Changes in alcohol-related emergency department presentations—a comparison of three waves in 2013, 2017 and 2022

Laura R Joyce, Lana Cleland, Elise Forman, Alex Hlavac, James Foulds, Rose Crossin

ABSTRACT

AIMS: Emergency departments (EDs) around the world are increasingly overcrowded, which is associated with significant patient harm. Alcohol use is a known contributor to ED overcrowding. This study aimed to assess trends in the characteristics of alcohol-related ED presentations over time.

METHODS: A cross-sectional observational study of Christchurch ED attendances during 3-week waves of data collection in November–December 2013, 2017 and 2022 was conducted. Potential participants were those patients attending the Christchurch Hospital ED who had ingested alcohol in the 4 hours prior to arrival, and/or the presentation was thought to be related to alcohol. Those who consented to take part were interviewed to examine amount and source of alcohol.

RESULTS: There has been a change in the age profile towards a greater proportion of older patients attending the ED with alcohol-related issues. In 2022, a greater proportion of alcohol was purchased from on-licence venues compared to previous years, although off-licence alcohol purchase and consumption in private locations remained the most common.

CONCLUSION: Alcohol use and harm places a significant, yet preventable, burden on EDs and the wider healthcare system. Implementation of evidence-based alcohol policies is urgently needed to reduce the impact of alcohol in the ED and improve the health of communities.

Emergency departments (EDs) around the world are increasingly overcrowded, with excess numbers of patients and long wait times being associated with significant patient harm.[1] Additionally, rates of preventable errors increase,[2] patients who require urgent assessment and treatment leave without being seen by a doctor[3] and ambulances are diverted.[4] Alcohol use is a known contributor to ED overcrowding,[5] with research in Australasia identifying 5–7% of ED presentations as being alcohol-related.[6] Alcohol-related ED presentations have longer lengths of stays.[7] In several previous studies, 16–21% of injury-related ED attendances have involved alcohol consumption,[8] with presentations of this nature being linked to a fivefold risk of mortality in the year following admission.[9]

Alcohol-related ED admissions, particularly for acute harms, may be a useful indicator of recent changes in drinking patterns, including those resulting from alcohol policy and the wider alcohol environment, such as the pervasiveness of alcohol advertising.[10] Within New Zealand, alcohol-related admissions to the Christchurch Hospital ED have been studied prior to and following the implementation of the *Sale and Supply of Alcohol Act 2012*, which was introduced with the aim of minimising alcohol-related harm.[11] However, these studies did not identify a significant change in the percentage of alcohol-related admissions following the introduction of the *Act*.[12,13] This was partly attributable to unsuccessful attempts to establish a Local Alcohol Policy (LAP) in Christchurch, with more minor changes made by the overarching *Act* being unlikely to significantly reduce the burden of alcohol on this ED.[12]

The COVID-19 pandemic has seen significant changes in alcohol use and purchase behaviours, both globally and in New Zealand. These changes have involved increases in overall alcohol consumption for some groups of individuals, but decreases for others.[14] Several factors, such as working from home, female gender and psychological distress, have been linked to increased drinking during the early pandemic period,[15] while the closure of on-licence venues, such as bars and restaurants, led to more alcohol being purchased from off-licence venues such as supermarkets.[16] Alcohol delivery also became increasingly popular during this period, and was related to

heavier drinking and concerns about insufficient age verification processes.[17] As several of these changes are likely to have persisted following the ending of lockdowns in New Zealand, alcohol-related ED admissions may provide insight into how alcohol use currently impacts the health system.

Aims

The present study is the planned third wave of the study conducted in 2013 and 2017 and aimed to assess any changes in the characteristics of alcohol-related ED presentations over time, particularly looking at where alcohol was purchased prior to an ED attendance.

Methods

Study design

A cross-sectional observational study of Christchurch ED attendances during three 3-week waves of data collection in November–December 2013,[12,18] 2017[13] and 2022 was conducted.

Setting

Christchurch Hospital is a tertiary referral centre in the South Island of New Zealand, and the only major hospital in the region, covering an area with a population of over 600,000. The Christchurch ED is one of the busiest EDs in Australasia, with over 130,000 presentations annually.

