



UNIVERSITY OF MASSACHUSETTS SCHOOL OF PUBLIC HEALTH AND HEALTH SCIENCES

# **MA GAMBLING IMPACT COHORT (MAGIC): Transitions across Four Waves**

**Robert J. Williams  
Martha Zorn  
Edward J. Stanek III  
Valerie Evans  
Rachel A. Volberg**

**May 22, 2020**

## Authorship

**Robert J. Williams**, Professor, Faculty of Health Sciences, University of Lethbridge, Lethbridge, Alberta, is Co-Principal Investigator on the MAGIC study and provided oversight of the study design, implementation, and analysis. Dr. Williams is the lead author of the current report.

**Martha Zorn**, Data Manager, University of Massachusetts Amherst School of Public Health and Health Sciences, was responsible for data management, data cleaning, and data analysis and contributed to all sections of the report.

**Edward J. Stanek**, Professor Emeritus, University of Massachusetts Amherst School of Public Health and Health Sciences, provided technical oversight and review of the study design and analysis.

**Valerie Evans**, Biostatistician and SEIGMA/MAGIC Project Manager, University of Massachusetts Amherst School of Public Health and Health Sciences. Ms. Evans provided edits to the report.

**Rachel A. Volberg**, Research Professor, University of Massachusetts Amherst School of Public Health and Health Sciences, is the study Principal Investigator and responsible for overall leadership of the project as well as oversight of the cohort study design, implementation, and analysis. Dr. Volberg is a co-author of the current report.

## Acknowledgements

Support for this study came from the Massachusetts Gaming Commission under ISA MGC10500001UMS15A establishing the Massachusetts Gambling Impact Cohort (MAGIC) study. This multi-year project was competitively bid via a Massachusetts Gaming Commission Request for Proposals (RFP) issued in November 20, 2013 and awarded to the University of Massachusetts Amherst in April 2014.

This study could not have been carried out without the cooperation and good will of the thousands of Massachusetts residents who agreed and continue to participate. We are also grateful to the many individuals at NORC at the University of Chicago who helped in collecting the data for this unique and important study.

We would like to thank the members of the Massachusetts Gaming Commission's Gaming Research Advisory Committee (GRAC) and Research Design and Analysis Subcommittee (RDASC). Members of these committees represent a range of perspectives and their careful review of draft versions of this report contributed to its clarity as well as utility to multiple audiences.

Finally, we would like to thank Mark Vander Linden, Director of Research and Responsible Gaming, and the Massachusetts Gaming Commission more generally, for their thoughtful input and clear guidance over the course of the project. The Commission's broad vision for the expansion of gambling in Massachusetts and commitment to the research needed to maximize the benefits and minimize harms related to gambling in the Commonwealth made this project possible.

### SUGGESTED CITATION:

Williams, R. J., Zorn, M., Stanek, E. J., Evans, V., and Volberg, R. A. (2020). *MA Gambling Impact Cohort (MAGIC): Transitions Across Four Waves*. Amherst, MA: School of Public Health and Health Sciences, University of Massachusetts Amherst.

**A PDF OF THIS REPORT CAN BE DOWNLOADED AT: [www.umass.edu/macohort](http://www.umass.edu/macohort)**

## Table of Contents

EXECUTIVE SUMMARY .....	V
INTRODUCTION .....	1
METHOD.....	4
Recruitment and Retention .....	4
Questionnaire .....	9
Data Cleaning.....	9
Retention .....	10
RESULTS .....	11
Prevalence of Gambling Participation across Waves .....	11
Prevalence of Gambling Categorizations across Waves.....	15
Individual Stability of Non-Gambling, Recreational Gambling, At-Risk Gambling, and Problem Gambling across Waves.....	15
DISCUSSION.....	21
REFERENCES.....	23
APPENDIX A: WAVE 4 QUESTIONNAIRE.....	25

### List of Figures

Figure 1. Individual Stability of Non-Gambling across Waves (n = 309) .....	17
Figure 2. Individual Stability of Recreational Gambling across Waves (n = 1539).....	18
Figure 3. Individual Stability of At-Risk Gambling across Waves (n = 280).....	19
Figure 4. Individual Stability of Problem Gambling across Waves (n = 156) .....	20

### List of Tables

Table 1. MAGIC Wave 2 Sampling Strategy and Achieved Response Rate.....	5
Table 2. Demographic Profile of the MAGIC Wave 2 Cohort relative to the MA Adult (18+) Population....	6
Table 3. Details of the 4 Waves of MAGIC.....	8
Table 4. MAGIC Completion Patterns among Eligible Participants .....	10
Table 5. Changes in Past Year Gambling Participation within the Cohort from Wave 1 to 4 among those who completed all four waves (unweighted) .....	13
Table 6. Lottery and Charitable Gaming Gross Revenue .....	14
Table 7. Changes in Gambling Categorization within the Cohort from Wave 1 to 4 among those who completed all four waves (unweighted) .....	15

## EXECUTIVE SUMMARY

The Massachusetts Gambling Impact Cohort (MAGIC) is a prospective study of gambling and problem gambling conducted in Massachusetts from 2013 to 2019. A group of 3,139 adults, 18 and older, was recruited via address-based sampling, with the sample over selected for factors that put them at higher risk of future problem gambling. Otherwise, the sample was roughly representative of the demographic profile of the Massachusetts population. The cohort had five assessment periods, with inter-assessment intervals ranging from 11.5 to 24 months. The vast majority of assessments were self-administered with most completed online and a minority completed on paper. The assessment collected comprehensive information on gambling-related behavior, attitudes, motivations, context, fallacies; problem gambling; physical health; mental health; substance use and abuse; social functioning; personality; and demographics. A retention rate of 81.1% was achieved in Wave 4 and 69.9% of participants completed all four waves.

MAGIC has three primary research goals. The first is to understand the stability and course of problem, at-risk, and recreational gambling. The second is to develop an etiological model of problem gambling. The third is to use the findings from the above research to optimize the treatment and prevention of problem gambling in Massachusetts. The present report is a **descriptive account of the stability and transitions of problem, at-risk, and recreational gambling over four Waves**. It follows the basic format of the two prior reports in this series, the Wave 1 to 2 report (Volberg, Williams, Stanek, Zorn & Mazar, 2017), and the Wave 1 to 3 report (Mazar et al., 2019). A comprehensive Final Report on the MAGIC study within the next 6 months will provide an interpretive account of the stability and transitions *over the full five waves* as well as present an etiological model of problem gambling and the relevant policy implications. The present report is primarily a methodological report of interest to researchers. That said, the present findings provide some preliminary data pertaining to a) the potential impact of casino introduction into Massachusetts on gambling and problem gambling (that will be explored in greater detail in future SEIGMA reports); and b) the inherent instability and relapse rates of problem gambling that is of relevance to public health interventions.

When restricting the analysis to individuals who completed all four waves, a significant difference across waves was observed in the past year self-reported participation in most individual types of gambling with the exception of horse/dog race betting and sports betting. In most cases this reflects self-reported increases in Wave 3 or 4 participation rates relative to either Wave 1 or 2 or both. However, there was a decrease in reported out-of-state casino patronization beginning in Wave 3. Statistically significant differences are commonly obtained with large sample sizes (over 2,000 in the present case) and do not necessarily denote meaningful differences. That said, the increases in participation rates for traditional lottery, instant tickets, and raffles parallel actual revenue increases in these formats during those time periods (likely driven by the unusually high Powerball jackpot in 2016). Changes in how the question was asked may have been responsible for the reported increases in daily lottery games, bingo, and online gambling participation.

When restricting the analysis to individuals who completed all four waves, there was also significant variation over time in the relative prevalence of the four gambling categories (Non-Gambling, Recreational Gambling, At-Risk Gambling, Problem Gambling). This reflected higher rates of Recreational Gambling in Waves 3 and 4 relative to Waves 1 and 2, along with a corresponding decrease in Non-Gambling in Waves 3 and 4 relative to Waves 1 and 2. At-Risk Gambling also decreased in Wave 4

relative to Wave 2. However, this was offset by an increase in problem gambling in Wave 4 relative to Wave 1. Here again, large sample sizes facilitate statistically significant differences and do not always indicate meaningful differences.

The *individual stability* of gambling categories varied as a function of category. Non-Gambling was a fairly stable classification, with the majority of Non-Gamblers in one wave continuing to be Non-Gamblers at the next wave. That said, only a minority of Non-Gamblers (38.2%) were Non-Gamblers throughout all four waves. Rather, the majority (61.4%) transitioned to Recreational Gambling in either Wave 2, 3, or 4, with a minority of those transitioning back to Non-Gambling in the following wave.

Recreational Gamblers, who constitute the majority of the sample, had the most stable behavioral pattern, with the large majority of Recreational Gamblers continuing to be Recreational Gamblers in the next wave, and 64.7% continuing to be Recreational Gamblers throughout all four waves. A small percentage eventually transitioned into Non-Gambling (13.5%) or At-Risk Gambling (19.4%), and an even smaller percentage (2.3%) became Problem Gamblers at some point in the subsequent three waves.

In contrast, people with sub-clinical levels of problem gambling symptomatology ('At-Risk Gamblers') had an unstable trajectory, with only a minority continuing to be in this category in the next wave and only 10.4% continuing in this category for four consecutive waves. Although a significant percentage of At-Risk Gamblers subsequently become Problem Gamblers (16.4%), a much more common route was transitioning back to Recreational Gambling.

Problem gambling was somewhat more stable than At-Risk Gambling, but still fairly unstable, with the majority of Problem Gamblers transitioning to At-Risk or Recreational Gambling in the next wave. Indeed, one wave was the modal duration of Problem Gambling, occurring in 57.0% of problem gamblers. A longer duration did occur for a significant minority, with 23.2% being in this category in all four waves and many others being in this category for either two or three consecutive waves. Risk of chronic problem gambling tended to increase with each consecutive year of problem gambling status. The relatively short episode duration for most problem gamblers also meant that recovery rates tended to be high. However, of those that recovered by Wave 2, 25.3% had relapsed in either Wave 3 or Wave 4. The longer-term relapse rate beyond this time frame is unknown, but is expected to be significantly higher.

# INTRODUCTION

Major longitudinal studies of gambling and problem gambling have been undertaken in Canada (el-Guebaly, Casey, Currie et al., 2015; Williams, Hann, Schopflocher et al, 2015), Australia (Billi, Stone, Marden, & Yeung, 2014), Sweden (Romild, Volberg & Abbott, 2014), and New Zealand (Abbott, Bellringer, & Garrett, 2018). Collectively, these studies have provided considerable information pertaining to the incidence, stability, and etiology of problem gambling. There is no doubt the results of these studies also apply to Massachusetts. However, there is also reason to suspect some differences as these studies were conducted at earlier time period (2006-2014) and in jurisdictions: (1) with much more pervasive availability of legal gambling than Massachusetts; (2) with a much more stable set of legal gambling offerings (including casino availability) over the study period; (3) having a younger legal age for casino gambling (i.e., 18)<sup>1</sup>; (4) having some demographic differences with Massachusetts; and (5) having a different set of harm minimization protocols and strategies.

Because of these potential differences, and because there had never been any longitudinal research studies of gambling and problem gambling in Massachusetts (or the United States), a longitudinal study of gambling was commissioned by the Massachusetts Gaming Commission in April 2014. This is known as the **M**assachusetts **G**ambling **I**mpact **C**ohort: **MAGIC**. MAGIC has an important relationship to the other major gambling-related research initiative in Massachusetts, the **S**ocial and **E**conomic **I**mpacts of **G**ambling in **M**assachusetts (**SEIGMA**) study, which began in March 2013 to evaluate the impacts of casino introductions to the state between June 2015 and June 2019<sup>2</sup>. The relationship between the two projects is due to (1) MAGIC also being able to shed some light on the impact of casino introduction by observed changes in the cohort in relation to casino openings; (2) both projects being conducted by the same research team from the University of Massachusetts (Amherst); (3) the fact that the MAGIC cohort originally derived from a Baseline General Population Survey (BGPS) of 9,578 Massachusetts adults (18+) conducted between September 2013 and May 2014 as part of the SEIGMA project.

MAGIC has three primary research goals:

- 1. To understand the stability and course of problem, at-risk, and recreational gambling.**  
Periodic cross-sectional assessments of the population provide snapshots of prevalence rates but provide no information on individual trajectories or the inherent stability of the entity being assessed. A stable prevalence rate across time can either reflect continuity in the same group of individuals, the rate of new cases being equivalent to the rate of remission, or something in between. These scenarios have much different implications for prevention and treatment, and which one is actually occurring can only be determined with a cohort study that tracks individual trajectories.
- 2. Develop an etiological model of problem gambling.**

---

<sup>1</sup> Age 20 in New Zealand

<sup>2</sup> Plainridge Park Casino on June 24, 2015, MGM Springfield casino on August 24, 2018, and Encore Boston Harbor casino on June 24, 2019.

This is also related to the question of stability and course, but the purpose here is to more comprehensively identify the specific risk factors that lead to problem gambling onset, recovery, and relapse, with a particular interest in the role of casino availability. Internationally, considerable effort is currently going into the development of strategies to prevent problem gambling. Unfortunately, the majority of these initiatives appear to be fairly ineffectual (Williams, West, & Simpson, 2012). This is partly due to the fact that most of these educational and policy initiatives have been put in place because they “seemed like good ideas” and/or were being used in other jurisdictions, rather than having demonstrated scientific efficacy or being derived from a clear understanding of effective prevention practices. However, it is also due to the fact that there is no comprehensive and well-established etiological model of problem gambling to guide these efforts.

While there are many well established correlates of problem gambling (e.g., gambling fallacies, mental health problems, etc.), their association with problem gambling may occur either because they *caused* problem gambling, developed *concurrently* with problem gambling, or developed as a *consequence* of problem gambling. From a prevention standpoint, knowing how and where to effectively intervene hinges on having research that clearly identifies the variables that are etiologically involved in problem gambling, their temporal sequence, and their causal connections. Similarly, knowing the factors implicated in sustained recovery from problem gambling is very important for the purposes of treatment. Longitudinal research is the best way of disentangling these complex relationships and understanding the chronology and causal directions, potentially allowing for the creation of a detailed etiological model of how gambling and problem gambling develops, continues, and remits. Longitudinal research has been applied successfully many times in the fields of health, mental health, and addiction to elucidate these connections. To date, however, comprehensive longitudinal studies are relatively uncommon in the area of gambling and problem gambling.

### 3. **To operationalize the above findings to optimize the treatment and prevention of problem gambling in Massachusetts.**

The ultimate purpose of all of this research is to achieve a better understanding of gambling and problem gambling so as to minimize its harm and maximize its benefits.

