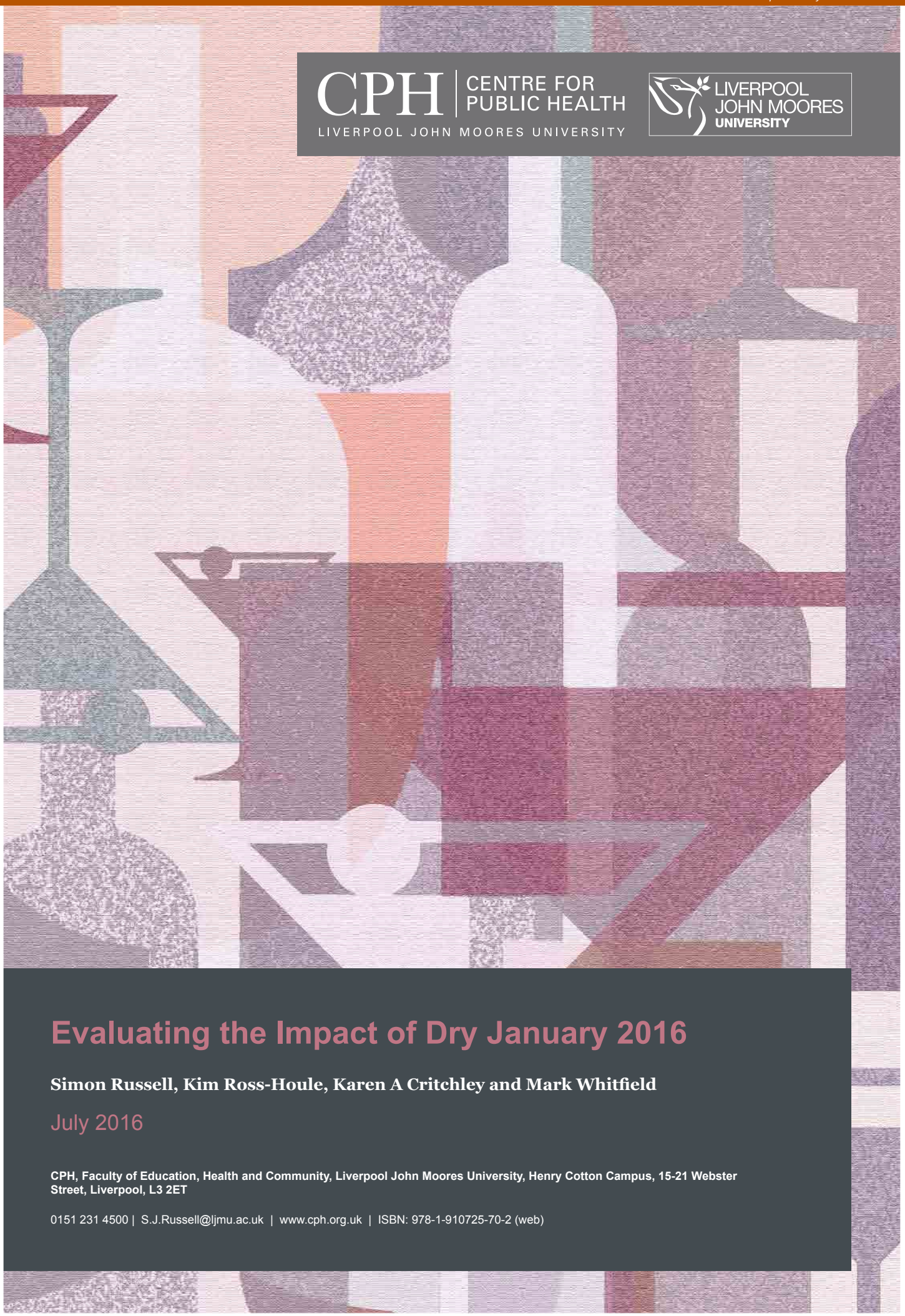

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Evaluating the Impact of Dry January 2016