Participants and data collection

Two University of Otago medical students were funded by The Health Promotion Directorate at Health New Zealand – Te Whatu Ora (formerly the Health Promotion Agency) via summer studentships in each of the waves in 2013, 2017 and 2022. Data were collected over a 3-week period with 2 full weeks of 8-hour shifts being covered over each wave, with similar dates each time (16 November–8 December 2013; 17 November–9 December 2017; 16 November–12 December 2022).

The study had been planned to occur every 4 years; however, the 2021 wave was delayed by a year due to increased COVID-19 alert levels during the planned 2021 dates. The study periods were chosen to align as closely as possible in each wave, with one public holiday weekend falling within each study period. Shifts were non-randomly allocated to mitigate fatigue on the interviewers, but with equal sampling of day (8 am–3:59 pm), evening (4 pm–11:59 pm) and night (12 am–7:59 am) shifts. Several events associated with high alcohol consumption, including "Cup Day" (New Zealand Trotting Cup), and "Crate Day" (an informal event where people are encouraged to buy and consume a "crate" of beer/other alcohol) fell within the study period.

Potentially eligible participants were identified among patients who attended the Christchurch ED within each data collection wave. The study aimed to identify all eligible patients who presented during each study shift. The interviewers had access to the ED electronic whiteboard, which was used to prioritise which patients would be assessed for inclusion. Patients were considered eligible to participate if they had ingested alcohol in the 4 hours before presentation to ED (coded as "Screen positive"), or if their presentation was directly related to alcohol use or they were visibly under the influence of alcohol (both coded as "Impact positive"). To determine eligibility, interviewers first approached the triage nurse (for patients in the waiting room) or the patient's primary nurse or doctor (for patients in bed spaces) to determine if the patient was appropriate to interview. Patients were then approached and invited and consented to take part in the study. It should be noted that in the first two waves of this study, students approached patients directly to seek consent to participate; however, for 2022 the Ethics Committee deemed it necessary for the students to first discuss with the treating doctor or nurse to determine suitability to be approached for consent.

Patients under 16 years were asked to assent to take part, but with parents/guardians also being asked to consent on their behalf. Patients were not approached if they were under 13 years old, or if staff felt that they were too unwell (e.g., altered level of consciousness) or it was inappropriate (e.g., uncooperative) to approach them. Patients with possible COVID-19 in isolation rooms were not approached due to the potential risk to the health of the interviewers—therefore, the study is not able assess the burden of alcohol-related ED presentations over time. A count of all ED attenders was done by the interviewers using the electronic whiteboard to allow the calculation of the denominator of ED attendances during each study shift.

The Northern B Health and Disability Ethics Committee approved this study (21/NTB/182) and

the Canterbury District Health Board (CDHB) provided locality authorisation (RO#21236). Te Komiti Whakarite, the CDHB Māori health research committee, supported this study.

Measures

Demographic information including age, gender and ethnicity was collected from consenting participants. Ethnicity data were prioritised in the following order, in line with New Zealand Ministry of Health ethnicity data protocols:[19] New Zealand Māori; Pacific peoples; other; European.

The date and time of arrival, reason for attendance and ED length of stay data were retrieved from the electronic patient management system. Participants' observed level of intoxication was noted as either "sober", "affected" or "intoxicated" using the Intoxication Assessment Tool.[20] Participants were asked how many standard drinks (10g alcohol) they consumed in their most recent drinking session (coded against the alcohol intake guidelines for single occasion of drinking),[21] the location of purchase and consumption of alcohol, type of alcoholic beverage and the time drinking commenced. The 10-item Alcohol Use Disorders Identification Test (AUDIT)[22] was administered to assess participants' regular drinking habits.

Participants were categorised into "screen" and "impact" positive or negative. Screen-positive participants were those who had ingested alcohol in the 4 hours before ED arrival. Impact positive were those whose reason for ED presentation was thought to be directly related to alcohol, such as a fall while intoxicated, or vomiting due to alcohol use. Presentations were further coded as "Alcohol-related" if participants were either observed to be influenced by alcohol while in the ED, or their presentation was thought to be related to alcohol ("impact positive").

Statistical analysis

Statistical comparisons were performed in Stata (version 16.1 for Windows) using Chi-squared tests for categorical outcomes and Kruskal–Wallis to test for differences between medians for continuous outcomes (after testing data for lack of normality using Shapiro–Wilk).

