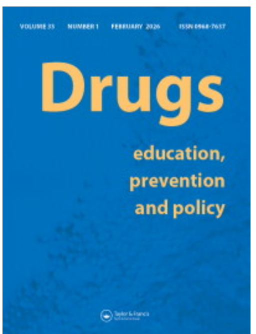

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'Alcohol problems are definitely twenty-four seven'—a qualitative interview study exploring the presenting features of alcohol-related ambulance call-outs in Scotland (IMPAACT study)

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ABSTRACT

Introduction: Alcohol contributes to at least 16% of ambulance call-outs in Scotland, placing a significant burden on emergency services. This study aimed to explore the circumstances behind these incidents from the perspective of practicing Scottish Ambulance Service (SAS) clinicians.

Methods: We conducted in-depth qualitative interviews (median duration: 81 minutes) with 31 SAS staff, purposively sampled for diversity in gender (10 women, 21 men), region, and length of service (1–50 years; median 10). Interviews were transcribed and thematically analyzed using both deductive and inductive approaches.

Results: Alcohol-related call-outs typically involved either chronic heavy drinking patterns mainly at home with co-existing mental, social, or emotional issues or acute intoxication in social settings. Clinicians reported a large volume of incidents and felt the public underestimated the proportion caused by chronic problems.

Conclusion: Strategies, policies, and interventions aiming to reduce pressure on emergency services must consider how to provide or improve accessible care for people with chronic alcohol problems, as well as how to reduce acute intoxication to help reduce the amount alcohol related calls SAS staff attend.

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Introduction

Scotland is amongst the heaviest drinking nations in the world with consumption sitting at 9.0 liters per adult per annum (Public Health Scotland, 2025), and death rates the highest in the UK (Office for National Statistics (ONS), 2025). Alcohol-specific deaths (those wholly attributable to alcohol consumption) increased in 2023 to 1,277, the highest level since 2008 (National Records of Scotland, 2023), but the total number of deaths due to alcohol consumption is much higher (Office for National Statistics (ONS), 2025). There are likely multiple factors that have led to rising alcohol deaths including austerity measures leading to cuts in public services (Price, 2024; Walsh et al., 2022) and socioeconomic status (Fone et al., 2013), increased social isolation and mental distress arising from the COVID-19 pandemic (Lin et al., 2024; Moon et al., 2021) but also social norms around alcohol consumption within the UK that have been studied for a long time (Hughes et al., 2019; Keatley et al., 2017; Kuntsche et al., 2021; Room et al., 2022). Accurate estimations on the prevalence of co-occurring alcohol, substance use, and mental health issues in Scotland are not collected systematically, however it has been identified by the Scottish Government as a serious concern (The Scottish Government, 2022). A Scottish Government report found that 76 percent of respondents working across 79 different drug and alcohol services in Scotland said that most service users who attend their service presented with co-occurring substance use and a current mental health concern (The Scottish Government, 2022).

The Scottish Government have attempted to tackle the issues of social norms around alcohol by bringing in a series policy changes. Measures on availability, however, have failed to reduce the number or opening hours of licensed premises and therefore have had limited, if any, positive impact on public health (de Vocht

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et al., 2022; Fitzgerald et al., 2023). The Alcohol Minimum Pricing Act 2012 & 2018 (Scotland) (The Alcohol (Minimum Pricing) (Scotland) Act 2012, 88, 2018) in Scotland (a legal minimum price of £0.50GBP per unit of alcohol (8 g of ethanol) in alcoholic beverages) has led to a reduction in alcohol deaths and hospital admissions compared to what would have happened without the policy in place (Wyper et al., 2023). In separate analysis, MUP was not found to have a significant effect on alcohol-related ambulance call-outs (Manca et al., 2022), ED attendances (So et al., 2021), or crimes (Manchester Metropolitan University, 2020). A higher rate of MUP (£0.65 per unit), was implemented in September 2024, which may result in positive effects on these services, but there is also evidence that some dependent drinkers may respond to MUP in harmful ways (e.g. reduced spending on food and utility bills (Holmes et al., 2022).

At present, alcohol consumption therefore still places a significant burden on health, social and emergency services, including ambulance services. One US study, undertaken over a decade ago (Carey et al., 2009), determined 17% of private ambulance call-outs were for intoxicated patients. More recent studies found that alcohol-related emergency department (ED) visit rates increased during 2020 (the initial phase of the COVID-19 pandemic) compared to previous years. It was also found that there were significantly fewer alcohol-related ambulance callouts initially, at the start of the pandemic, followed by a resurgence (Fitzgerald et al., 2022). Alcohol-related attendances then showed a displacement to home settings (Esser et al., 2022; Fitzgerald et al., 2022; Mason et al., 2022; Ogeil et al., 2021).