Originally, an additional research goal of MAGIC was to determine the **annual incidence of problem gambling in Massachusetts**. However, this has become a problematic determination for several reasons. For one, the MAGIC cohort established in Wave 2 consisted of a stratified unequal probability of selection sample derived from the BGPS, which itself is a stratified unequal probability of selection sample from the population. It was always uncertain whether weighting back to the population sufficiently adjusted for all sample bias, especially considering that new weights had to continually be created to account for the non-random loss of participants with each wave. One bias of particular concern was that prospective participants became aware in Wave 2 that MAGIC was primarily a study of gambling, rather than a survey of ‘health and recreation behavior’ as it was described in Wave 1 (which tends to lead to loss of non-gamblers and retention of heavy gamblers, Williams & Volberg (2009)). A final issue that makes the calculation of annual incidence untenable is that the inter-assessment interval from Wave 3 to Wave 4 was 24 months, compared to 16.8 months from Wave 1 to Wave 2 and 12 months from Wave 2 to Wave 3.

The focus on the present report is on **the stability and transitions of problem, at-risk, and recreational gambling over four Waves**. It follows the basic format of the two prior reports in this series, the Wave 1 to 2 report (Volberg, Williams, Stanek, Zorn & Mazar, 2017), and the Wave 1 to 3 report (Mazar et al.,

2019). The present report is primarily a methodological report of interest to researchers. A comprehensive Final Report on the MAGIC study in the next 6 months will more fully examine the stability and transitions over the full five waves as well as present an etiological model of problem gambling and their relevant policy implications.

# METHOD

## Recruitment and Retention

### BGPS/Wave 1

As mentioned, Wave 1 of MAGIC was derived from a Baseline General Population Survey (BGPS) of 9,578 Massachusetts adults (18+) that was conducted as part of the SEIGMA project (Volberg, Williams, Stanek, Zorn & Rodriguez-Monguio, 2017). Survey administration began in September 2013 and was undertaken by [NORC](#) at the University of Chicago on behalf of the University of Massachusetts (Amherst). Address-based sampling was employed followed by multi-modal recruitment. The specific steps were as follows:

1. A random sample of 33,368 residential mail delivery locations in Massachusetts were selected from the universe of 2,731,168 known residential locations as compiled by the U.S. Postal Service (with a degree of oversampling for western Massachusetts).
2. An attempt was made to match these addresses with landline telephone numbers, which was successfully achieved for 78% of addresses.
3. Regardless of whether a landline match was made, all addresses were mailed an invitation to participate in a 10-15 minute online survey of “health and recreation behavior in Massachusetts”, with the website identified in the letter. [Note: a ‘health and recreation’ description was utilized to prevent biasing the sample toward gamblers, which tends to occur when the survey is described as a ‘gambling survey’ (Williams & Volberg, 2009, 2010)]. The letter also indicated the adult (18+) in the household having the next birthday should be the person completing the survey. A \$1 incentive was enclosed and participants were informed they would receive a \$10 Amazon gift-code if they completed the survey within 14 days.
4. Postcards reminding participants of the survey and thanking them for completion if they had already completed it were sent one and two weeks after the initial invitation letter.
5. Participants who had not completed the online survey within four weeks were mailed a package that contained a paper version of the questionnaire, a postage-paid return envelope, a \$5 incentive and a letter that invited them to fill out either the online or paper versions of the questionnaire.
6. Two weeks later a reminder postcard was mailed out.
7. Two weeks later a second invitation letter was sent out along with a second paper copy of the questionnaire.
8. Addresses that did not complete either the paper or online survey and whose household had been matched to a landline were then contacted by phone and given the opportunity to complete the survey over the phone (via a computer-assisted telephone interview) as well as reminded of the paper and online options. All three of the BGPS data collection modalities (online, paper, phone) were available in both Spanish and English, with 1.5% ( $n = 73$ ) of respondents completing the survey in Spanish.
9. People who could be contacted but did not wish to participate were contacted by phone at a later date by an experienced refusal converter as long as the initial refusal was not adamant.
10. People who could not be contacted via any of the three modes were sent to NORC’s Locating personnel, who checked for alternate phone numbers and additional contacts listed on the BGPS, as well as conducting Internet and reverse telephone number searches.
11. The final obtained sample was 9,578 completed surveys, with 40% of these done online, 52% on paper, and 7% by telephone interview. The first survey was completed on September 13, 2013 and the

last survey on July 1, 2014, with 95% completed by April 2, 2014. Overall response rate was 36.6% (AAPOR-RR3, 2015).

## Wave 2

1. To formally establish the MAGIC cohort, a subsample of 4,860 from the BGPS was identified for recruitment into 'Wave 2'. The sample size of 4,860 was chosen to ensure it resulted in an ultimate cohort size of at least 2,600 individuals. The sample composition was chosen to ensure it contained a high portion of the individuals thought to be at most risk for future problem gambling. This included a) everyone identified as a problem gambler; b) everyone identified as an at-risk gambler; c) everyone who reported spending at least \$1200 on gambling in the past 12 months; d) everyone who reported gambling at least once a week or more in the past 12 months; e) everyone who had provided military service after September 2001. A random selection of all other individuals constituted the remainder of the cohort. (For further details see the Wave 1 – 2 report: Volberg, Williams, Stanek, Zorn & Mazar, 2017).
2. Wave 2 began in March 2015.<sup>3</sup> The same multimodal recruitment procedure utilized in Wave 1 was utilized in Wave 2 with the exception being that the Spanish language option was eliminated. [Nonetheless, among the 73 individuals who completed Wave 1 in Spanish, 29 participated in Wave 2, 11 in Wave 3, and 14 in Wave 4]. The 4,860 selected individuals were first mailed an invitation letter explaining that the University of Massachusetts Amherst was conducting a 'longitudinal study about gambling'<sup>4</sup> and would like to have the individual who completed the Wave 1 questionnaire to participate in an online Wave 2 survey. The letter contained a \$5 incentive, a PIN, and offered a \$20 Amazon gift code if they completed the survey within 14 days. To better ensure that the individual who completed Wave 1 was also the individual who completed Wave 2, respondent demographic information (name, age, and gender) collected during Wave 1 was preloaded into the screener question<sup>5</sup> for the Wave 2 online questionnaire and telephone interviews.
3. In the end, of the 4,860 individuals selected for recruitment, 3,139 completed the Wave 2 questionnaire, which is a response rate of 65.1% (AAPOR-RR3, 2015). A total of 58% completed the survey online, 36% by paper, and 5% by phone. The first survey was completed on March 20, 2015 and the last on October 13, 2015, with 95% completed by June 23, 2015. [Note that Plainridge Park Casino opened on June 24, 2015]. Response rate by strata is detailed in Table 1.

Table 1. MAGIC Wave 2 Sampling Strategy and Achieved Response Rate

Strata from the BGPS	Sampling Fraction	Eligible <i>n</i>	Achieved Sample	Response Rate by Strata
Problem Gamblers	100%	133	81	61.4%
At-Risk Gamblers	100%	450	295	65.7%
Spent \$1200+ on gambling in past 12 months	100%	1088	726	67.2%

<sup>3</sup> Although the MGC agreed to contract with the University of Massachusetts Amherst for the MAGIC study in April 2014, the start of Wave 2 was delayed until after the November 2014 election which included a ballot question regarding repeal of the Expanded Gaming Act permitting the introduction of casinos.

<sup>4</sup> The more explicit description of the study as a 'gambling study' was necessitated by the fact that Wave 1 participants would now have been aware that the focus of the questionnaire was on gambling, which was made even more evident by the project name "Massachusetts Gambling Impact Cohort".

<sup>5</sup> Online: "Please confirm that you are [NAME], the individual who completed the Massachusetts Survey of Health and Recreation in [INTERVIEW MONTH AND YEAR]". Telephone: "We would like to speak with [NAME]. In [INTERVIEW MONTH AND YEAR], (he/she) participated in a survey on health and recreation in Massachusetts. Is [NAME] available?"

Gambled weekly or more in past 12 months	100%	792	534	67.6%
Military Service (Sept 2001 or later)	100%	49	37	78.7%
All Others	33%	7066	1466	63.1%
TOTAL		9578	3139	65.1%

Table 2 compares key demographic characteristics of the obtained Wave 2 cohort with the Massachusetts adult population in 2015 from the American Community Survey. As seen, the cohort is reasonably representative, albeit with a) proportionally fewer people <35 years old and proportionally more >55 years old; b) proportionally fewer racial/ethnic minorities; and proportionally fewer individuals with lower educational attainment and proportionally more with higher educational attainment.

Table 2. Demographic Profile of the MAGIC Wave 2 Cohort relative to the MA Adult (18+) Population

		MAGIC Wave 2		MA 2015 <sup>1</sup>
		<i>n</i>	%	%
Gender	Male	1,458	46.5	47.9
	Female	1,678	53.5	52.1
Age	18-20	8	0.3	5.6
	21-24	37	1.2	7.3
	25-34	260	8.5	17.4
	35-54	887	29.1	33.6
	55-64	751	24.6	16.8
	65-79	846	27.7	13.9
	80+	264	8.6	5.3
Race/Ethnicity	Hispanic	131	4.3	9.6
	White	2,653	87.0	75.5
	Black	84	2.8	6.4
	Asian	95	3.1	6.4
	Some other race	24	0.8	0.8
	Two or more races	61	2.0	1.3
Educational Attainment	Less than high school	97	3.1	9.7
	High School diploma or GED	473	15.3	25.5
	Some college below Bachelor's	911	29.4	26.2
	Bachelor's Degree	758	24.5	22.4
	Graduate or professional degree	690	22.3	13.7
	Doctoral degree	166	5.4	2.4
Household Income	Less than \$15,000	176	6.7	6.9
	\$15,000-<\$30,000	300	11.4	8.7
	\$30,000-<\$50,000	427	16.2	12.6
	\$50,000-<\$100,000	842	32.0	27.9
	\$100,000-<\$150,000	474	18.0	20.6
	\$150,000 and more	409	15.6	23.2

1. U.S. Census Bureau (2015). *2015 American Community Survey 1-year Public Use Microdata Samples*.

### Wave 3

1. Wave 3 recruitment began in April 2016.
2. The same multimodal recruitment procedure utilized in Wave 2 was utilized again in Wave 3 with the exceptions being that a) telephone interviewing was eliminated and was replaced by telephone prompting, that encouraged people to complete the survey either online or by paper; b) participants were offered a \$50 check for completing the survey as well as an additional \$20 if they completed it within 14 days; and c) there was no attempt at 'refusal conversion'. There was also a significant expansion of the questionnaire, as explained in the next section.
4. In the end, of the 3,139 eligible individuals, 2,450 completed the Wave 3 questionnaire, which is a retention rate of 78.1%. A total of 76% completed the survey online and 24% by paper. The first survey was completed on April 8, 2016 and the last on August 18, 2016, with 95% completing by July 8, 2016. (For further details see the Wave 1 – 3 report: Mazar et al., 2019).

### Wave 4

1. Wave 4 was planned for April 2017 but was delayed a year due to budgetary constraints. Thus, Wave 4 recruitment began in April 2018. The same multimodal recruitment procedure utilized in Wave 3 was utilized in Wave 4.
2. In the end, of the 3,015 eligible individuals, 2,444 completed the Wave 4 questionnaire, which is a retention rate of 81.1%. A total of 84% completed the survey online and 16% by paper. The first survey was completed on April 12, 2018 and the last on November 12, 2018, with 95% completed by June 27, 2018. [Note that MGM Springfield opened on August 24, 2018].

The table below provides basic details about each of the four waves of MAGIC.

Table 3. Details of the 4 Waves of MAGIC

Wave	Beginning and End Dates	95% Assessment Window	Inter-Assessment Interval	Eligible Sample	Completed Surveys	Questionnaire Length	Survey Administration Modality	Response Rate	Retention Rate
1	Sep 13, 2013 – Jul 1, 2014	6.75 months (Apr 2, 2014)	Not applicable	Not applicable	Not applicable <sup>6</sup>	Short	44% online, 50% paper, 6% phone	36.6%	Not applicable
2	Mar 20, 2015 – Oct 13, 2015 (95.2% prior to PPC opening)	3.0 months (Jun 23, 2015)	16.8 months	4860	3139	Short	58% online; 36% paper; 5% phone	65.1%	Not applicable
June 24, 2015		Opening of Plainridge Park Casino (PPC)							
3	Apr 8, 2016 – Aug 18, 2016	3.0 months (Jul 8, 2016)	12.0 months	3139	2450	Comprehensive	76% online; 24% paper	Not applicable	78.1%
4	Apr 2017 – Jul 2017	Postponed due to budgetary constraints							
4	Apr 12, 2018 – Nov 12, 2018 (99.7% prior to MGM opening)	2.5 months (Jun 27, 2018)	24.0 months	3015	2444	Comprehensive	84% online; 16% paper	Not applicable	81.1%
August 24, 2018		Opening of MGM Springfield							

**Beginning and End Dates:** date of the first completed assessment to the last completed assessment

**95% Assessment Window:** number of months from the first completed assessment to the last completed assessment for 95% of respondents

**Inter-Assessment Interval:** length of time between the median completion in previous wave to the median completion in current wave

**Eligible Sample:** members of the designated cohort (i.e., people who completed Wave 2) minus individuals unable to participate due to death or permanent medical incapacitation

**Completed Surveys:** total number of surveys from the eligible sample deemed complete, defined as having completed at least 7 of the 10 primary questions on gambling participation

**Questionnaire Length:** refers to whether it was a relatively short survey focused on gambling or a more comprehensive survey that included potential etiological predictors of problem gambling

**Survey Content:** whether the survey was short, due to a focus on gambling behavior, or comprehensive due to a broader focus on the etiological predictors of problem gambling

**Survey Modality:** percent of surveys self-administered online; self-administered via a mailed paper survey; and administered via a telephone interview

**Response Rate:** completed surveys as a percentage of the sample eligible for recruitment

**Retention Rate:** completed surveys as a percentage of the eligible cohort membership

<sup>6</sup> Of the 3139 participants in Wave 2, 3096 could be matched to the same survey participant and his/her survey in Wave 1.

## Questionnaire

The purpose of the BGPS (Wave 1) was more circumscribed than the purpose of MAGIC in that the focus of the BGPS was to establish base rates of gambling and problem gambling prior to casino introduction, whereas MAGIC intended to also broadly examine the range of potential etiological contributors to problem gambling (Volberg, Williams, Stanek et al., 2017). The BGPS survey had three main sections, Comorbidities, Gambling, and Demographics.

The Wave 2 survey questionnaire was virtually the same as the Wave 1 questionnaire.