Results

Over the three waves of this study, 412 patients consented to take part, with a total of 109 participants during the 2022 data collection period. Figure 1 demonstrates the participant inclusion flow over the three waves.

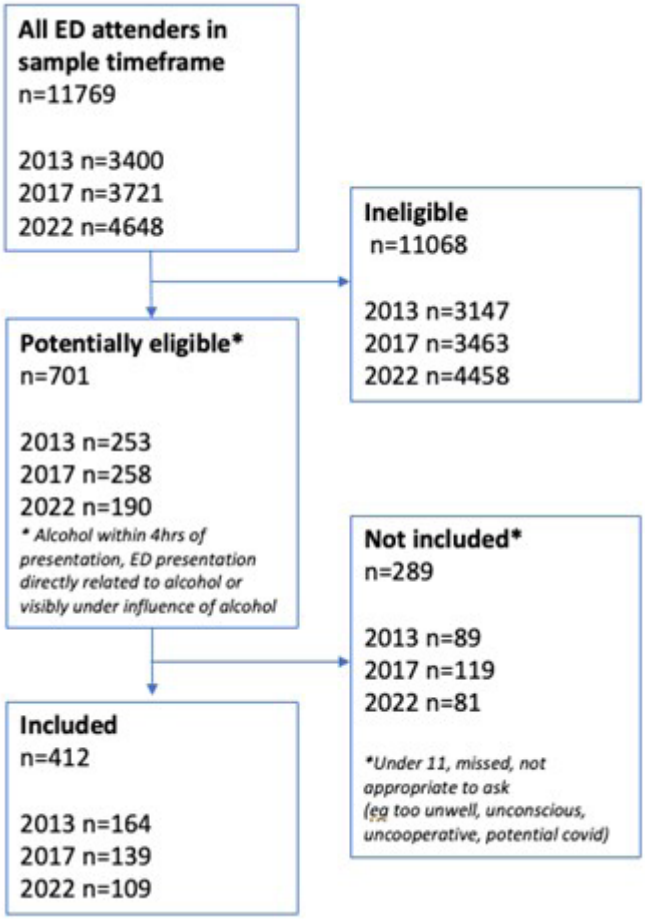
As shown in Table 1, most participants were male and ranged in age from 15 to 88 years. Significant differences in age groups were observed across the three time points, with 2022 featuring a lower proportion of those in the 18–24 category and greater proportions in the 25–44 and 65+ age categories. There were differences in ethnicity across data collection periods, with fewer Māori and Pacific participants in 2022.

Arrival day and time remained relatively stable and did not differ significantly across the three time points. Most presentations in 2022 were due to non-interpersonal trauma or medical/other reasons, while an increase in presentations due to alcohol excess was observed for this data collection period.

Table 2 demonstrates the amounts and sources of alcohol for all participants who consented to take part in the study. The median number of standard drinks and percentage of participants consuming alcohol over the recommended guidelines has decreased; however, injury-related attendances have been similar over the three waves. Although off-licence premises (e.g., liquor stores, supermarkets, online retailers) continued to be the most common source of alcohol in 2022, the proportion of those who purchased their alcohol from on-licence premises (e.g., bars, nightclubs, restaurants) more than doubled from 2017 to 2022. In 2022, the most common places of purchase were liquor stores, followed by on-licence premises and supermarkets (which sell beer, wine and cider only).

Table 3 presents a sub-group analysis of only those participants included in the study who had alcohol-related ED presentations. This includes participants who were observed to be influenced by alcohol while in the ED, or those whose presentation was thought to be directly related to alcohol ("impact positive"). There has been no significant change in the percentage of presentations that were alcohol related, with approximately two thirds being alcohol related in each wave. The number of participants who are consuming alcohol at levels above recommended guidelines is higher in this sub-group than all participants (Table 2); however, this percentage has also decreased over the three waves. The source of alcohol is no longer significantly different between on- and off-licences in this sub-group of alcohol-related presentations.

Figure 1: Flowchart of eligibility by data collection wave.