Reducing the burden of alcohol related injury and harm on ambulance services in Scotland, but also the UK, is a public health priority, especially in the context of very high levels of demand for ambulance services more generally (Mahase, 2022).

There are few studies on the impact of alcohol on ambulance services in the UK and most used methods that do not allow detailed description of the circumstances or context underpinning alcohol-related calls. A retrospective analysis of the free text ambulance patient records over a 1-year period in the North of England (Martin et al., 2012) found that 3.2% of call-outs were alcohol-related. Front line staff in England responding to a survey (N = 398) reported that alcohol was a leading cause of ambulance call-outs and estimated on average that 37% of ambulance time was spent on attending alcohol-related incidents (Carter et al., 2015). A survey in Scotland (N = 608, approximately 25% of all frontline ambulance staff), reported that three quarters of participants said that more than half of the incidents attended at weekends (not defined) involved alcohol. 95% of respondents felt that dealing with people who are under the influence of alcohol made it difficult for them to do their job (Scottish Ambulance Service, 2015). Although relevant, this work was survey-based, is over 10 years old, and did not enable in-depth understanding of the presenting conditions or circumstances underpinning these call-outs.

A robust analysis by our team published just 4 years ago of alcohol-related ambulance incidents in Scotland used a novel algorithm to search free-text reports by clinicians in patient records and found that 16.2% of all ambulance call outs (86,780 calls-outs) were alcohol-related in 2019 (Manca et al., 2021). Manca et al.'s study was limited by an inability to distinguish between incidents related to acute or chronic alcohol consumption or which patients were purchasing alcohol from on or off-trade venues. It is also quantitative and doesn't provided an in-depth understanding or further detail of the frontline clinicians' experiences. This is of particular importance considering evidence stating that alcohol related call-outs are not like other calls, as SAS staff suffer increased levels of aggression and violence while attending alcohol-related calls-outs (Uny et al., 2025). This is adding to paramedics' workload and creating burnout. Therefore, different alcohol related call-outs need different responses, and being able to understand the causes of these types of call-out can help SAS staff to mitigate these scenarios. Our study aims to provide novel and deeper insights into some of the context and patient circumstances which may underpin these presentations which is not explored in this prior literature. Furthermore, we believe that this is the first study to capture ambulance clinician rather than patient perspectives.

The aim of this paper is to provide a rich description of the presenting features of alcohol-related ambulance call-outs and underlying factors from the perspectives of Scottish Ambulance Service (SAS) clinicians in Scotland, and in so doing, to inform policy and service planning to reduce harms from alcohol and the resulting burden on ambulance services.

Methods

Context

The data in this study was collected as part of a larger study entitled 'The Impact of Minimum Pricing of Alcohol on Ambulance Call-outs in Scotland' (IMPAACT) which aimed to examine the impact (if any) of

minimum unit pricing of alcohol on ambulance call-outs in Scotland; and to describe the impact of alcohol on SAS. SAS is part of the NHS and dispatches immediate and free medical assistance or clinical advice to over five million people across Scotland. With over 5,700 staff members, including those working in frontline roles and other managerial, dispatch, and admin staff, in the year to March 2023 SAS made over 400,000 journeys to provide care for patients (Scottish Ambulance Service, 2024).

Sampling

We aimed to recruit SAS clinicians who were currently working in frontline emergency ambulance response roles in Scotland, sampling purposively for diversity in gender, role (paramedic or ambulance technician), geographic region, experience (years of service), and seniority. Paramedics hold a registration with the Health & Care Professions Council and have an advanced skill set which includes extensive patient assessment, intravenous cannulation, electrocardiogram procedures, and administration of medication. Ambulance Technicians are trained in basic clinical examination and can perform immediate life support and other interventions. Geographic location is divided into three areas: North (Highlands & Islands and Grampian), East (Lothian, Borders, Tayside, Fife and Forth Valley), and West (Glasgow, Lanarkshire, Ayrshire, Argyll & Clyde and Dumfriesshire) (Scottish Ambulance Service, 2022). We also aimed to interview key individuals in senior or strategic management positions within SAS to provide comment on the early findings from the IMPAACT project, bring strategic insights to help interpret the explanations for and implications of our findings and their perceptions of: the level of such call outs and the burden on SAS, available pathways, and potential policies that may address the burden of alcohol-related call outs on the service.

