A survey of paramedics and alcohol related work: ascertaining fear of, and level of assault amongst the North East Ambulance Service

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MeSH Keywords: Emergency Medical Technicians, Ethanol, Allied Health Personnel

Word count: 3912

ABSTRACT

Purpose
For North East Ambulance Service NHS Foundation Trust (NEAS) employees, contact with patients with alcohol related injury or illness is increasing, along with a general increase in workload. The aim of this survey was to ascertain the fear of, and actual levels of assault amongst NEAS employees, and to identify workload pressures arising from patient alcohol consumption.

Basic procedures
The survey, undertaken in 2014, looked at 'risky locations', frequency of physical and sexual assault, and workload pressures from alcohol related incidents.

Main findings
Thirty two per cent of NEAS frontline staff (n=358), completed the survey. The majority of callouts perceived to be alcohol related were at weekend nights. Ninety three percent of participants reported that they have experienced a threat of violence (n=332), with 47% of participants (n=168) having been assaulted by a (perceived) intoxicated member of the public, and 45% having endured some form of sexual assault or harassment (n=147). Additionally, 72% (n=244) reported feeling most at risk in private residences. The majority of participants (76%) did not feel they had received adequate training to deal with alcohol related incidences.

Principal conclusions
NEAS employees experience high levels of assault and fear of assault and current training needs to be revisited, especially around prevention and management of sexual assaults/harassment.

Keywords: Paramedics, alcohol, ambulance, public health

Funding source: Balance, The North East Alcohol Office

INTRODUCTION

In 2013, 37% of men and 36% of women in England drank more than the recommended limits (Health and Social Care Information Centre, 2016b). The North East of England had one of the highest percentages of people drinking at risky levels (defined as individuals who drink more than 14 units per week) in 2015, at 25% (NHS Digital, 2015).

In the United Kingdom (UK) alcohol related harm is estimated to cost society between £27-52 billion annually (Burton et al., 2016). Health care costs associated with caring for those with alcohol related problems alone are estimated to be £3.5 billion (The Information Centre, 2010). A 2012 study found that 10% of ambulance call outs in the North East of England were recorded as alcohol related (Martin et al., 2012).

For frontline emergency staff, the incidence of contact with patients with alcohol related injury or illness is increasing, along with a general increase in workload (Glencorse, Wilson, & Newbury-Birch, 2014). The total number of emergency calls into the ambulance control room for the Ambulance Services of England was nine million in 2014-2015 (Association of Ambulance Chief Executives, 2015). It is suggested that a third of ambulance call-outs are alcohol related, with the cost of these call-outs and subsequent accident and emergency department (ED) attendances costing £9 million each year in the North East (Martin et al., 2012). Additionally, in the North East alone, in 2011 the cost of alcohol related ambulance call-outs was estimated at £6.98 million (Martin et al., 2012). Since just under one quarter of all people attending EDs in England arrive by ambulance (Health and Social Care Information Centre, 2016a), alcohol related call-outs have the capacity to create a large amount of work for the ambulance service (Lynagh, Sanson-Fisher, & Shakeshaft, 2010). Furthermore, UK NEAS employees have reported that they receive very little training on how to deal with patients with alcohol related injury or illness (Glencorse et al., 2014; Lynagh et al., 2010).

A study in Australia in 2007 found that the majority of paramedics (88%) had been exposed to workplace violence, with 82% having been victims of: verbal abuse, 55% intimidation, 38% physical assault, 17% sexual harassment and 4% sexual abuse (Boyle, Koritsas, Coles, & Stanley, 2007). Furthermore a study in Canada in 2014 found that 75% paramedics reported experiencing violence in the workplace, with 67% being victims of verbal abuse, 41% intimidation, 26% physical assault, 14% sexual harassment and 3% sexual abuse (Bigham et al., 2014).

The aim of this study was firstly to ascertain the threat of, and actual levels of assault amongst NEAS employees. Secondly, to look at locations where the fear of assaults and the pressures on workload of alcohol related incidents is greatest.