Discussion

Alcohol harm is pervasive across New Zealand and is associated with significant morbidity and mortality. Alcohol-related morbidity can be acute, such as injury and overdose, or chronic, arising from the effects of long-term use. An estimated 5.4% of all premature deaths in New Zealand are attributable to alcohol, with many resulting from alcohol-related injuries, several different forms of cancer and diseases such as liver cirrhosis and pancreatitis.[23] These conditions place significant pressure upon the healthcare system, including a high financial burden[24] and increased demands on hospital staff and resources.[25]

This study provides an updated snapshot of the burden of alcohol on the Christchurch ED across 42 shifts in November and December 2022, compared to similar periods in 2017 and 2013. During the 2022 wave, there were 109 participants who consented for the study, of which 68 presentations were perceived to be directly attributable to alcohol use. This is a preventable burden on the health system. It must be recognised that the COVID-19 healthcare environment changed the ability of researchers to approach all patients, with those patients in isolation avoided. Therefore, the raw number of participants consenting to take part should not be compared across the three waves.

Although media attention often focusses on "young people drinking in pubs and bars on a Saturday night", this is not the case in terms of ED presentations in this study. Over the three waves the median age of participants has increased to 39 years, and presentations in the 65+ age group have doubled; however, presentations have decreased in the 18–24-year age group. This decrease in young people drinking has been seen in other high income countries.[26]

Table 1: Characteristics of participants presenting during each wave of data collection.

	Data collection wave			
	2013	**2017**	**2022**	**Statistical test***
Number of participants	164	139	109	
Male gender: n (%)	106 (64.6%)	96 (69.1%)	70 (64.2%)	X^2=0.87, p=0.65
Age categories (years): n (%)				
<18	9 (5.5%)	5 (3.6%)	4 (3.7%)	
18–24	46 (28.1%)	36 (25.9%)	17 (15.6%)	
25–44	49 (29.9%)	47 (33.8%)	44 (40.4%)	**X^2=16.12, p=0.04**
45–64	41 (25.0%)	31 (22.3%)	18 (16.5%)	
65+	19 (11.6%)	20 (14.4%)	26 (23.9%)	
Age: median (IQR)	32.5 (22–51)	34 (23–52)	39 (27–61)	X^2=5.72, p=0.06
Prioritised ethnicity: n (%)				
NZ Māori	21 (12.8%)	21 (15.1%)	13 (11.9%)	
Pacific	3 (1.8%)	5 (3.6%)	2 (1.8%)	
Other	8 (4.9%)	10 (7.2%)	12 (11.0%)	X^2=5.54, p=0.48
European	132 (80.5%)	103 (74.1%)	82 (75.2%)	
ED arrival time: n (%)				
Day (8 am–3:59 pm)	33 (20.1%)	34 (24.5%)	26 (23.9%)	
Evening (4 pm–11:59 pm)	81 (49.4%)	67 (48.2%)	47 (43.1%)	X^2=1.98, p=0.74
Night (12 am–7:59 am)	50 (30.5%)	38 (27.3%)	36 (33.0%)	
Day of ED presentation: n (%)				
Monday–Thursday	55 (33.5%)	53 (38.1%)	40 (36.7%)	X^2=0.73, p=0.70
Friday–Sunday	109 (66.5%)	86 (61.9%)	69 (63.3%)	
Reason for ED presentation: n (%)				
Motor vehicle accident	2 (1.2%)	5 (3.6%)	4 (3.7%)	
Non-interpersonal trauma	60 (36.6%)	50 (36.0%)	33 (30.3%)	
Interpersonal trauma	16 (9.8%)	19 (13.7%)	9 (8.3%)	
Alcohol excess	9 (5.5%)	3 (2.2%)	12 (11.0%)	**X^2=21.48, p=0.02**
Mental health/overdose	23 (13.0%)	7 (5.0%)	8 (7.3%)	
Medical/other	54 (32.9%)	55 (39.6%)	43 (39.5%)	

Table 1 (continued): Characteristics of participants presenting during each wave of data collection.

Alcohol-influenced ED presentation: n (%)				
Screen positive*/impact negative	37 (22.6%)	29 (20.9%)	27 (24.8%)	X^2=1.08, p=0.90
Screen positive/impact positive**	64 (39.0%)	60 (43.2%)	41 (37.6%)	
Screen negative/impact positive	37 (22.6%)	29 (20.9%)	27 (24.8%)	

*Screen positive = ingested alcohol in the 4 hours before ED arrival.
**Impact positive = reason for ED presentation thought to be directly related to alcohol.

Table 2: Comparison of alcohol-related measures between waves: **all included participants**.

