



**Turning Point**  
Alcohol & Drug Centre

# Association between increased density of alcohol outlets and harmful outcomes

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# Presentation outline

- Alcohol and young people
- Liquor licensing in Victoria
- Summary of previous work on alcohol availability
- Recent trends in consumption and harm
- Summary of work examining effects of availability in Victoria
- Implications for policy



# Alcohol and young people

- Alcohol is responsible for ~ 3.5% of the burden of disease and injury in Australia
- This figure is much higher for young people
  - 42.2% for 15-24 year old males
  - 9.7% for 15-24 year old females
- Leading causes of death amongst young people are highly linked to alcohol consumption
  - Road traffic accidents
  - Suicide
  - Homicide
  - Falls and other accidents

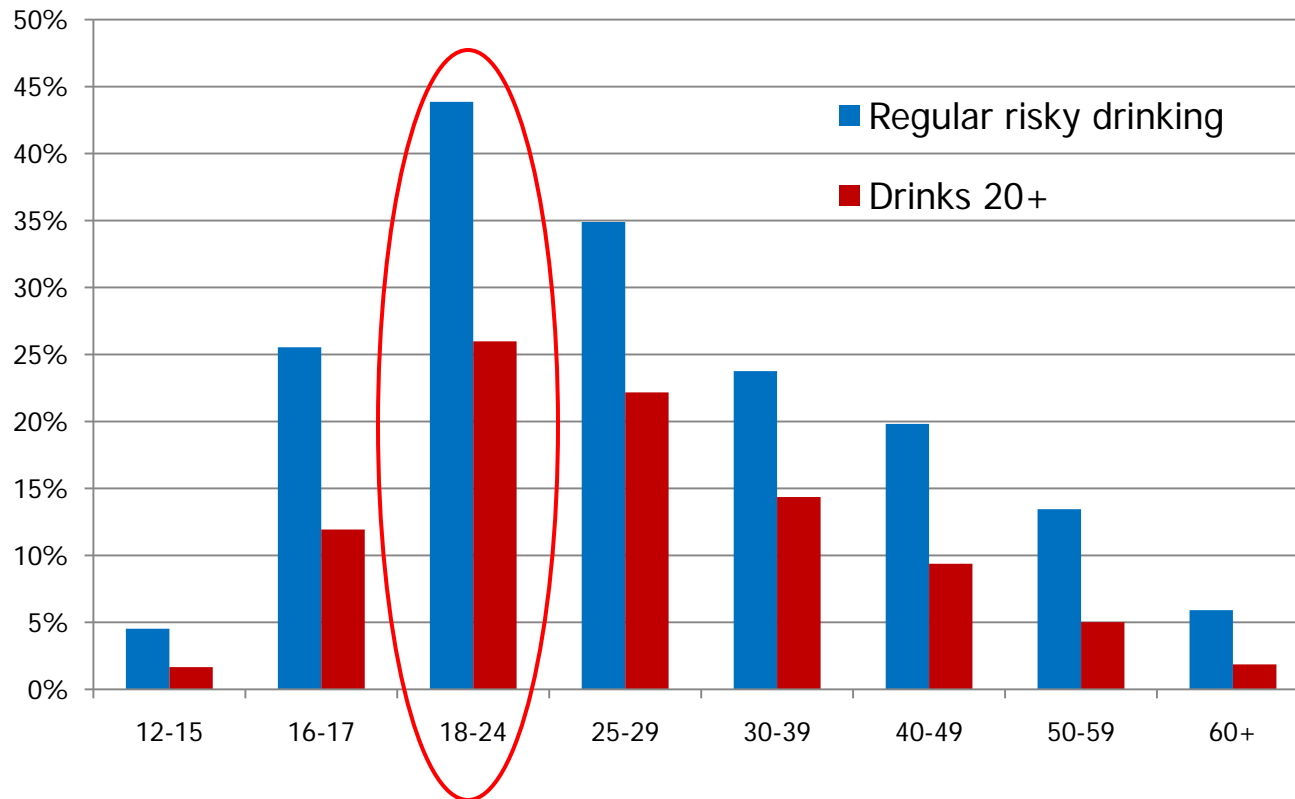


# Alcohol and young people

- Victorian studies presented today focus on:
  - Assaults
  - Domestic violence
  - Alcohol-caused chronic disease
  - Very heavy drinking
- Only heavy drinking study focuses specifically on youth, but all harms examined except chronic disease have substantial youth component

