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# A point-prevalence survey of alcohol-related presentations to Australasian emergency departments

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We report the results from our second point-prevalence survey of alcohol harm in Australasian emergency departments (EDs). This was conducted as part of the Australasian College for Emergency Medicine (ACEM) Alcohol Harm in EDs Project.[1] The project's aim was to quantify the amount of alcohol harm presenting to Australasian EDs and to raise awareness of the scale of this public health issue. Previous research attempting to quantify alcohol harm in EDs has been largely retrospective, coding-based or single-site, and has estimated total ED alcohol-related attendances in the range of 0.5 to nine per cent.[2,3]

The authors conducted the first large-scale, bi-national point prevalence ('snapshot') survey of alcohol harm in 106 Australasian EDs (92 Australia, 14 New Zealand), on 14 December 2013. This survey found that one in seven presentations in Australia were alcohol-related (14%); the rate for New Zealand was one in five (18%).[4]

The second snapshot survey was conducted at 2.00 am on 6 December 2014. All EDs in Australia and New Zealand accredited by the Australasian College for Emergency Medicine (ACEM) for specialty training and non-accredited EDs that are part of the Emergency Medicine Education and Training (EMET) teaching network were invited to participate. The full methodology is described in our previous paper reporting data from the 2013 snapshot survey.[2] The ACT Health Human Research and Ethics Committee's Low Risk Sub-Committee approved both studies (ethlr.13.294), and site-specific governance approval was obtained where required.

A total of 141 ACEM-accredited EDs were invited to participate in the survey. The overall response rate was 80.9% (114/141). The response rate was 89.5% (17/19) in New Zealand and 77.6% (97/125) in Australia. By role delineation response rates varied between 84.4% (27/32) for major referral, 74.6% (44/59) for urban district, 65% (34/42) for rural and regional and 69.2% (9/13) in unaccredited EDs.

At the survey time, 344 of 2,696 ED presentations were alcohol-related; 12.6% [95%CI 11.3-14.0] in Australia and 13.7% [10.6-17.5] in New Zealand. This equates to one-in-eight presentations in Australia and one-in-seven in New Zealand. Table 1 demonstrates the results by regions.

The results from the 2014 snapshot survey are consistent with data collected from the 2013 snapshot survey, and also a seven-day survey the authors conducted in 2014. In the seven-day survey, all patients attending seven EDs over a seven-day period were prospectively screened for an alcohol-related presentation.[5]

The seven-day study and this snapshot survey were run concurrently at seven sites (five in Australia and two in New Zealand), with an independent clinician at the seven-day study sites completing the snapshot survey at 2.00 am for validation purposes. Forty patients were identified as alcohol positive at the seven-day study sites, while data returned for the snapshot survey by the independent clinician at these same seven sites shows 41 people were in the ED because of alcohol. This indicates that the point-prevalence survey method is accurate and validates its measurement method.

The snapshot survey methodology is an inexpensive and pragmatic approach to providing an estimate of the number of alcohol-related presentations to Australasian EDs at a point in time. Given our high response rate across regions and types of ED, and validation with our prospective study, we believe our results are both reliable and a broadly representative estimate of alcohol-related presentations in Australasian EDs at high alcohol times.

Our work confirms that alcohol-related presentations to EDs continue to be under-reported, and presents a strong case for government regulation to address alcohol availability, cost and promotion.

Screening and collection of alcohol-related presentation data varies across Australasian EDs. While the New Zealand Ministry of Health will commence routine data collection of alcohol-related presentations in 2017, this data is not included in current Australian minimum patient data sets. Routine collection of alcohol-related ED presentation data would not only allow quantification of the scale of the public health burden of these presentations, but provide a powerful measure of the impact of policy change and population-based interventions to reduce alcohol harm.

## References

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**Table 1: All results by Country, State (for Australia) and ACEM hospital role delineation.**

| | All NZ | NZ MR | NZ UD | NZ RR | NZ NA | All AUS | ACT | NSW | NT | QLD | SA | TAS | VIC | WA | AUS MR | AUS UD | AUS RR | AUS NA |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| No. of Alcohol-affected patients | 57 | 33 | 8 | 10 | 6 | 287 | 16 | 81 | 21 | 66 | 21 | 7 | 26 | 49 | 130 | 94 | 59 | 4 |
| Total no. of patients in ED | 415 | 226 | 66 | 75 | 48 | 2281 | 87 | 809 | 65 | 458 | 138 | 79 | 388 | 257 | 925 | 872 | 452 | 32 |
| % alcohol-related | 13.73 | 14.60 | 12.12 | 13.33 | 12.50 | 12.58 | 18.39 | 10.01 | 32.31 | 14.41 | 15.22 | 8.86 | 6.70 | 19.07 | 14.05 | 10.78 | 13.05 | 12.50 |
| 95% Low | 10.65 | 10.40 | 5.75 | 6.92 | 5.19 | 11.26 | 11.19 | 8.07 | 21.54 | 11.39 | 9.88 | 3.94 | 4.51 | 14.56 | 11.91 | 8.84 | 10.16 | 4.08 |
| 95% High | 17.51 | 20.04 | 23.04 | 23.61 | 25.94 | 14.03 | 28.45 | 12.34 | 45.18 | 18.04 | 22.55 | 17.96 | 9.79 | 24.52 | 16.50 | 13.07 | 16.59 | 29.93 |

*MR=Major referral, UD=Urban district, RR=Regional referral, NA=Not accredited*