	Data collection wave			
	2013	**2017**	**2022**	**Statistical test***
Number of participants	164	139	109	
Standard drinks consumed in index drinking episode: n (%)				
<5	53 (32.3%)	41 (29.5%)	50 (45.9%)	**X^2=23.82, p=0.01**
5–9	33 (20.1%)	39 (28.1%)	22 (20.2%)	
10–14	22 (13.4%)	19 (13.7%)	14 (12.8%)	
15–19	23 (14.0%)	10 (7.2%)	4 (3.7%)	
20+	33 (20.1%)	25 (18.0%)	18 (16.5%)	
Unknown	0 (0.0%)	5 (3.6%)	1 (0.9%)	
Standard drinks				
Median (IQR)	8 (3–17)	8 (3–15)	6 (2–12)	X^2=5.3, p=0.07
Consumption over guidelines				
No	53 (32.3%)	43 (30.9%)	52 (47.7%)	**X^2=15.80, p<0.00**
Yes	111 (67.7%)	91 (65.5%)	56 (51.4%)	
Unknown	0 (0.0%)	5 (3.6%)	1 (0.9%)	
Injury-related attendance: n (%)				
	78 (47.6%)	74 (53.2%)	46 (42.2%)	X^2=3.01, p=0.22
Source of alcoholic beverage(s): n (%)				
On-licence	25 (15.2%)	14 (10.1%)	27 (24.8%)	**X^2=17.69, p=0.01**
Off-licence	117 (71.3%)	110 (79.1%)	70 (64.2%)	
Both	22 (13.4%)	12 (8.6%)	12 (11.0%)	
Other or unknown	0 (0.0%)	3 (2.2%)	0 (0.0%)	

Table 2 (continued): Comparison of alcohol-related measures between waves: **all included participants**.

Off-licence purchase location: n (% of all non-on-licence source: 2017, n=125; 2022, n=82)				
Liquor store	Not available	73 (52.5%)	45 (41.3%)	**X^2=13.1, p=0.01**
Supermarket		29 (20.9%)	26 (23.9%)	
Other/unknown/multiple		23 (16.6%)	11 (10.1%)	
Place last drink consumed: n (%)				
Private location	108 (65.9%)	99 (71.2%)	70 (64.2%)	X^2=10.10, p=0.26
On-licence venue	43 (26.2%)	25 (18.0%)	33 (30.3%)	
Unlicenced public location	5 (3.1%)	5 (3.6%)	4 (3.6%)	
Other or unknown	8 (4.9%)	10 (7.2%)	2 (1.8%)	
Type of alcoholic beverage(s) being consumed: n (%)				
Beer	52 (31.7%)	46 (33.1%)	34 (31.2%)	X^2=2.65, p=0.96
Wine	27 (16.5%)	23 (16.6%)	20 (18.4%)	
Spirits	23 (14.0%)	17 (12.2%)	16 (14.7%)	
RTDs*	20 (12.2%)	21 (15.1%)	10 (9.2%)	
Other/various	42 (25.6%)	32 (23.0%)	29 (26.6%)	
AUDIT score				
Median (IQR)	Not administered	11 (6–18)	11 (7–17)	X^2=0.03, p=0.86
% scoring <8		39 (28.1%)	30 (27.5%)	X^2=3.21, p=0.36
% scoring 8–19		63 (45.3%)	53 (48.6%)	
% scoring 20 or more		28 (20.1%)	24 (22.0%)	
Unknown/not answered		9 (6.5%)	2 (1.8%)	

*RTD = ready-to-drink pre-mixed alcoholic beverage.

Table 3: Comparison of alcohol-related measures between waves: alcohol-related* participants only.