# Alcohol and young people

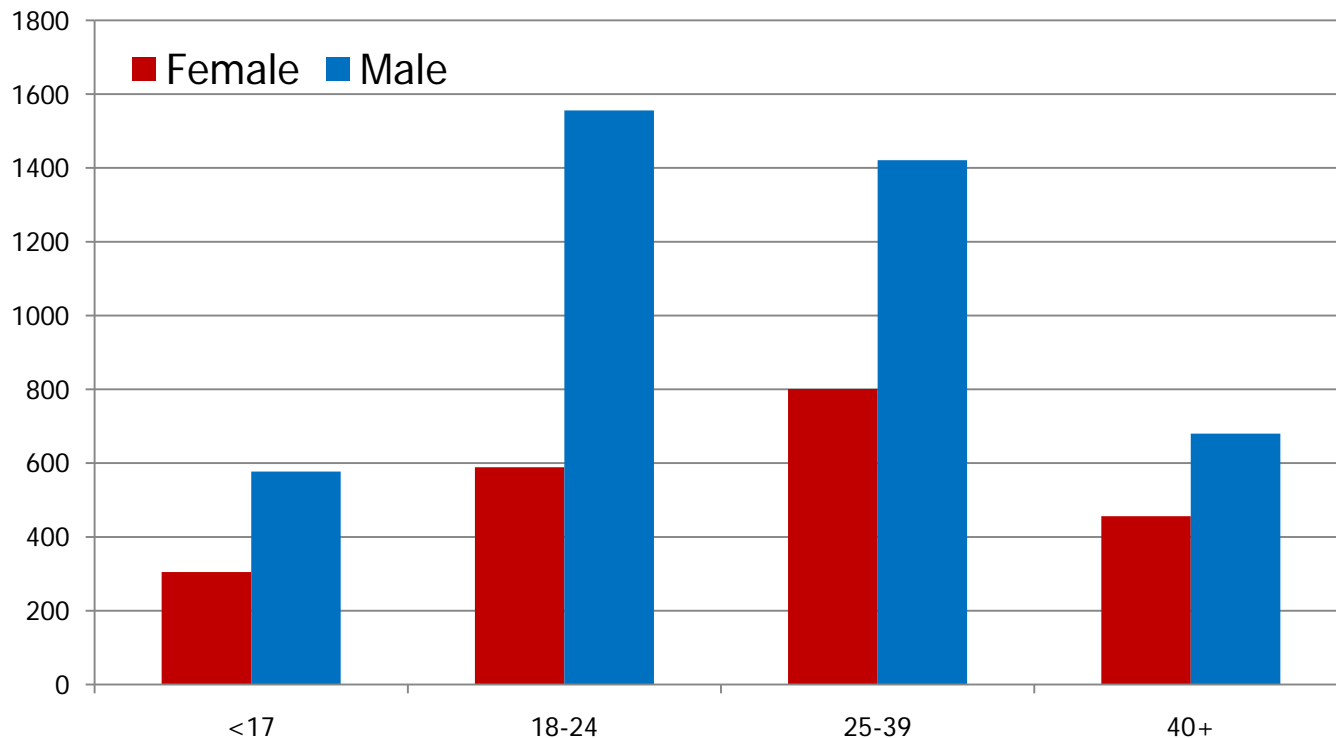
- Heavy drinking peaks in early adulthood