Recruitment & consent

Invitations to express interest in participating were sent by email via SAS managers to clinicians in each of the three areas. A further email was sent directly to all SAS frontline clinicians (est. N>=2,000) in Scotland from a member of the administrations team within SAS. A total of 118 SAS clinicians expressed interest in participating. Ambulance clinicians are extremely busy, had to take part in their own time, and their shift patterns make organizing interviews with participants difficult. Recruitment for these interviews took place during the acute phase of the COVID-19 pandemic which made it even more challenging to recruit participants. Therefore, of those interested, 27 were interviewed in accordance with our sampling strategy detailed above and participant availability. Senior staff were contacted directly by the project team via email inviting them to be interviewed. All eligible participants were given an information sheet and asked for written or verbal consent to participate. Verbal consent comprised of the interviewer reading aloud the same questions as presented for written consent, for the interviewee to respond to, with this being audio recorded before the interview started.

Data collection

In phase one, 27 in-depth interviews with frontline clinicians were conducted by telephone between May 2019 and December 2021. The achieved sample was diverse in gender (eight were female reflecting the current ratio within the SAS workforce) and had good representation within each of the variables across the other categories such as role, region, and years of service (Table 1). A semi-structured topic guide was used to conduct interviews, asking participants to explain what kinds of call-outs are related to alcohol, the common reasons for alcohol call-outs, patient presentation in alcohol-related call-outs and to provide some in-depth examples of calls they have experienced. Phase two involved interviews with people in senior roles (n = 4) and were conducted in May and June 2022. A semi-structured topic guide was again used to conduct interviews however these participants were given a brief description of the early findings from the IMPAACT project and asked to comment on these findings. All interviews were audio-recorded with participants' consent, took 81 mins on average to complete and were conducted by AB, NF, IU, and AF.

Table 1. Sample characteristics.

In our sample we had:					
Gender	10 Female	21 Males			
Role	17 Paramedics	10 Technicians	4 Senior staff		
Region	14 from the East	7 from the West	7 from the North	3 National	
Years of service in ambulance service	4 with 1–3	7 with 4–6	4 with 7–10	8 with 11–20	8 with 21+

Data handling and analysis

Interview recordings were professionally transcribed and imported into NVivo 12 for analysis. Analysis was thematic and used both deductive and inductive approaches. Two researchers reviewed a selection of the phase one transcripts and developed an initial thematic coding framework. Authors independently tested the framework by coding three randomly selected transcripts. The framework themes were further discussed with a third member of the research team and refined. Two members of the research team coded the remainder of the transcripts. All coded themes were checked by members of the research team to ensure the correct data was coded under the correct theme. A more rapid coding and analysis of the senior staff interviews transcripts was conducted for phase two as the coding framework was already in place from phase one. The coding framework covered three main categories, each with substantive data to merit three separate papers: 1) call-out reasons, which captured the various circumstances that prompted emergency responses, the broader patterns of how alcohol-related incidents unfold, all of which are reported on in this paper and participant reflections on the volume of incidents and public perceptions of what underpins them; 2) the clinical handling of such call-outs (the practical, medical, and procedural aspects of managing alcohol-related emergencies), as well as training-related considerations, reported on in a separate paper (Mitchell et al., 2025; under review); and 3) staff experiences of attending alcohol call-outs, impact on the ambulance service, and related emotions, including challenging behaviors and aggression as well as positive experiences, published recently (Uny et al., 2025).

Ethical approval

Ethical approval was granted by the University of Stirling (NICR 19/20 056) in September 2019. Research and development approval was granted by the Scottish Ambulance Service (SAS) in October 2019.

Results

Participants described, in detail, many of the specific alcohol-related incidents that they had attended. These formed 12 sub-themes which were discussed in response to questions about what causes alcohol-related call-outs. The sub-themes were discussed in detail with the research team and two broad overarching causes of alcohol-related call-outs emerged from these discussions. First, call-outs arising from chronic heavy drinking often presenting in conjunction with mental ill-health, mainly in patients at home, and second, call-outs arising as a result of acute alcohol intoxication in the patient or a third party, in diverse social contexts and in both private and public locations including bars/public houses and night clubs. These two overarching causes encompassed nine of the causes identified in the data as shown in Table 2. The other causes were mentioned very few times (sub-themes 1.10 & 1.11). Sub-theme 1.12 included perceptions of call-out frequency and patterns of alcohol related call-outs rather than causes. We further discuss these two main types of alcohol-related call-out in turn below, with illustrative quotes, alongside participant views. We then describe overall perceptions of the volume of different incident types. Findings were largely consistent across the dataset with no discernible pattern or differences in the data collected across role, gender, region, or years of service in relation to experiences of alcohol-related call-outs.

