

Quality of data for geo-spatial studies of alcohol-related harm

Geoff Hay¹, Kypros Kypri¹, Peter Whigham², John Langley¹

¹Injury Prevention Research Unit,
Department of Preventive and Social Medicine,
University of Otago, Dunedin, New Zealand.
Phone: +64 3 4795399 Fax: +64 3 479-8337
Email:geoff.hay@ipru.otago.ac.nz

²Spatial Information Research Centre
University of Otago, Dunedin, New Zealand
Phone: +64 3 479-7391 Fax: +64 3 479-8311
Email: pwhigham@infoscience.otago.ac.nz

**Presented at SIRC 2006 – The 18th Annual Colloquium of the Spatial Information Research Centre
University of Otago, Dunedin, New Zealand
November 6th-7th 2006**

ABSTRACT

There is growing research interest in the relationship between the geographic density of liquor outlets and the incidence of various harms (e.g., assault), however, to date, detail is lacking on the quality of data used in such research. The aims of this study were to (1) Assess the consistency of liquor outlet counts in New Zealand; (2) determine the spatial precision of outlet location data; (3) determine the completeness of temporal data (i.e., days and hours of opening). Liquor Licensing Authority data (1992-2005) for 10 local authority areas were obtained. The consistency of outlet counts was assessed by comparing counts of distinct license addresses and premise names. The spatial precision (city, street, or exact co-ordinates) of the outlet location information was determined. The precision of temporal data for license data was measured. Depending on the attribute counted, a 5% variation in outlet counts was detected. Location data were complete enough to permit precise mapping of 91% of outlets in urban areas and 38% in rural areas. Eighty eight percent of license records detailed outlet opening hours, however, only 50% contained licence end-dates. Errors and omissions in liquor outlet data are such that the total number of outlets, and whether outlets were operating on particular dates, must be approximated. The data permit geocoding of most outlet locations in urban areas but not in rural areas. Effort should be made to improve the quality of outlet data, and consideration given to the likely effects of anomalies on research findings.