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July 2016

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KEY FINDINGS

DRY JANUARY PARTICIPATION

- There were 1,829 participants of the Dry January campaign within the North West Coast (NWC) area, of which 720 completed the pre-campaign questionnaire and 476 completed the post-campaign questionnaire.
- The highest number of participants came from Liverpool Local Authority (LA; 177), followed by Wirral (154), Sefton (137), Cheshire West and Chester (134) and Blackburn with Darwen (132). The highest rates of participation per 100,000 population were from Blackburn with Darwen (90 per 100,000 population), Halton (60 per 100,000 population) Warrington (60 per 100,000 population), West Lancashire, Eden and Ribble Valley (each 57 per 100,000 population).
- Increasing participation rates were found to be associated with decreasing levels of deprivation.
- Substantially more females than males participated in Dry January 2016 in the North West Coast (NWC) area (68% compared to 28%; 4% had unknown/undisclosed gender or identified as transgender). In terms of age, 30% of participants were aged 46 to 55 years and 29% were aged 36 to 45 years.
- In terms of alcohol consumption, alcohol AUDIT (WHO, 1993) findings revealed that the mean score for all participants was 13, which represents increasing risk; 20% of participants were found to be at lower risk, 46% were at increasing risk, 16% were at higher risk and 19% were found to be drinking at levels of possible dependence.
- The LAs with the highest levels of drinking among participants of Dry January participants were Blackpool (average score 18), Barrow-in-Furness (17) and Liverpool (16); the lowest were Blackburn with Darwen (10), Allerdale (11), Knowsley (11) and Halton (11).

EMERGENCY DEPARTMENT FINDINGS

- Excluding residents of Warrington LA, between December 2015 and March 2016 there were 137,154 trauma-related attendances by residents of NWC area to Emergency Departments (EDs); 96% were for unintentional injuries and 4% were for intentional injuries. Of the total, 34,588 (25%) attendances were in January 2016.
- Comparing the period December 2015 to March 2016 to the same period for the previous five years, assaults and unintentional injuries were generally lower than the average for previous years but the pattern between months was similar. Deliberate self-harm (DSH) attendances were also relatively lower than previous years but the increase between December and January was much less in 2015/16 than the previous five years (there was no change in 2015/16 compared to an average increase of 15% in previous years).
- An association was found when plotting intentional and unintentional injury ED attendance rates against Dry January participation rates by LA but with a high degree of variance.
- For males and females between the ages of 18 and 45, increasing Dry January participation rates were associated with decreasing intentional injury ED attendance rates; however, this association is not necessarily causative.
- Historic Trauma and Injury Intelligence Group (TIIG) data reveal (where data are collected) that 49% of assault, 41% of DSH and 7% of unintentional injury ED attendees consume alcohol in the three hours prior to the attendance. For the period December 2015 and March 2016, the proportion of attendees who had consumed alcohol in the three hours prior to the attendance was lower than the three year average for assaults, DSH and unintentional injuries; however, average data are taken from one ED and findings should be interpreted with caution.

- In January 2016, among the eight EDs that collect good quality alcohol data, a higher proportion of assault attendees were found to have consumed alcohol prior to the ED attendance when compared to December, February and March 2015/16.
- In terms of the day of the week an ED was attended, for intentional injuries, January 2016 had a higher proportion than December, February or March 2015/16 attending on a Friday (20% compared to 10%, 12% and 13% respectively). There were no significant findings in terms of the time an ED was attended when comparing January to other months for intentional or unintentional injuries.
- There were no significant differences in terms of referral source to the ED, arrival mode or disposal method, when comparing January to other months.

NORTH WEST AMBULANCE SERVICE FINDINGS

- There were 42,330 call outs made by the North West Ambulance Service (NWAS) within the NWC area between December 2015 and March 2016; 74% were for unintentional injuries, 6% were for assaults and 20% were for self-harm (including 'Psychiatric/Suicide Attempt' and 'Overdose/Poisoning [Ingestion]'). Of the total, 10,717 (25%) were in January 2016.
- Call outs for assaults in 2015/16 were substantially higher than the yearly average for the previous two years; however, the decrease in call out rates between December 2015 and January 2016 was greater than the average for the previous two years (29% compared to 9%).
- Call outs for self-harm were higher in 2015/16 than the yearly average for the previous two years. The rate between December 2015 and January 2016 fell by 9% compared to previous years where there was no change. The decrease was maintained between January and February and there was a further decrease between February and March 2016, compared to the average for the previous two years which increased between February and March by 8%.
- Call out rates for unintentional injuries were lower in 2015/16 compared to the yearly average for the previous two years; the average decrease between December and January for previous years was 6% compared to 3% in 2015/16.
- The LAs in the NWC area with the highest rates of intentional injury call outs were Blackpool (168 per 100,000 population), Liverpool (101 per 100,000 population) and Barrow-in-Furness (98 per 100,000 population). The LAs in the NWC with the highest rates of unintentional injuries were Blackpool (254 per 100,000 population), South Lakeland (246 per 100,000 population) and Wirral (228 per 100,000).
- Similar to ED attendances, there was an association between call out rates for intentional injuries and participation rates in Dry January by LA where, despite a high degree of variance, intentional injury call out rates increased with decreasing Dry January participation rates. There was no association between unintentional call out rates by LA and Dry January participation rates.
- For males and females between the ages of 18 and 45, increasing Dry January participation rates were associated with decreasing intentional injury call out rates; however, similar to ED attendances, this association is not necessarily causative.