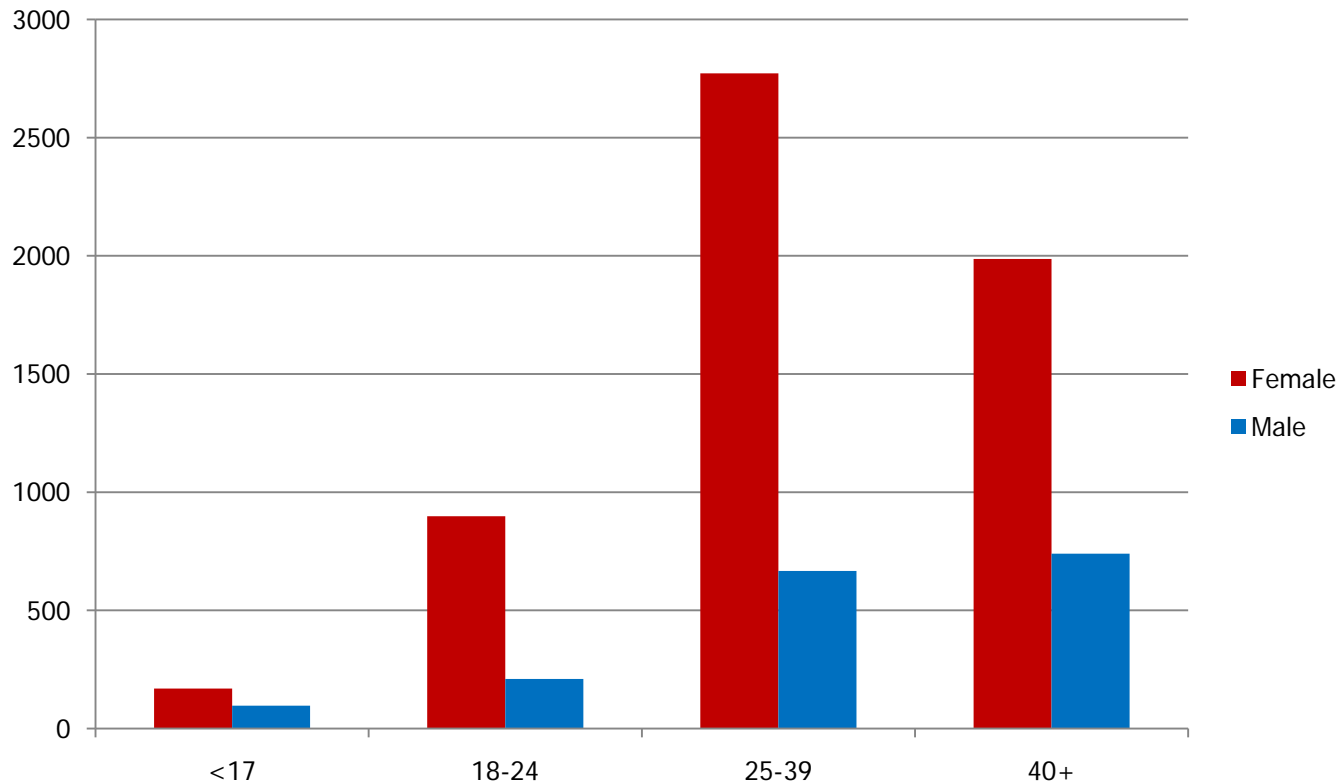
# Alcohol and young people


- Around half of alcohol-related assault victims are aged < 24



# Alcohol and young people

- Around 20% of alcohol-related domestic violence victims are aged < 24 (plus many child witnesses)





# Key question for the rest of this presentation

- How are alcohol-related harms related to alcohol availability (as measured by number of outlets) in Victoria



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# History of liquor licensing in Victoria

- Largely stable system from early 1900s up to the 1960s, when the slow march of liberalisation began
  - Introduction of first restaurant licences in 1960
  - Phillips Royal Commission (1963), led to 10pm closing (from 1966)
  - Davies Inquiry (1976), led to further minor relaxations of hours and restrictions in 1980
  - Niewenhuysen Review (1986), led to new system, under the Liquor Control Act 1987



# Liquor Control Act 1987

- Implemented the majority of Nieuwenhuysen's recommendations, making new licences easier to obtain and removing many restrictions on licensees
- Made getting a liquor licence relatively straightforward
- Relaxed regulations on trading hours, food service, ownership limits etc
  - Intended to introduce a European style drinking culture to Victoria
  - The effects of the changes to availability were more dramatic than even Nieuwenhuysen expected



# Further amendments

- Two amendments in 1993 and 1995, increasing trading options for licensees and introducing tougher penalties for breaches
  - Driven in part by the opening of Crown Casino, restrictions around food service and trading hours were loosened
  - Increased sanctions mainly focussed on service to underage drinkers
  - Introduction of on the spot fines for both licensees and drinkers
  - Fines generally targeted at individuals rather than premises



# Liquor Control Reform Act, 1998

- New Act in 1998, following yet another review
  - Created new regulatory body: Liquor Licensing Victoria (in Dept of State Development), with Director as statutory appointment
  - Focussed largely on making Victoria compliant with National Competition Policy
    - E.g. Removal of 'need' criteria, lifting of 8% restrictions (initially just for pubs, packaged liquor phased out)
- But also:
  - Loosening of restaurant restrictions (meaning 'on-premise' licences now include bars, nightclubs etc as well as restaurants)
  - Further relaxation of trading hours regulation – 24 hour trading



## From 1998 until ~ 2007

- National Competition Commission pressure resulted in the removal of 8% cap for packaged liquor in 2000
- Increased reliance on planning regulations at the local level rather than state level regulation
  - But no public health focus in planning legislation
- Shift of LLV from State Development to Dept of Consumer Affairs
  - Gradual decline through bureaucratic hierarchy