A significant expansion and reworking of the questionnaire occurred in Wave 3 primarily to more comprehensively capture the potential etiological contributors to problem gambling. Another major change was a more fine-grained assessment of gambling participation (e.g., specific questions about electronic gambling machines and casino table games now that they were available in Massachusetts; patronage of the new Plainridge Park Casino; more detailed questions about online gambling; more detailed questions about daily fantasy sports betting; more detailed questions about player card and ATM use). With the expansion of the questionnaire there was also a need to remove or reduce questions that were less essential and/or pertained more to the socioeconomic impact of casinos.

The Wave 4 questionnaire was virtually identical to the Wave 3 questionnaire. A copy of the Wave 4 questionnaire is contained in Appendix A.

## Data Cleaning

Throughout data collection, SAS programs were run by NORC to identify any errors that occurred in the online or CATI systems. This allowed inconsistencies to be reconciled and to fix system or questionnaire errors as they occurred. Once data collection was complete, NORC reviewed verbatim responses for several questions that offered an “Other” response category. The verbatim responses were back-coded into existing response categories where appropriate.

After the dataset was received by UMass, skip patterns and outliers were reviewed and a cleaned dataset was created. Using the cleaned data, several additional summative and/or composite variables were created and added to the final dataset.

There were discrepancies in gender and/or year of birth for a small number of respondents ( $n=87$ , 3.0%) from Wave 1 to Wave 2, from Wave 2 to Wave 3 ( $n=16$ , 0.6%), and from Wave 2 to Wave 4 ( $n=31$ , 1.3%). Upon further investigation, 51% of the Wave 2 discrepancies were deemed to be the same individual who completed the Wave 1 questionnaire, 69% of Wave 3 discrepancies were deemed to be the same Wave 2 respondent and 65% of Wave 4 discrepancies were deemed to be the same Wave 2 respondent. The 43 respondents whose gender and/or year of birth could not be matched to Wave 1 data are included in the cohort beginning in Wave 2 but are deemed to have missing data for Wave 1. For Wave 3 five surveys were excluded as we suspect the survey was not completed by the right person. For Wave 4 a total of 11 surveys were excluded for the same reason.

Item non-response was similar for each of the data collection modes. Respondents were allowed to refuse to answer any question or to give a “don’t know” response. The percentage of complete responses was extremely high for nearly all of the individual questions. The non-response rate was greater than 10% for only one question in Wave 1 and Wave 2: household income. In Wave 3 and Wave

4, several additional variables had non-response rates of greater than 10%: life events; symptoms of post-traumatic stress; symptoms of substance use disorder; percentage of electronic gambling machine (EGM) and/or casino table spending at each location; and amount of money spent per out-of-state casino visit.

## Retention

As reported earlier, MAGIC has achieved fairly high retention, with 81.1% of eligible participants completing Wave 4. Table 4 shows the completion patterns as a function of number of assessments completed up to Wave 4. Poor retention can compromise the validity of a longitudinal study, as attrition is not usually random. Rather, males, young people, ethnic minorities, substance users, and individuals with mental health problems are known to have higher attrition (Claus, Kindelberger & Dugan, 2002; de Graaf et al., 2000; Eaton et al., 1992). This is less of a concern in the present study as the analysis is restricted to a) changes *within the cohort*; b) the 2195 individuals who completed *all four surveys*; and c) the cohort contains a reasonably diverse array of individuals having a range of scores/values on the variables of etiological interest. Fuller examination of attrition patterns will be contained in our MAGIC Final Report later this year.

Table 4. MAGIC Completion Patterns among Eligible Participants

	<i>n</i>	%
Completed 4/4 Waves	2195	69.9
Completed 3/4 Waves	477	15.2
Completed 2/4 Waves	451	14.4
Completed 1/4 Waves	16	0.5

# RESULTS

## Prevalence of Gambling Participation across Waves

Table 5 shows the prevalence of past year gambling and individual types of gambling in each wave among individuals who completed all four waves. A Cochran Q test tested for significant variation across waves. There was significant variation between years on all types of gambling except horse/dog race betting and sports betting, which is not surprising considering the large sample sizes involved (over 2,000 in the present case).<sup>7</sup> Pairwise McNemar comparisons ( $p < .01$ , 2-tail) established that this primarily reflected higher prevalence rates in later waves relative to earlier waves. Most specifically, prevalence rates were higher in Waves 3 relative to Waves 1 and 2 for traditional lottery, daily lottery, any lottery product, bingo, online gambling; higher in Wave 3 relative to Wave 2 for instant tickets; higher in Wave 4 relative to Waves 1 and 2 for daily lottery, any lottery product, bingo, and online gambling; and higher in Wave 4 relative to just Wave 2 for raffles. There were some exceptions to this pattern. Wave 4 rates were significantly *lower* than Wave 3 rates for traditional lottery and any lottery product, and out-of-state casino gambling also *decreased* in Waves 3 and 4 relative to Waves 1 and 2. It will be instructive to see whether out-of-state casino patronage declines further in Wave 5 as this survey was administered after the second casino opened.<sup>8</sup>

Some of these increases in participation rates are corroborated by parallel increases in actual revenue, as detailed in Table 6, whereas others are likely artifactual, due to changes in question wording.

- For example, an unusually large Powerball jackpot in 2016 (Wave 3) resulted in a 27.7% increase in **traditional lottery** revenue in fiscal 2016 relative to fiscal 2015. (This Powerball jackpot likely also contributed to the increases described below for instant tickets and raffles).
- Similarly, **instant tickets** had a small increase in sales in fiscal 2016 (2.6%) and a small decline (2.7%) in fiscal 2017.
- **Daily lottery games** (particularly Keno) also experienced a revenue increase in fiscal 2016 (5.2%). However, a change in the question wording in Wave 3 is likely responsible for part of the increase in reported participation rates, as the names of all four of the daily lotteries were listed as examples in Wave 3 and beyond (only Keno and Jackpot Poker were given as examples in Waves 1 and 2).
- There was a 9.1% increase in **raffle ticket revenue** in 2016 and a 9.4% increase in 2018, which provides some corroboration of the self-reported participation increases.
- In contrast, **bingo** revenue has continued to decline over time and yet self-reported participation rates have increased. It is quite possible that a question rewording in Wave 3 might be responsible

---

<sup>7</sup> The effect size associated with a statistically significant difference usually provides a better indication of the meaningfulness of a statistically significant change. Unfortunately, in the present case, the effect sizes that can be utilized with Cochran's Q do not have a reference scale to guide interpretation. Thus, we have not presented them.

<sup>8</sup> The decline in out-of-state casinos is almost certainly real. However, one caution is that there was only a single question about out-of-state casino patronage in Wave 2 (as MA-based EGMs and casino table games were not yet available), whereas in Wave 3 questions were asked about EGM participation, casino table game participation, and then out-of-state patronage of EGMs and/or table games (if they indicated they had played EGMs or table games). It is unclear whether the different question wordings could or would have any impact on obtained prevalence rates.

for the reported increase in participation, as beginning in Wave 3 it was explicitly indicated that bingo participation included *online* bingo.

- The increase in reported **online gambling** participation is likely partly real and partly artifactual. It is partly real due to the fact that online gambling prevalence continues to increase in most western countries and, b) because fantasy sports betting (which is online) was legalized in Massachusetts in August 2016, as the first type of legal online gambling in the state. It is partly artifactual as online gambling was asked as a single question in Wave 2, whereas it was asked as a supplemental question for most individual types of gambling in Wave 3 (i.e., if the person indicated they participated in a particular type of gambling they were asked whether it was online or land-based participation). Obtained prevalence rates tend to increase when questions about involvement are asked in a repeated and more specific fashion such as this (Wood & Williams, 2007b).

Table 5. Changes in Past Year Gambling Participation within the Cohort from Wave 1 to 4 among those who completed all four waves (unweighted)

	n	Wave 1: 2013/14		Wave 2: 2015		Wave 3: 2016		Wave 4: 2018		p-value
		%	95% CI	%	95% CI	%	95% CI	%	95% CI	
Traditional Lottery	2,192	70.5	(68.5, 72.4)	70.3	(68.4, 72.2)	74.8	(73.0, 76.6)	71.7	(69.7, 73.5)	<0.0001
Instant Tickets	2,169	47.8	(45.7, 49.9)	47.1	(45.0, 49.2)	50.4	(48.3, 52.5)	48.0	(45.9, 50.1)	0.0074
Daily Lottery Games	2,165	18.2	(16.6, 19.8)	20.0	(18.4, 21.8)	35.5	(33.5, 37.5)	33.5	(31.5, 35.5)	<0.0001
Any Lottery Product	2,178	73.4	(71.5, 75.2)	73.3	(71.4, 75.1)	78.5	(76.7, 80.2)	75.6	(73.8, 77.4)	<0.0001
Raffle Tickets	2,161	45.9	(43.8, 48.0)	44.1	(42.0, 46.2)	46.6	(44.5, 48.8)	48.0	(45.9, 50.1)	0.0066
Bingo	2,156	4.5	(3.7, 5.4)	5.1	(4.2, 6.1)	7.0	(6.0, 8.2)	7.6	(6.5, 8.8)	<0.0001
EGMs	1,969	Not asked		Not asked		22.3	(20.5, 24.2)	21.5	(19.8, 23.4)	
Table Games	2,172	Not asked		Not asked		12.2	(10.9, 13.6)	13.2	(11.9, 14.7)	
Out of State Casinos	1,722	32.2	(30.1, 34.5)	32.2	(30.1, 34.5)	21.5	(19.7, 23.6)	19.2	(17.4, 21.1)	<0.0001
Horse/Dog Racing	2,167	6.4	(5.5, 7.5)	7.0	(6.0, 8.1)	5.7	(4.8, 6.8)	6.3	(5.4, 7.4)	0.1012
Sports Betting	2,163	16.6	(15.1, 18.3)	18.8	(17.2, 20.5)	17.2	(15.7, 18.8)	17.4	(15.8, 19.0)	0.0678
Private Betting	2,177	13.4	(12.0, 14.9)	14.7	(13.2, 16.2)	Not asked		Not asked		
Online Gambling	1,662	1.6	(1.1, 2.3)	2.2	(1.6, 3.1)	7.3	(6.1, 8.6)	8.4	(7.1, 9.8)	<0.0001
Other Gambling	2,172	Not asked		Not asked		4.5	(3.7, 5.5)	5.0	(4.2, 6.0)	
Any Past Year Gambling	2,189	85.7	(84.1, 87.1)	85.1	(83.6, 86.5)	87.1	(85.6, 88.4)	87.3	(85.9, 88.7)	0.0024

Plainridge Park Casino Opening

One Year Postponement

MGM Springfield Opening

Table 6. Lottery and Charitable Gaming Gross Revenue

	Fiscal 2014	Fiscal 2015	% change	Fiscal 2016	% change	Fiscal 2017	% change	Fiscal 2018	% change
Powerball	\$113,075,000	\$101,861,000		\$169,091,000		\$119,334,000		\$130,832,000	
MegaMillions	\$82,819,000	\$78,646,000		\$69,148,000		\$60,985,000		\$92,552,000	
Lucky for Life	\$32,112,000	\$27,524,000		\$27,317,000		\$25,614,000		\$25,028,000	
TRADITIONAL LOTTERY TOTAL	\$228,006,000	\$208,031,000	91.2%	\$265,556,000	127.7%	\$205,933,000	77.5%	\$248,412,000	120.6%

	Fiscal 2014	Fiscal 2015	% change	Fiscal 2016	% change	Fiscal 2017	% change	Fiscal 2018	% change
INSTANT TICKET TOTAL	\$3,382,841	\$3,522,390,000	104.1%	\$3,615,138,000	102.6%	\$3,517,783,000	97.3%	\$3,592,661,000	102.3%

	Fiscal 2014	Fiscal 2015	% change	Fiscal 2016	% change	Fiscal 2017	% change	Fiscal 2018	% change
Keno	\$814,158,000	\$850,487,000		\$904,967,000		\$914,787,000		\$966,794,000	
Numbers Game	\$322,649,000	\$322,813,000		\$329,372,000		\$324,506,000		\$325,158,000	
Mass Cash	\$73,027,000	\$75,052,000		\$79,626,000		\$78,861,000		\$81,808,000	
Jackpot Poker	\$6,550,000	\$2,780,000		\$2,170,000		\$2,000		\$0	
All or Nothing	\$0	\$0		\$0		\$18,814,000		\$9,679,000	
DAILY LOTTERY TOTAL	\$1,216,384,000	\$1,251,132,000	102.9%	\$1,316,135,000	105.2%	\$1,336,970,000	101.6%	\$1,383,439,000	103.5%

	Calendar 2014	Calendar 2015	% change	Calendar 2016	% change	Calendar 2017	% change	Calendar 2018	% change
RAFFLE TICKETS	\$18,542,537	\$17,595,734	94.9%	\$19,199,979	109.1%	\$19,015,374	99.0%	\$20,806,087	109.4%
BINGO	\$29,825,143	\$27,581,036	92.5%	\$26,987,266	97.8%	\$25,380,941	94.0%	\$23,685,765	93.3%

Sources: Massachusetts Lottery Commission (2019); Massachusetts Lottery Commission Charitable Gaming Division (2014,2015,2016,2017,2018)

## Prevalence of Gambling Categorizations across Waves

Table 7 shows the change in the prevalence of Non-Gambling, Recreational, At-Risk, and Problem Gambling across the waves among individuals who completed all four waves. A Cochran Q test tested for significant variation across waves.

Significant variation over time is observed in all four categories. Pairwise McNemar comparisons ( $p < .01$ , 2-tail) established that this reflected higher rates of Recreational Gambling in Waves 3 and 4 relative to Waves 1 and 2, along with a corresponding decrease in Non-Gambling in Waves 3 and 4 relative to Waves 1 and 2. At-Risk Gambling also decreased in Wave 4 relative to Wave 2. However, this was offset by an increase in problem gambling in Wave 4 relative to Wave 1. The increase in problem gambling is of greatest concern. Further light will be shed on this issue in the next section.