QUALITATIVE FINDINGS

- Overall there was a mixed response with regards to how successful the Dry January Campaign had been in the different workplaces. There was a general consensus from all participants that monitoring the campaign was difficult. This led to

several participants deciding not to monitor the campaign within their workplace, and those that did were unsure about how meaningful the data collected were.

- A common observation made by participants was that many people within their workplace appeared to have already made the decision to take part in Dry January before the workplace promotion started. Therefore, many participants were unsure how effective their own efforts had been in promoting Dry January.
- The issue of fundraising was discussed across all of the interviews; because official sign ups to Dry January were not promoted in most of the workplaces they also did not encourage fundraising. The workplaces that did encourage participants to sign up, did not put pressure on those taking part to fundraise. It was acknowledged that having pressure to fundraise may discourage people from taking part.
- Social media was used to promote the campaign in many of the workplaces and due to funding restraints it was recognised that this would likely be the main platform for future campaigns.
- The cost of Alcohol Concern materials was a further issue raised in the interviews, with some stating that they felt they would have had more engagement with the campaign if these had been available for free.
- Staff health and wellbeing was an important issue and many participants felt that the Dry January campaign was a good way of addressing alcohol consumption, although other participants were sceptical and felt that only those whose alcohol consumption did not need addressing would take part in the campaign.
- The effect that alcohol consumption could have on staff absenteeism and productivity was recognised by participants who felt that it was important to raise awareness of the effect that alcohol can have on general health and wellbeing and that the Dry January campaign had the potential to raise such awareness.

CONCLUSIONS

DRY JANUARY PARTICIPATION DATA

- Participation numbers and rates of Dry January were relatively high, but numbers were not sufficiently high to conduct meaningful analyses at Lower Super Output Area (LSOA) level; analyses were restricted to LA level.
- There was considerable geographical variation in terms of participation rates with Dry January, ranging from 24 participants per 100,000 population in Burnley to 90 participants per 100,000 population in Blackburn with Darwen.
- There were also substantial variations between age and gender groups in terms of participation rates, with females aged 26 to 55 years comprising 53% of all participants.
- Drinking levels were generally high among participants; 80% of participants reported drinking at increasing levels of risk, high risk or possible dependence.

EMERGENCY DEPARTMENT DATA

- ED attendances between December 2015 and March 2016 were lower than the yearly average for the previous five years but there were no substantial changes between December and January for assaults or unintentional injuries.
- However, the relatively lower number of attendances for DSH in January 2016 is particularly encouraging since TIIG data reveal that 54% of DSH attendances are comprised of females aged between 15 and 59 years and females aged between 26 and 55 comprised the majority (53%) of participants of Dry January. It is possible that the Dry January campaign has led to a reduction in incidents and attendances for DSH among females aged between 18 and 55 years.
- While there was an association between intentional and unintentional injury ED attendance rates with Dry January participation rates, the association is not necessarily causative as there are many other variables which may affect ED attendance rates. For example, Dry January rates were found to decrease with increasing deprivation among LAs, and previous TIIG analyses have highlighted a positive association between increasing levels of deprivation and increasing intentional and unintentional injury ED attendance rates.
- Similarly, the association for males and females between the ages of 18 and 45 years between intentional injuries and Dry January participation rates may be coincidental since intentional injury rates tend to fall with increasing age group for both males and females. This association could be explored more fully in subsequent work by controlling for expected decreases in attendance rates and analysing whether areas with high participation in Dry January exceed the expected decrease.
- While there were some interesting trends and associations within the ED data in terms of Dry January participation, evidence suggests that certain demographics are more likely to engage with the campaign, such as females from less deprived areas between the ages of 26 and 55, and it could be argued that these demographics would be less likely to engage in health risk behaviours which would precede an ED attendance for an intentional or unintentional injury. Participating in the Dry January campaign represents an investment in health behaviour and such individuals may be less likely to engage in risk taking behaviours in the night-time economy, which may lead to being a victim of violence, or engaging in DSH. While there may be a reduction in unintentional injuries due to reduced levels of drinking, the participation numbers compared to ED attendances are very small and an effect may be difficult to control for and identify within the scope of this research.

NORTH WEST AMBULANCE SERVICE DATA

- Similar to ED data, the call out rate for self-harm fell between December 2015 and January 2016, 9% compared to previous years, where there was no change. The decrease was maintained or decreased further between February and March 2016. This is particularly encouraging given the demographic context of self-harm patients and Dry January participants.
- The association between intentional injury call out rates and Dry January participation rates is also encouraging but the association is not necessarily causative. While call out location is provided in NWAS data rather than patient address, previous analyses have found an association between call out location area and deprivation; the positive association between increasing levels of deprivation and increasing intentional call out rates may be more causal than the Dry January participation rates.
- Similarly to ED data, the association for males and females between the ages of 18 and 45 years between intentional injuries and Dry January participation rates may also be coincidental since intentional injury rates tend to fall with increasing age group for both males and females.

