Association between increased density of alcohol outlets and harmful outcomes

Michael Livingston

Turning Point Alcohol and Drug Centre
University of Melbourne

Research funded by the Sidney Myer Fund and IOR Ltd
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
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
  - Niewenhuyse Review (1986), led to new system, under the Liquor Control Act 1987
Liquor Control Act 1987

- Implemented the majority of Niewenhuysen’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 focusing 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

Rate per 10,000 population

- Hospitalisations
- ADIS treatment episodes
- Ambulance presentations (metro Melbourne)
- Alcohol-related D.V.
- E.D. Presentations (intoxication)
- Night-time assaults
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

![Graph showing trends for Male and Female.

- Male: Increasing from 0% in 2002 to 60% in 2009.
- Female: Increasing from 10% in 2002 to 30% in 2009.]

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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 focusing 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