METHODS

Study design

A cross sectional survey was undertaken across the North East Ambulance Service NHS Foundation Trust (hereafter referred to as 'NEAS') between April and December 2014 with a small pilot survey initially being undertaken with five NEAS employees. NEAS provides services to the geographical areas of Northumberland, Tyne and Wear, Durham and

Teesside and services a population of 2.6 million (North East Ambulance Service., 2011). The target group for the survey included current NEAS staff members working in frontline positions: paramedics; emergency care support workers; advanced technicians; emergency medical technicians; and urgent care assistant paramedics, hereafter referred to as 'participants' or 'NEAS employees' . The clinical governance department of the North East Ambulance Service approved the study and therefore formal ethical approval was not required. A multi-disciplinary steering group provided oversight and scrutiny for the study.

Survey design and methods

The survey (see supplementary data file 1) included questions relating to the experience of, and risks associated with, alcohol related ambulance callouts. Participants were asked where they felt at risk during their duties in terms of location, and also the number of occasions on which they had been physically and sexually assaulted.

Paper copies of the survey were initially distributed via mandatory training sessions attended annually by all NEAS employees. The expectation was that surveys would be completed alongside NEAS training evaluation forms. However, low response rates were obtained, so eight months into the study an online version of the survey was circulated via email to allow completion of the survey at a more convenient time. Surveys were completed using the Bristol Online Survey portal (https://survey.bristol.ac.uk), which has been approved for National Health Service (NHS) research use.

Two open-ended questions were added to the online version of the survey to obtain further qualitative data. These open questions asked participants to comment about any experiences of alcohol related ambulance call-outs throughout their career that were particularly memorable for them, and to describe situations where they have been at risk, or personally assaulted in some form, as a consequence of alcohol intake in members of the public and/or patients.

Paper copies of the survey were input into an SPSS database (by NM) and a 10% sample was randomly selected and double-checked for input accuracy (also by NM), to ensure the accuracy of data transference from paper to electronic format. The electronic responses from the online survey were then aggregated with the existing SPSS database before analysis was undertaken.

Data analysis: quantitative results

SPSS version 21 was used to carry out descriptive statistics. Proportions where given, are based on responses to the individual questions, with data on missing respondents indicated where appropriate.

Data analysis: qualitative results

Verbatim quotations posted in response to the open-ended online survey questions are shown below throughout the results section in italics. Selected quotations were chosen to qualitatively reflect and to add explicit meaning to quantitative results, rather than a separate qualitative analysis being undertaken.

RESULTS

At the time of the survey NEAS reported that there were 1,113 staff members working in frontline positions. Thirty two per cent (n=358) completed, or partially completed, a paper (n=267) or online (n=91) version of the survey with 81% (n=289) completing all of the survey questions in full. In the case of partially completed surveys, any responses to single questions have been included in the analysis. The option of qualitative responses was only offered to online participants of which 47% (n=43) responded to at least one of the three qualitative questions in the survey.

Sixty five per cent of the sample responses were from males (n=231). Thirty nine per cent of respondents were aged 35-44 years, 26% had worked for NEAS for 20 years or more, and 46% reported they were lone workers (see Table 1). Of the online sample (n=91), 41% (n=37) responded with information to the open-ended questions about alcohol related incidents, with 31% (n=28) describing situations where they have been at risk, or suffered, as a consequence of drunken members of the public and/or patients. The sections below are divided into the following sections: 1) pressures on workload, 2) assaults to NEAS employees, and 3) dealing with intoxicated patients.

Table 1: Participant demographics

	n	%
Gender *(missing n=3)*		
Male	231	65%
Female	124	35%
Age *(missing n=4)*		
18-24	7	2%
25-34	61	17%
35-44	138	39%
45-54	109	31%
55+	39	11%
Years of service *(missing n=4)*		
0-4 years	58	16%
5-9 years	93	26%
10-14 years	74	21%
15-19 years	36	10%
20+ years	93	26%
Job role *(missing n=3)*		
Paramedic	230	65%
Technician	38	11%
Emergency support/urgent care	87	25%
Lone worker status *(missing n=4)*		
Lone worker	162	46%
Non lone worker	192	54%

Pressures on workload

Participants reported that alcohol intoxicated patients were most likely to be encountered

on weekend nights with 49% (n=164) stating at least 60% of their callouts were alcohol related on weekends (see Table 2 and Figure 1).