QUALITATIVE DATA

- There was a mixed response from stakeholders and partners of the Dry January campaign. It was overall perceived to be highly beneficial in terms of reducing alcohol consumption, which has positive impacts in terms of participant health, wellbeing and potentially absenteeism and productivity in work. However, some participants felt that those who participated in Dry January were not necessarily problematic drinkers who needed to address their drinking habits.
- The monitoring of the campaign was perceived to be difficult and data that derived were not necessarily meaningful.
- Some reported that the fundraising element of the campaign was not encouraged as it was felt that the pressure to fundraise may discourage people from taking part.
- Social media was utilised in many of the interviewees' workplaces, and it was reported that social media would play a key role in future campaigns, particularly in light of funding restraints.

INTRODUCTION

Alcohol consumption is associated with a number of health risks and harms and is becoming of increasing concern within public health. More than nine million people in England drink more than the daily limits (Alcohol Concern, 2016) which are 14 units of alcohol per week spread over three days or more (Department of Health, 2016). There is an estimated 1.6 million people in England who have some level of alcohol dependence and 10.8 million adults are consuming alcohol at levels that pose health risks (PHE, 2016). According to Alcohol Concern (2016), alcohol is a causal factor in a number of cancers as well as contributing to high blood pressure, liver disease and mental health problems. The number of people presenting for treatment for alcohol problems in 2014/15 was 150,640; of these, 89,107 were treated for problematic drinking alone (PHE, 2015). In 2014, there were 8,697 alcohol-related deaths registered in the UK, an age-standardised rate of 14.3 deaths per 100,000 population. Of these, 5,687 deaths were among males (65%) and 3,010 among females (35%), with rates of 19.4 deaths per 100,000 males and 9.6 per 100,000 females (ONS, 2015a).

Alcohol consumption increases the risk of suffering intentional and unintentional injuries. There have been links with alcohol consumption and increased public and domestic violence (Faculty of Public Health, 2005), and it is estimated that alcohol plays a part in 1.2 million violent incidents in England and Wales (Budd, 2003), which have devastating consequences for victims, families and communities. During 2012/13 almost half (49%) of victims believed that their offender(s) was/were under the influence of alcohol during the incident (ONS, 2014). Alcohol misuse also greatly increases the risk of deliberate self-harm (DSH) and suicide, and problematic use of alcohol is very common among DSH patients (Haw et al., 2005). In recent years, hospital admissions for DSH have increased in the UK, by as much as 20% per year for some age and gender groups (PHE, 2014). Alcohol use also increases the risk of suffering unintentional injuries; for example, there is substantial evidence that alcohol use greatly increases the risk of suffering a fall and that the consequences of a fall, including death, are worse among those who had been exposed to high levels of alcohol (Mukamal et al., 2004; Hingson and Howland, 1987).

A great burden is placed on Emergency Departments (EDs) for trauma-related injuries, whether intentional or unintentional. Intentional injuries, sustained from assaults and DSH, and unintentional injuries, including those sustained from accidents, falls and road traffic accidents (RTAs), are the leading cause of death among people aged between five and 44 years in the UK (Parekh, Mitis and Sethi, 2015). The risk of suffering intentional and unintentional injuries is not equal among various sociodemographic groups; social inequality, the built environment, the prevalence of alcohol and drug abuse, and the absence of community support services can increase the risk of incidents occurring and the seriousness of resulting injuries (Cohen et al., 2003); age and gender are also key risk factors in the prevalence of injuries. EDs are at the heart of emergency care systems and can play a key role reducing injuries through various means, including accurate and comprehensive data sharing. While injury attendances to EDs place a burden on health services and social resources, EDs can play a leading role in guiding and informing targeted prevention strategies.

As well as the harms that alcohol can cause to individuals, there is also increasing interest in the wider costs to society. Salonsalmi et al. (2015) argue that alcohol has been associated with issues around performance as well as absences in the work place. Their research with employees of the City of Helsinki, Finland, found that there was an increase in self-certified absences in heavier drinkers. Salonsalmi et al. stated that: “Changes in drinking habits are important contributors to employee health, which provides evidence for prevention of adverse consequences of alcohol drinking. Preventing adverse drinking habits among employees is likely to support health and work ability and help reduce sickness absence” (Salonsalmi et al., 2015; 371).