Table 7. Changes in Gambling Categorization within the Cohort from Wave 1 to 4 among those who completed all four waves (unweighted)

	N	Wave 1: 2013/14		Wave 2: 2015		Plainridge Park Casino Opening	Wave 3: 2016		One Year Postponement	Wave 4: 2018		MGM Springfield Opening	p-value
		%	95% CI	%	95% CI		%	95% CI		%	95% CI		
Non-Gambler	2184	14.1	(12.7, 15.7)	14.7	(13.3, 16.2)		12.9	(11.5, 14.3)		12.5	(11.2, 14.0)		.0042
Recreational Gambler	2184	70.5	(68.5, 72.3)	68.7	(66.7, 70.6)		72.3	(70.3, 74.1)		72.9	(71.0, 74.7)		.0002
At-Risk Gambler	2184	12.8	(11.5, 14.3)	13.5	(12.1, 15.0)		11.8	(10.5, 13.2)		10.8	(9.5, 12.1)		.0060
Problem Gambler	2184	2.6	(2.0, 3.3)	3.1	(2.5, 3.9)		3.1	(2.4, 3.9)		3.8	(3.1, 4.7)		.0153

## Individual Stability of Non-Gambling, Recreational Gambling, At-Risk Gambling, and Problem Gambling across Waves

Figure 1 depicts the stability of the PPGM **Non-Gambling** classification over the four waves for the 309 Non-Gamblers at Wave 1 who subsequently completed all assessments (i.e., had no missing assessments). Each row represents an individual, with white designating Non-Gambling, green designating Recreational Gambling, yellow designating At-Risk Gambling, and red designating Problem or Pathological Gambling. As can be seen, Non-Gambling is a reasonably stable category, with the majority of Non-Gamblers also being Non-Gamblers in the next wave (e.g., 63.4% of Non-Gamblers at Wave 1 were also Non-Gamblers at Wave 2). However, only a minority (38.2%) were Non-Gamblers throughout all four waves. Rather, it was common for Non-Gamblers to transition into Recreational Gambling at some point (altogether, 61.2% of Non-Gamblers at Wave 1 became Recreational Gamblers in either Wave 2, 3, or 4). However, it is also the case that among the Non-Gamblers who made a transition to Recreational Gambling, a minority transitioned back into Non-Gambling in the next wave. The movement back and forth from Non-Gambling to Recreational Gambling is to be expected considering that the single purchase of a lottery or raffle ticket is sufficient to be designated as a Recreational Gambler. Of final note, it was very uncommon for Non-Gamblers to directly transition into At-Risk or Problem Gambling in the next wave (occurring in 1.9% of the sample). Non-Gamblers at Wave 1 also had the lowest risk of ever becoming Problem Gamblers, occurring in just 3/309 (1.0%) of individuals.

Figure 2 depicts the stability of the PPGM **Recreational Gambling** classification over the four waves for the 1539 Recreational Gamblers at Wave 1 who subsequently completed all assessments. Each row represents 50 individuals, with green designating Recreational Gambling, white designating Non-Gambling, yellow designating At-Risk Gambling, and red designating Problem or Pathological Gambling. This figure illustrates that Recreational Gambling is a very stable category with the large majority of Recreational Gamblers also being Recreational Gamblers in the next wave (80.6% of people who were Recreational Gamblers in Wave 1 were also Recreational Gamblers in Wave 2). Furthermore, most (64.7%) Recreational Gamblers at Wave 1 continued to be Recreational Gamblers throughout all four waves, although a small percentage eventually transitioned into Non-Gambling (14.3%) or At-Risk Gambling (19.4%). (Thus, while it is common for Non-Gamblers to transition to Recreational Gambling, it is much less common for Recreational Gamblers to transition to Non-Gambling). Of final note, only 3.3% of Recreational Gamblers in Wave 1 became Problem Gamblers at some point in the subsequent three waves.

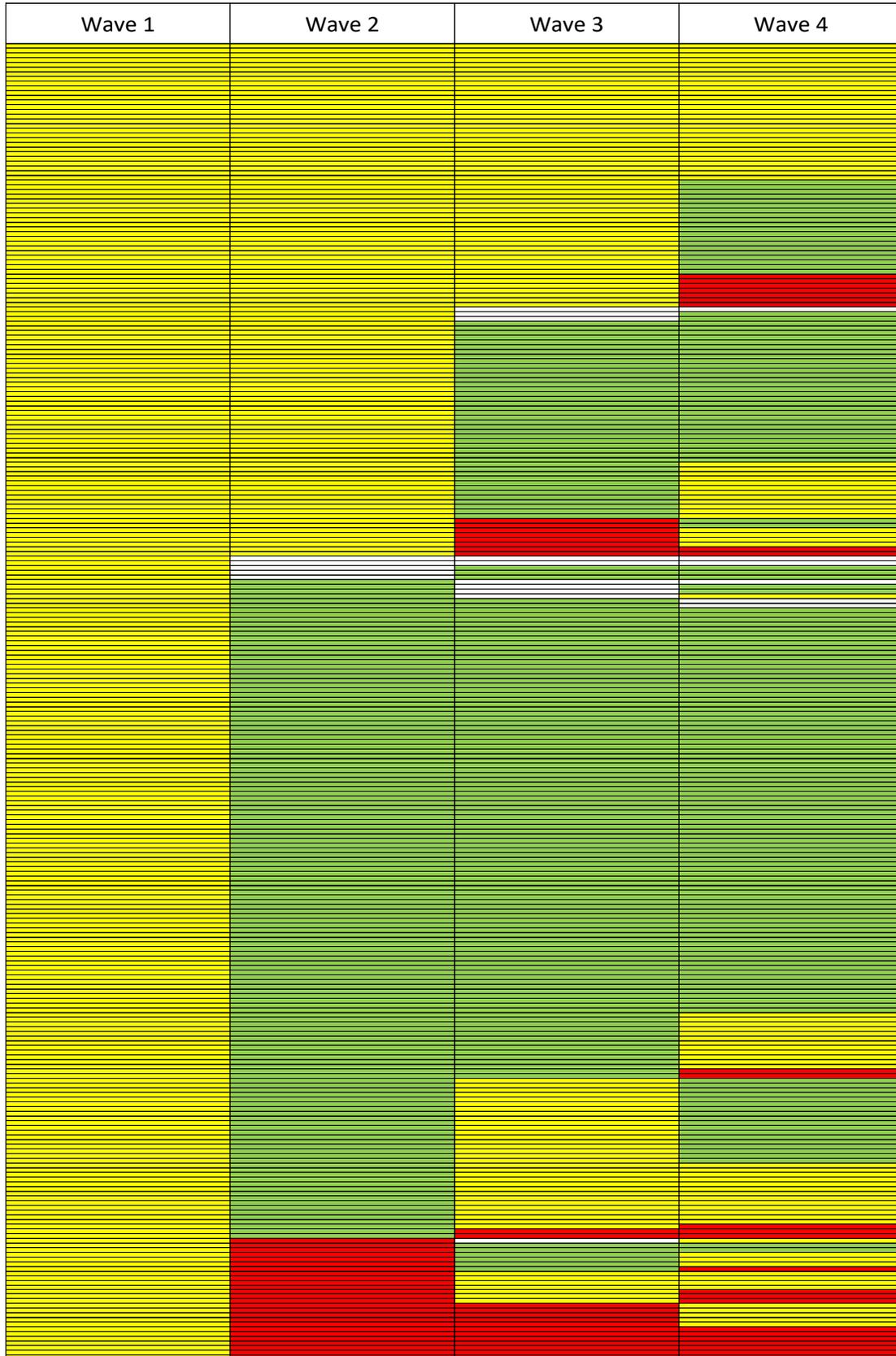
Figure 3 depicts the stability of the PPGM **At-Risk Gambling** classification over the four waves for the 280 At-Risk individuals at Wave 1 who completed all subsequent assessments. Each row represents an individual, with yellow designating At-Risk Gambling. As can be seen, this category displays considerably more instability compared to the Non-Gambling and Recreational Gambling categories. Only a minority of At-Risk individuals continued in this category in the next assessment period (only 38.9% from Wave 1 remained in this category in Wave 2) and only 10.4% of individuals remained in the At-Risk category in all four waves. It is also important to note that although a small but significant percentage of At-Risk Gamblers subsequently become Problem Gamblers ( $46/280 = 16.4\%$ ), a much more common route was for At-Risk gamblers to transition back to Recreational Gambling.

Figure 4 depicts the stability of **Problem Gambling** in the four waves using a problem or pathological designation on the PPGM to designate problem gambling. The figure is restricted to the 156 individuals who were problem or pathological gamblers on the PPGM at any point during the MAGIC study and completed all four assessments. Each row represents an individual, with red designating Problem/Pathological Gambling, yellow designating At-Risk Gambling, green designating Recreational Gambling, and white designating Non-Problem Gambling. Problem Gambling was somewhat more stable than At-Risk Gambling, but still fairly unstable, with the majority of Problem Gamblers transitioning to At-Risk or Recreational Gambling in the next wave. Indeed, one wave was the modal duration of Problem Gambling, occurring in 56.4% of problem gamblers. A longer duration did occur for a significant minority, with 8.3% being in this category in all four waves and many others being in this category for either two or three consecutive waves. Risk of chronic problem gambling tended to increase with each consecutive year of problem gambling status. The relatively short episode duration for most problem gamblers also meant that recovery rates tended to be high, with the majority having at least one year of recovery over the four waves. However, of the 28 that had recovered by Wave 2, 32.1% (9/28) had relapsed either by Wave 3 or 4. The longer-term relapse rate beyond this time frame is unknown, but is expected to be significantly higher. It is instructive to note that almost no individuals transitioned to non-gambling in the following wave, which might account for the high rate of relapse. Our forthcoming Final Report will examine predictors of relapse, including treatment access and qualitative accounts of reasons for recovery. Of final note, although only 16.4% of At-Risk Gamblers subsequently became Problem Gamblers, the onset of Problem Gambling was preceded by being in the At-Risk category in the previous wave 56.9% of the time.





Figure 3. Individual Stability of At-Risk Gambling across Waves (n = 280)



White=Non-Gambling; Green=Recreational Gambling; Yellow=At-Risk Gambling; Red=Problem Gambling



## DISCUSSION

As mentioned, the primary purpose of the present report is to provide a descriptive account of the stability and transitions of problem, at-risk, and recreational gambling over four Waves. A comprehensive Final Report on the MAGIC study within the next 6 months will provide an in-depth interpretive account of the stability and transitions *over the full five waves* as well as present an etiological model of problem gambling and the relevant policy implications. That said, the present findings provide some preliminary data pertaining to a) the potential impact of casino introduction into Massachusetts on gambling and problem gambling (that will be explored in greater detail in future SEIGMA reports); and b) the inherent instability and relapse rates of problem gambling that is of relevance to public health interventions.

At this stage it suffices to restate the main findings thus far:

- Within the cohort there was a significant variation over time in the past year self-reported participation in most individual forms of gambling with the exception of horse race betting and sports betting. In most cases this reflects self-reported increases in Wave 3 or 4 participation rates relative to either Wave 1 or 2 or both. However, there was a decrease in report of out-of-state casino patronization beginning in Wave 3. These increases are coincident with objective evidence of revenue increases (in the case of traditional lottery, instant tickets, raffles). However, changes in how the question was asked likely contributed to the increase in daily lottery games, bingo, and online gambling.
- Within the cohort there was also significant changes in the relative prevalence of the four gambling categories. An increase in Recreational Gambling is evident beginning in Wave 3 along with a corresponding decrease in Non-Gambling. There was a decrease in the prevalence of At-Risk Gambling in Wave 4 that is offset somewhat by an increase in problem gambling in this wave.
- In both of the above situations, statistically significant differences are commonly obtained when utilizing large sample sizes (over 2,000 in the present case), and do not necessarily denote large meaningful differences between waves.
- The *individual stability* of PPGM gambling categories varied as a function of category.
  - Non-Gambling was a fairly stable classification, with the majority of Non-Gamblers in one wave continuing to be Non-Gamblers at the next wave. That said, transitioning to Recreational Gambling was not uncommon.
  - Recreational Gambling had the most stable behavioral patterns, with the large majority of Recreational Gamblers continuing to be Recreational Gamblers in the next wave, and 64.7% continuing to be Recreational Gamblers throughout all four waves.
  - At-Risk Gamblers had the most unstable pattern, with only a minority continuing to be in this category in the next wave and only 10.4% continuing in this category for four consecutive waves. Although a significant percentage of At-Risk Gamblers subsequently become Problem Gamblers (16.4%), a much more common route was transitioning back to Recreational Gambling.
  - Problem gambling was somewhat more stable than At-Risk Gambling, but still fairly unstable. One wave was the modal duration of Problem Gambling, occurring in 56.4% of problem gamblers. A longer duration did occur for a significant minority, with 28.3% being in this category in all four waves and a several others being in this category for either two or three consecutive waves. Risk of chronic problem gambling tended to increase with each consecutive year of problem gambling status. The relatively short episode duration for most problem gamblers also meant that recovery rates tended to be high. However, of those that

recovered by Wave 2, 32.1% relapsed in either Wave 3 or Wave 4. The longer-term relapse rate beyond this time frame is unknown, but is expected to be significantly higher.

## REFERENCES

- Abbott, M., Bellringer, M., & Garrett, N. (2018). *New Zealand national gambling study: wave 4 (2015). Report number 6*. Auckland: NZ.
- American Association for Public Opinion Research (AAPOR). (2015). *Standard definitions: Final dispositions of case codes and outcome rates for surveys (8th edition ed.)*. Deerfield, IL: AAPOR.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5)*. Arlington, VA: American Psychiatric Publishing.
- Billi, R., Stone, C. A., Marden, P., & Yeung, K. (2014). *The Victorian Gambling Study: A longitudinal study of gambling and health in Victoria, 2008–2012*. Victorian Responsible Gambling Foundation.
- Claus, R.E, Kindleberger, L.R. & Dugan, M.C. (2002). Predictors of attrition in a longitudinal study of substance abusers. *Journal of Psychoactive Drugs*, 34, 69-74.
- Costa, P.T. & McCrae, R.R. (1992). *NEO PI-R Professional Manual*. Odessa, FL: Psychological Assessment Resources.
- De Graaf, R., Bijl R., Smit, F., Ravelli, A. & Vollebergh, W.A. (2000). Psychiatric sociodemographic predictors of attrition in a longitudinal study: The Netherlands Mental Health Survey and Incidence Study. *American Journal of Epidemiology*, 1152 (11), 1039-1047.
- Eaton, W.W., Anthony, J.C., Tepper, S. & Dryman, A. (1992). Psychopathology and attrition in The Epidemiologic Catchment Area surveys. *American Journal of Epidemiology*, 135 (9), 1051-9.
- el-Guebaly, N., Casey, D. M., Currie, S., Hodgins, D. C., Schopflocher, D., Smith, G. J., & Williams, R. J. (2015). *The Leisure, Lifestyle, and Lifecycle Project (LLLP): A longitudinal study of gambling in Alberta*. Retrieved from Edmonton:  
[http://dspace.ucalgary.ca/bitstream/1880/50377/1/LLLP\\_Final\\_Report\\_Feb21\\_2015\\_V4.pdf](http://dspace.ucalgary.ca/bitstream/1880/50377/1/LLLP_Final_Report_Feb21_2015_V4.pdf)
- Ferris, J., & Wynne, H. (2001). *The Canadian Problem Gambling Index: Final report*. Retrieved from Ottawa: <http://www.ccgr.ca/wp-content/uploads/2013/03/CPGI-Final-Report-English.pdf>
- Leonard, C., Williams, R.J., & Vokey, J. (2015). Gambling fallacies: What are they and how are they best measured? *Journal of Addiction Research & Therapy*, 6 (4), 256.  
<http://dx.doi.org/10.4172/21556105.1000256>
- Leonard, C.A., & Williams, R.J. (2016). The relationship between gambling fallacies and problem gambling. *Psychology of Addictive Behavior*, 30 (6), 694-704.
- Levenson, M., Kiehl, K. & Fitzpatrick, C. (1995). Assessing psychopathic attributes in a noninstitutionalized population". *Journal of Personality and Social Psychology*, 68, 151-158.
- Massachusetts Lottery Commission (2019). *Financial Statements. Fiscal Year 2019, 2018, 2017, 2016, 2015, 2014*.
- Massachusetts Lottery Commission Charitable Gaming Division (2014). *Charitable Gaming 2014 Annual Report*. <http://archives.lib.state.ma.us/handle/2452/392382>
- Massachusetts Lottery Commission Charitable Gaming Division (2015). *Charitable Gaming 2015 Annual Report*. <http://archives.lib.state.ma.us/handle/2452/392383>
- Massachusetts Lottery Commission Charitable Gaming Division (2016). *Charitable Gaming 2016 Annual Report*. <http://archives.lib.state.ma.us/handle/2452/674737>
- Massachusetts Lottery Commission Charitable Gaming Division (2017). *Charitable Gaming 2017 Annual Report*. <http://archives.lib.state.ma.us/handle/2452/783467>
- Massachusetts Lottery Commission Charitable Gaming Division (2018). *Charitable Gaming 2018 Annual Report*. <http://archives.lib.state.ma.us/handle/2452/800699>