Table 2: Percentage of callouts perceived to be alcohol related by day and time

% callouts perceived to be alcohol related	**Week day**		**Week night**		**Weekend day**		**Weekend night**	
	%	**n**	**%**	**n**	**%**	**n**	**%**	**n**
0-19%	57%	190	25%	82	22%	75	9%	31
20-39%	28%	94	39%	130	39%	132	19%	63
40-59%	11%	37	22%	73	23%	79	23%	79
60-79%	3%	11	12%	41	11%	37	33%	112
80%+	1%	2	2%	6	4%	14	15%	52
Missing n		*24*		*26*		*21*		*21*

Assault-related callouts were seen as most closely linked to alcohol, with 88% of participants (n=309) reporting that at least 50% of assault callouts were alcohol related. Domestic violence-related callouts were the next most closely linked to alcohol, with 73% of participants (n=250) reporting that at least 50% of these callouts were alcohol related (see Table 3 and Figure 2).

Table 3: Prevalence of callouts perceived to be alcohol related by incident type

% callouts perceived to be alcohol related	**Incident Type**											
	Road traffic		**Domestic violence**		**Assaults**		**Fractured injured limbs**		**Unconsciousness**		**Slips trips falls**	
	%	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**
0-24%	85%	282	8%	27	3%	9	35%	120	11%	39	21%	74
25-49%	13%	44	20%	67	9%	32	45%	154	20%	69	38%	133
50-74%	1%	4	33%	2	24%	85	18%	63	38%	132	29%	100
75%+	1%	2	40%	8	64%	224	2%	81	31%	110	12%	41
Missing n		*26*		*14*		*8*		*13*		*8*		*10*

There was a perception that intoxicated patients are unnecessarily using ambulance services that could be used in other emergency situations:

"We have been called out on several occasions to alcohol related incidents (most on the weekends) to the general public intoxicated and most importantly coming through as a high priority because they are unconscious but when we arrive on the scene they are NOT UNCONSCIOUS they are just very intoxicated and drunk and just need to be taken to the nearest A&E Department to sober up. This is all taking up valuable time and resources from the ambulance crews and the general public that need critical lifesaving treatment in a life and death situation. (Heart Attack, Strokes, Cardiac Arrests, Diabetics)."[NEAS Participant 1, male, 25-34, 0-4 years of service]

"In my role most alcohol related call outs are through too much alcohol consumption to the point where people either pass out due to drink or go to sleep due to drink. In the Ambulance service these calls always generate a Red 2 response, which is the same response someone having a heart attack or stroke would receive if calling for an Ambulance. As you can imagine this is a very frustrating situation the ambulance clinicians find themselves in quite regularly. Not only this but many intoxicated people have a tendency to vomit while en route to hospital. Ambulances aren't however like taxi's and don't charge people for this pleasure but are taken off active duty to be fully cleaned before other patients can be transported in them also, which is again frustrating". [NEAS Participant 2, male, 35-44, 5-9 years of service]

Assaults to NEAS employees

Ninety three per cent of participants surveyed have been threatened with violence when working (see Table 4). Forty seven percent of participants have been physically assaulted from a drunken member of the public whilst on duty, whilst 29% have been injured at least twice in their career (n=103).

"As a female I'm less at risk of physical assault from drunk patients as it has normally been aimed at my male work partner. However, the sexual harassment from the males can get out of hand." [NEAS Participant3, female, 25-34, 5-9 years of service]

Table 4: Prevalence of actual and perceived injury

	Male (n=213)		**Female** (n=124)		**All people** (n=355)	
	%	**n**	**%**	**n**	**%**	**n**
Threat of injury						
Never	7%	16	6%	7	7%	23
Once	6%	14	8%	10	7%	24
2-3 times	23%	52	38%	47	28%	99
4-5 times	10%	24	15%	19	12%	43
6+ times	54%	125	33%	41	47%	166
Actual injury						
Never	52%	121	53%	66	53%	187
Once	15%	35	24%	30	18%	65
2-3 times	25%	57	18%	22	22%	79
4-5 times	6%	14	2%	3	5%	17

6+ times	2%	4	2%	3	2%	7
Sexual assault or harassment						
Yes	32%	69	70%	78	45%	147
No	68%	145	30%	33	55%	178
Missing n		*17*		*13*		*30*
Feel at risk of assault in Night time economy						
Very high risk	20%	46	19%	24	20%	70
High risk	47%	106	38%	47	44%	153
Some risk	33%	76	43%	53	37%	129
No risk	0%	0	0%	0	0%	0
Missing n		*3*		*0*		*3*
Feel at risk of assault in daytime						
Very high risk	5%	11	9%	11	6%	22
High risk	21%	48	19%	23	20%	71
Some risk	71%	162	72%	88	71%	250
No risk	3%	6	1%	1	2%	7
Missing n		*4*		*1*		*5*

