

Health professionals driving under the influence

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Introduction

A column in the March 2018 New Zealand Doctor sparked debate on the misuse of alcohol by health professionals (Docherty, 2018). In the article 'My best friend alcohol', the author provided anecdotal reports of alcohol abuse by doctors and nurses and put out a call to "remove the cloak of silence" by examining valid data to identify the extent of alcohol misuse by health professionals.

In response to this, the Health Promotion Agency (HPA) looked at one aspect of alcohol misuse amongst health professionals: driving under the influence.

Methods

We used the Integrated Data Infrastructure (IDI) for this analysis. The IDI is a collection of linked administrative and survey datasets which consists of a 'spine', which is the central individual-level dataset, and 'nodes', which are all the other datasets linked back to the spine. The spine includes the maximum number of people in the target population, and is created using tax, births and visa data (Black, 2016).

Using the IDI, we brought together information on occupation from the 2013 New Zealand Census (Census) from Statistics New Zealand and court charges from drink driving from the Ministry of Justice. This allowed a calculation of the rate of people charged for driving under the influence and the rate of people with offences proven in court related to driving under the influence in health professionals and other professional occupations. Nearly all driving under the influence charges linked to the IDI spine. Very few driving under the influence charges have name suppression (charges with name suppression are not shared with the IDI) (Stats NZ, 2017).

'Driving under the influence' offences include driving under the influence of alcohol and/or drugs. However, driving under the influence of drugs makes up only a small percentage of charges.

Occupation data

This analysis includes individuals usually resident in New Zealand who completed the Census on 5 March 2013 and were 18 years or over on that day. Records that did not link to the IDI spine were excluded (5.4%).

Only employed individuals were included in this analysis. 1,884,033 people 18 and over reported being employed in the Census, and 72,651 of them were health professionals, using the Australian and New Zealand Standard Classification of Occupations (ANZSCO) 2006 classification (Australian Bureau of Statistics, 2006). This included 12,498 medical practitioners and 40,506 midwifery and nursing practitioners.

Health professionals are classified as having Skill Level 1 by the ANZSCO. Occupations at Skill Level 1 have a level of skill commensurate with a bachelor degree or higher qualification. At least five years of relevant experience may substitute for the formal qualification. In some instances relevant experience and/or on-the-job training may be required in addition to the formal qualification. Other types of professional occupations, including education professionals and

Information and Communication Technology (ICT) professionals, also have Skill Level 1. Because a similar skill level is necessary for the professional occupations, comparisons in rates of drink driving have been drawn between health professionals and other professional occupations. We also show rates for Police, because they face potentially serious professional consequences for a drink-driving conviction and they may also be more likely to know about the process of alcohol testing, eg, the right to request an evidential blood test.

Charges data

The court charges data from the Ministry of Justice was searched between January 2012 and January 2015 for charges related to driving under the influence. On average, 86% of medical school graduates are retained two years after graduation (Medical Council of New Zealand, n.d.). By restricting charges to within one year before and two years after the Census we can be confident that most respondents have not changed occupation.

An indicator of having at least one charge for driving under the influence in the three-year period was created for each individual in the Census. The Australian and New Zealand Standard Offence Classification (ANZSOC) (Pink, 2011) was used to define the indicator, following the method used by the Ministry of Justice (Ministry of Justice, n.d.). Offences for driving under the influence include those in the following ANZSOC groups:

0132: Driving causing death (which relate to alcohol or drugs)

0411: Driving under the influence of alcohol or other substance

1431: Exceed the prescribed content of alcohol or other substance limit.

Note that this indicator counts people charged in court (using the date that the offence occurred). It does not include instances where a person received an infringement notice for driving under the influence of alcohol.

Analysis was done in terms of people charged rather than people convicted for several reasons. Most importantly, a conviction is not the only court outcome that indicates a proven offence. For example, a discharge without conviction requires that the offender was found guilty or pleads guilty (Ministry of Justice, n.d.). In addition, there may be systematic differences in conviction rates between professional groups. For example, courts are aware that there may be serious consequences of a conviction in some professional groups and so may treat these groups differently.

As a sensitivity analysis, we repeated the analysis in terms of people with proven offences, which includes discharges without convictions and adult diversion in addition to convictions.

Results

Health professionals had the lowest rate of being charged with driving under the influence in the three-year period (0.27%), compared with the other professional groups (Table 1). All professional groups analysed had a much lower rate of driving under the influence than the average rate for all employed adults (1.26%).

Table 1 Rates of being charged with driving under the influence* in employed adults in New Zealand, by occupation (January 2012 to January 2015)

	Number driving under the influence	Total employed adults	% driving under the influence
All employed adults	23,742	1,884,033	1.26
Health Professionals	195	72,651	0.27
Health Diagnostic and Promotion Professionals	27	9,252	0.29**
Health Therapy Professionals	30	10,398	0.29**
Medical Practitioners	24	12,498	0.19**
Midwifery and Nursing Professionals	114	40,506	0.28
Arts and Media Professionals	159	16,974	0.94
Business, Human Resource and Marketing Professionals	429	92,349	0.46
Design, Engineering, Science and Transport Professionals	420	57,402	0.73
Education Professionals	291	98,076	0.30
ICT Professionals	213	39,117	0.54
Legal, Social and Welfare Professionals	156	39,468	0.40
Police	21	9,630	0.22**

Source: Statistics New Zealand 2013 Census data and Ministry of Justice court charges data in the IDI.

Counts in this table have been random rounded, base 3.

* Note that this includes drug as well as alcohol offences.

**These proportions are based on very low numerators. Because driving under the influence is such a rare event for these groups, random rounding to base 3 had a non-negligible effect on the uncertainty of the proportions. The true proportions are within $\pm 0.02\%$ of these estimates.

Health professionals had a similar rate of driving under the influence to Police (0.22%). We did not find any marked differences within the health professions. Medical Practitioners, Health Diagnostic and Promotion Professionals, Midwifery and Nursing Professionals and Health Therapy Professionals all had similar rates.

We repeated analyses of people with proven offences and found that the pattern of results was essentially the same. This was not surprising, as out of all individuals 18 or over in the Census who had at least one charge for driving under the influence, 98% had at least one proven offence.

Discussion

Although there is anecdotal evidence of alcohol misuse in health professionals, this analysis shows that health professionals have a lower rate of driving under the influence than other professionals and employed adults overall. However, there could be reasons for this lower rate in health professionals. In general, socioeconomic status is associated with drink-driving - drivers with lower occupational status or educational level are more likely to be arrested for or convicted of driving under the influence (Aaltonen, Kivivuori, & Martikainen, 2011; Hollinger, 1984; Riala et al., 2003). In particular, medical practitioners have to declare a drink driving conviction at their annual registration, which could provide a strong disincentive to either driving under the influence or getting caught. Further research is needed into other forms of alcohol (and other drug) misuse and alcohol-related harm in health professionals, particularly forms more directly relevant to care of patients and professional standards.

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Disclaimer

The results in this paper are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI), managed by Statistics NZ.

The opinions, findings, recommendations, and conclusions expressed in this paper are those of the author(s), not Statistics NZ.

Access to the anonymised data used in this study was provided by Statistics NZ under the security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business, or organisation, and the results in this paper have been confidentialised to protect these groups from identification and to keep their data safe.

Careful consideration has been given to the privacy, security, and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the Privacy impact assessment for the Integrated Data Infrastructure available from www.stats.govt.nz.