A national research study of workers in the US suggested that in 2013/14 9% reported having experienced working with a hangover within the past year with 2% reporting having worked with a hangover at least once a month (Frone, 2013). However, Frone and Verster (2013) reported that research into the effects of working with a hangover have not been consistent and therefore further research needs to be carried out in order to fully assess the impact that hangovers from alcohol can have in workplaces. In turn, this would help to estimate the costs associated with alcohol use, abuse and dependence to employers as well as wider societal costs (Frone and Verster, 2013).

There are numerous health campaigns in the UK that are targeted at reducing alcohol consumption and raising awareness of the health risks associated with alcohol. Health campaigns implemented through the mass media have the potential to be effective in communicating public health messages and potentially influencing behaviours (Anker et al., 2016). Hendrinks et al. (2014) argue that health campaigns have varying levels of success, and that to run a successful campaign, interpersonal communication is also important. Hendricks et al. (2012) investigated the influence that exposure to alcohol-related health campaigns can have on binge drinking. They investigated a range of anti-alcohol messages and how these affected subsequent conversations about alcohol consumption. They found that those who viewed a more negative media message about alcohol were subsequently increasingly negative in conversations about alcohol compared to those who were exposed to a less negative message. This suggests that campaigns have the potential to influence opinions about alcohol consumption and that this is more effective when dialogues around the subject of the campaign take place. Social media is being increasingly used in the promotion of health campaigns as it provides a crucial platform to engage and communicate public health information to the general public, including public health interventions such as health campaigns (Kass-Hout and Alhinnawi, 2013).

Dry January is an annual health campaign run by Alcohol Concern. It challenges people to abstain from consuming alcohol for the month of January; participants are encouraged to re-evaluate their alcohol consumption as well as fundraise and gain sponsorship to help raise money for Alcohol Concern. Benefits of taking part in Dry January included better sleep, losing weight, clearer skin and higher energy levels, in addition to saving money (Dry January, 2016). Those taking part in Dry January are encouraged to sign up via the website and raise sponsorship money for Alcohol Concern. The website includes health-related material as well as advice on abstaining from drinking in social situations that would usually involve alcohol consumption. The Dry January campaign also has a strong presence on social media, which enables those participating to engage with the campaign itself as well as others who are taking part in the challenge.

Additional benefits of the Dry January campaign have also been cited in research. Independent research from the University of Sussex suggested that six months following participation in the campaign 72% of participants had sustained reduced levels of harmful drinking, 23% had moved from 'harmful' levels of alcohol consumption to 'low risk', 4% had remained abstinent and in general participants reported feeling more confident abstaining in social situations that would normally involve alcohol consumption (Institute of Alcohol Studies, 2015). Furthermore, Ballard (2016) points to how General Practitioners should promote participation to the vast majority of their patients due to alcohol potentially interacting with medication, affecting mental health, disturbing sleep and thus making it more difficult to recover from common winter illness such as flu and increasing weight gain and blood pressure. However, there has been some criticism of the campaign suggesting that the message may be misinterpreted by the general public who may believe that brief periods of abstinence could prevent the long term health risks associated with consuming alcohol (Cabezas and Bataller, 2016).

EVALUATING THE IMPACT OF DRY JANUARY

OVERVIEW

The North West Coast (NWC) Academic Health Science Network (AHSN) has identified harms caused by alcohol as a specific area of work in the region. In particular the AHSN is keen to support innovative initiatives where they can have a direct effect on the reduction of alcohol-related attendances and admissions in Emergency Departments (EDs) and Urgent Care Centres (UCCs). Alcohol use has direct impacts on health care resources in EDs, but also impacts upon associative services, such as the ambulance service and the Police. Risky and harmful alcohol can also affect the wellbeing of individuals in addition to increasing the risk of sexually transmitted infections (STIs), domestic violence and harms to children.

The NWC AHSN wishes to support the Dry January campaign 2016, spearheaded by Alcohol Concern, which encourages abstinence from alcohol for a full month in January. By amplifying the campaign in the NWC area, it is hoped that the AHSN can contribute to a culture change in the region and reduce alcohol-related harms, including the consumption of National Health Service (NHS) resources.

Campaign success will be judged in terms of:

- A reduction of alcohol-related attendances to EDs and UCCs, in addition to violence due to alcohol;
- Pledges of support in each Local Authority (LA) area;
- Media reach of the campaign and media activity through Twitter, Instagram and Facebook;
- Employers signing up to encourage employees to have a Dry January; and,
- Improvements in staff productivity and reduction of absenteeism as gauged by employer perceptions.