Alcohol call-outs to people with chronic alcohol problems

According to the clinicians interviewed, alcohol call-outs to people with chronic alcohol problems tended to have three main underlying features: consistently high alcohol consumption, emotional or psychological distress, and mental ill-health, each of which we describe in turn here.

Clinicians reported that a significant number of these incidents involved attending to individuals, experiencing acute alcohol withdrawal (vomiting, abdominal pains, and seizures) or other diverse conditions arising from chronic alcohol consumption:

'The dependent drinker [whom we attend] most of the time seems to be a withdrawal. So, it usually comes

Table 2. Coding framework for alcohol-related call-out reasons.

Category	Sub-themes	Codes
Alcohol call-outs to people with chronic alcohol problems	Dependent drinkers	1.01
	Rough sleepers and hostels	1.02
	Mental health	1.06
	Accidents & injuries	1.07
	Domestic violence	1.09
Alcohol-related call-outs resulting from acute intoxication	Non-Dependant Drinkers Outside the home	1.03
	Non-Dependant Drinkers at home	1.04
	Underage drinkers	1.05
	Assaults	1.08
Other	Road traffic accidents	1.10
	Other reasons	1.11
Perceptions of call-out frequency and patterns of alcohol related call-outs	Extent and patterns of alcohol call-outs	1.12

through as a patient has been vomiting for some time. And then they will be part of the story, heavy drinker but has not had a drink for so many days you know, obviously no doctor will ever tell a heavy drinker to cold turkey it because you know their body has been that accustomed to that certain amount of alcohol.' [Int 17, Male, Paramedic]

Clinicians described abdominal pain as being a very common complaint for people with chronic alcohol problems, often leading to more than one ambulance call-out or them becoming 'regulars'.

'*We got a chap about three weeks ago in fact, it came through as abdominal pain and when we got there, he was, I think he was in his mid-fifties, and his sister was there, and the patient was at their parents' house. He'd been lying in bed for three days vomiting and in abdominal pain.'* [Int 5, Male, Paramedic]

Call-outs due to accidents and injuries suffered by people with chronic alcohol problems were also commonplace:

'Yeah, there is quite a few people who will fall down a set of stairs or something like that, when they've had too much to drink, and I can think of two that comes to mind where people who are most likely alcohol dependent and they have fallen down a flight of stairs' [Int 1, Female, Technician]

Furthermore, senior participants reported that ambulance crews realize when they arrive on scene that the reason why patient presents to an ambulance is often much more complex than a lot of people realize, and there isn't just one reason for them presenting:

'When our crews get, get to, to the person that they, that they discover that the code case is much more complex, so that would be another, another kind of obvious one as, as well. And as I mentioned, some of the kind of the more chronic conditions, you know, respiratory, we get a lot of respiratory calls, about 10 percent of total activity respiratory calls, falls, you know often have alcohol – as a factor in them. So often it's not one particular issue but I think multiple that people present with.' [Int 31, senior staff]

There was no suggestion in our data that clinicians treated patients in any way unprofessionally. However, a few participants felt that patients tried to '*work the system*' [Int 7, Male, Paramedic], sometimes in a dishonest way, to get a certain outcome. In this example, the paramedic appears to suggest that the patient is feigning a seizure in order to get taken to hospital. Vomiting blood and suicidal tendencies were other examples that patients were felt to have been feigning:

'if someone was having a seizure there is no way they could make a phone call, and you turn up and it's difficult, sometimes you don't really know what they are wanting out of your visit, and you just end up saying 'Right. If you feel you need to go to the hospital, we will take you to the hospital' [Int 6, Female, Paramedic]

A few participants stated that patients want to go to hospital as they would have access to a bed, as well as be offered some food.