- Mazar, A., Volberg, R. A., Williams, R. J., Stanek, E. J., Zorn, M. (2019). *The MA Gambling Impact Cohort: Analyses Across Three Waves*. Amherst, MA: School of Public Health and Health Sciences, University of Massachusetts Amherst.
- Mochari, I. (2015, October 9, 2015). Why DraftKings and FanDuel spent \$206 million on ads this year. *Inc*. Retrieved from <https://www.inc.com/ilan-mochari/fantasy-sports-betting-startups-206-million-tv-ads.html>
- Miller, J. D., Gaughan, E. T., and Pryor, L. R. (2008). The Levenson Self-Report Psychopathy Scale. An Examination of the Personality Traits and Disorders Associated With the LSRP Factors. *Assessment, 15*, 450-463.
- Romild, U., Volberg, R. A., & Abbott, M. W. (2014). The Swedish Longitudinal Gambling Study (Swelogs): Design and methods of the epidemiological (EP-) track. *International Journal of Methods in Psychiatric Research, 23*(3), 372-386.
- Sellbom, M. (2011). Elaborating on the construct validity of the Levenson self-report psychopathy scale in incarcerated and non-incarcerated samples. *Law and Human Behavior, 35*, 440-451.
- Serlin, R. C., Carr, J., and Marascuillo, L. A. (1982). A measure of association for selected nonparametric procedures. *Psychological Bulletin, 92*:786–790.
- Tucker, C., Vuchinich, R.E. & Gladsjo, J.A. (1994). Environmental events surrounding natural recovery from alcohol-related problems. *Journal of Addictions Nursing, 6*, 117-128.
- Volberg, R. A., Williams, R. J., Stanek, E. J., Houpt, K. A., Zorn, M., Rodriguez-Monguio, R. (2017). *Gambling and Problem Gambling in Massachusetts: Results of a Baseline Population Survey*. Amherst, MA: School of Public Health and Health Sciences, University of Massachusetts Amherst. [https://www.umass.edu/seigma/sites/default/files/Updated%20BGPS%20Report\\_Final.pdf](https://www.umass.edu/seigma/sites/default/files/Updated%20BGPS%20Report_Final.pdf)
- Volberg, R. A., Williams, R. J., Stanek, E. J., Zorn, M., Mazar, A. (2017). *Analysis of MAGIC Wave 2: Incidence and Transitions*. Amherst, MA: School of Public Health and Health Sciences, University of Massachusetts Amherst.
- Vuchinich, R. E., Tucker, J. A. & Harlee, L. M. (1986, August). *Individual Differences in the Reliability of Alcoholics' Reports of Drinking*. Poster presented at the 94<sup>th</sup> Annual Convention of the American Psychological Association, Washington, D.C.
- Williams, R. J., Hann, R., Schopflocher, D., West, B., McLaughlin, P., White, N., . . . Flexhaug, T. (2015). *Quinte Longitudinal Study of Gambling and Problem Gambling*. Retrieved from <https://www.uleth.ca/dspace/bitstream/handle/10133/3641/QLS-OPGRC-2015.pdf?sequence=3>
- Williams, R.J. & Volberg, R.A. (2009). Impact of survey description, administration format, and exclusionary criteria on population prevalence rates of problem gambling. *International Gambling Studies, 9* (2), 101-117.
- Williams, R. J., & Volberg, R. A. (2010). *Best practices in the population assessment of problem gambling*. Retrieved from Guelph: <http://www.gamblingresearch.org/content/research.php?appid=2500>
- Williams, R. J., & Volberg, R. A. (2014). The classification accuracy of four problem gambling assessment instruments in population research. *International Gambling Studies, 14*(1), 15-28.
- Williams, R. J., Volberg, R. A., & Stevens, R. M. G. (2012). *The population prevalence of problem gambling: Methodological influences, standardized rates, jurisdictional differences, and worldwide trends*. Retrieved from Guelph: <https://www.uleth.ca/dspace/handle/10133/3068>
- Williams, R. J., West, R., & Simpson, R. I. (2012). *Prevention of problem gambling: A comprehensive review of the evidence and identified best practices*. Retrieved from Guelph: <http://hdl.handle.net/10133/3121>
- Wood, R. T., & Williams, R. J. (2007). How much money do you spend on gambling? The comparative validity of question wordings used to assess gambling expenditure. *International Journal of Social Research Methodology, 10*(1), 63-77.

## APPENDIX A: WAVE 4 QUESTIONNAIRE

# Massachusetts Gambling Impact Cohort Study



**Please have the adult in your household (18 years or older)  
who previously participated in the Massachusetts  
Gambling Impact Cohort Study complete this survey.**

**MAGIC**  **MASSACHUSETTS GAMBLING  
IMPACT COHORT STUDY**

UNIVERSITY OF MASSACHUSETTS SCHOOL OF PUBLIC HEALTH AND HEALTH SCIENCES

## Instructions for Completing the Booklet

This booklet contains several types of questions. Each question should be answered only about yourself, not anyone else in your household.

- For some questions, you answer the question by marking a box, like this:  
<sup>1</sup>  Yes  
<sup>2</sup>  No
- For some questions, you answer the question by filling in one number per box, like this:  

0	9
---	---

*Number of Days*
- You will sometimes be instructed to skip one or more questions. In this example, if your choice is 'No', you skip to question 10; otherwise, you continue to the next question.  
<sup>1</sup>  Yes  
<sup>2</sup>  No → GO TO 10
- This survey asks many questions about gambling as a recreational activity. We would like you to participate even if you have never gambled. It is important that we collect information that is representative of the state of Massachusetts.

## Definitions

For the purposes of this survey, please refer to the definitions below for the following terms.

- “Non-medical” drug use means using it to get high or experience pleasurable effects, see what the effects are like, or use with friends.
- “Serious” means something that either you or someone else would say is considerable, important, or major, either because of its frequency or significance.
- A high risk stock is a stock from a company that has a real risk of going out of business and/or having their stock price double or triple in value in the next year.
- An “underground” casino is a place with unlicensed slot machines or casino game tables.
- A “sportsbook” is a venue where someone can place a bet on a sporting event.
- A “bookmaker” or “bookie” is an organization or person that takes bets on sporting events.
- “eSports” are professional video game competitions.

The University of Massachusetts is conducting a longitudinal study about gambling in Massachusetts. This survey is private and confidential. We have a Federal Certificate of Confidentiality that is designed to protect the confidentiality of your research data from a court order or subpoena. We can provide you with more information if you would like. You don't have to answer any question you don't want to, and you can stop at any time. Almost everyone will be able to finish the survey within 20 to 40 minutes.

If you have questions about the Federal Certificate of Confidentiality, please visit:

<http://grants.nih.gov/grants/policy/coc/faqs.htm#187>.

## Health Section

We would like to start by asking you questions about your health.

1. Over the past 12 months, would you say that in general your health has been...

- 1 Excellent
- 2 Very good
- 3 Good
- 4 Fair
- 5 Poor

2. Do you have any physical disability or chronic health problem that limits the amount or kind of activity you can do at home, work or school?

- 1 Yes
- 2 No

3. In the past 12 months, how would you rate your overall level of stress? Would you say...

- 1 Very high
- 2 High
- 3 Moderate
- 4 Low
- 5 Very low

4. Check off any events that have happened to you in the past 12 months. Check all that apply.

### Work/School

- 1 Started school
- 2 Experienced significant difficulties at school
- 3 Dropped out of school
- 4 Started a new job
- 5 Had a significant change in work hours, work demands, or work type
- 6 Received an important promotion
- 7 Had serious conflict(s) at work
- 8 Suffered a significant business loss or failure
- 9 Had difficulty finding employment
- 10 Was laid off or fired
- 11 Retired

### Family and Friends

- 12 Moved to new location/house
- 13 Became pregnant (or spouse became pregnant)
- 14 Experienced a miscarriage or abortion

### Family and Friends (continued)

- 15 Had a new addition to the family through birth or adoption
- 16 Son or daughter left home
- 17 Started a relationship with a new boyfriend/girlfriend
- 18 Got married
- 19 Had serious conflicts or difficulties with spouse or partner
- 20 Broke up with boyfriend/girlfriend
- 21 Separated or divorced
- 22 Had serious conflicts with family member(s)
- 23 Had serious conflicts with close friend(s)
- 24 Had serious conflicts with neighbor(s)
- 25 Had serious conflicts with ex-spouse
- 26 Death of spouse or partner
- 27 Death of other close family member
- 28 Death of close friend
- 29 Serious illness or injury in family member or close friend
- 30 Death of important family pet

### Property and Finances

- 31 Suffered a significant financial loss
- 32 Declared bankruptcy
- 33 Went on social support or welfare
- 34 Suffered a significant loss or damage of property
- 35 Borrowed a significant amount of money (e.g., mortgage)
- 36 Had a significant financial improvement

### Legal Matters/Crime

- 37 Arrested or charged with a crime
- 38 Placed in jail
- 39 Became involved in lawsuit
- 40 Received serious threats or harassment
- 41 Was assaulted
- 42 Was robbed
- 43 Was a victim of some other crime
- 44 Caused a serious accident that injured or killed someone

### Health

- 45 Witnessed a serious accident that injured or killed someone
- 46 Suffered a serious injury as a result of an accident
- 47 Became seriously overweight or underweight
- 48 Developed a serious physical illness
- 49 Developed a serious mental illness
- 50 Developed a drug or alcohol addiction

If at Question 4, you selected any of the options below, please continue to Question 5. If none of these items were selected, please go to Question 6.

- Death of spouse or partner
- Death of other close family member
- Death of close friend
- Serious illness or injury in family member or close friend
- Received serious threats or harassment
- Was assaulted
- Was robbed
- Was a victim of some other crime
- Caused a serious accident that injured or killed someone
- Witnessed a serious accident that injured or killed someone
- Suffered a serious injury as a result of an accident

5. Did any of the following symptoms occur for at least a month as a result of one or more of the options listed in the instructions to the left?

Check all that apply.

- Recurrent intrusive distressing memories of the event
- Recurrent distressing dreams about the event
- Flashbacks, in which you felt you were reliving the event
- Intense psychological distress to reminders of the event
- Intense physical reactions to reminders of the event
- Avoidance of distressing memories, thoughts, or feelings about the event
- Avoidance of external reminders (people, places, etc.) that might lead to memories, thoughts, or feelings about the event
- Inability to remember an important part of the event
- Persistent and exaggerated negative beliefs or expectations about oneself, others, or the world (e.g., "I am bad", "No one can be trusted", "The world is dangerous")
- Persistent, distorted beliefs about the cause or consequences of the event that has led you to blame yourself or others
- Persistent negative emotions (fear, horror, anger, guilt, shame)
- Markedly decreased interest or participation in activities
- Feelings of detachment from others
- Persistent inability to experience positive emotions
- Irritable behavior and angry outbursts
- Reckless or self-destructive behavior
- Over-vigilance or over-alertness
- Exaggerated startled response
- Difficulty concentrating
- Difficulty sleeping

6. In the past 12 months, how would you rate your overall level of happiness? Would you say...

- Very high
- High
- Moderate
- Low
- Very low

7. Have you used tobacco or e-cigarettes in the past 12 months (includes cigarettes, cigars, pipe tobacco, shisha tobacco, chewing tobacco, dipping tobacco, snuff)?

- <sup>1</sup>  Yes
- <sup>2</sup>  No → GO TO 10

8. Which of the following products have you used? *Check all that apply.*

- <sup>1</sup>  Cigarettes
- <sup>2</sup>  Electronic cigarettes (e-cigarettes)
- <sup>3</sup>  Cigars
- <sup>4</sup>  Pipe tobacco
- <sup>5</sup>  Shisha tobacco
- <sup>6</sup>  Chewing tobacco
- <sup>7</sup>  Dipping tobacco
- <sup>8</sup>  Snuff

9. Have you used tobacco or e-cigarettes in the past 30 days (includes cigarettes, cigars, pipe tobacco, shisha tobacco, chewing tobacco, dipping tobacco, snuff)?

