



# Alcohol Related Presentations to Dunedin Hospital's Emergency Department: January to December 2019

Prepared by the Public Health Service of Southern DHB  
September 2020

## Key findings -

Annual summary 2019

- There were 1860 alcohol related presentations to ED (4%)
- Every month, an average of 5-6 people presented to ED with a life threatening alcohol related condition (triage level 1).
- Every week, an average of 14 people presented to ED with potentially life-threatening alcohol related conditions (triage levels 2 or 3).
- Alcohol related cases present in ED at any time of the day or night with the busiest times being Saturday night (6pm-midnight) and Sunday morning (midnight-6am).
- February was the busiest month.
- 51% of cases were aged 18-24 years while 13% were aged between 25-34 years. Males presented more frequently than females (57% of presentations were male).

## Background

From July 2017, all Emergency Departments (EDs) are mandated to record whether or not alcohol has been a factor in each admission. Alcohol presentation categories are shown below.

**No** - alcohol consumption is NOT directly associated with this presentation  
**Not known** - couldn't determine if alcohol is associated with this presentation  
**Secondary** - consequence of others' alcohol consumption  
**Yes** - alcohol consumption is directly associated with this presentation

The presentation descriptions of interest are defined into two subgroups:

- **Primary** *Principal person admitted who is affected by alcohol (coded above as Yes)*
- **Secondary** *Person who is admitted with injuries caused by an alcohol affected person*

Unless otherwise specified, when this report refers to alcohol related presentations it includes both primary and secondary.

**Limitations:** Data quality is only as good as data entry; it is currently unknown if this process is consistent across all facilities who collect this data. This is an ongoing piece of work for Southern DHB.

**Triaging definition:** Triaging is the process of deciding how serious a person's illness or injury is in order to prioritise cases so they can be treated by urgency. All presentations to ED are assigned a triage level, as below.

**1** - immediately life threatening  
**2** - imminently life-threatening, or important time-critical (>10 min)  
**3** - potentially life-threatening, potential adverse outcomes from delay > 30 min, or severe discomfort or distress  
**4** - potentially serious, or potential adverse outcomes from delay > 60 min, or significant complexity or severity, or discomfort or distress  
**5** - less urgent, or dealing with administrative issues only

## Dunedin Hospital Emergency Data

This data reflects only acute harm that presented at the Dunedin Emergency Department. It does not include presentations to other parts of the health system or the full range of known harms from alcohol and their costs to both individuals and their communities. Alcohol consumption is a causal factor in more than 200 disease and injury conditions.<sup>1</sup> Individual harm is also known to be related to the pattern of alcohol consumption:<sup>2</sup>

- binge drinking can lead to interpersonal violence and injuries and result in emotional trauma;
- chronic medium to high level consumption is linked with liver and cardiovascular disease, mental health disorders and domestic violence;
- lower level consumption over long periods has been causally linked with a range of cancers.

The data provided is not representative of patterns and is not generalisable.

**Table 1: ED presentations by alcohol classification (January-December 2019)**

Alcohol Presentation description	Dunedin Hospital
<b>No</b> - alcohol consumption is NOT directly associated with this presentation	41625
<b>Not known</b> - couldn't determine if alcohol is associated with this presentation	1680
<b>Secondary</b> - consequence of others' alcohol consumption	227
<b>Yes</b> - alcohol consumption is directly associated with this presentation	1633
<b>Grand Total</b>	<b>45165</b>

There were 1860 ED alcohol related presentations (4% of the total).

- Crudely 155 ED presentations every month, *5 every day*
- More than 1 in 10 of these presentations were coded as secondary alcohol harm (12%).

Tables 2 and 3 show the profiles of the alcohol related ED presentations (n=1860); age and gender as well as ethnicity.