Emotional or psychological distress

Emotional or psychological distress including loneliness was felt to be a second major factor underpinning ambulance attendances to patients with chronic alcohol problems. Clinicians felt that some patients who reported physical symptoms when calling an ambulance, seemed to be more in need of emotional or social support when the ambulance reached them, or other help that was not seen as 'clinical treatment'. Most clinicians were very sympathetic to these patients, but others diminished such needs as being less 'genuinely' requiring their help:

'it's quite sad actually, especially when you go into these chronic people. Whether they are genuinely wanting help or not, or whether they are just lonely and wanting to speak to someone' [Int 4, Female, Technician*]*

'*I think that is an important patient group that is overlooked a lot and they quiet, the most common thing is the drunk person lonely in the house, lonely, drunk person normally with mental health problems as well as alcohol problems is crying for help and they call (…) We turn up at the job because you know the person needs help. But they don't really want to go to, they don't want our help because they have been there before they know it doesn't help and they certainly don't want to go to hospital'* [Int 3, Male, Paramedic]

Mental ill- health

Thirdly, patients with chronic alcohol problems attended by the ambulance service, also often experienced associated mental ill-health. Some patients showed signs of mental illness likely due to their alcohol consumption whereas others were felt to be consuming alcohol as a means of coping with symptoms of mental ill-health. One paramedic described just how frequent these incidents are:

'mental health is becoming the biggest issue for us and we need to accept that that's what we are going to be going to, and obviously alcohol comes into mental health a lot (…) that was the biggest shock when I joined the service, was just how many mental health calls you go to' [Int 7, Male, Paramedic].

Sometimes incidents involving alcohol and mental ill-health involved patients with urgent or acute needs,

such as in the example below involving suicidal thoughts and self-harm:

'There was a call for a gentleman who'd, early thirties, mid-thirties, he had threatened suicide, he'd had quite a history of depression, anxiety issues, and he phoned a friend or a family member, I'm not sure what, to say he was going to commit suicide, and we arrived at the same time as the police (…) and it turns out he had got some serious thoughts of suicide and he was very drunk but not to the point of falling down, not to the point of bouncing off walls, it was just a, just an exacerbation of a bad mood, alcohol affects some people that way, so I think he made his own feelings worse (…) so in that sort of situation it's purely someone is having a crisis and they need to talk to somebody' [Int 10, Male, Paramedic]

Alcohol related call-outs resulting from acute intoxication in a social context

The second overarching cause alcohol related call-outs was acute alcohol intoxication in the patient themselves or a third party. These call-outs were usually toa social setting such as a bar, club, or private home. Such calls were not typically clinically complex:

'We get quite a lot of [acute alcohol-related call-outs] I would say as well, the majority of them are just minor injuries, thank goodness. It will be a broken ankle or a broken wrist or things like that. I can't think of many catastrophic that we've had that have been alcohol related. They all just tend to be minor.' [Int 21, Female, Paramedic]

Participants also described how such calls were often made because the acutely intoxicated patient appeared to be unconscious, even though they were sometimes able to respond to the ambulance staff on arrival:

'You'll find the patient, generally they'll be sort of perhaps lying on the floor in the toilet stall, possibly surrounded by sick or their head down the toilet bowl, something of that nature. (…) The person makes a great show of being unconscious but will be perfectly capable of responding, usually verbally.' [Int 14, Male, Technician]

Participants reported that people who were intoxicated from drinking alcohol tended to present with problems arising from their own intoxication rather than because of an assault by someone else. However, as this paramedic explains, they do attend to a smaller number of call-outs related to violence:

'Compared to the other categories [of alcohol related call-outs] there's relatively few [assaults]. People tend to cause themselves more problems than other people when they're drunk (…) I think you see more of them on the nightshift, particularly like on, you know, the traditional times, a Friday, Saturday night. But yes, you get them, you have fights and someone will get, you know, a punch to the head or they'll get knocked over during a fight and they'll bang the back of their head. The vast majority of the time it's superficial wounds' [Int 11, Male, Paramedic]

Some call-outs to people who were intoxicated were related to accidental injuries which commonly included head injuries from falls. Participants reported that the effects of alcohol can mimic those of some head injuries, but can also mask head injuries. Often, SAS staff attending these incidents can't treat the patient at the scene, as their protocol for concussion/head injuries is to take patients to hospital:

'*The other one is where you go to somebody that has had alcohol, they have fell, well say they have bashed their head and say they have a cut to the head that needs stitched. Now as paramedics we can glue these wounds, but we can't if there is alcohol involved because of the effects of alcohol. So, they have to go to hospital.'* [Int 18, Male, Paramedic]

Public perceptions

Participants felt that the public assumed that attending patients who had been assaulted was one of the more common causes of an alcohol-related call-outs, whereas ambulance clinicians felt that chronic alcohol problems, often with concurrent mental health problems were both a more common and less well-recognized cause of alcohol-related attendances:

'*You have people who have had too much to drink on a night out and something happens as a result of that. I think there are quite a few of those but they're certainly not the phenomenon that I think the media would display. I wouldn't say that that's the big issue. Then the other two are chronic alcoholics* [sic] *who are drunk at that point in time or people who are chronic alcoholics* [sic] *and have related medical conditions that have caused them to present to the Ambulance Service. And I honestly think those two categories, the second two I mentioned, probably form the majority of our alcohol related work in my opinion.'* [Int 11, Male, Paramedic]

The volume of alcohol-related incidents

Clinicians taking part in this study felt that the volume of alcohol-related incidents had increased, even before the COVID-19 pandemic, and that such incidents were now a common occurrence. One reported that alcohol incidents could happen at *'any time of the day, any time of the week, any night of the week'* [Int 15, female, Technician]. Clinicians' experiences of the regularity of alcohol-related calls of various types, came across clearly:

'It's not as restricted to time as the general public would think (…) alcohol problems are definitely twenty-four seven' [Int 3, Male, Paramedic].

Senior staff participants tended to focus on the volume of ambulance call-outs relating to mental health issues, including alcohol-related incidents, rather than alcohol specifically. They reported that this meant that SAS was having to adapt as an organization. In responding to these calls, senior staff discussed the need for SAS to work as part of a wider team with others, including third sector organizations:

> *'We supported the third sector to get extra funding from the Government, so because we supported them, they could deal with more people [with drug related call-outs] and that just had a small positive effect, it wasn't huge, but through working with them they were able to build a case to go back to Government to get more funding to get more staff in place. So, I think there is a bit about how we work as that multidisciplinary team rather than everything sitting on us but how we can empower others by just giving that support as well.' [Int 28, senior* staff]

Another senior participant expressed a view that SAS should move toward a preventative role, rather than just providing an immediate clinical response, given the demands such incidents are placing on the service. Again, this was discussed in relation to mental ill health more broadly, rather than alcohol problems:

> *'As part of what's, what's gonna be different going forward, we're just developing our 2030 strategy at the moment and there's a huge part of that in terms of public health and our role in, in the primary, the preventative space, and we don't have any public health expertise within the Scottish Ambulance Service at the moment (…) so we're working with Public Health Scotland and the Directors of Public Health, to really kind of scope out what is it that we really need in terms of competence and potential resourcing within SAS to enable us to step into, into that space.'* [Int 31, senior staff]

Discussion

This is the first study to capture rich descriptions of alcohol-related ambulance call-outs from the perspective of frontline ambulance clinicians. Alcohol-related attendances were reported as arising from two distinct categories of circumstance. Firstly, incidents involving patients with chronic heavy drinking patterns often presented in conjunction with mental health, social, emotional, or psychological issues including acute crises, distress, and/or loneliness. These attendances were mainly to patients at home. The second category included violence, accidents, loss of consciousness, or falls that were linked to acute intoxication either in the patient or a third party, in diverse social contexts and both private and public locations. These findings provide a deeper understanding of how alcohol-related call-outs present themselves to SAS.

Very few studies address the specific subject of alcohol-related ambulance call-outs, though some ED studies provide relevant insights, which align with our findings. One study in six NHS hospitals in South & West London (UK) involved semi-structured face-to-face interviews with 30 people who repeatedly attended EDs for alcohol-related reasons (Parkman et al., 2017), two thirds of whom had chronic alcohol problems. When these patients were asked why they had attended the ED, they most commonly reported that they needed medical intervention for physical injuries associated with pain and identified alcohol as the underlying cause of most of these injuries. Patient fears or experiences of withdrawal symptoms were also a common reason to attend the ED. In one ED in Glasgow, Scotland, about one in five patients arriving at the ED by emergency ambulance were acutely intoxicated due to alcohol, and over half of these presented with chronic alcohol problems (Vardy et al., 2009). In a separate study in the same ED, three-quarters of all the patients attending as a result of alcohol consumption (regardless of whether they arrived by ambulance or self-presented) were found to have chronic alcohol dependence (Vardy et al., 2016).

A recent study conducted in Copenhagen did investigate the role of alcohol in urgent ambulance contacts (Bruun et al., 2023). However, similarly to Manca et al. (2021), this study used free texts in prehospital medical records to produce a quantitative result of 16% of ambulance contacts in 15–24-year-olds being alcohol-related. Bruun et al. (2023)'s study only captured 'ambulance contact' with patients that were under the influence of alcohol at the time, described as drunk or intoxicated in the free text, with the research team deciding other inclusions based on the free-text submission to the system (therefore likely missing any chronic or long-term alcohol related conditions). This study also only included 15–24-year-olds. For these reasons, it is therefore unsurprising that they reported that the most frequent primary cause for an 'ambulance contact' was acute alcohol intoxication (46%). Our study however, through the in-depth interviews uncovers the underlying reasons behind alcohol-related call-outs that mythological restraints from Bruun et al and Manca et al don't capture. Our data also involves patients of all ages, giving much better representation of the population. Through these in-depth qualitative interviews SAS staff were able to better describe the whole picture that they are presented with when attending alcohol related call-outs, and describe in more accurate detail or root cause of the call-out.

