



UNIVERSITY OF MASSACHUSETTS SCHOOL OF PUBLIC HEALTH AND HEALTH SCIENCES

MAGIC: TRANSITIONS ACROSS FOUR WAVES

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MAGIC

- **Massachusetts Gambling Impact Cohort (MAGIC) is the first major cohort study of gambling in the United States**
- Began in 2013



Research Goals

1. Monitor changes in prevalence of gambling and problem gambling over time that might identify **impacts of MA-casino introduction**.
2. Determine **stability and course** of problem, at-risk, and recreational gambling.
3. Identify predictors of problem gambling onset, continuation, remission, and relapse for the purposes of developing an **etiological model of problem gambling**.
4. **Operationalize above findings to optimize treatment and prevention** of problem gambling in MA.



Details of Each Wave

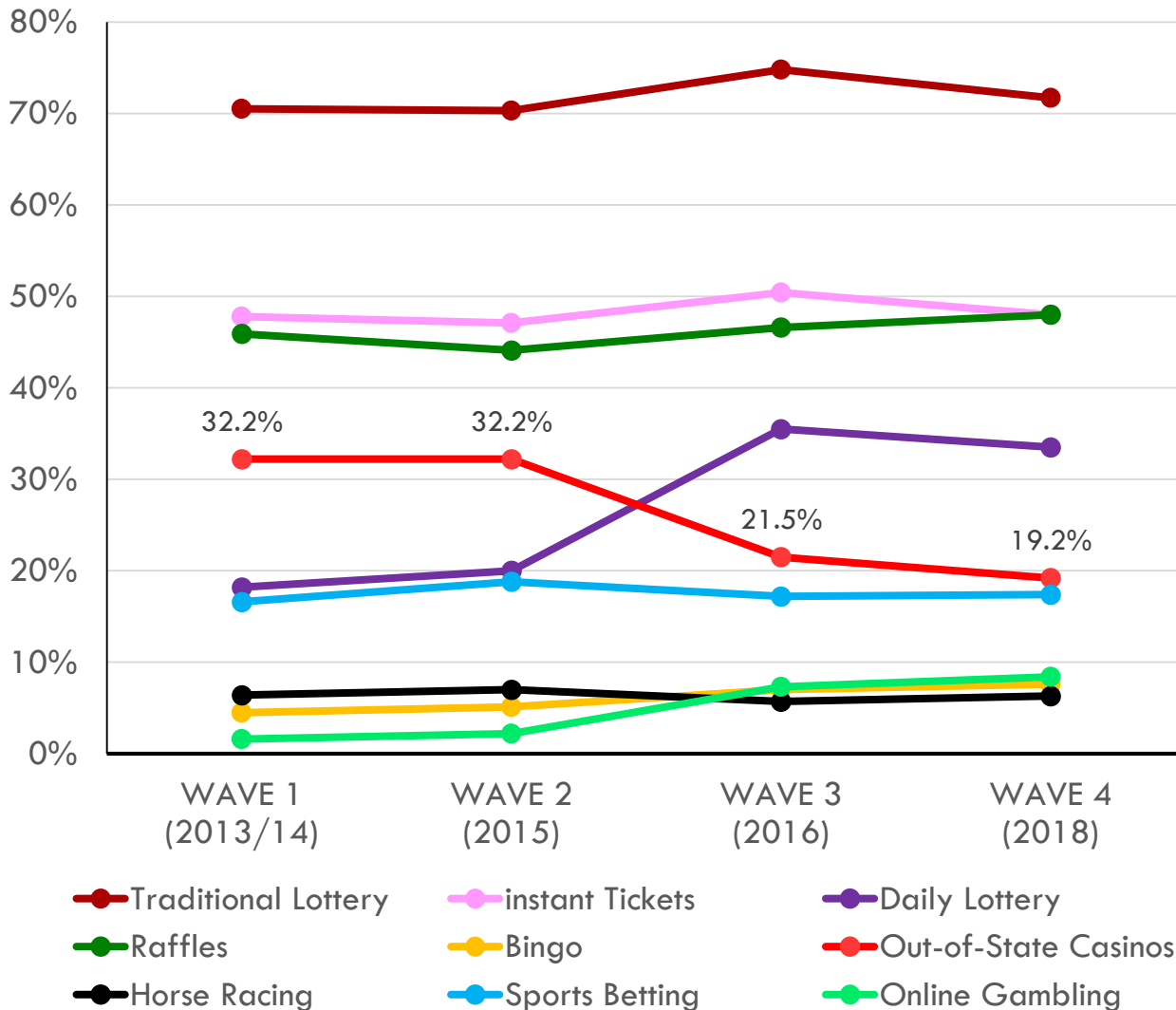
Wave	95% Assessment Window	Complete	Response/Retention
1	Sep 2013 – Apr 2014	3,096	36.6% response
2	Mar – Jun 2015	3,139	65.1% response
<i>Jun 24, 2015: Opening of Plainridge Park Casino</i>			
3	Apr – Jul 2016	2,450	78.1% retention
4	<i>Postponed due to budgetary constraints</i>		
4	Apr – Jun 2018	2,444	81.1% retention
<i>Aug 24, 2018: Opening of MGM Springfield</i>			

