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PREDICTING ALCOHOL-RELATED HARMS FROM LICENSED OUTLET DENSITY: A FEASIBILITY STUDY.

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Chikritzhs, Catalano, Pascal & Henrickson (2007).

Plain English summary and implications for police prepared by Roger Nicholas.

Aims and Methodology

This project sought to further the development of an Australian model to determine appropriate liquor outlet densities in order to reduce alcohol-related harms within communities. The researchers sought to progress the development of a model that would be sensitive to local risk factors. The research involved an extensive literature review. In addition, secondary data on indicators of alcohol consumption and related harms was collected. This data was then examined to determine the possible existence of relationships with the type and density of licensed premises. In particular, the researchers measured the impact of licensed premises density on police-reported assaults, drink driving breath tests, alcohol-attributable hospitalisations, and alcohol-attributable deaths. In addition, they sought to determine the most appropriate means of identifying high and low risk regions in relation to outlet density, alcohol consumption and harms. The researchers then sought to identify the most effective means of using this information to highlight future high and low risk regions for alcohol consumption and related harms and to predict the likely impact of changes to outlet density. The final objective of the project was to create a framework to map the requirements for developing an outlet density model for minimising alcohol-related harms.

Key findings:

- Throughout Australia, liquor licensing decisions relating to outlet density have generally been made on an ad hoc basis. Increasingly these decisions are being informed by the application of public interest tests. This involves testing the extent to which new licences or changes in existing licences are in the pubic interest. The application of these tests is currently impeded by a lack of objective data-driven evidence.
- The results of this research have excluded the viability of a 'one size fits all' model that can be applied Australia-wide to predict the impact of changes in licensed outlet density on alcohol-related harms.
- There is very strong research evidence that the frequency of assaults increases with increases in the density of licensed premises. Evidence regarding the relationship of alcohol outlet density to road crashes and drink driving is less consistent however this may be a feature of problems with research design. There is also some evidence of positive relationships between outlet density and the extent of other harms such as homicide, child abuse and neglect, self-inflicted injury, and alcohol-related deaths and illnesses.
- The researchers measured alcohol outlet density in three ways. These were: a simple raw count of the number of licensed outlets per local government area (LGA); the number of licensed outlets divided by the total land area in the LGA; and the volume of wholesale alcohol purchases made by retail outlets located in the LGA (not specifically related to the density of outlets).
- Of these three outlet density measures, the volume of sales of full strength beer provided the strongest and most consistent associations with alcohol-related harm. All three outlet density measures were strongly associated with assault and drink driving offences, but the number of

outlets per LGA and outlets per land area had only moderate/weak associations with alcohol-related hospitalisations and deaths.

- The strength of the associations between the level of wholesale purchases of regular strength beer and indicators of harm varied by licence type. Hotels/taverns and liquor stores had consistently strong associations across all alcohol-related harm indicators. Club licences and restaurants had a moderate association with offences (apart from a high correlation between density of restaurants and drink driving). Nightclub and other types of alcohol licences had moderate to weak associations between wholesale regular strength beer sales and alcohol-related harms. In some of the regions, however, demographic and socio-economic characteristics appeared to be more predictive of assaults than was volume of beer sales.
- The researchers also reported that where the numbers of licensed premises increase, leading to subsequent increases in the numbers of assaults, these additional assaults are far more likely to occur in private homes rather than at licensed premises.
- The researchers concluded that the level of wholesale alcoholic beverage sales is likely to be a far more accurate predictor of alcohol-related harms than is outlet density. A major advantage of this approach is that it does not assume that all outlets (or types of outlets) are equivalent in terms of the sale and supply of alcohol or alcohol-related harm.
- While this is an important finding, at present only Western Australia routinely collects and allows information on wholesale alcohol purchases by individual retailers to be made available for research purposes. The Northern Territory and Queensland also collect this wholesale purchase information, however this is either not in a form that is useful for research purposes or is not released to researchers. Other Australian jurisdictions do not collect this information. Given the apparent value of using the level of full strength beer sales as a predictor of alcohol-related harm, this is likely to be a major impediment to the development of national outlet density models.
- The best approach to forecasting the impact of changes to outlet density on the public health, safety and amenity of the community is one which allows as complete a view of the range of possible outcomes as possible. A particularly useful adjunct to this data collection on alcohol-related harms would be hospital emergency department data.

Implications for policing

Some Australian jurisdictions are moving towards liquor licensing approval processes that involve a public interest test. That is, a test which considers whether the granting of a specific licence is in the public interest. Key to this process is the formulation of a tool to assist police, health and liquor licensing authorities to predict the extent to which granting a licence would lead to an increase in alcohol-related harms. The researchers suggest the development of a model of alcohol outlet density which uses systematically-recorded data. In the future it is to be hoped that police, when faced with a potentially problematic liquor licensing application, could apply such a model which could then accurately predict the likely impact of granting of the licence.

Importantly, the characteristics of the local environment and those of the proposed licensed premises could be factored in to such a model. This evidence could then be presented to licensing authorities so as to influence their decisions in ways that enhance public safety, health and amenity. At present, the processes that are used to make these determinations can lack consistency and transparency. For this reason, the development of a model which assists in predicting the impact of changes in the patterns of retail alcohol sales on levels of alcohol-related harm is likely to bring very tangible benefits to policing.

The provision of accurate data is essential to ensure the accuracy of such models. In particular, the lack of availability, in most Australian jurisdictions, of detailed data relating to wholesale alcohol sales made to specific licensed premises, is likely to be highly problematic. Police in these jurisdictions may therefore wish to give some consideration to how this could be redressed.

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