	Data collection wave			
	2013	**2017**	**2022**	**Statistical test***
All participants	164	139	109	
Alcohol-related* participants	116 (70.7%)	96 (69.1%)	68 (62.4%)	X^2=2.21, p=0.33
Standard drinks consumed in index drinking episode: n (%)				
<5	15 (12.9%)	3 (3.1%)	11 (16.2%)	**X^2=26.57, p<0.01**
5–9	24 (20.7%)	36 (37.5%)	20 (29.4%)	
10–14	22 (19.0%)	18 (18.8%)	14 (20.6%)	
15–19	22 (19.0%)	10 (10.4%)	4 (5.9%)	
20+	33 (28.5%)	24 (25.0%)	18 (26.5%)	
Unknown	0 (0.0%)	5 (5.2%)	1 (1.5%)	
Standard drinks				
Median (IQR)	14 (8–21)	11 (8–20)	10 (6–23)	X^2=1.19, p=0.55
Consumption over guidelines				
No	15 (12.9%)	5 (5.2%)	13 (19.1%)	**X^2=14.1, p=0.01**
Yes	101 (87.1%)	86 (89.6%)	54 (79.4%)	
Unknown	0 (0.0%)	5 (5.2%)	1 (1.5%)	
Injury-related attendance: n (%)				
	62 (53.5)	61 (63.5%)	39 (57.4%)	X^2=2.20, p=0.33
Source of alcoholic beverage(s): n (%)				
On-licence	14 (12.1%)	10 (10.4%)	10 (14.7%)	X^2=4.81, p= 0.57
Off-licence	81 (69.8%)	74 (77.1%)	46 (67.7%)	
Both	21 (18.1%)	11 (11.5%)	12 (17.7%)	
Other or unknown	0 (0.0%)	1 (1.0%)	0 (0.0%)	
Off-licence purchase: n (%)				
Liquor store	Not available	60 (62.5%)	33 (48.5%)	X^2=6.25, p=0.18
Supermarket		13 (13.5%)	17 (25.0%)	
Other/unknown/multiple		13 (13.5%)	8 (11.8%)	
Place last drink consumed: n (%)				
Private location	75 (64.7%)	65 (67.7%)	47 (69.1%)	X^2=8.63, p=0.37
On-licence venue	35 (30.2%)	20 (20.8%)	16 (23.5%)	
Unlicenced public location	4 (3.5%)	5 (5.2%)	3 (4.4%)	
Other or unknown	2 (1.7%)	6 (6.3%)	2 (2.9%)	

Table 3 (continued): Comparison of alcohol-related measures between waves: alcohol-related* participants only.

Type of alcoholic beverage(s) being consumed: n (%)				
Beer	27 (23.3%)	26 (27.1%)	15 (22.1%)	X^2=5.56, p=0.70
Wine	16 (13.8%)	16 (16.7%)	11 (16.2%)	
Spirits	19 (16.4%)	12 (12.5%)	8 (11.8%)	
RTDs**	14 (12.1%)	14 (14.6%)	5 (7.4%)	
Other/various	40 (34.5%)	28 (29.2%)	29 (42.7%)	
AUDIT score				
Median (IQR)	Not administered	15 (10–20)	14 (10–23)	X^2=0.01, p=0.92
% scoring <8		11 (11.5%)	10 (14.7%)	X^2=5.88. p=0.12
% scoring 8–19		53 (55.2%)	36 (52.9%)	
% scoring 20 or more		25 (26.0%)	22 (32.4%)	
Unknown/not answered		7 (7.3%)	0 (0.0%)	
Reason for ED presentation				
Motor vehicle accident	1 (1.0%)	5 (5.2%)	4 (5.9%)	**X^2=24.50, p=0.006**
Non-interpersonal trauma	45 (38.8%)	39 (40.6%)	28 (41.2%)	
Interpersonal trauma	16 (13.8%)	17 (17.7%)	7 (10.3%)	
Alcohol excess	9 (7.8%)	3 (3.1%)	12 (17.7%)	
Mental health/overdose	22 (19.0%)	7 (7.3%)	8 (11.8%)	
Medical/other	23 (19.8%)	25 (26.0%)	9 (13.2%)	

*Alcohol-related = those observed to be influenced by alcohol while in the ED, or those whose presentation was thought to be related to alcohol ("impact positive").
**RTD = ready-to-drink pre-mixed alcoholic beverage.

Towers et al. have previously found that over one third of older New Zealanders are drinking at levels that may result in harm.[27] People in this age group are more likely to have additional comorbidities and the potential for medication interactions, and despite participants drinking comparatively fewer standard drinks in the 2022 wave, they are still attending ED with alcohol-related issues. In addition, almost one quarter of presentations were during the daytime, and greater than a third were from Monday to Thursday. This is similar to findings from a study in Auckland, New Zealand,[7] but in contrast to Australian-based ambulance data suggesting that high-alcohol hours occur on Friday and Saturday evenings.[28]

Off-licence venues remain the primary source of alcohol purchases, and the site of alcohol consumption remains private venues (such as own home) for two thirds of those attending the ED with alcohol-related issues. This has policy implications as a greater focus needs to be on off-licence venues—particularly as a key supplier of large quantities of cheap alcohol—and on New Zealand drinking culture. It should also be noted that there is a significant proportion of patients in each wave in this study who have consumed 20 or more standard drinks in a single occasion, which

is extremely concerning. Addressing the high availability of off-licence outlets in communities is possible within a local alcohol policy. With the recent passing of the *Sale and Supply of Alcohol (Community Participation) Amendment Bill*,[29] councils can now implement strong controls on alcohol availability without the risk of alcohol industry appeals, particularly from alcohol retailers.