- <sup>1</sup>  Yes
- <sup>2</sup>  No

10. How often have you used alcohol in the past 12 months?

- <sup>1</sup>  4 or more times a week
- <sup>2</sup>  2-3 times a week
- <sup>3</sup>  Once a week
- <sup>4</sup>  2-3 times a month
- <sup>5</sup>  Once a month
- <sup>6</sup>  Less than once a month
- <sup>7</sup>  Not at all

11. In the past 12 months how often have you used any marijuana, hallucinogens (such as LSD, mushrooms, or PCP), cocaine, amphetamines, heroin, opium, fentanyl, or any other drugs not intended for medical use? *If you are not sure what is considered non-medical drug use, please refer to the definitions on the inside cover.*

- <sup>1</sup>  4 or more times a week
- <sup>2</sup>  2-3 times a week
- <sup>3</sup>  Once a week
- <sup>4</sup>  2-3 times a month
- <sup>5</sup>  Once a month
- <sup>6</sup>  Less than once a month
- <sup>7</sup>  Not at all

12. Which drugs have you used for nonmedical purposes in the past 12 months? *Check all that apply.*

- <sup>1</sup>  Cannabis (marijuana, hashish, weed, pot)
- <sup>2</sup>  Benzodiazepines (downers)
- <sup>3</sup>  Amphetamines (methamphetamine, ice, uppers, crystal, speed)
- <sup>4</sup>  Ecstasy/MDMA
- <sup>5</sup>  Cocaine (coke, crack)
- <sup>6</sup>  Opiates and Opioids (opium, morphine, codeine, Oxycontin, fentanyl, heroin, Demerol, Talwin, Percocet)
- <sup>7</sup>  Hallucinogens (LSD, mushrooms, PCP, mescaline/peyote, ayahuasca)
- <sup>8</sup>  Other (khat, bath salts, salvia)

---

*If you selected "Less than once a month" or "Not at all" for Question 10 **AND** Question 11, go to Question 15. Otherwise, continue to Question 13.*

---

13. In the past 12 months has your use of alcohol or other drugs been associated with any of the following? *Check all that apply.*

- <sup>1</sup>  Often taken in larger amounts or over a longer period than intended
- <sup>2</sup>  A persistent desire or unsuccessful efforts to cut down or control use
- <sup>3</sup>  A great deal of time spent in activities necessary to obtain the substance
- <sup>4</sup>  Strong cravings for the substance
- <sup>5</sup>  Recurrent use resulting in a failure to fulfill major role obligations at work, school, or home
- <sup>6</sup>  Continued use despite the substance causing or worsening social or interpersonal problems
- <sup>7</sup>  Continued use despite the substance causing or worsening a physical or psychological problem
- <sup>8</sup>  Important social, occupational, or recreational activities given up or reduced because of use
- <sup>9</sup>  Recurrent use in situations in which it was physically dangerous
- <sup>10</sup>  Tolerance to the substance (needing more of it to have the same effect)
- <sup>11</sup>  Withdrawal symptoms when not using the substance

14. During the past 12 months, have you sought help for your use of alcohol or drugs?

- <sup>1</sup>  Yes
- <sup>2</sup>  No

If you would like information regarding treatment resources, please see page 21 for contact information.

15. **Prior to the past 12 months, have you had any significant problems with overuse of drugs or alcohol?**  
1  Yes  
2  No
16. **In the past 12 months have you had any problems with other behavior such as overeating, sex or pornography, shopping, exercise, Internet chat lines, or other things? What we mean is difficulties controlling the behavior which has led to significant negative consequences for you or other people.**  
1  Yes  
2  No → GO TO 18
17. **Which specific activities have you had problems with? Check all that apply.**  
1  Overeating  
2  Sex or pornography  
3  Exercise  
4  Shopping  
5  Internet chat lines  
6  Video or internet gaming  
91  Other
18. **Prior to the past 12 months, have you had any significant problems with excessive involvement in overeating, sex or pornography, shopping, exercise, Internet chat lines, or other things?**  
1  Yes  
2  No
19. **In the past 12 months, was there ever a period of 2 weeks or longer where you had a depressed mood most of the day nearly every day and/or a loss of interest or pleasure in most activities?**  
1  Yes  
2  No → GO TO 21
20. **Check off any of the following that occurred during this time period. Check all that apply.**  
1  Significant weight loss or weight gain or an increase or decrease in appetite  
2  Problems sleeping or excessive sleeping nearly every day  
3  Physical agitation or being slowed down nearly every day  
4  Fatigue or loss of energy nearly every day  
5  Feelings of worthlessness or excessive or inappropriate guilt  
6  Decreased ability to think or concentrate or indecisiveness nearly every day  
7  Recurrent thoughts of death or suicide
21. **Would you describe yourself as chronically anxious? (i.e., having excessive anxiety and worry most days about a variety of things)?**  
1  Yes  
2  No → GO TO 24 ON PAGE 5
22. **Does this anxiety cause significant distress or impairment in your social functioning, employment, or other areas?**  
1  Yes  
2  No → GO TO 24 ON PAGE 5
23. **Do you also have any of the following symptoms? Check all that apply.**  
1  Restlessness or feeling keyed up or on edge  
2  Easily fatigued  
3  Difficulty concentrating or mind going blank  
4  Irritability  
5  Muscle tension  
6  Difficulty sleeping

24. In the past 12 months have you had recurrent unexpected panic attacks during which 4 or more of the following symptoms occur:

- Pounding heart
- Sweating
- Trembling
- Shortness of breath
- Feelings of choking
- Chest pain
- Nausea
- Dizziness
- Chills or hot flashes
- Numbness
- Feelings of unreality
- Fear of losing control
- Fear of dying?

<sup>1</sup>  Yes

<sup>2</sup>  No → GO TO 26

25. Have these attacks been followed by either a persistent worry about having additional attacks and/or avoidance of activities (e.g., exercise) or unfamiliar places?

<sup>1</sup>  Yes

<sup>2</sup>  No

26. In the past 12 months have you had *any other* significant mental health problem that has not been mentioned (e.g., bipolar disorder, schizophrenia, bulimia, obsessive-compulsive disorder, agoraphobia)?

<sup>1</sup>  Yes

<sup>2</sup>  No

*If you would like information regarding mental health treatment resources, please see page 21 for contact information.*

## Gambling Attitudes

*For the following words, write down the very first word or phrase that comes to mind after reading the word (e.g., salt: pepper; black: white; water: drink).*

27. **Streak:**

28. **Ticket:**

29. **Win:**

30. **Game:**

31. **Money:**

32. **Loss:**

*For the following phrases, write down the very first behavior that comes to mind. For example: feeling hungry: have a snack; feeling tired: nap. Keep your answers short; limit yourself to a single word or phrase.*

33. **Feeling bored:**

34. **Have fun:**

35. **Feeling lonely:**

36. **Pass the time:**

37. **Do something thrilling:**

38. **Make money:**

*These questions ask you to categorize your previous answers. For each answer indicate the category or categories you believe your answer best fits into or relates to. Please do not change any previous responses when answering this series.*

**39. Streak: [your response to 27]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**40. Ticket: [your response to 28]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**41. Win: [your response to 29]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**42. Game: [your response to 30]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**43. Money: [your response to 31]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**44. Loss: [your response to 32]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**45. Feeling bored: [your response to 33]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**46. Have fun: [your response to 34]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**47. Feeling lonely: [your response to 35]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**48. Pass the time: [your response to 36]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**49. Do something thrilling: [your response to 37]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

**50. Make money: [your response to 38]**

- <sup>1</sup> Recreation/leisure
- <sup>2</sup> Gambling
- <sup>3</sup> Food
- <sup>4</sup> Friends/Family
- <sup>5</sup> Alcohol
- <sup>6</sup> Other

Now we would like to ask you some questions about gambling.

We define gambling 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 tickets, scratch tickets, bingo, betting against a friend on a game of skill or chance, betting on horse racing or sports, investing in high risk stocks, etc.

51. Which best describes your belief about the benefit or harm that gambling has for society? Would you say...
- <sup>1</sup>  The harm far outweighs the benefits
  - <sup>2</sup>  The harm somewhat outweighs the benefits
  - <sup>3</sup>  The benefits are about equal to the harm
  - <sup>4</sup>  The benefits somewhat outweigh the harm
  - <sup>5</sup>  The benefits far outweigh the harm
52. Do you believe that gambling is morally wrong?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
53. Which of the following best describes your opinion about *legalized* gambling? Would you say...
- <sup>1</sup>  All types of gambling should be legal
  - <sup>2</sup>  Some types of gambling should be legal and some should be illegal
  - <sup>3</sup>  All types of gambling should be illegal
54. Which of the following best describes your opinion about gambling opportunities in Massachusetts? Would you say...
- <sup>1</sup>  Gambling is too widely available
  - <sup>2</sup>  Gambling is not available enough
  - <sup>3</sup>  The current availability of gambling is fine

## Past Gambling Behaviors

The following questions ask about frequency of participation and spending on each type of gambling. Spend means how much you are ahead (+\$) or behind (-\$), or your net win or loss in an average month in the past 12 months.

55. In the past 12 months, how often have you purchased *lottery tickets* such as *Megabucks, Powerball, or Lucky for Life*? This does not include daily lottery games (e.g., *Mass Cash, Numbers Game, Keno, All or Nothing*) or instant tickets, pull tabs, or raffle tickets. Would you say...
- <sup>1</sup>  4 or more times a week
  - <sup>2</sup>  2-3 times a week
  - <sup>3</sup>  Once a week
  - <sup>4</sup>  2-3 times a month
  - <sup>5</sup>  Once a month
  - <sup>6</sup>  Less than once a month
  - <sup>7</sup>  Not at all → GO TO 58
56. Roughly how much money do you spend on lottery tickets in a typical month?
- \$  ,  ,
57. Did you purchase these *lottery tickets* in person or online? Check all that apply.
- <sup>1</sup>  In-person
  - <sup>2</sup>  Online
58. In the past 12 months, how often have you purchased instant tickets or pull tabs? Would you say...
- <sup>1</sup>  4 or more times a week
  - <sup>2</sup>  2-3 times a week
  - <sup>3</sup>  Once a week
  - <sup>4</sup>  2-3 times a month
  - <sup>5</sup>  Once a month
  - <sup>6</sup>  Less than once a month
  - <sup>7</sup>  Not at all → GO TO 61 ON PAGE 8
59. Roughly how much money do you spend on instant tickets or pull tabs in a typical month?
- \$  ,  ,
60. Did you purchase these *instant tickets* or *pull tabs* in person or online? Check all that apply.
- <sup>1</sup>  In-person
  - <sup>2</sup>  Online

61. In the past 12 months, how often have you purchased *raffle tickets*? Would you say...?

- <sup>1</sup>  4 or more times a week
- <sup>2</sup>  2-3 times a week
- <sup>3</sup>  Once a week
- <sup>4</sup>  2-3 times a month
- <sup>5</sup>  Once a month
- <sup>6</sup>  Less than once a month
- <sup>7</sup>  Not at all → GO TO 63

62. Roughly how much money do you spend on raffle tickets in a typical month?

- \$  ,  ,

63. In the past 12 months, how often have you played *daily lottery games* such as *Mass Cash, Keno, All or Nothing, Numbers Game*? Would you say...

- <sup>1</sup>  4 or more times a week
- <sup>2</sup>  2-3 times a week
- <sup>3</sup>  Once a week
- <sup>4</sup>  2-3 times a month
- <sup>5</sup>  Once a month
- <sup>6</sup>  Less than once a month
- <sup>7</sup>  Not at all → GO TO 65

64. Roughly how much money do you spend on daily lottery games in a typical month?

- \$  ,  ,

65. In the past 12 months, how often have you bet money or gambled on *sports* (this includes social betting, online betting, fantasy sports, and eSports)? Would you say...

- <sup>1</sup>  4 or more times a week
- <sup>2</sup>  2-3 times a week
- <sup>3</sup>  Once a week
- <sup>4</sup>  2-3 times a month
- <sup>5</sup>  Once a month
- <sup>6</sup>  Less than once a month
- <sup>7</sup>  Not at all → GO TO 75 ON PAGE 9

66. Roughly how much money do you spend on sports betting in a typical month?

- \$  ,  ,

67. What type of sports betting did you engage in? For a definition of *sportsbook* or *eSports*, please refer to inside cover. Check all that apply.

- <sup>1</sup>  Office sports pools or social betting against friends or family
- <sup>2</sup>  Placing bets with a legal land-based sportsbook outside of Massachusetts
- <sup>3</sup>  Placing bets with an illegal/underground land-based sportsbook or bookmaker in Massachusetts
- <sup>4</sup>  Placing bets on sporting events with an online sportsbook
- <sup>5</sup>  Online fantasy sports
- <sup>6</sup>  eSports

---

If you selected "Online fantasy sports" for Question 67, then continue to Question 68. Otherwise, go to Question 75 on page 9.

---

68. Do you play traditional fantasy sports (where results are determined at the end of the season) or daily fantasy sports (where results are determined on a daily or weekly basis)?

- <sup>1</sup>  Traditional fantasy sports → GO TO 75 ON PAGE 9
- <sup>2</sup>  Daily fantasy sports
- <sup>3</sup>  Both traditional and daily fantasy sports

69. Which internet sites do you most often use to play daily fantasy sports? Check all that apply.

- <sup>1</sup>  DraftKings
- <sup>2</sup>  FanDuel
- <sup>3</sup>  DraftDay
- <sup>91</sup>  Other (specify)

70. In the past 30 days, on the days that you played, how many hours on average did you spend on daily fantasy sports?

71. In the past 30 days, what has your usual balance been in your daily fantasy sports account(s)?

\$  ,  ,

72. In the past 30 days, how much have you deposited into your daily fantasy sports account(s)?

\$  ,  ,

73. In the past 30 days, how much money have you cashed out from your daily fantasy sports account(s)?

\$  ,  ,

74. Considering all the time you spend on all your gambling activities, what percentage of time involves playing daily fantasy sports?

%

75. In the past 12 months, how often have you played *bingo* either in person or online (this includes electronic bingo machines)?  
Would you say...

- 1 4 or more times a week
- 2 2-3 times a week
- 3 Once a week
- 4 2-3 times a month
- 5 Once a month
- 6 Less than once a month
- 7 Not at all → GO TO 80

76. Roughly how much money do you spend on bingo in a typical month?

- \$  ,  ,

77. How and where do you play bingo?  
*Check all that apply.*

- 1 In person at a bingo hall in Massachusetts
- 2 In person at a bingo hall outside Massachusetts
- 3 At an online bingo site

78. In the past 12 months, how often have you spent money on *electronic gambling machines* (i.e., slot machines, video lottery terminals, electronic casino table games) either in person or online?

- 1 4 or more times a week
- 2 2-3 times a week
- 3 Once a week
- 4 2-3 times a month
- 5 Once a month
- 6 Less than once a month
- 7 Not at all → GO TO 80

79. Roughly how much money do you spend on electronic gambling machines in a typical month?

- \$  ,  ,

80. In the past 12 months how often have you bet money on any *casino table game* such as poker, blackjack, baccarat, roulette, craps, mah-jong, sic-bo, pai gow, either in person or online?