It is interesting to find that many of the frontline SAS staff we interviewed stated that they attend call-outs involving chronic alcohol consumption related issues just as much as acute intoxication in the night-time economy. This finding contradicts Bruun et al. (2023) and the common assumption that late-night drinking and acute intoxication form the majority of alcohol related call-outs for ambulance services. The data in this study is clear that alcohol related call-outs are attended by SAS staff on a much more consistent basis and at any time of the day than many people think. It is extremely important to shine a light on how common it is for people in Scotland to present to the ambulance service with chronic alcohol issues and raise awareness of the desperate situations ambulance staff are attending and dealing with daily. Our finding, that SAS staff often feel they have no option but to take people with chronic alcohol consumption issues to hospital, align with recent evidence from a briefing by Public Health Scotland where they state '*19,710 people in Scotland were admitted to a general acute hospital with a diagnosis wholly attributable to alcohol in 2023/24, meaning that some people were admitted more than once*' (Public Health Scotland, 2025, p. 9). This also supports our findings that SAS staff are called out to, and transport to hospital, the same patients multiple times.

A further aspect of our findings is that clinicians' accounts describe how many patients, especially those with chronic problems, initially present as having physical symptoms, but on attendance are found to be more in need of social, emotional, or psychological support, or perhaps mental health treatment. This is another strength of our study, as Bruun et al. (2023) and Manca et al. (2021)'s methods meant they would not be able to capture this nuance. These types of alcohol related call-outs require empathy and compassion for the people who are suffering from alcohol dependence or alcohol use disorders (AUD) and mental ill health. These types of call-outs also require huge amount of patience, particularly for the call-outs describes when the actually presenting reason isn't clear. SAS frontline staff are highly trained medical experts, however these call-outs require a completely different, yet potentially just as valuable skill set. It is important to understand what types of call-outs involve alcohol because they may mean different responses are required. The 'late-night drinking' call-outs to pubs, bars and clubs don't require the same empathetic response, but instead seem to generate more violence/aggression toward ambulance staff. Therefore, these kinds of alcohol related call-outs not only produce burden on other services, such as the Police, but also add to the ambulance service's workload, induce feelings of anxiety and frustration as well as contribute to burnout (Uny et al., 2025).

In our research, some clinicians appeared to diminish the distress that patients felt or appeared judgmental about what they perceived as ambulance resources being used for problems that were social or emotional rather than clinical. In an online survey of staff in the ambulance service in the North-East of England (N = 145), 93% of those surveyed agreed that dealing with alcohol-related call-outs places an avoidable demand on time and resources (Newbury-Birch et al., 2017). We cannot tell if the attitudes found in our study translated in any way into patient care, though there was no suggestion that they did. Such attitudes likely reflect the pressures on staff combined with underlying societal stigma around alcohol and wider mental health problems as somehow being less important or deserving of treatment than physical health problems. They also reflect neoliberal frames promoted by the alcohol industry that suggest that alcohol problems are the fault of a minority of individuals who fail to drink 'responsibly' rather than being driven by wider societal and policy decisions (Hawkins & Holden, 2013; Petticrew et al., 2016; Ulucanlar et al., 2023).

The rapid and professional support provided by ambulance clinicians will continue to be perceived by many patients, as evidenced by this study, as the only or best option available to them, as other avenues are closed or fail to meet their acute or chronic needs. It is not a novel finding of this study to note that more accessible integrated services are needed that do not require abstinence from alcohol prior to providing mental health treatment. Alcohol is often used to self-medicate mental ill-health, but the pathways in place remove this coping mechanism before any other form of support is in place (The Scottish Government, 2022). The Scottish Government has focused efforts on improving access to medication-assisted treatment and associated support for people experiencing problems with the use of drugs other than alcohol (Public Health Scotland, 2024). Whilst there has been some mention of expanding these efforts to include treatment for people with problematic alcohol use (Public Health Scotland, 2023), this has yet to materialize. Further investment and ring-fenced funding would enable local alcohol and drug partnerships to expand and improve alcohol support services. Our evidence suggests particular attention may be needed to data sharing between the ambulance service and ADPs to target help where it is most needed.

