



# Examining Changes in Problem Gambling Prevalence Over Time

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# Some definitions

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- **Epidemiology** is the study of the distribution and determinants of health-events in populations
- **Prevalence** refers to the percentage or number of people who have an illness or disorder at one point in time
- **Incidence** refers to the percentage or number of people who develop a problem over a given period of time (“new cases”)

# The changing face of problem gambling

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- Early population surveys in numerous jurisdictions identified the following risk factors:
  - Male gender
  - Age under 30
  - Low income
  - Single marital status
  - Low occupational status
  - Less formal education
  - Residing in large cities
- “Feminization of problem gambling”
- “Bimodal groups”
  - African Americans in US
  - Pacific Islanders in New Zealand
  - Eastern European immigrants in Sweden

# Exposure vs. adaptation: Framing the issue

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- Is the relationship between exposure and harm a straightforward one?
- Does the “total consumption/single distribution” model apply to gambling?
- Relevant in other areas of public health
  - Alcohol & tobacco consumption
  - Obesity
  - High blood pressure
- Researchers have proposed a modified formulation that includes both exposure & adaptation



# Standardization study

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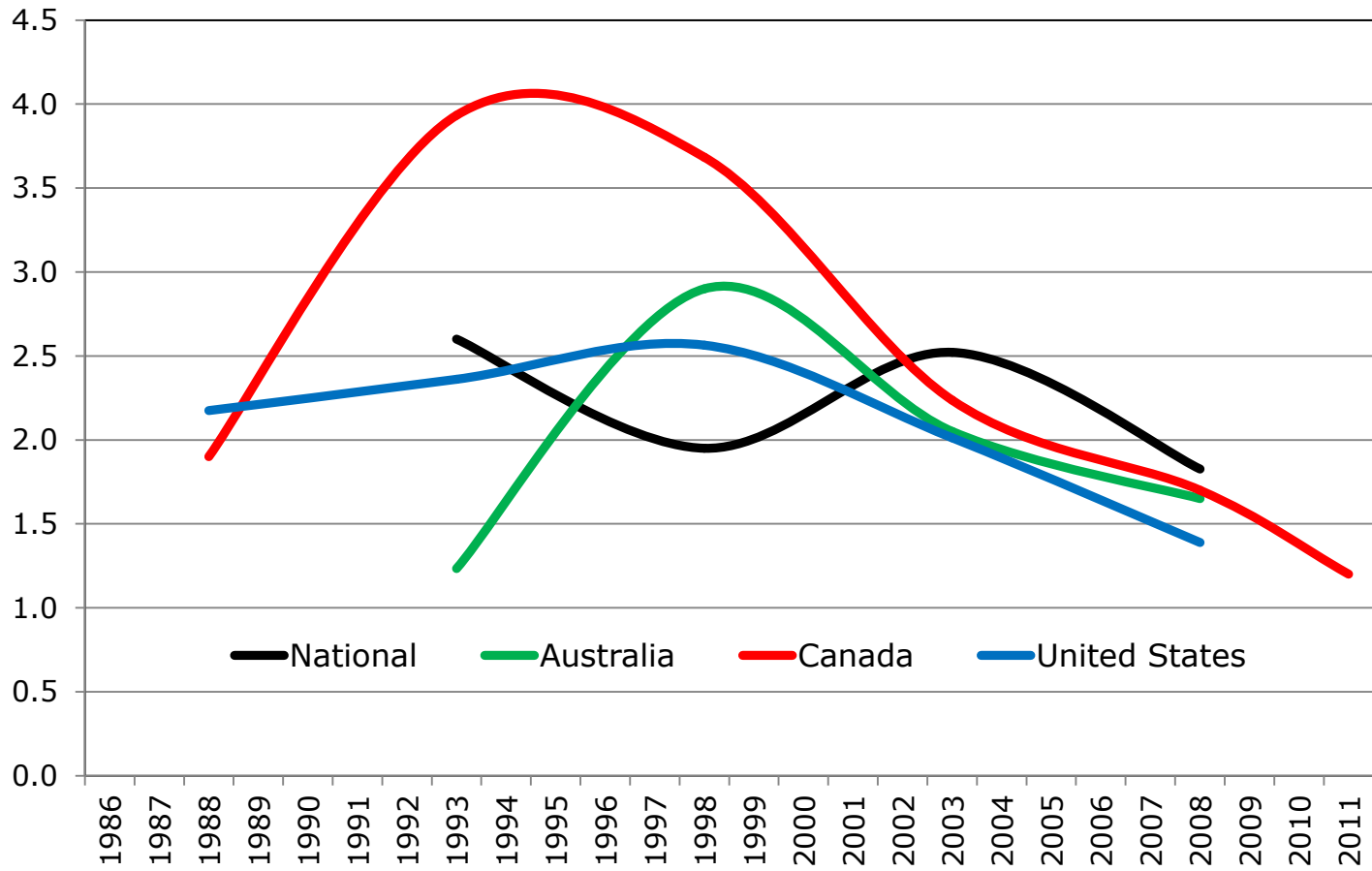
- Comprehensive compilation of all published & unpublished studies that have included a jurisdiction-wide adult prevalence survey
- Prevalence rates were standardized to facilitate comparison of rates between jurisdictions & within same jurisdiction over time
- Enabled analysis of changes in standardized PG prevalence rates over time