**Table 2:** Alcohol related presentations were heavily skewed towards the younger age groups.

1. highest users were 18-24 year olds (half of all presentations)
2. female presentations were typically less than males (43% v 57%)

**Table 3:** the majority of alcohol related presentations self-identified as European (79%), followed by Māori (14%)

**Table 2: ED Alcohol related presentations by gender and age (January-December 2019)**

Age Range	< 15	15-17	18-24	25-34	35-44	45-54	55-64	65-74	75 +	Grand Total
Female	4	41	419	93	83	69	36	31	16	792
Male	2	40	525	153	114	90	78	43	15	1060
Undefined			5	1		1		1		8
<b>Grand Total</b>	<b>6</b>	<b>81</b>	<b>949</b>	<b>247</b>	<b>197</b>	<b>160</b>	<b>114</b>	<b>75</b>	<b>31</b>	<b>1860</b>
<i>Percentage</i>	<i>0%</i>	<i>4%</i>	<i>51%</i>	<i>13%</i>	<i>11%</i>	<i>9%</i>	<i>6%</i>	<i>4%</i>	<i>2%</i>	<i>100%</i>

**Table 3: ED Alcohol related presentations by ethnicity (January-December 2019)**

Ethnicity	European	Māori	Pacific Peoples	Other Ethnicity	Asian	Grand Total
Total	1465	256	57	18	49	1845
<i>Percentage</i>	<i>79%</i>	<i>14%</i>	<i>3%</i>	<i>1%</i>	<i>3%</i>	<i>100%</i>

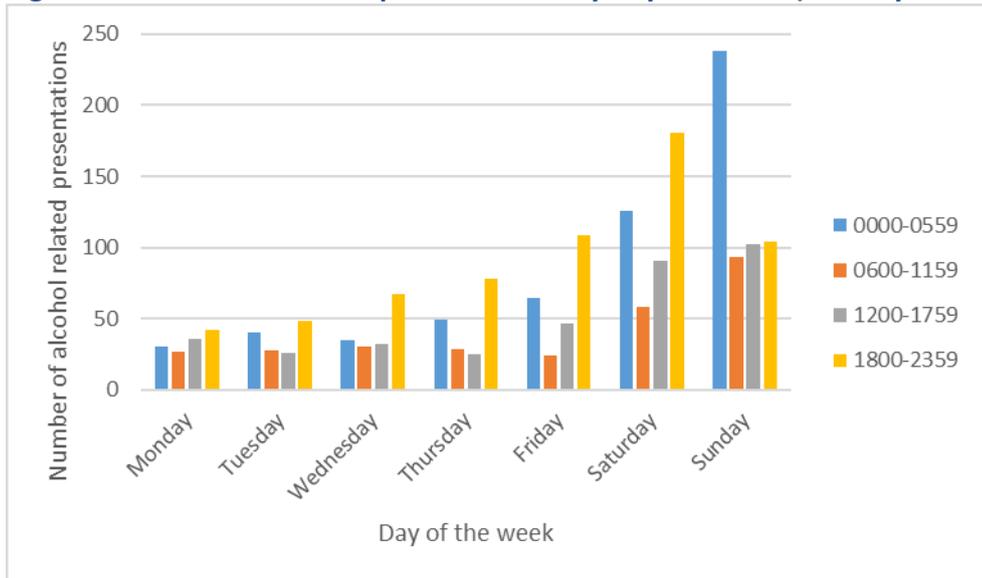
Note 1: there were 15 individuals (<1%) where ethnicity was not defined

Note 2: this data (both tables) should be compared against the latest Census data

<sup>1</sup> World Health Organization. Alcohol. Fact sheet; 2015, <http://www.who.int/mediacentre/factsheets/fs349/en/>

<sup>2</sup> Ministerial Council on Drug Strategy. Alcohol in Australia: issues and strategies; 2001

**Figure 1: ED alcohol related presentations by day and time (January-December 2019)**



Note: Not appropriate to plot averages as numbers are too small

Alcohol related ED presentations are avoidable. The harm that people cause to themselves is *bad enough* but they also divert time and resources from other patients. The number of intoxicated people turning up in ED puts unnecessary strain on the service “people can be rude, aggressive, or in the worst circumstances – even violent towards doctors and nurses”. This behaviour is not always limited to the individual requiring medical care as they may also be accompanied by associates who have also consumed high levels of alcohol. On these occasions, hospital security staff maybe required to restrain the patient and/or associate which is once again an avoidable drain on resources.