Finally, this is a Scottish study, but it has resonance with the rest of the UK. Alcohol-specific, and alcohol-related deaths are both on the rise in recent

years, and so too is hospital admissions as the rate for alcohol-related admissions in 2023 to 2024 was higher than the previous year, and the highest since the start of the data series in 2016 to 2017 (Office for Health Improvement & Disparities, 2025). The UK has one of the most liberal regimes for alcohol premises licensing in the developed world, particularly England and Wales with 24-hour rapid alcohol delivery (Home Office, 2024), and little local control of premises opening hours. Current policy proposals suggest further weakening licensing authorities' powers over the late-night sale of alcohol, which is likely to add to the burden on ambulance services (Department for Business & Trade, 2025; Uny et al., 2025). Future research is required to assess if England & Wales experience the same or a worse impact on their ambulance service as a result of these more liberal alcohol availability policies.

Strengths & limitations

To our knowledge, this is the first qualitative interview study specifically exploring alcohol-related call-outs from the perspective of frontline ambulance clinicians. It was planned and conducted in partnership with SAS. Our sample was representative across a range of categories including SAS region, years of experience, and role. In-depth interviews allowed participants the time to fully discuss their views and experiences. The interviews were conducted over a 3-year period due to this being an exceptionally busy period for SAS, which included 2 years of the COVID-19 pandemic. The sample size of senior staff was quite small but the number of senior staff within SAS is small. Furthermore, the 118 who expressed interest are perhaps more likely to be those with a strong view, a story to tell, or may be frustrated with these kinds of call-outs and so may not be representative of all SAS clinicians or senior staff. There was also no capacity to present the full findings from the other areas of this study together, however we report the emotional toll of alcohol-related incidents on clinicians and the wider service (Uny et al., 2025), as well as the clinicians' preparedness for handling alcohol-related ambulance and the pathways available to them separately (Mitchell et al., 2025, under review).

Conclusion

Frontline ambulance clinicians in Scotland reported that alcohol-related call-outs fall into two distinct categories: first, incidents involving patients with chronic heavy drinking patterns mainly at home, often presenting in conjunction with mental health, social, emotional, or psychological issues; and second, incidents arising from acute alcohol intoxication by the patient or a third party, in diverse social settings. For the former, these kinds of call-outs require more of an empathetic and supportive response, which often requires more patience and time spent with the person in need. Which obviously has a knock-on effect on the capacity of the SAS staff attending to these types of call-outs. For call-outs as a result of acute alcohol intoxication, these types are more likely to cause issues for the SAS staff in terms of experiencing violence and/or harassment so has a knock-on effect not just for the individual SAS staff experiencing this, but also for other services to support them in these incidents. Therefore strategies, policies, and interventions aiming to reduce pressure on emergency services must consider how to provide or improve accessible care for people with chronic alcohol problems, as well as how to reduce acute intoxication to help reduce the amount alcohol related calls SAS staff attend. Population-wide policies to reduce the burden of alcohol nationally through price, availability, and marketing controls are likely to be most effective in the longer-term. In the shorter term, low-threshold services able to provide rapid, holistic support for people with co-morbid alcohol and mental health problems also appear key to reducing the burden from alcohol on patients and services.

Disclosure statement

Jack Gregor Martin has received funding for alcohol research separate from this study from the Scottish Football Association, which as of May 2024 received less than 5% of its income from alcohol (in the form of sponsorship) and the Scottish Professional Football League, which as of May 2024 receives less than 10% of its income from alcohol (in the form of sponsorship). He currently serves on the co-ordinating committee of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol. Isabelle Uny has no interests to declare. Danielle Mitchell worked for Alcohol Focus Scotland between January 2021 and October 2021. Rebecca Howell's salary has been supported in part by funding from Alcohol Focus Scotland and Alcohol Change UK since 2021. Niamh Fitzgerald has received funding for alcohol research separate from this study from the charity Alcohol Change UK, from Public Health Scotland, the Northern Ireland Department for Communities, the UK Prevention Research Partnership, and the Institute for Public Health in Ireland. She served from 2020 to 2023 on the Public Health Alcohol Research Group in Ireland appointed by the Minister for Health and currently serves on the Alcohol Advisory Board of the Office for Health Improvement and Disparities in the UK Department of Health and Social Care and on the co-ordinating committee of the Kettil Bruun Society for Social and Epidemiological Research on Alcohol. Allison Ford, Amelie Begley, David Fitzpatrick, Daniel Mackay, and Jim Lewsey has no interests to declare.

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