# Data & methods

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- 202 studies extracted
  - 68 national
  - 27 Australian states/territories
  - 40 Canadian provinces
  - 67 U.S. states
- Five primary methodological variants for which weights were developed & applied
  - Differences in PG **assessment instrument** & differing thresholds to designate PG for the same instrument
  - Differences in **time frame** used to assess PG
  - Differences in method of **survey administration**
  - Differences in how survey is **described** to potential participants
  - Differences in the **threshold** for administering PG questions
  - Differences in **response rates** over time, administration method
- Did not correct for differences in sampling strategy, weighting of survey data

# Changes w/in jurisdictions over time



Standardized PG Prevalence Rates Over Time (5 Year Smoothed)

# Findings

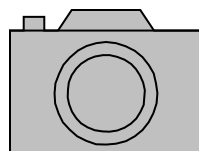
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- Results support both exposure & adaptation
- Adaptation can occur at different levels
  - Individual (recovery, professional intervention)
  - Community (novelty wears off, increased awareness of risks)
  - Population (“natural selection” & removal of unsuccessful gamblers)
- Different levels of adaptation suggest distinct policy approaches



# Prevalence surveys provide 'snapshots' of a dynamic process

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# PG status can change over time

Table 4: Transitions between PGSI groups Wave One to Wave Two (n=5003)

|          |              | Wave Two       |            |                  |            |            |           |              |
|----------|--------------|----------------|------------|------------------|------------|------------|-----------|--------------|
|          |              | Completed 2009 | NG         | NPG              | LR         | MR         | PG        | Shifted 2009 |
| Wave One | NG           | 1024           | 464        | 526              | 24         | 9          | 1         | 560          |
|          | NPG          | 3569           | 240        | 3131             | 169        | 24         | 5         | 438          |
|          | LR           | 274            | 9          | 144              | 81         | 38         | 2         | 193          |
|          | MR           | 96             | 3          | 20               | 26         | 39         | 8         | 57           |
|          | PG           | 40             | 0          | 2                | 0          | 9          | 29        | 11           |
|          | <b>Total</b> | <b>5003</b>    | <b>716</b> | <b>3823</b>      | <b>300</b> | <b>119</b> | <b>45</b> | <b>1259</b>  |
|          |              |                |            | No Movement      |            |            |           |              |
|          |              |                |            | Transition Up    |            |            |           |              |
|          |              |                |            | Transitions Down |            |            |           |              |



# Risk factors predicting PG development

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- Gambling in the past year on EGMs, casino table games, Internet
- Betting weekly on horse/dog races
  
- Poor health (physical, mental)
- Smoking
- Risky drinking habits
  
- Difficulties at work
- Changes in working conditions
- Loss of a close relative
- Changes in personal/HH finances