Limitations

This study had several limitations. Firstly, it must be emphasised that the numbers of participants included in each wave of this study are not comparable, and cannot be interpreted to indicate any change in the overall burden of alcohol-related presentations on EDs. The third wave of data collection for this study was delayed a year due to COVID-related lockdowns occurring in November 2021. However, COVID-19 continued to have a significant impact on EDs in 2022, and so participants were unable to be approached to take part in this study if they were unwell with COVID-like symptoms to reduce unnecessary risk to the medical students recruiting. At least partly related to COVID-19, there have been significant increases in all ED presentations around New Zealand in 2022 and ongoing, and so it was not feasible for a single student to approach every patient on a particular shift; therefore not all eligible participants may have been included.

Secondly, the participants in this study were often not sober. Those patients with the highest levels of intoxication were unable to consent to take part, and those who were able to take part may not have been able to answer questions accurately. This may introduce both sampling and recall bias. The assessment by the medical students of whether participants were intoxicated was also relatively subjective, despite the use of the Alcohol Intoxication Tool to guide classification,[22] as is the classification of whether a presentation was alcohol-related or not.

Thirdly, in 2013 and 2017 the demographics of those who consented to participate were compared to those who did not consent. This was not possible in 2022 as it was a requirement of the ethics committee that any data recorded were only for those patients who consented to answer the study questions.

Finally, we acknowledge that ED data on alcohol-related presentations is only one indicator of alcohol-related harm, and will not capture the full picture of community-level harm that is occurring in our population.

Conclusions

Over the three waves of this study, there has been a change in the age profile towards older patients attending the ED with alcohol-related issues. In 2022 there has been shift back towards on-licence alcohol purchase, although off-licence alcohol purchase and consumption in private locations remains the most common. The burden of alcohol-related harm to individuals can also cause impact on other patients, as morbidity and mortality increases for all patients in an ED when it's overcrowded. Given that alcohol-related presentations contribute to ED overcrowding, and are preventable, system-level preventative measures are required. It is highly important that EDs in New Zealand systematically collect alcohol-related data, which can inform a comprehensive approach including more widespread implementation of effective population-level alcohol policies to reduce excessive drinking and alcohol-related ED visits and the burden of alcohol use on the healthcare system.

COMPETING INTERESTS
None to declare.

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AUTHOR INFORMATION
Laura R Joyce: Senior Lecturer, Department of Surgery and Critical Care, University of Otago (Christchurch), New Zealand; Emergency Medicine Specialist, Emergency Department, Te Whatu Ora Waitaha, New Zealand.
Lana Cleland: Assistant Research Fellow, Department of Population Health, University of Otago (Christchurch), New Zealand; Assistant Research Fellow, Department of Psychological Medicine, University of Otago (Christchurch), New Zealand.
Elise Forman: Medical Student, Department of Surgery and Critical Care, University of Otago (Christchurch), New Zealand; Medical Student, Department of Population Health, University of Otago (Christchurch), New Zealand.
Alex Hlavac: Medical Student, Department of Surgery and Critical Care, University of Otago (Christchurch), New Zealand; Medical Student, Department of Population Health, University of Otago (Christchurch), New Zealand.
James Foulds: Associate Professor, Psychiatrist, Department of Psychological Medicine, University of Otago (Christchurch), New Zealand.
Rose Crossin: Senior Lecturer, Department of Population Health, University of Otago (Christchurch), New Zealand.

CORRESPONDING AUTHOR
Dr Laura Joyce: Department of Surgery and Critical Care, University of Otago Christchurch, 2 Riccarton Avenue, Christchurch, New Zealand. Ph: (03) 3640270.
E: laura.joyce@otago.ac.nz

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