Managing intoxicated patients

Fifty nine percent of participants (n=212) disagreed that they should be responsible for managing patients who have been excessively drinking (as defined by each participant), with 23% (n=82) strongly disagreeing that this should form part of their job role. Ninety three percent of participants (n=332) agreed that alcohol related ambulance call outs place an unnecessary burden on their time and resources, with 58% (n=209) strongly agreeing. Ninety three per cent of participants (n=333) agreed that patients should be financially charged for calling out an ambulance where the reason was purely due to their own intoxication from alcohol with 68% (n=243) strongly agreeing.

Seventy six per cent of participants (n=268) reported feeling that they were unsure about whether they had received any training, or had never received, adequate training from NEAS to deal with individuals who are alcohol-intoxicated. Only fifty five per cent (n=196) reported having the confidence and skills to deal with potential conflict that can arise through dealing with drunken members of the public.

> *"We have conflict resolution training but we have no hands on training like self-defence training."* [NEAS Participant 3, female, 25-34, 5-9 years of service]

When asked what locations participants felt most at risk, 72% reported this feeling most at risk within private residences, whilst only 3% felt most at risk within EDs (Table 5).

Table 5: Percentage of NEAS employees selecting stated location as one of top three in which they felt most at risk from intoxicated patients

Location type	%	n

Private residence	72%	244
Town/city centre street	64%	217
Inside the ambulance	58%	198
Inside licensed premises	39%	134
Outside licensed premises	35%	120
Rural street locations	14%	48
EDs	3%	9

> *"I was once called to a child* [who had] *stopped breathing. On arrival at the incident the child was of no real cause for concern, Grandma who was looking after the child explained that mam and dad were at the pub. Grandma was in the back of the ambulance with us and the child when parents arrived back, dad got on the ambulance and immediately punched grandma in the face, he then turned round and kicked his wife who was now climbing in through the side door in the head before again turning and attacking my colleague. We managed to restrain him and pin him to the floor at which point. Granddad jumped on the vehicle and began kicking him in the head. I then had to restrain Granddad while my colleague continued to hold dad down. We requested immediate police assistance and had a large number of police officers with us in a very short space of time."* [NEAS Participant 4, male, 45-54, 20+ years of service]

> *"*[An] *emergency button* [was] *needed when* [we were] *inside an upstairs bedroom of* [a] *house as* [a] *family member* [was] *downstairs who were under* [the] *influence of drink/drugs* [and] *decided to fight using* [a] *samurai sword."* [NEAS Participant 5, female, 35-44, 5-9 years of service]

Sixty three per cent of participants feel either at 'very high' or 'high' risk of physical assault (n=225) when working a night-time shift. Twenty seven per cent of paramedics feel either at 'very high' or 'high' risk of physical assault (n=95) when working a day-time shift.

> *"I was once surrounded by members of the public in a bar trying to deal with a drunk male 'unconscious' and they started pushing us to do something, we had to escape to the safety of the ambulance and call the police".* [NEAS Participant 6, male, 45-54, 20+ years of service]

Only six percent of participants (n=23) have never been threatened with injury from drunken members of the public whilst on duty, with 47% (n= 166) have been threatened six or more times.

> *"Assisting a very drunk person onto* [the] *back of ambulance who had been assaulted by group of people who then decided to try and get at her again resulting in a fist just missing my face as I tried to protect her…Dealing with a drunk person fitting in a city centre before drunken people in pub overlooking scene thought would be a great idea to start throwing glasses at us. Emergency button on radio used, had to run away back to ambulance."* [NEAS Participant 7, female, 35-44, 5-9 years of service]

DISCUSSION AND KEY CONCLUSIONS

Summary of main findings

The results of this study show that the majority of call-outs perceived to be related to alcohol were at weekend nights, which is in keeping with what has been found in EDs (Drummond et al., 2005; Waller, Thom, Harris, & Kelly, 1998). Furthermore participants reported that both assaults and domestic violence call-outs were more likely to be alcohol related. The majority of participants did not feel they should be responsible for dealing with patients who have been drinking alcohol. Moreover, nearly all paramedics (93%) felt that these call outs cause an unnecessary burden on their time and resources. This is all within the current climate of the NHS and ambulance services facing greater pressure and demand than has ever been seen previously.

