

# SNAPSHOT: Alcohol-related Harm 2013

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## Methodology

### Alcohol-involved Traffic Crashes

Data on drivers in alcohol-involved traffic crashes resulting in injury or fatality over the entire New Zealand population were obtained from the Ministry of Transport in 2013. The numbers of drivers aged 15+ years in alcohol-involved crashes, resulting in an injury or fatality, in 2013 were: 356 in Auckland and 831 nationally.

Crashes involving injury or death are required by law to be reported to the Police in New Zealand. In non-fatal injury crashes, driver alcohol levels were available from hospital blood tests or police administered breath tests. Drivers were required to be over the legal BAC limit for driving for alcohol-involvement to be coded. The legal BAC limit for driving in New Zealand was 80 millilitres of alcohol per 100 millilitres of blood for adults 20+ years in 2013 and zero milligrams for drivers under 20 years.

In the case of fatal crashes, a blood test was obtained at autopsy for drivers who died. Measured BACs were available for around 80% of fatally injured drivers.

In some cases, Police recorded that alcohol was suspected but did not record an alcohol level. Evidence indicates that this is a reasonably accurate indicator of alcohol-involvement.<sup>1</sup>

### Heavier Quantities of Alcohol Consumed (8+ drinks)

The 2013 Alcohol Policy in New Zealand (APINZ) Survey was the source of the survey data analysed. The survey was designed to represent the population and the sample size was approximately 700 in Auckland and 2000 nationally. The response rate in 2013 was 68%. Respondents who had consumed alcohol were asked to report on drinking in a number of specified locations, plus any additional locations they used. For each place, they were asked how often they drank there and what they would drink on a typical occasion at that location. This information was then used to estimate the quantity consumed on a typical occasion. This approach to collecting consumption data has been shown to have very good validity as it accounts for a high amount of the alcohol available for consumption in New Zealand (approximately 90%).<sup>2</sup> The quantity consumed on a typical occasion is reported in the text as number of drinks. A drink here is defined as 15 ml of absolute alcohol.



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## Wholly Alcohol-attributable Hospitalisations

Hospitalisations that were wholly attributable to alcohol were obtained from the National Minimum Dataset in 2013. The data represent hospitalisations not individual people. Wholly alcohol-attributable conditions are those conditions where alcohol is implicated in all cases of the condition. By definition, the Attributable Fraction = 1 (or 100%), because no cases would be expected to arise in the absence of alcohol.

### Hospitalisations for the following conditions were obtained:

- Mental and behavioural disorders due to use of alcohol including: acute intoxication, harmful use, dependence syndrome, withdrawal state (including with delirium), psychotic disorder, amnesic syndrome, residual and late-onset psychotic disorder, other and unspecified mental and behavioural disorders that are all attributable to alcohol,
- Alcoholic liver cirrhosis,
- Alcohol toxicity (poisoning),
- Alcoholic cardiomyopathy (where alcohol weakens the heart muscle),
- Alcoholic gastritis (inflammation of the lining of the stomach caused by excessive alcohol use),
- Alcoholic poly neuropathy (damage to the nerves that results from excessive drinking of alcohol),
- Alcohol induced pancreatitis.

The numbers of hospitalisations for wholly alcohol-attributable conditions among people aged 15+ years in 2013 were: 1006 in the Auckland Region and 2738 nationally.

## Analysis

Rates of alcohol-related harms were generated for the Auckland Region and nationally and separately for age groups. Rate calculations were undertaken using Census 2013 data from the Auckland Region and nationwide for: a) the population aged 15+ years, and b) for each age group separately (using the population in each age group as the denominator). Age groups were 15-17, 18-19, 20-24, 25-34, 35-44, 45-54, 55-64 and 65+. Survey data were analysed using SAS 9.4 (age groups analysed differed slightly for the survey data and were: 16-17, 18-19, 20-24, 25-34, 35-44, 45-54 and 55-65).

1 Kypri K. *Minimum Purchase Age as a Strategy to Reduce Alcohol-related Injury*. Centre for Clinical Epidemiology & Biostatistics, School of Medicine and Public Health, University of Newcastle; 2010.

2 Casswell, S., Huckle, T. & Pledger, M. (2002). *Survey data need not underestimate alcohol consumption*. *Alcoholism: Clinical and Experimental Research*, 26. 1561-1567.

The results presented here differ considerably from previous analyses of alcohol-related harms undertaken by ACC that showed the Auckland Region to have lower rates compared to those nationwide (the reason for the discrepancy could not be ascertained Pers Comm. Anurag Sharma ACC).