- Wave 1 over-selected for at-risk characteristics: all problem gamblers, at-risk gamblers, weekly gamblers, >\$1200 past year gambling expenditure, military service.
- Limited number of variables assessed in Wave 1 and 2; comprehensive set included in Waves 3 – 5.

**CHANGES IN PREVALENCE OF
GAMBLING AND PROBLEM GAMBLING
WITHIN THE COHORT THAT MIGHT
IDENTIFY IMPACTS OF MA-CASINO
INTRODUCTION**



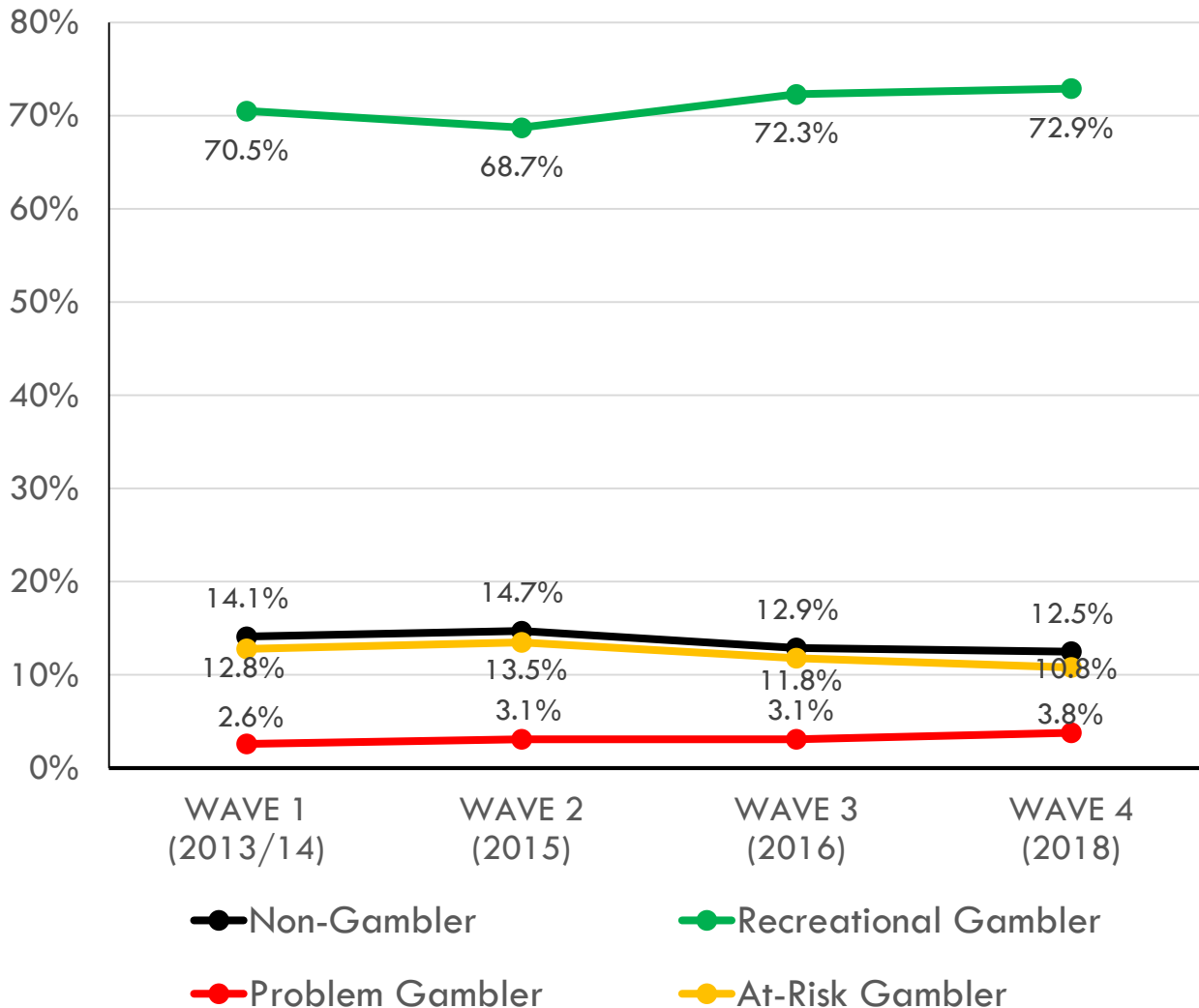
Gambling Participation within the Cohort Across Waves