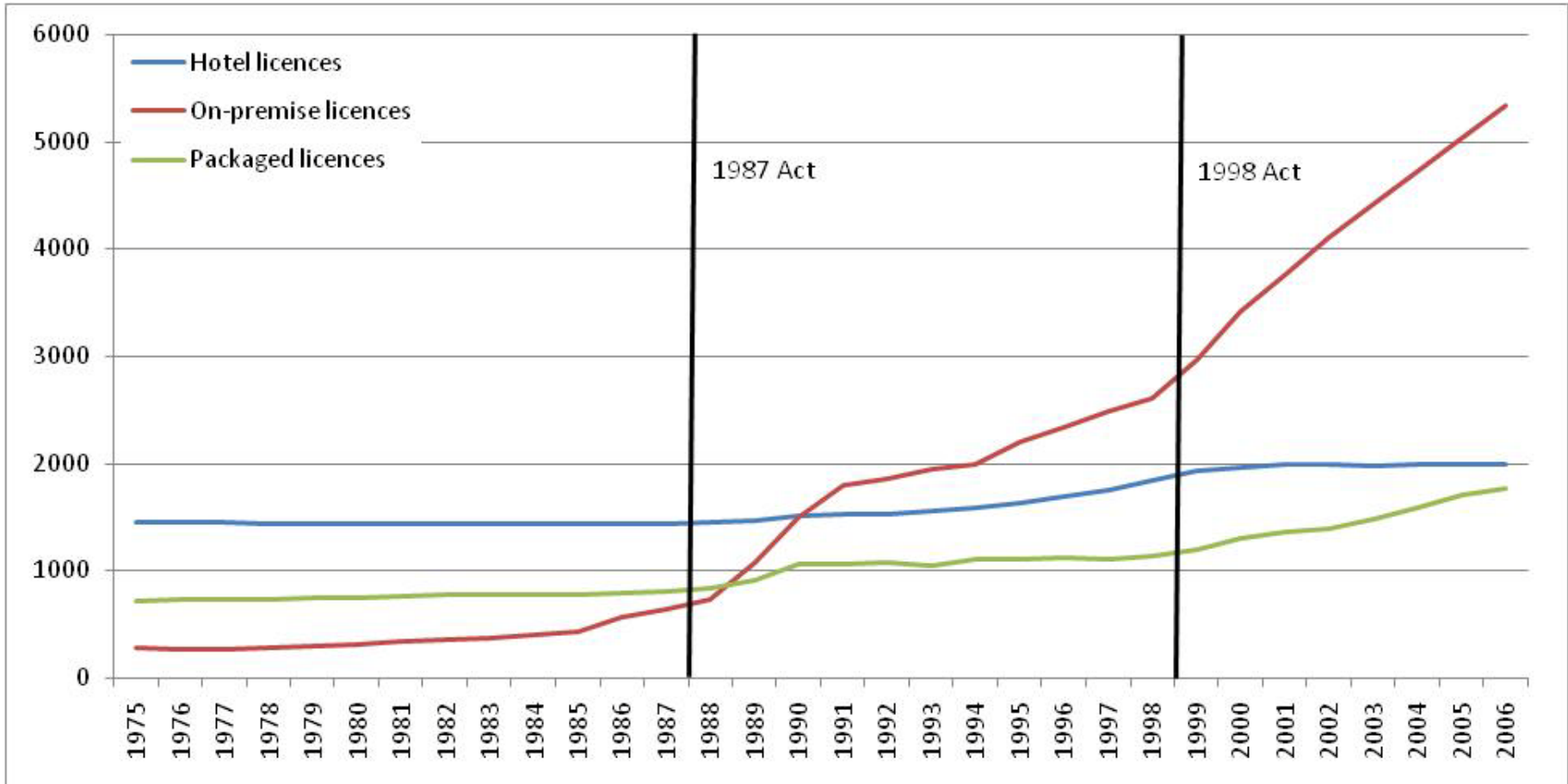



# Underlying philosophy

- Throughout the various reviews and inquiries, the general consensus has been that increases in availability *do not* lead to increases in consumption or harm
  - Evidence usually cross-sectional (e.g. Victoria has more outlets than Tasmania, and fewer alcohol problems, therefore availability isn't important)
  - Tended to discount international research evidence (e.g. 1970s and 1980s studies from the USA) as being irrelevant to Australian conditions
- Focussed largely on efficiency and convenience
  - With some undoubted benefits



# Effects of regulatory changes





# The research literature on alcohol outlet density

- Links between outlet density and:
  - consumption and drinking patterns,
  - drink-driving and traffic accidents,
  - assault, homicide and other violent crimes,
  - child abuse and neglect,
  - sexually transmitted diseases,
  - drunkenness and neighbourhood disturbances,
  - property damage and vandalism, and
  - personal injury
- Most research from the late 1990s onwards