EVALUATION

The Centre for Public Health (CPH) at Liverpool John Moores University has been invited to conduct an evaluation which will help to gauge the success of the campaign using mixed methodologies. The proposed evaluation will be composed of: A comparison and analysis of Dry January participation data (shared by HITCH on behalf of Alcohol Concern), Trauma and Injury Intelligence Group (TIIG) data and North West Ambulance Service (NWAS) data; and, semi-structured interviews with key stakeholders within companies who participated in the Dry January campaign. This research was granted ethical approval by the University Research Ethics Committee (16/EHC/005).

QUANTITATIVE COMPONENT

The quantitative component of the evaluation will utilise Dry January participation data, TIIG ED data and NWAS call out data.

Dry January participation data (age, sex, LA of residence and Alcohol AUDIT) will be used to present participation numbers and rates for each LA within the NWC region (Merseyside, Cheshire [except Cheshire East], Lancashire and Cumbria). Participation data will also be considered by age and sex groups and will report alcohol AUDIT (WHO, 1993) data, with averages for age, sex and LA residence groups.

TIIG data including:

- All injury attendance data to 16 EDs (not including Warrington Hospital ED[1]) in the NWC area, between December 2015 and March 2016;
- Unintentional injuries (including falls, road traffic accidents, sports injuries and other accidents) and intentional injuries (including assaults and deliberate self-harm);
- Demographic, geographic (patient LA of residence) and attendance-related information, such as referral, arrival and disposal method from the ED;
- Incident date and location for unintentional and intentional injuries; and,
- Data relating to whether alcohol had been consumed prior to the assault (some EDs provide alcohol data for all injury groups) for approximately half EDs in the NWC footprint.

NWAS data including:

- All injury NWAS call out data for residents of the NWC area; injury groups are categorised differently from TIIG data but are comparable;
- Demographic information; and,
- LA of call out location.

TIIG and NWAS data will be used primarily to compare crude rates of ED attendances and NWAS call outs by LA to participation rates in Dry January. This will be carried out for key injury groups, such as assaults and DSH, and for particular demographic groups to determine whether higher rates of participation correlate with decreasing incidents of violence, DSH or unintentional injuries. Trends of alcohol-related attendances will also be identified, overlaid by rates of participation in Dry January. Analysis of referral, arrival and disposal method will also be considered in order to gauge the severity of ED injury attendances. InstantAtlas© mapping software will be utilised to visually display participation, ED injury attendance and NWAS call out rates by LA across the NWC region. TIIG and NWAS data will be analysed between December 2015 and March 2016 to assess ED attendances before, during and after the campaign. To control for natural variation between these months, attendances and call outs will be calculated as daily rates, and five years of historical ED and two years of NWAS data will be analysed to estimate the expected change in daily rates between December and March.

QUALITATIVE COMPONENT

A list of potential participants was provided to the Centre for Public Health by North West Coast. The potential participants were sent an invitation to take part in the research via email. Semi-structured interviews were carried out with 11 participants (six from NHS trusts, four from LAs and one from a local business) who had a leading role in the implementation of the Dry January Campaign within their workplace. There were set questions that allowed for open ended responses. The questions referred to how they ran the campaign, how they monitored the sign ups, participation and completion, what worked and what could be improved, and the impact on staff productivity and health and wellbeing. Participants gave verbal consent to take part in the interviews. The interviews were carried out over the telephone and were audio recorded. All of the interviews were fully transcribed and thematic analysis (Braun and Clarke, 2006) was applied to the transcripts independently by two researchers to identify common themes.

[1] Data flow from Warrington Hospital Emergency Department was interrupted at the time of this evaluation and all ED data for residents of Warrington LA have been omitted from these analyses.

ANALYSIS OF DRY JANUARY PARTICIPATION DATA

OVERVIEW

There were 1,829 participants of Dry January in the NWC area. Table 1 displays participation numbers, LA population (mid-2014; ONS, 2015b) and crude rates per 100,000 population for each LA. The LAs with the highest rates of participation were Blackburn with Darwen (90 per 100,000 population), Halton (60 per 100,000 population), and Warrington (60 per 100,000 population); the LAs with the lowest rates of participation were Burnley (24 per 100,000 population), Allerdale (26 per 100,000 population), and Pendle (26 per 100,000 population). The overall rate for the NWC area was 45 per 100,000 population.