- Wave 3 & 4 decrease in **out-of-state casinos** likely due to MA-casino introduction.
- Wave 3 increase in **traditional lottery, instant tickets, raffles** likely due to 2016 Powerball jackpot.
- Wave 3 increase in daily lottery, bingo, online gambling likely artifactual due to change in question wordings.



Gambling Categorizations within the Cohort Across Waves



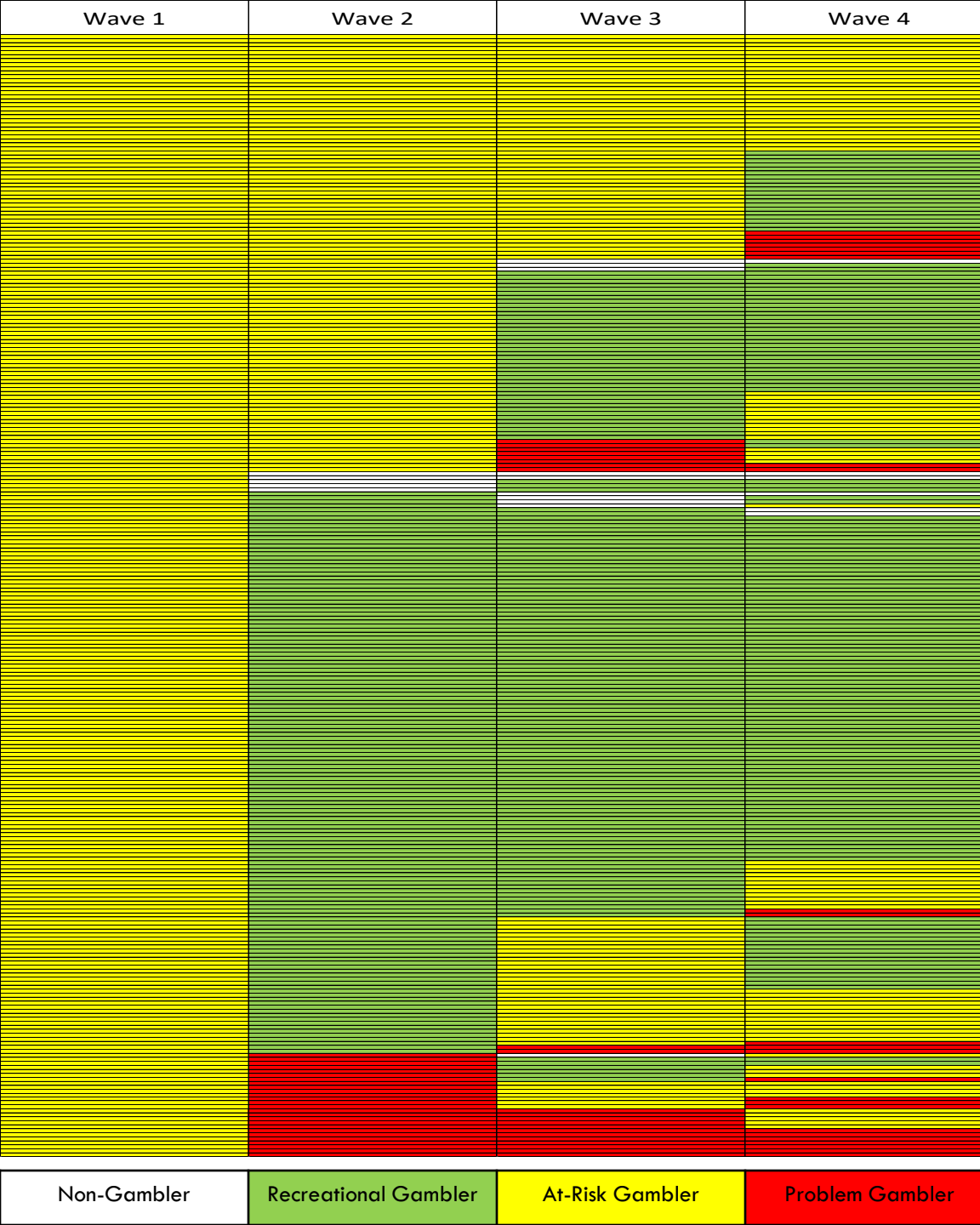
- Wave 3 & 4 increase in **Recreational Gambling** likely due to 2016 Powerball jackpot + changes in question wordings.
- Wave 4 increase in **Problem Gambling** plausibly related to casino introduction, but magnitude of change very small.