# The research literature on alcohol outlet density

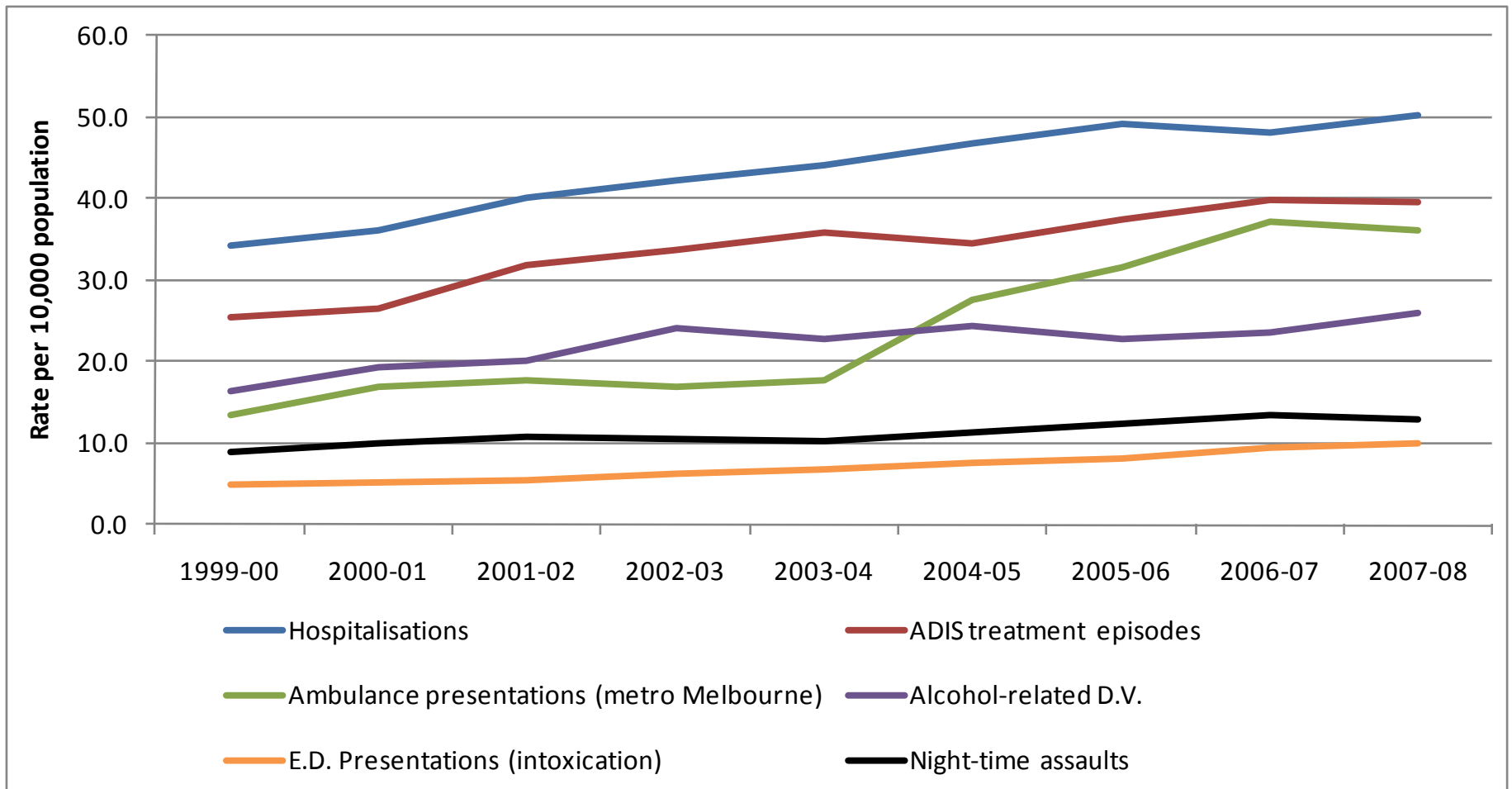
- Strongest evidence for acute harms
  - Particularly violence
- Evidence weakest for overall consumption patterns
  - Although studies of young people show fairly consistent effects
- Few studies focussing particularly on harms in young people – although many harms (e.g. violence, STDs, road crashes) are concentrated among youth



# Alcohol outlet density

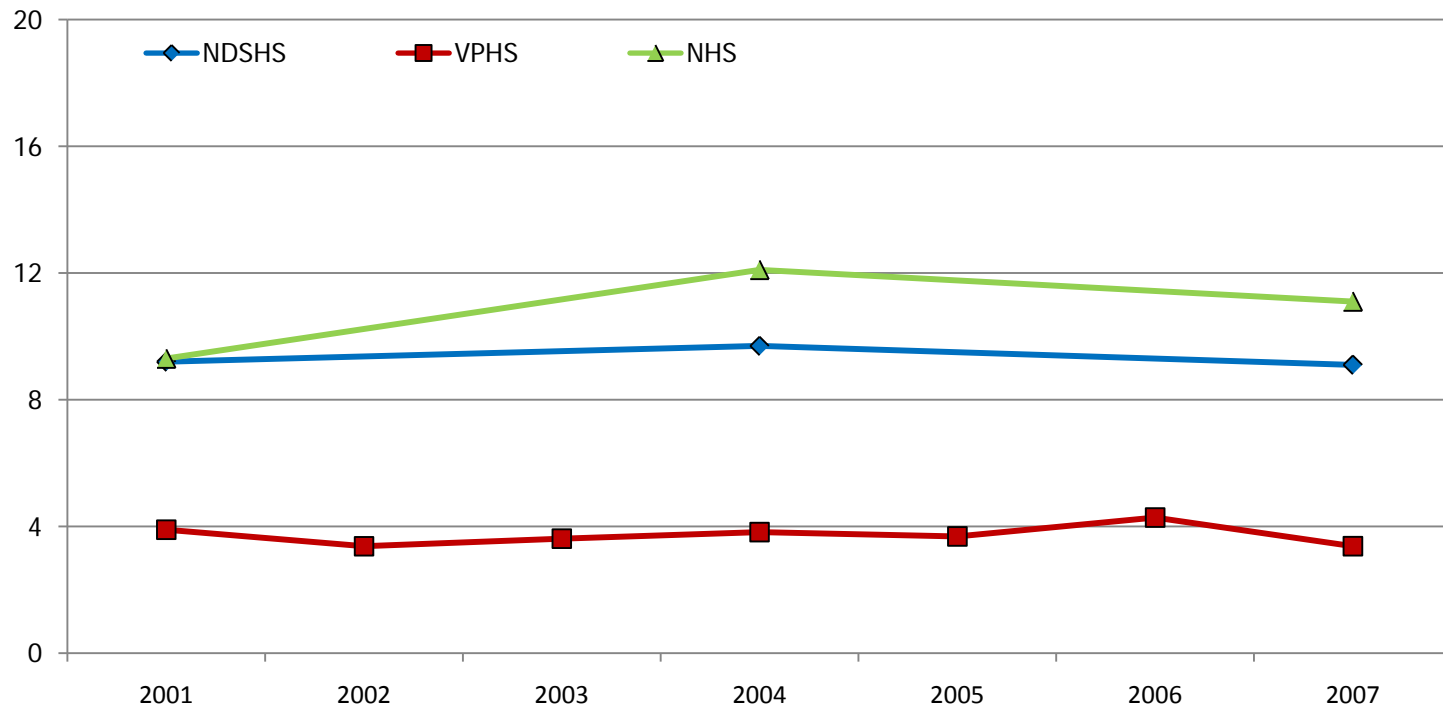
- Increasingly incorporated into policy
  - California restricts on- and off-premise licences on a per-capita basis (e.g. one on-sale general licence per 2,000 people living in a county)
  - Violent Crime Reduction Act (2006) in the U.K. includes provisions to make licensees pay the costs of alcohol-related crime in 'Alcohol Disorder Zones' where a concentration of premises has led to high rates of problems
  - Focus of Local Governments across Australia