Comparison to previous literature

It has been shown that work-place violence is common among professions in the health-care field (Bigham et al., 2014). In this present study, the perceived levels of exposure to violence were higher in this group of NEAS employees (93%) than previously reported in Australia (88%) and Canada (75%) (Bigham et al., 2014; Boyle et al., 2007). More frontline employees have been physically assaulted in NEAS (47%) and in Australia (55%) however, compared to Canada (26%) (Bigham et al., 2014; Boyle et al., 2007). Furthermore nearly half of participants in this current study reported that they have been threatened with assault six or more times by individuals who have been drinking alcohol. Levels of assaults to paramedics have been shown to have an effect on levels of depression and even Post Traumatic Stress Disorder (PTSD) (Bigham et al., 2014; Fjeldheim et al., 2014). Moreover, it has been shown that threats of violence can alter patient care (Suserund, Blomquist, & Johansson, 2002).

Of great concern is the level of sexual assault/harassment at work (45%), which is higher than in both Australia (17%) and Canada (14%) (Bigham et al., 2014; Boyle et al., 2007). Moreover this study found that female participants reported being more likely to be sexually assaulted or harassed when compared to male participants. Incidences of sexual assault/harassment appear to be lower for males, yet opened ended responses to the survey shows that males were more likely to report being the victims of physical assault compared to females undergoing sexual assault/harassment.

NEAS employees reported that they had not been given adequate training on how to deal with the potential conflict of dealing with patients who had consumed high levels of alcohol, which has been found in other studies (Glencorse et al., 2014). Participants report feeling most at risk in situations where there are no other people around. It is however also the case that they also feel at risk in town/city centre street locations. One issue here is who is responsible for dealing with alcohol-intoxicated patients. ‘Alcohol treatment centres’ are used in other countries, yet few are used in the UK to ‘sober up’ patients (Institute of Alcohol Studies, 2015). This is but one example of how alcohol-intoxicated could be dealt with, but greater debate on this issue is needed, to reduce costs to the NHS and harm to ambulance-service employees from treating intoxicated patients, whilst also best treating these patients.

Implications for future research and practice

Given the range of situations that NEAS employees reported facing due to alcohol intoxicated patients, one worrying outcome seen in wider studies is the onset of PTSD. Whilst, this study did not measure PTSD we recommend that further research is undertaken into PTSD in NEAS employees, given that coming into frequent contact with intoxicated patients has been shown to have an effect on mental health of them. Qualitative research is needed to fully explore this issue to fully understand the psychological impact of intoxicated patients on the health of NEAS employees and the subsequent impact on the ambulance service (i.e. due to sickness leave). The North East has some of the highest rates of alcohol related mortality and morbidity in the country and there would also be benefits to undertaking further research to establish whether levels of fear and assault are related to overall alcohol consumption within ambulance service geographies nationally.

Given that NEAS employees reported feeling at risk when attending callouts at private residences and in city centre locations one further implication for practice that would be advantageous for paramedics is self-defence training, in addition to training on how to deal with intoxicated patients. This training would be beneficial given the diverse range of locations and situations for which they attend alcohol related incidences. In particular, self-defence training is used in other settings where harm may come to workers (e.g. prisons) and thus could be looked to as an example for why and how self-defence training may be appropriate for ambulance-service employees. Such training has been advocated for some time (Beech & Leather, 2006).

Limitations

Whilst response rates were low in this present study (32%), this is a limitation that has been found in similar studies with paramedics (Boyle et al., 2007; Glencorse et al., 2014; Hargreaves, Goodacre, & Mortimer, 2014). Given the low response rate, it cannot be assumed that these findings are representative of all NEAS employees or those employed elsewhere. Additionally, the study is based on self-reported data. This is a limitation in that it is often viewed as erroneous and biased data, however the very nature of surveys relies on trust that the answers provided by respondents are a true reflection of their attitudes at that given point in time. We therefore maintain that this study offers an exploratory understanding of the views of NEAs employees on their perceived and actual levels of alcohol related levels of assault in the North East of England. As the open ended questions were only added to the online version of the questionnaire, only 91 individuals had the opportunity to respond to these questions, however many in-depth comments were written on the paper-based questionnaires.