**INDIVIDUAL STABILITY OF NON-
GAMBLING, RECREATIONAL GAMBLING,
AT-RISK GAMBLING AND PROBLEM
GAMBLING ACROSS WAVES**



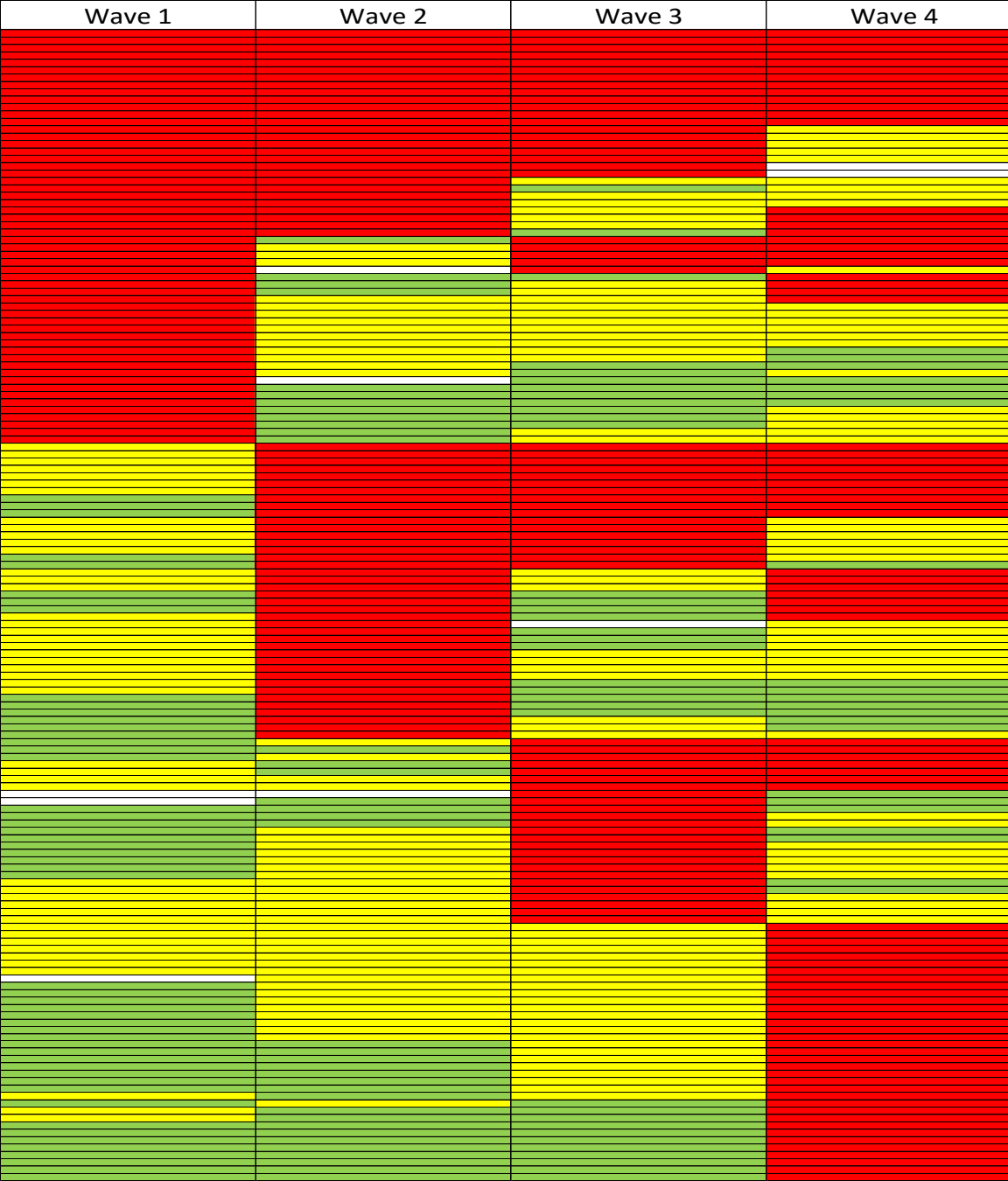
- N = 309; each row represents an individual
- **NON-GAMBLING** a fairly stable category, with majority in one wave continuing to be Non-Gamblers at the next wave.
- However, only minority Non-Gamblers in all 4 waves (38.2%). Majority (61.4%) transitioned to Recreational Gambling in Wave 2, 3, or 4, with minority transitioning back to Non-Gambling in following wave.

Non-Gambler	Recreational Gambler	At-Risk Gambler	Problem Gambler
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- N = 280; each row represents an individual
- **AT-RISK GAMBLING** an unstable category, with minority being in same 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.

Wave 1	Wave 2	Wave 3	Wave 4
Non-Gambler	Recreational Gambler	At-Risk Gambler	Problem Gambler



- N = 156; each row represents an individual
- **PROBLEM GAMBLING** somewhat more stable than At-Risk Gambling, but still fairly unstable, with majority transitioning to At-Risk or Recreational Gambling in next wave.
- One year the modal duration of PG, occurring in 57.0%, with only 23.2% being PGs in all 4 waves. Risk of chronicity increased with each consecutive year of PG status.
- The short episode duration also means recovery rates are high. However, of those that recovered by Wave 2, 25.3% had relapsed in either Wave 3 or Wave 4. Longer-term relapse rate unknown, but likely much higher.

Non-Gambler	Recreational Gambler	At-Risk Gambler	Problem Gambler
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MAGIC: Transitions over 4 Waves

Questions?