*This does not include automated electronic versions of these games, which should be reported in the question about electronic gambling machines.*

- 1 4 or more times a week
- 2 2-3 times a week
- 3 Once a week
- 4 2-3 times a month
- 5 Once a month
- 6 Less than once a month
- 7 Not at all

81. Roughly how much money do you spend on casino table games in a typical month?

- \$  ,  ,

---

*If you did not bet money on electronic gambling machines or casino table games in the past 12 months, please go to Question 92 on page 10. Otherwise, continue to Question 82.*

---

82. Where did you play these electronic gambling machines and/or casino table games? *Check all that apply.*

- 1 At the Plainridge Park Casino in Plainville, Massachusetts
- 2 At a land-based casino, slot parlor, slots at racetrack, or card room outside of Massachusetts
- 3 At an online casino or card/poker room
- 4 At an underground/illegal casino, slot parlor, or card room in Massachusetts
- 5 At a private residence

83. Roughly what percentage of your spending on electronic gambling machines and/or casino table games is done at each location? *The percentages should add up to 100%.*

1    % Plainridge Park Casino in Plainville, Massachusetts

2    % Land-based casino, slot parlor, slots at racetrack, or card room outside of Massachusetts

3    % Online casino or card/poker room

4    % Underground/illegal casinos, slot parlor, or card room in Massachusetts

5    % At a private residence

*If you selected "At a land-based casino, slot parlor, slots at racetrack, or card room outside of Massachusetts" at Question 82, continue to Question 84. If you did **NOT** select this option, go to Question 88.*

84. In the past 12 months, how many times have you played electronic gambling machines or casino table games at a casino, slots parlor, slots at racetrack, or card room outside of Massachusetts?

number of times

85. In the past 12 months, roughly how much money did you spend on *gambling* per visit in out of state casinos, slots parlors, slots at racetracks, and card rooms?

- \$  ,    ,

86. In the past 12 months, roughly how much money did you spend on *nongambling activities* (such as food, travel, lodging, entertainment) per visit in out of state casinos, slots parlors, slots at racetracks, and card rooms?

\$   ,

87. Which specific casino or slots parlor do you most often go to?

- 1  Atlantic City Casino (NJ)
- 2  Nevada Casino
- 3  Empire City (Yonkers, NY)
- 4  Foxwoods (Ledyard, CT)
- 5  Hollywood Slots (Bangor, ME)
- 6  Mohegan Sun (Uncasville, CT)
- 7  Monticello (Monticello, NY)
- 8  Newport Grand (Newport, RI)
- 9  Oxford Casino (Oxford, ME)
- 10  Resorts World (Queens, NY)
- 11  Rivers Casino & Resort (Schenectady, NY)
- 12  Saratoga Casino & Raceway (Saratoga, NY)
- 13  Tiverton Casino (RI)
- 14  Turning Stone (Verona, NY)
- 15  Twin River (Lincoln, RI)
- 16  Vernon Downs (Vernon, NY)
- 91  Other

88. Do you have a casino player rewards card (e.g., Marquee Rewards)?

- 1  Yes
- 2  No → GO TO 92

89. Is this a rewards card for a Massachusetts casino?

- 1  Yes
- 2  No → GO TO 92

90. Have you used the PlayMyWay tool on your card allowing you to set spending limits?

- 1  Yes
- 2  No → GO TO 92

91. Have you found this tool useful in managing your gambling?

- 1  Yes
- 2  No

92. In the past 12 months, how often have you bet on *horse racing* or *dog racing* either in person, by phone, or online? Would you say...?

- 1  4 or more times a week
- 2  2-3 times a week
- 3  Once a week
- 4  2-3 times a month
- 5  Once a month
- 6  Less than once a month
- 7  Not at all → GO TO 95 ON PAGE 11

93. Roughly how much money do you spend on horse or dog racing in a typical month?

- \$  ,  ,

94. Where do you most often bet on horse or dog racing?

- <sup>1</sup> Suffolk Downs
- <sup>2</sup> Plainridge Racecourse
- <sup>3</sup> Raynham Park
- <sup>4</sup> Other Massachusetts racecourse (e.g., Brockton)
- <sup>5</sup> Online racebook
- <sup>91</sup> Other

95. In the past 12 months how often have you gambled or bet money on *other types of gambling* that have not yet been mentioned, such as betting on card games other than poker, blackjack, and baccarat; board games (e.g., chess, backgammon); television events; political events; video games; cock fighting; dog fights; financial indices betting on a gambling website (including spread betting); or anything else?

- <sup>1</sup> 4 or more times a week
- <sup>2</sup> 2-3 times a week
- <sup>3</sup> Once a week
- <sup>4</sup> 2-3 times a month
- <sup>5</sup> Once a month
- <sup>6</sup> Less than once a month
- <sup>7</sup> Not at all → GO TO 99

96. What are these other types of gambling you bet money on? *Check all that apply.*

- <sup>1</sup> Non-casino card games
- <sup>2</sup> Board games
- <sup>3</sup> Television events
- <sup>4</sup> Political events
- <sup>5</sup> Video games
- <sup>6</sup> Cock fights
- <sup>7</sup> Dog fights
- <sup>8</sup> Financial indices betting
- <sup>91</sup> Other

97. Did you make these bets in person or remotely via a computer, phone, television, or other device? *Check all that apply.*

- <sup>1</sup> In person
- <sup>2</sup> Remotely via a computer, phone, television, or other device

98. Roughly how much money do you spend on these other types of gambling in a typical month?

- \$  ,  ,

99. Do you personally manage most of your own *stock market* investments (i.e., make your own decisions and purchases of stocks, bonds, etc. independent of a financial advisor or fund manager)?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 102
- <sup>3</sup> I have no stock market investments → GO TO 102

100. In the past 12 months, which of the following financial products/activities have you purchased, sold, or engaged in? *Check all that apply.*

- <sup>1</sup> Mutual funds
- <sup>2</sup> Bonds
- <sup>3</sup> Individual stocks
- <sup>4</sup> Penny stocks
- <sup>5</sup> Options
- <sup>6</sup> Futures
- <sup>7</sup> Other derivatives (e.g., Swaps)
- <sup>8</sup> Shorting stocks
- <sup>9</sup> Day trading

101. What do you estimate your net loss or gain in a typical month is from your stock market activity?

- \$  ,  ,

102. To what extent do you agree with the statement: "wealth is a good measure of success in life"?

- <sup>1</sup> Strongly agree
- <sup>2</sup> Agree
- <sup>3</sup> Neutral
- <sup>4</sup> Disagree
- <sup>5</sup> Strongly disagree

103. How often do you use automatic teller machines at casinos, slot parlors, racetracks, or bingo halls?

- <sup>1</sup> Never
- <sup>2</sup> Occasionally
- <sup>3</sup> Most times that I go

104. In the past 12 months what was the largest amount of money you have won gambling in a single day?

- <sup>1</sup> \$0
- <sup>2</sup> +\$1 to +\$199
- <sup>3</sup> +\$200 to +\$499
- <sup>4</sup> +\$500 to +\$999
- <sup>5</sup> +\$1000 to +\$1999
- <sup>6</sup> +\$2000 or more

105. In the past 12 months what was the largest amount of money you have lost gambling in a single day?

- <sup>1</sup> \$0
- <sup>2</sup> -\$1 to -\$199
- <sup>3</sup> -\$200 to -\$499
- <sup>4</sup> -\$500 to -\$999
- <sup>5</sup> -\$1000 to -\$1999
- <sup>6</sup> -\$2000 or more

### Gambling Activity and Availability

*The following questions ask about your current gambling activities and the availability of gambling in your area.*

106. What would you say is the main reason that you gamble? Would you say...

- <sup>1</sup> For excitement/entertainment
- <sup>2</sup> To win money
- <sup>3</sup> To escape or distract yourself
- <sup>4</sup> To socialize with family or friends
- <sup>5</sup> To support worthy causes
- <sup>6</sup> Because it makes you feel good about yourself
- <sup>81</sup> Other

107. How important is gambling to you as a recreational activity? Would you say...

- <sup>1</sup> Very important
- <sup>2</sup> Somewhat important
- <sup>3</sup> Not very important
- <sup>4</sup> Not at all important

108. Has gambling replaced other recreational activities for you in the past year?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 110

109. Which recreational activities has gambling replaced?

110. Do you typically gamble alone or with friends?

- <sup>1</sup> More often alone
- <sup>2</sup> More often with friends

111. How available are gambling opportunities at your workplace or school?

- <sup>1</sup> Not available
- <sup>2</sup> Somewhat available
- <sup>3</sup> Extensively available

112. How close is the nearest casino to you?

- <sup>1</sup> More than a 30 minute drive from either home, work, or school
- <sup>2</sup> A 16 to 30 minute drive from either home, work, or school
- <sup>3</sup> A 5 to 15 minute drive from either home, work, or school
- <sup>4</sup> Less than a 5 minute drive from either home, work, or school

113. At what age do you recall gambling for money for the first time?

- <sup>88</sup> Have never gambled for money

114. Have any of your parents, brothers or sisters, or children ever been regular gamblers?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 116 ON PAGE 13
- <sup>3</sup> Unsure

115. Have any of your parents, brothers or sisters, or children ever been problem gamblers (i.e., had difficulty controlling their gambling to the extent that it caused significant problems)?

- <sup>1</sup> Yes
- <sup>2</sup> No
- <sup>3</sup> Unsure

## Gambling Beliefs

The next set of questions will ask your opinion about various gambling situations.

116. Which of the following set of lottery numbers has the greatest probability of being selected as the winning combination?

- <sup>1</sup>  1, 2, 3, 4, 5, 6
- <sup>2</sup>  8, 18, 3, 55, 32, 28
- <sup>3</sup>  Each of the above have an equal probability of being selected

117. Which gives you the best chance of winning the jackpot on a slot machine?

- <sup>1</sup>  Playing a slot machine that has not had a jackpot in over a month.
- <sup>2</sup>  Playing a slot machine that had a jackpot an hour ago.
- <sup>3</sup>  Your chances of winning the jackpot are the same on both machines.

118. How lucky are you? If 10 people's names were put into a hat and one name drawn for a prize, how likely is it that your name would be chosen?

- <sup>1</sup>  About the same likelihood as everyone else
- <sup>2</sup>  Less likely than other people
- <sup>3</sup>  More likely than other people

119. If you were to buy a lottery ticket, which would be the best place to buy it from?

- <sup>1</sup>  A place that has sold many previous winning tickets
- <sup>2</sup>  A place that has sold few previous winning tickets
- <sup>3</sup>  One place is as good as another

120. A positive attitude or doing good deeds increases your likelihood of winning money when gambling.

- <sup>1</sup>  Disagree
- <sup>2</sup>  Agree

121. A gambler goes to the casino and wins 75% of the time. How many times has he or she likely gone to the casino?

- <sup>1</sup>  4 times
- <sup>2</sup>  100 times
- <sup>3</sup>  It is just as likely that he has gone either 4 or 100 times

122. You go to a casino with \$100 hoping to double your money. Which strategy gives you the best chance of doing this?

- <sup>1</sup>  Betting all your money on a single bet
- <sup>2</sup>  Betting small amounts of money on several different bets
- <sup>3</sup>  Either strategy gives you an equal chance of doubling your money

123. Which game can you consistently win money at if you use the right strategy?

- <sup>1</sup>  Slot machines
- <sup>2</sup>  Roulette
- <sup>3</sup>  Bingo
- <sup>4</sup>  None of the above

124. Your chances of winning a lottery are better if you are able to choose your own numbers.

- <sup>1</sup>  Disagree
- <sup>2</sup>  Agree

125. You have flipped a coin and correctly guessed 'heads' 5 times in a row. What are the odds that heads will come up on the next flip. Would you say...

- <sup>1</sup>  50%
- <sup>2</sup>  More than 50%
- <sup>3</sup>  Or less than 50%

## Prevention Awareness

Now we would like to ask you a few questions about media campaigns and gambling behaviors.

126. In the past 12 months have you seen or heard any media campaigns to prevent problem gambling in Massachusetts?

- <sup>1</sup>  Yes
- <sup>2</sup>  No

127. In the past 12 months have you been aware of any programs to prevent problem gambling (other than media campaigns) offered at your school, your place of work, in your community or elsewhere?

- <sup>1</sup>  Yes
- <sup>2</sup>  No

If you selected "No" to both Question 126 **AND** Question 127, then go to Question 130 on Page 14. Otherwise, continue to Question 128 on Page 14.

128. Did you participate in any of the problem gambling prevention programs that you heard of in the past 12 months?

- <sup>1</sup>  Yes  
<sup>2</sup>  No

129. Did any of these media campaigns or programs cause you to alter your own gambling behavior?

- <sup>1</sup>  Yes  
<sup>2</sup>  No

130. What portion of your close friends and family members are regular gamblers? Would you say...

- <sup>1</sup>  None of them  
<sup>2</sup>  Some of them  
<sup>3</sup>  Most of them  
<sup>4</sup>  All of them

131. During the last 12 months, has there been any person in your life that you consider gambles too much?

- <sup>1</sup>  Yes  
<sup>2</sup>  No → GO TO 133

132. What is this person's relationship to you?

- <sup>1</sup>  Spouse/partner  
<sup>2</sup>  Parent/step parent  
<sup>3</sup>  Child/step child  
<sup>4</sup>  Other person (in your household)  
<sup>5</sup>  Other family member (not living in your household)  
<sup>6</sup>  Ex-partner  
<sup>7</sup>  Work colleague  
<sup>8</sup>  Friend  
<sup>9</sup>  Neighbor  
<sup>91</sup>  Someone else

## Gambling Outcomes

*Please answer all of the following questions, even if you think they do not apply to you.*

133. In the past 12 months, have you bet more than you could really afford to lose? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

134. In the past 12 months, have you felt guilty about the way you gamble or what happens when you gamble? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

135. In the past 12 months, have you needed to gamble with larger amounts of money to get the same feeling of excitement? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

136. In the past 12 months, when you gambled, did you go back another day to try to win back the money you lost? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

137. In the past 12 months, have you borrowed money or sold anything to get money to gamble? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

138. In the past 12 months, has your gambling caused any financial problems for you or your household? Would you say...

- <sup>1</sup>  Never  
<sup>2</sup>  Sometimes  
<sup>3</sup>  Most of the time  
<sup>4</sup>  Almost always

139. In the past 12 months, has your gambling caused you any health problems, including stress or anxiety? Would you say...
- <sup>1</sup>  Never
  - <sup>2</sup>  Sometimes
  - <sup>3</sup>  Most of the time
  - <sup>4</sup>  Almost always
140. In the past 12 months, have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true? Would you say...
- <sup>1</sup>  Never
  - <sup>2</sup>  Sometimes
  - <sup>3</sup>  Most of the time
  - <sup>4</sup>  Almost always
141. In the past 12 months, have you felt that you might have a problem with gambling? Would you say...
- <sup>1</sup>  Never
  - <sup>2</sup>  Sometimes
  - <sup>3</sup>  Most of the time
  - <sup>4</sup>  Almost always
142. 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?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
143. Has your involvement in gambling caused significant problems in your relationship with your spouse/partner or important friends or family in the past 12 months?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
144. In the past 12 months, has your involvement in gambling caused you to repeatedly neglect your children or family?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
145. 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?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
146. In the past 12 months, has your involvement in gambling caused you or someone close to you to write bad checks, take money that didn't belong to you or commit other illegal acts to support your gambling?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
147. In the past 12 months, have you often gambled longer, with more money or more frequently than you intended to?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
148. In the past 12 months, have you made attempts to either cut down, control or stop gambling?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No → GO TO 150
149. Were you successful in these attempts to cut down, control or stop gambling?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
150. In the past 12 months, is there anyone else who would say that you had difficulty controlling your gambling, regardless of whether you agreed with them or not?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
151. In the past 12 months, would you say you have been preoccupied with gambling?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
152. In the past 12 months, when you did try cutting down or stopping did you find you were very restless or irritable or that you had strong cravings for it?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
153. 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?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No
154. Are there particular types of gambling that have contributed to your problems more than others?
- <sup>1</sup>  Yes
  - <sup>2</sup>  No → GO TO 156 ON PAGE 16

