

### What can public health surveillance of emergency department presentations for acute alcohol problems tell us about social trends in drinking behaviour?

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**TO THE EDITOR:** Since colonial times, alcohol has been central to Australia's political, cultural and social fabric.<sup>1</sup> In the past year, concern about alcohol misuse has re-emerged as a dominant feature in the political landscape.

We analysed the New South Wales emergency department (ED) data collection, on the NSW Department of Health's HOIST (Health Outcomes and Information Statistical Toolkit) database, to describe the

epidemiology of ED attendances due to acute alcohol problems. Data from 43 hospitals that contributed reasonably complete diagnosis information since 2000 were used. Attendances were selected using codes for alcohol intoxication, alcohol dependence/withdrawal, or drug or alcohol blood test from the ninth and 10th revisions of the International classification of diseases (ICD-9 and ICD-10) or from the Systematized Nomenclature of Medicine — Clinical Terms (SNOMED-CT). Population rates by age, sex and year were calculated. To assess the association between alcohol-related ED presentations and large public social events, time series of 24-hour counts ending at midday were used (because most presentations for acute alcohol problems occur at night).<sup>2</sup>

Between 2005 and 2008, the rate of ED presentations for acute alcohol problems rose sharply from around 110 to almost 150 per 100 000 population (Box 1). Between 2000 and 2008, the highest rates of ED attendance involved 18–24-year-olds of both sexes, and 25–64-year-old men. The largest increase was among 18–24-year-olds. Notably, in that age group, the rate in women converged with that of men at 228 per 100 000 in 2004 and was then higher until it re-converged in 2008 at around 390 per 100 000. In all years, the rate of presentation in 10–17-year-olds was slightly higher for females than for males (Box 2). Among children aged less than 10 years, the rate was under four per 100 000 in all years.

Many peaks in ED attendance coincided with large public gatherings, including New Year's Eve celebrations and the closing of the 2000 Sydney Olympic Games. In 2007 and 2008 especially, the Sydney Gay and Lesbian Mardi Gras was associated with marked increases (Box 3), which may reflect underlying increases in alcohol use in the younger age groups that might be attracted to this now mainstream event.

Because the coverage of the ED data collection was limited, these figures underestimate the true incidence. Nevertheless, most urban and larger rural hospitals were included. We were unable to include the far greater number of ED presentations in which alcohol use was a factor, but not the primary reason for presentation.<sup>3</sup>

The trends and rates we observed were similar to those found in a recent Victorian study of young people.<sup>4</sup> The small decline in overall rate from 2000 to 2002 (Box 1) is consistent with declining per-capita consumption of beer and spirits, while the

subsequent increase in young people, which flattened out in 2008, is similar to the trend in consumption of ready-to-drink alcoholic beverages over the same period.<sup>5</sup> Studies of the types of beverages used before ED presentation are urgently required to assess whether this is a causal association.

Analysis of routine ED databases can provide a timely insight into the social and epidemiological context of high-risk drinking. The rise in alcohol-related presentation among teenagers and young adults bodes poorly for subsequent long-term alcohol use disorders and other risk behaviours and their consequences.<sup>6</sup> The correlation between

peaks in ED presentations and large-scale social events suggests that the development of cultural norms may have a strong influence on individuals' behavioural choices.

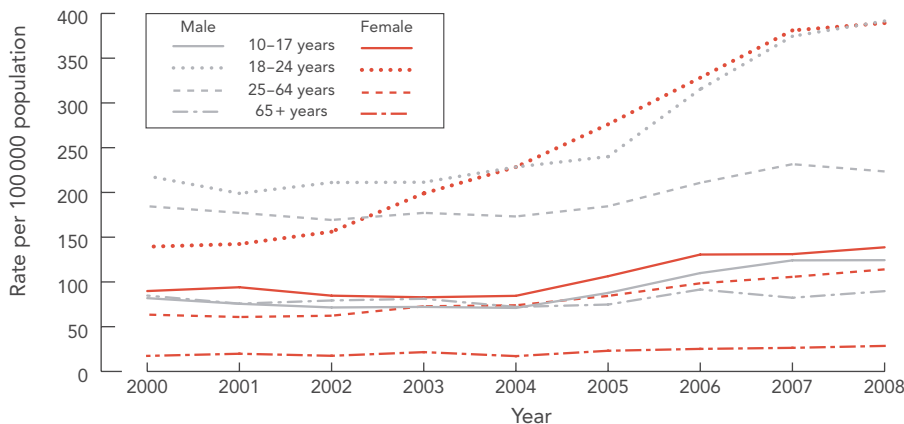
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### 1 Number and rate of presentations to 43 emergency departments for acute alcohol problems, New South Wales, 2000–2008