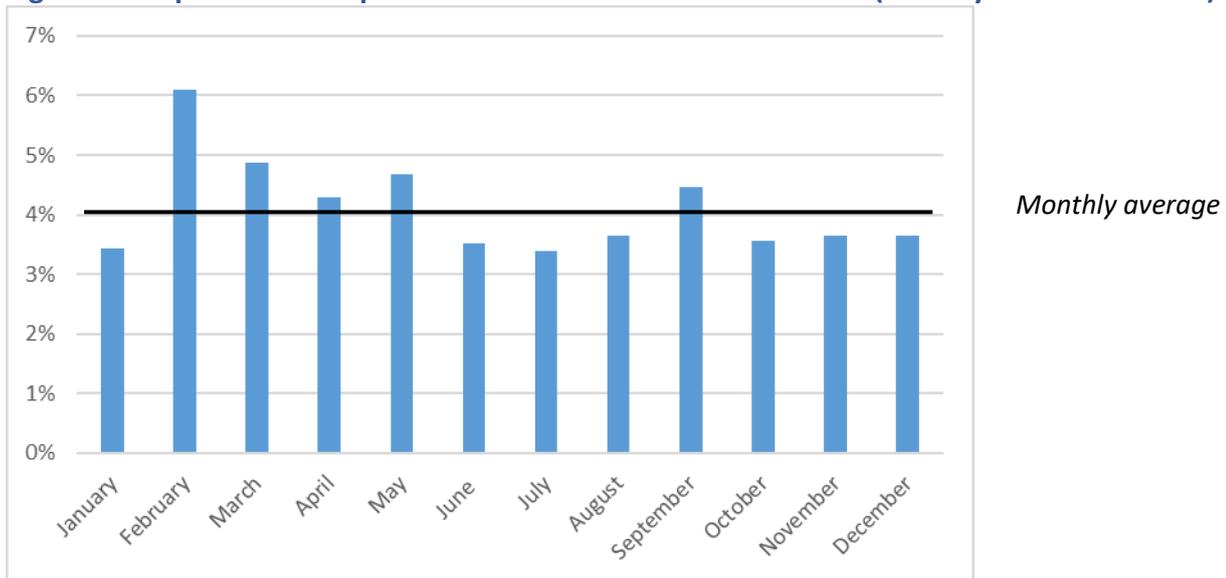
Figure 1 shows:

- 6pm-midnight Saturday x to x day and midnight-6am Sunday are disproportionately the busiest times

Figure 2 below shows:

- 4% of all ED presentations were alcohol related
- February had the highest proportion of alcohol related presentations (6%)

**Figure 2: Proportion of ED presentations that are alcohol related (January-December 2019)**



Note: Health cannot predict or comment on peaks and troughs as we cannot show a causal relationship to admission rates

**Table 4: ED Alcohol related presentations: what does this harm look like?**

ED Triage level	Primary alcohol harm	Secondary alcohol harm	Grand Total
1: Immediately life-threatening	59	6	65
2: Imminently life-threatening, or important time-critical (>10 min)	173	25	198
3: Potentially life-threatening, potential adverse outcomes from delay > 30 min, or severe discomfort or distress	469	77	546
4: Potentially serious, or potential adverse outcomes from delay > 60 min, or significant complexity or severity, or discomfort or distress	802	102	904
5: Less urgent, or dealing with administrative issues only	130	17	147
<b>Grand Total</b>	<b>1633</b>	<b>227</b>	<b>1860</b>

Table 4 describes the burden of alcohol related presentations on ED by triage level:

- Every week, an average of 14 individuals presented who were in imminent or potentially life-threatening conditions (triage levels 2-3)
- Every month, an average of 5 people presented to ED with an immediately life threatening alcohol related condition (triage level 1)<sup>3</sup>

Table 5 describes the duration of stay for alcohol related presentations (n=1860) in EDs.

- Approximately a quarter were discharged from ED within an hour
- 15% were in ED for longer than three hours but not admitted.
- 10% were subsequently admitted for surgery or to a ward, which is 3-4 people every week. Of these, the majority (n=132) of admissions were triage levels 1-3, requiring urgent attention

**Table 5: ED Alcohol related presentations: level of harm measured**

Duration of stay	Total	Percentage
<b>ED only</b>	<b>1670</b>	<b>90%</b>
< 60 minutes	441	24%
1-2 hours	556	30%
2-3 hours	397	21%
> 3 hours	276	15%
<b>Admission to ward</b>	<b>190</b>	<b>10%</b>
<b>Grand Total</b>	<b>1860</b>	<b>100%</b>

<sup>3</sup> Triage levels 1-2 descriptions include: motor vehicle/scooter accident, self-harm (attempted suicides, overdoses), head injuries (assault, loss of consciousness), orthopaedic injuries, impalement of sharp objects/skin lacerations, confusion/semi-responsive, cardiovascular, alleged sexual assault