Table 1. Participation in Dry January 2016, numbers and crude rates per 100,000 population for each LA, NWC area

Local Authority	LA population	Dry January participants	Dry January participation rate
Allerdale	96471	25	26
Barrow-in-Furness	67648	26	38
Blackburn with Darwen	146743	132	90
Blackpool	140501	59	42
Burnley	87291	21	24
Carlisle	108022	48	44
Cheshire West and Chester	332210	134	40
Chorley	111607	47	42
Copeland	69832	26	37
Eden	52630	30	57
Fylde	77042	35	45
Halton	126354	76	60
Hyndburn	80208	44	55
Knowsley	146407	80	55
Lancaster	141277	51	36
Liverpool	473073	177	37
Pendle	89840	23	26
Preston	140452	50	36
Ribble Valley	58091	33	57
Rossendale	69168	24	35
Sefton	273531	137	50
South Lakeland	103271	38	37
South Ribble	109077	43	39
St. Helens	177188	80	45
Warrington	206428	124	60
West Lancashire	111940	64	57
Wirral	320914	154	48
Wyre	108742	48	44
Total	**4025958**	**1829**	**45**

Figure 1 shows LAs by increasing participation rates in Dry January by average deprivation rank. While the effect is not highly pronounced, average deprivation rank increased (decreasingly deprived) with increasing participation rates, as denoted by a linear trend line.

Figure 1. Participation rate in Dry January 2016 by LA and average deprivation rank, NWC area

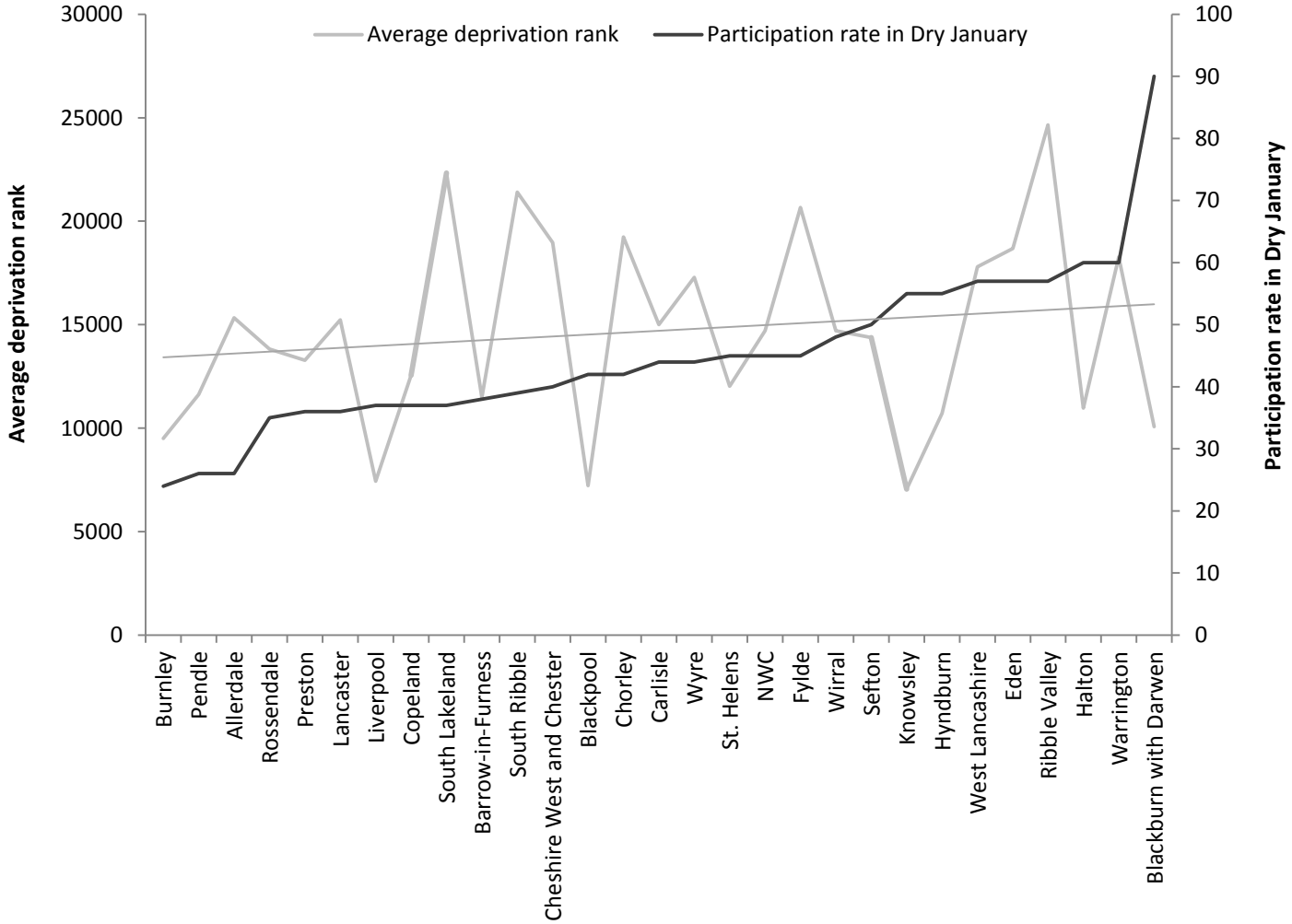


Figure 2 maps participation numbers in Dry January 2016 by LA; as shown, the highest numbers of participation were found in Blackburn with Darwen, Cheshire West and Chester, Liverpool, Sefton and Wirral LAs.