	Year								
	2000	2001	2002	2003	2004	2005	2006	2007	2008
Number	6400	6215	6203	6762	6826	7652	9112	10119	10382
Rate per 100 000 population*	98.7	94.5	93.6	101.3	101.7	113.2	133.7	147.1	149.4

\* Rates are an underestimate because not all NSW emergency departments are included. ◆

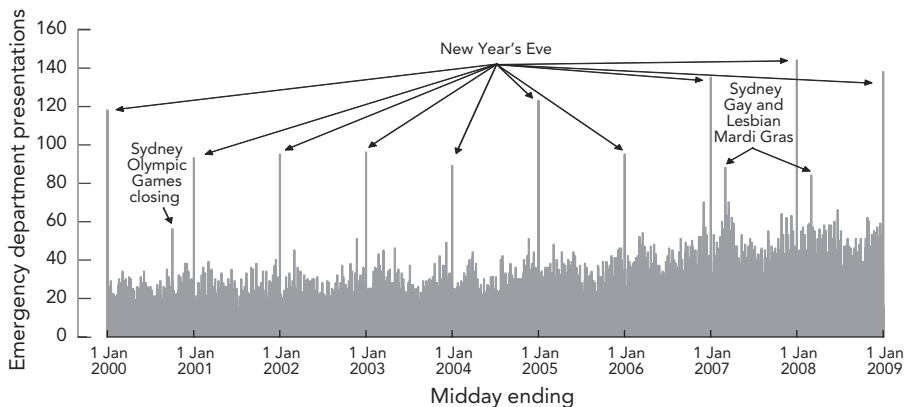
### 2 Population rate of presentations to 43 emergency departments for acute alcohol problems,\* by year, sex and age,† New South Wales, 2000–2008



\* Rates are an underestimate because not all NSW emergency departments are included.

† Values not shown for people aged < 10 years because all values were below 4/100 000 population. ◆

### 3 Daily counts\* of presentations to 43 emergency departments for acute alcohol problems, New South Wales, 2000–2008



\* Counts are aggregated over 24-hour periods, ending at midday. ◆

- 1 Midford R. Australia and alcohol: living down the legend. *Addiction* 2005; 100: 891-896.
- 2 Charalambous MP. Alcohol and the accident and emergency department: a current review. *Alcohol Alcohol* 2002; 37: 307-312.
- 3 Indig D, Copeland J, Conigrave KM, Rotenko I. Why are alcohol-related emergency department presentations under-detected? An exploratory study using nursing triage text. *Drug Alcohol Rev* 2008; 29: 1-7.
- 4 Livingston M. Recent trends in risky alcohol consumption and related harm among young people in Victoria, Australia. *Aust N Z J Public Health* 2008; 32: 266-271.
- 5 Distilled Spirits Industry Council of Australia. Improving Australia's System of alcohol taxation — the first phase. Melbourne: DSICA, 2008. [http://taxreview.treasury.gov.au/content/submissions/pre\\_14\\_november\\_2008/Distilled\\_Spirits\\_Industry\\_Council\\_of\\_Australia.pdf](http://taxreview.treasury.gov.au/content/submissions/pre_14_november_2008/Distilled_Spirits_Industry_Council_of_Australia.pdf) (accessed Jul 2009).
- 6 Moore E, Coffey C, Carlin JB, et al. Assessing alcohol guidelines in teenagers: results from a 10-year prospective study. *Aust N Z J Public Health* 2009; 33: 154-159. □