# Trends in alcohol-related harm



# Trends in consumption

- Estimates of risky drinking rates from three Victorian survey samples



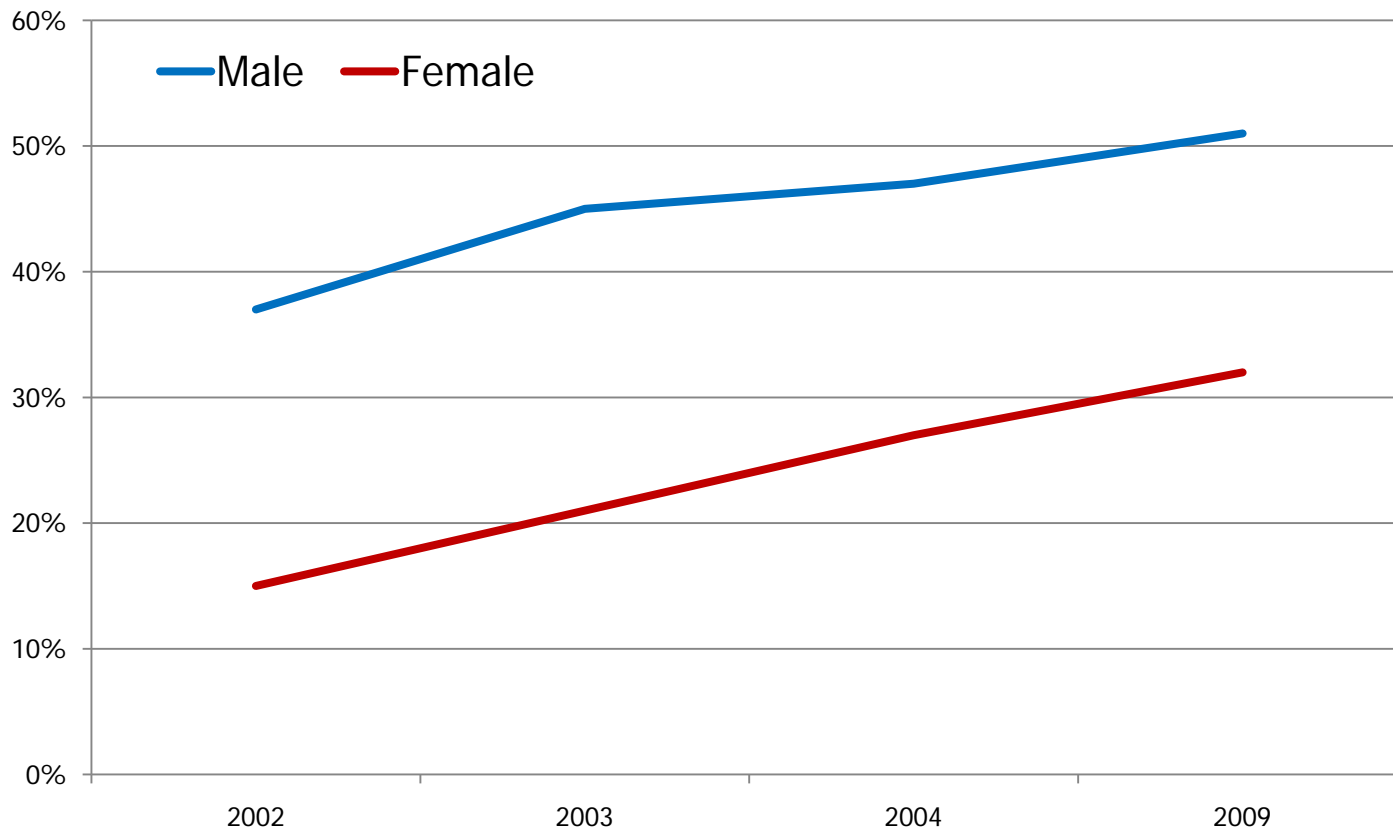


## Youth trends

- Harm rates increasing more quickly than general population
  - e.g. 200+% increases in emergency presentations in ten years
- Risky consumption rates fairly stable or declining.
  - However, some indication of increases in very heavy drinking