Key conclusions

Despite these limitations, this study clearly shows that NEAS employees are experiencing high levels of assault and fear of assault and that current training needs to be revisited, especially around prevention and management of sexual assaults/harassment. NEAS frontline employees are in a unique position where they are dealing with patients at their most vulnerable and have to make life and death decisions on a daily basis. They should feel safe in their work environment and more needs to be done to ensure that this is the case and that they receive adequate training and support in dealing with intoxicated patients and alcohol related call-outs.

Author Contributions

NM and CS conceived the study and its design; NM, CS, ELG, DNB, CM contributed to the analysis and interpretation of data, and drafting of the paper. All authors approved the final version for publication.

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Figure 1: Percentage of perceived callouts that are perceived to be alcohol related by day and time

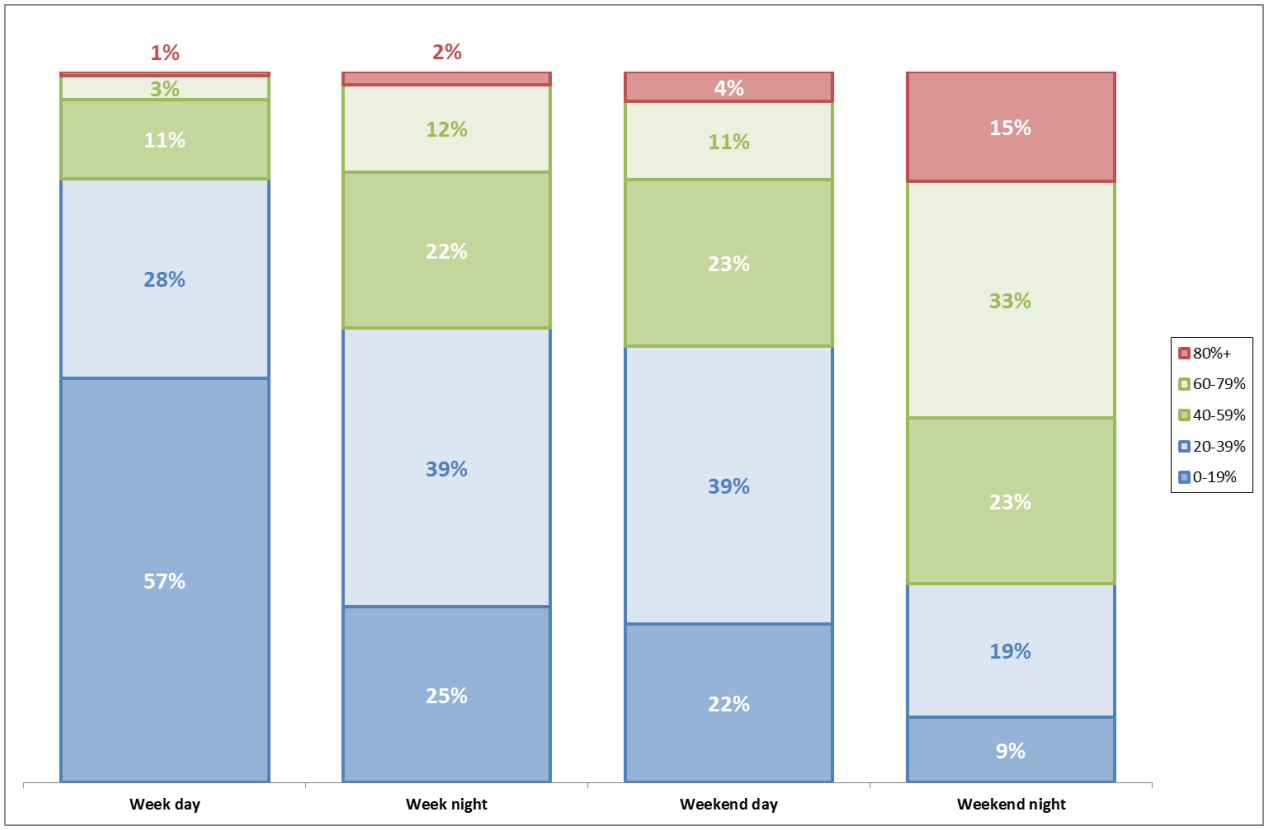

Figure 2: Prevalence of callouts perceived to be alcohol related by incident type