155. Which types of gambling have contributed to your problems? *Check all that apply.*

- <sup>1</sup> Lottery
- <sup>2</sup> Instant ticket
- <sup>3</sup> Daily lotteries
- <sup>4</sup> Bingo
- <sup>5</sup> Slot machines or video lottery terminals
- <sup>6</sup> Casino table games (i.e., Blackjack, Baccarat, Roulette, Craps, etc.)
- <sup>7</sup> Poker
- <sup>8</sup> Horse racing or dog racing
- <sup>9</sup> Sports betting
- <sup>10</sup> Speculative high risk stocks, options, futures, or day trading
- <sup>11</sup> Online gambling
- <sup>91</sup> Other

156. Have you *wanted* help for gambling problems in the past 12 months?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 160

157. Have you *sought* help for gambling problems in the past 12 months?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 160

158. Where did you seek help from?  
*Check all that apply.*

- <sup>1</sup> Friends or family
- <sup>2</sup> GameSense Information Center
- <sup>3</sup> Gamblers Anonymous
- <sup>4</sup> Gam Anon (This is a support group for friends/family of problem gamblers)
- <sup>5</sup> Family doctor
- <sup>6</sup> Private Psychologist/Psychiatrist/Counselor
- <sup>7</sup> Problem gambling treatment center/clinic
- <sup>8</sup> Pastor/Minister/Priest/etc.
- <sup>9</sup> Telephone help/hotline
- <sup>10</sup> Online help
- <sup>91</sup> Other

159. How helpful was this? Would you say...

- <sup>1</sup> Very helpful
- <sup>2</sup> Somewhat helpful
- <sup>3</sup> Not very helpful
- <sup>4</sup> Not at all helpful

160. Have you excluded yourself from any casino or slots parlor in the past 12 months?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 162

161. In which states have you excluded yourself?  
*Check all that apply.*

- <sup>1</sup> Massachusetts
- <sup>2</sup> Connecticut
- <sup>3</sup> Rhode Island
- <sup>4</sup> New Jersey
- <sup>5</sup> New York
- <sup>6</sup> Pennsylvania
- <sup>7</sup> Maine
- <sup>8</sup> Nevada
- <sup>91</sup> Other

162. What would you say have been the main cause or causes of your gambling problems (provide as much detail as needed)?

163. Do you believe you are having fewer gambling problems than last year?

- <sup>1</sup> Yes
- <sup>2</sup> No → GO TO 165 ON PAGE 17

164. What would you say is responsible for this improvement (provide as much detail as needed)?

---

*If you would like information regarding treatment resources, please see page 21 for contact information.*

---

## Social Relationships

*Now we'd like to ask your opinion on several items.*

*For each statement, select the response that best represents your opinion.*

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
165. I am not a worrier.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
166. I try to be courteous to everyone I meet.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
167. I keep my belongings neat and clean.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
168. I rarely feel fearful or anxious.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
169. I often get into arguments with my family and co-workers.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
170. I have little difficulty resisting temptation.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
171. I'm pretty stable emotionally.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
172. I rarely overindulge in anything.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
173. I'm pretty good about pacing myself so as to get things done on time.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
174. When I am having my favorite foods, I tend to eat too much.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
175. I often feel tense and jittery.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
176. I often crave excitement.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
177. Some people think I'm selfish and egotistical.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
178. I seldom give in to my impulses.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
179. I sometimes eat myself sick.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
180. I am not a very methodical person.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
181. I often get angry at the way people treat me.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
182. I would rather cooperate with others than compete with them.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
183. I try to perform all the tasks assigned to me conscientiously.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
184. At times I have been so ashamed I just wanted to hide.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
185. I tend to be cynical and sceptical of others' intentions.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
186. I have a clear set of goals and work toward them in an orderly fashion.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
187. I often feel inferior to others.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
188. I believe that most people will take advantage of you if you let them.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
189. I waste a lot of time before settling down to work.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
190. I rarely feel lonely or blue.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
191. Most people I know like me.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
192. When I make a commitment, I can always be counted on to follow through.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
193. Sometimes I feel completely worthless.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

**For each statement, select the response that best represents your opinion.**

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
194. Some people think of me as cold and calculating.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
195. Sometimes I'm not as dependable or reliable as I should be.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
196. I am seldom sad or depressed.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
197. I'm hard-headed and tough-minded in my attitudes.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
198. I tend to avoid movies that are shocking or scary.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
199. I love the excitement of roller coasters.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
200. I am a productive person who always gets the job done.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
201. Too often, when things go wrong, I get discouraged and feel like giving up.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
202. I generally try to be thoughtful and considerate.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
203. I like being part of the crowd at sporting events.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
204. I keep a cool head in emergencies.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
205. I work hard to accomplish my goals.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
206. I often feel helpless and want someone else to solve my problems.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
207. It's often hard for me to make up my mind.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
208. If I don't like people, I let them know it.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
209. I never seem to be able to get organized.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
210. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
211. I like to be where the action is.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
212. If necessary, I am willing to manipulate people to get what I want.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
213. I strive for excellence in everything I do.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
214. I feel I am capable of coping with most of my problems.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
215. I'm attracted to bright colors and flashy styles.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
216. I can handle myself pretty well in a crisis.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
217. When everything seems to be going wrong, I can still make good decisions.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
218. I have trouble resisting my cravings.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
219. Sometimes I do things on impulse that I later regret.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
220. I wouldn't enjoy vacationing in Las Vegas.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
221. I am always able to keep my feelings under control.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>
222. I have sometimes done things just for "kicks" or "thrills."	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>

*We would now like to switch focus and ask a few questions about family and social relationships.*

**223. How would you rate your current family relationships?**

- 1 Excellent
- 2 Very good
- 3 Average
- 4 Below average
- 5 Poor

**224. How would you rate your current marital relationship?**

- 1 Excellent
- 2 Very good
- 3 Average
- 4 Below average
- 5 Poor
- 6 Not applicable

**225. How would you rate your current level of social support?**

- 1 Excellent
- 2 Very good
- 3 Average
- 4 Below average
- 5 Poor

**226. How important is religion in your life?**

- 1 Very important
- 2 Somewhat important
- 3 Not too important
- 4 Not at all important

**227. Have you committed any illegal activities in the past year?**

- 1 Yes
- 2 No

**228. Do you have a criminal record?**

- 1 Yes
- 2 No

## Demographics

*The last few questions are about your background so we can keep track of the characteristics of people who respond to the survey.*

**229. Are you male or female?**

- 1 Male
- 2 Female

**230. In what year were you born?**

Year

**231. At present are you...**

- 1 Married
- 2 Living with your partner
- 3 Separated, but still legally married
- 4 Divorced
- 5 Widowed
- 6 Never been married

**232. How many children under 18 years old live in your household?**

Number of children

**233. What is the highest degree or level of school you have completed?**

- 1 Never attended school or only attended kindergarten
- 2 Grades 1 through 8
- 3 Grades 9 through 11
- 4 Regular High School Diploma or GED
- 5 Some college credit, but less than 1 year of college credit
- 6 1 or more years of college credit, but no degree
- 7 Associate Degree
- 8 Bachelor's Degree
- 9 Master's Degree
- 10 Professional Degree beyond a Bachelor's Degree
- 11 Doctorate Degree

**234. Are you currently...**

- 1 Employed for wages
- 2 Self-employed
- 3 Out of work for more than 1 year
- 4 Out of work for less than 1 year
- 5 A Homemaker
- 6 A Student
- 7 Retired
- 8 Unable to work

235. Have you ever served on active duty in the U.S. Armed Forces, military Reserves, or National Guard? Active duty does not include training for the Reserves or National Guard, but DOES include activation, for example, for the Persian Gulf War.

- Yes, now on active duty
- Yes, on active duty in the past, but not during the last 12 months
- No, training for Reserves or National Guard only
- No, never served in the military

236. Do you own the place where you currently live, pay rent or something else?

- Own
- Rent
- Something else

237. Is your approximate annual household income from all sources...

- Less than \$15,000
- \$15,000 - \$29,999
- \$30,000 - \$49,999
- \$50,000 - \$69,999
- \$70,000 - \$99,999
- \$100,000 - \$124,999
- \$125,000 - \$149,999
- \$150,000 or more

238. What do you estimate your current debt to be? Please include mortgages, credit cards, loans, car payments, etc.

- \$0 (no debt)
- Less than \$10,000
- \$10,000 - \$19,999
- \$20,000 - \$39,999
- \$40,000 - \$59,999
- \$60,000 - \$79,999
- \$80,000 - \$99,999
- \$100,000 - \$119,999
- \$120,000 - \$139,999
- \$140,000 - \$159,999
- \$160,000 - \$179,999
- \$180,000 - \$199,999
- \$200,000 - \$299,999
- \$300,000 - \$399,999
- \$400,000 - \$499,999
- \$500,000 or more

239. Were you born in the United States?

- Yes
- No

240. Many people only live in Massachusetts for part of the year. Do you live in Massachusetts for 6 or more months out of the year? If you recently moved to Massachusetts and plan on staying for 6 months or longer, mark yes. If you are planning on moving out of Massachusetts but have lived there for at least 6 months in 2015, mark yes.

- Yes
- No

241. Are you Hispanic or Latino?

- Yes
- No

242. Which one or more of the following would you say is your race? Check all that apply.

- White or Caucasian
- Black or African American
- Asian
- Native Hawaiian or Other Pacific Islander
- Native American or Alaskan Native
- Some other race

243. How many members of your household, including yourself, are 18 years of age or older?

- Number of adults (18 or older)

244. Do you have an internet connection either at home or at work?

- Yes
- No

245. Overall, how often do you use the Internet?

- Daily
- A few times a week
- A few times a month
- A few times a year
- Not at all

Because we are interested in how opinions change over time, you may be re-contacted in the future to participate in related studies. If you are contacted to participate in future surveys, you have the right to refuse. To document who completed the survey from your household, please enter your first name, last name, email, and phone number.

246. First Name:

247. Last Name:

248. What is the best phone number to reach you if we have more questions about your household?

*This number will only be used to contact you about this study. We are prohibited from sharing, distributing, or selling your information to anyone outside this project.*

(    )    -

249. Please enter your email address.

<p>You have reached the end of the survey. You will be re-contacted again each year about this same time to retake the survey. If any of your contact information changes in the next year please contact NORC via email or by phone at MACohort@NORC.org or 877-346-9979. It is also possible you may be re-contacted to participate in related studies. If you are contacted to participate in any future surveys you have the right to refuse. I'd like to thank you on behalf of the University of Massachusetts for the time and effort you've spent answering these questions. If you have any questions about this survey, you may contact Dr. Rachel Volberg at 413-545-6700.</p> <p><i>Thank you again.</i></p>	<p>To help us contact you, please provide the names and contact information for three people who are likely to know where you can be reached. <i>Please do not include someone who lives in your household.</i></p> <p><b>Contact #1</b></p> <p>Name <input type="text"/></p> <p>Address <input type="text"/></p> <p>Phone <input type="text"/></p> <p>Email <input type="text"/></p> <p><b>Contact #2</b></p> <p>Name <input type="text"/></p> <p>Address <input type="text"/></p> <p>Phone <input type="text"/></p> <p>Email <input type="text"/></p> <p><b>Contact #3</b></p> <p>Name <input type="text"/></p> <p>Address <input type="text"/></p> <p>Phone <input type="text"/></p> <p>Email <input type="text"/></p>				
<p>If you would like information regarding treatment resources, please contact:</p> <table border="0"> <tr> <td> <p><b>Massachusetts Substance Abuse Information and Education Helpline</b> 800-327-5050 TTY: 617-536-5872</p> </td> <td> <p><b>National Alliance on Mental Illness</b> 1-800-950-6264</p> <p><b>Samaritans</b> 877-870-4673</p> </td> </tr> <tr> <td> <p><b>Drug &amp; Alcohol Treatment Hotline</b> 800-662-HELP</p> </td> <td> <p><b>National Suicide Prevention Lifeline</b> 1-800-273-8255 1-800-799-4889</p> </td> </tr> </table>	<p><b>Massachusetts Substance Abuse Information and Education Helpline</b> 800-327-5050 TTY: 617-536-5872</p>	<p><b>National Alliance on Mental Illness</b> 1-800-950-6264</p> <p><b>Samaritans</b> 877-870-4673</p>	<p><b>Drug &amp; Alcohol Treatment Hotline</b> 800-662-HELP</p>	<p><b>National Suicide Prevention Lifeline</b> 1-800-273-8255 1-800-799-4889</p>	<p style="text-align: center;">21</p>
<p><b>Massachusetts Substance Abuse Information and Education Helpline</b> 800-327-5050 TTY: 617-536-5872</p>	<p><b>National Alliance on Mental Illness</b> 1-800-950-6264</p> <p><b>Samaritans</b> 877-870-4673</p>				
<p><b>Drug &amp; Alcohol Treatment Hotline</b> 800-662-HELP</p>	<p><b>National Suicide Prevention Lifeline</b> 1-800-273-8255 1-800-799-4889</p>				

Please return your completed questionnaire using the enclosed pre-paid envelope to:

University of Massachusetts Amherst  
C/O NORC at the University of Chicago  
55 East Monroe Street, 19th Floor  
Chicago, IL 60603

If you have misplaced the pre-paid envelope, please call 1-877-346-9979 for a new one.

NORC at the University of Chicago is conducting this study on behalf of the University of Massachusetts Amherst. If you have questions, please call NORC toll-free at 1-877-346-9979.

If you have questions about your rights as a study participant, you may call the NORC Institutional Review Board toll-free, at 1-866-309-0542.

If you would prefer to complete this survey online, please go to: <https://ccsurvey.norc.org/MAGIC>.

Your unique survey Personal Identification Number (PIN) is: [P\_PIN].

OFFICE USE ONLY							
Receipt		CADE		Verification		Adjudication	
Initials	Date	Initials	Date	Initials	Date	Initials	Date