# Youth trends – 20+ drinks in a session



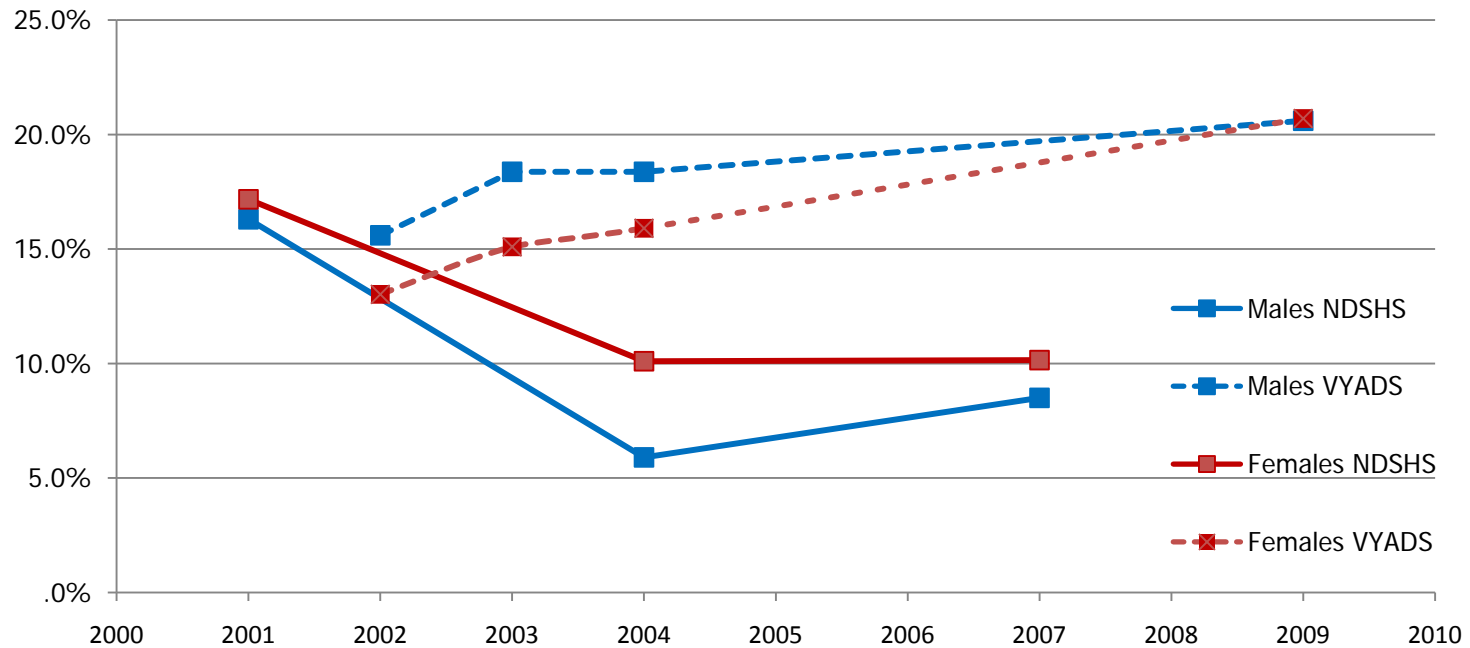


# Challenges of measuring consumption

- No reliable state level data on overall alcohol consumption (e.g. sales data)
- Relying on survey responses, which typically relate to consumption in the previous 12 months at various levels
  - Low response rates
- Reasonable research evidence that survey responses are broadly reliable
  - However: trends over time seem problematic

# Survey issues

- Short-term risky drinking prevalence (16-24 year olds), using two different surveys





## Empirical studies

- Statewide trends are suggestive of substantial impacts from deregulation
  - Although consumption data is unclear
- To provide evidence of causality, more rigorous analyses are required
  - Examine whether harm rates in small geographic areas (postcodes) vary along with changes in outlet density
- Licence density examined for on-premise, packaged and general (pub) licences



# Study 1 – longitudinal assault analysis

- Examined how changes in outlet density relate to changes in assaults over time at the postcode level
- Used fixed effects models to utilise the small number of time points (9 years) and large number of units (186 postcodes)
- Assault data provided by police based on location of offence



# Study 1 – longitudinal assault analysis

- Results suggest changes in all three licence types are related to changes in assaults
- Largest effect size for general (pub) licence density
- These relationships were examined for subsets of postcodes (e.g. Inner-city, disadvantaged suburban), with notable variation in effects




# Study 1 – longitudinal assault analysis

- General licences positively related to violence in all suburb types except for disadvantaged suburban areas
  - Particularly problematic in central suburbs
- Packaged licences positively related to violence in advantaged and disadvantaged suburban areas
  - No effects in other areas
- On-premise licences positively related to violence in inner-urban and suburban areas



## Study 1 – Conclusions

- Changes in the number of alcohol outlets across Melbourne in the last decade are related to changes in the number of assaults
- This relationship is particularly strong in the central suburbs, with large numbers of pre-existing alcohol outlets, suggesting some form of ‘saturation’



## Study 2 – longitudinal domestic violence analysis

- Similar study to the previous analysis, but focussed on domestic violence rather than assault
- A small amount of previous research provides mixed evidence on whether outlet density is related to domestic violence
- Socio-economic disadvantage has been consistently shown to be related to domestic violence, so studies of outlet effects need to control for it carefully



## Study 2 – longitudinal domestic violence analysis

- Longitudinal results:
  - Over time, general and packaged liquor licence density are positively related to domestic violence rates
  - Packaged liquor has the largest effect size when licence types are examined separately
    - 10% increase in packaged liquor -> 3.3% increase in domestic violence
    - ~ 1/3 of domestic violence incidents reported to police



## Study 2 – Conclusions

- Reasonable evidence that alcohol outlet density is related to rates of domestic violence at the postcode level in Melbourne
- This relationship persists when socio-economic disadvantage is controlled for
- Packaged liquor appears to be particularly problematic



## Study 3 – longitudinal hospital admissions analyses

- Examined local level patterns of hospital admission for assault and for alcohol-caused chronic disease
- Counteracts issues relating to the meaningfulness of police data
  - E.g. Policing patterns might be influenced by the density of licensed premises resulting in more assaults being recorded
  - Pattern of victims reporting to police may be somehow associated with availability of alcohol



## Study 3 – longitudinal hospital admissions analyses

- Data from a fourteen year period (1994-2007)
- Records of all hospital admissions (i.e. doesn't include emergency department presentations that don't lead to admission)
- Based on postcode of residence of admitted patient
  - Previous analyses have been based on postcode of violent event




## Study 3 – Conclusions

- General licences (pubs) and packaged licences (bottle shops) were both significantly related to assault-related hospital admissions
  - Small effect sizes, but focussing on the most severe assaults
  - Less than 15% of assault victims seek any medical help, presumably only a small proportion of these are admitted to hospital
- Packaged licences and on-premise licences (restaurants/bars etc) were significantly related to rates of alcohol-caused chronic disease
  - Largest effect size for packaged licences - in an average postcode, a new bottle-shop is associated with around 0.9 admissions for chronic disease


## Study 4 – High risk drinking amongst 16-24 year olds

- VYADS phone survey of 12,000 Victorians aged 16-24.
- Very high-risk drinking defined as more than 20 drinks and more than 11 drinks for females, at least 12 times a year (~20% of young drinkers)
- Use of survey data allowed for the incorporation of individual-level control variables (age, sex, income, family functioning etc)
- Socio-economic status of neighbourhood also incorporated, along with measures of alcohol outlet density



# Study 4 – High risk drinking amongst 16-24 year olds

- A range of individual level variables predicted high risk drinking
  - Age (18-24 > 16-17)
  - NESB (-ve)
  - Family functioning problems (+ve)
  - Living with a partner or two parents (-ve)
  - Having left school (+ve)
  - Disposable income (+ve)
  - Age first consumed alcohol (-ve)



## Study 4 – High risk drinking amongst 16-24 year olds

- No effect of neighbourhood socio-economic status
- Young people living in rural/regional areas more likely to drink at high risk levels
- Significant effect of packaged liquor density in the respondent's neighbourhood
  - In a hypothetical neighbourhood with 1,000 16-24 year old drinkers, the findings suggest that each additional bottle-shop would result in six extra young people drinking at high risk levels



## Overall conclusions

- Deregulation of liquor licensing was an ongoing project through the 1980s and 1990s
- Focus of legislative changes was largely competition and economic development
- Deregulation lead to substantial growth in alcohol availability, both in terms of numbers of outlets and hours of trade



## Overall conclusions

- The increases in availability have occurred concurrently with substantial increases in harm rates
- Specific studies have demonstrated links between alcohol outlet density, high-risk drinking, chronic disease and domestic and general violence in Victoria in the last decade.
- Further studies (e.g. Newcastle trading hours) have demonstrated substantial reductions in harm following licensing restrictions



## Policy response

- Recent evidence that the focus of liquor licensing policy is shifting back to controlling rates of harm
  - Lock-out trial
  - Establishment of Responsible Alcohol Victoria in 2008
  - Risk-based liquor licensing fees
  - Recent amendments to planning regulations to allow cumulative impact to be considered in decisions
  - Increasing focus on alcohol issues by local governments (although they have limited powers)



## Policy response

- Driven largely by growing media and public concern about night-time violence
- Policy options favoured still largely those that do not interfere substantially with the market
  - Policy-makers also fear unintended consequences such as the live music backlash and lock-out failure
  - Tend to focus most on cracking down on ‘bad apples’
- Have focussed almost entirely on night-time economy
  - Although some hints that packaged liquor is back on the agenda



## Policy response

- Policies that restrict the growth of the alcohol industry are likely to restrict increases in alcohol-related harm
  - These policies are challenging to develop and implement and can have a range of unintended consequences
  - Also have substantial evidence base behind them, and should be a key focus of any government serious about reducing alcohol-related harm