Figure 2. Participation numbers in Dry January 2016 by LA, NWC area

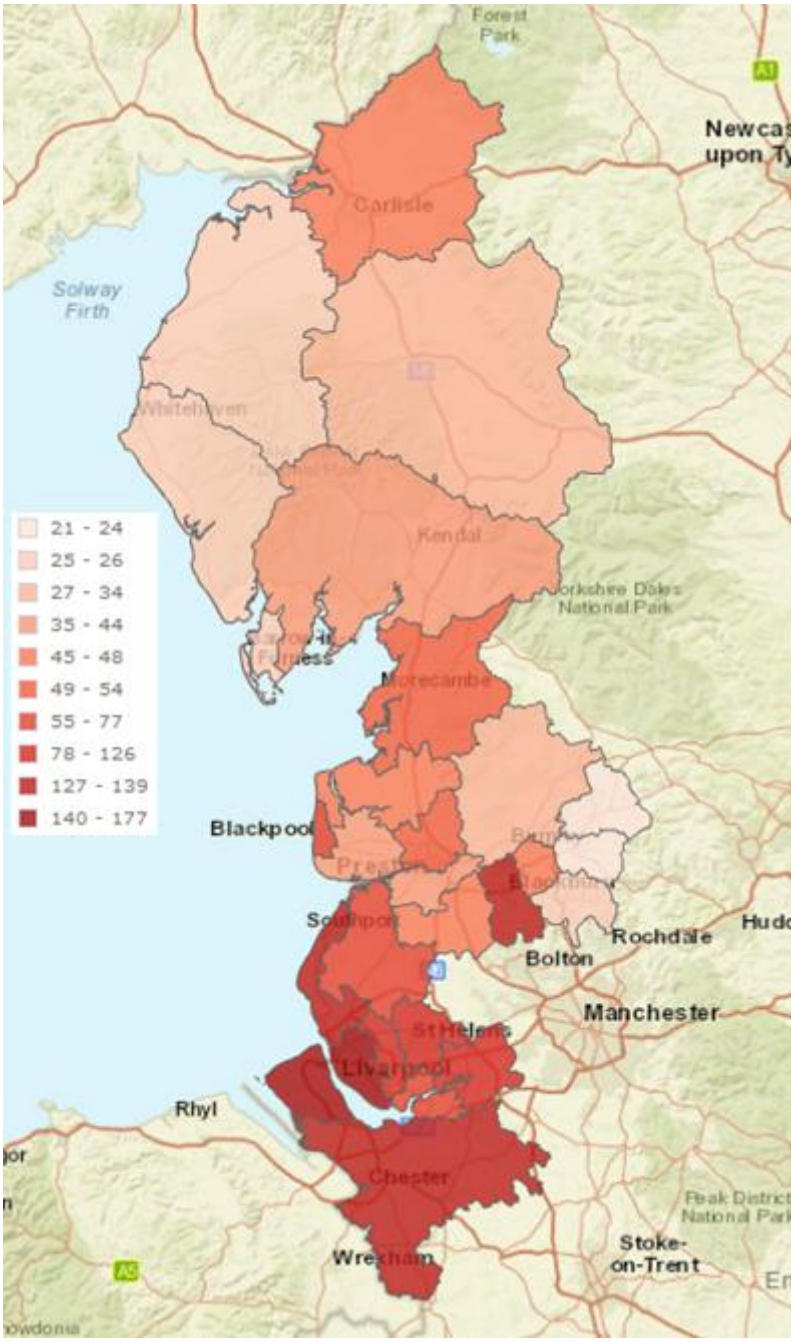


Table 2 displays Dry January participants by age and gender. Substantially more females than males participated in Dry January from the NWC area, 68% (1,250) compared to 28% (514). People aged 46 to 55 years comprised the biggest proportion of participants (547, 30%), of which, 71% were female, followed by participants aged 36 to 45 years (524, 29%), of which 70% were female.

Table 2. Participation in Dry January 2016 by age and gender,[2] NWC area[3]

Age group	Male	Female	Unknown/Transgender /Undisclosed	Total	Percent
0-17	***	<10	0	**8**	**0%**
18-25	44	120	6	**170**	**9%**
26-35	89	212	9	**310**	**17%**
36-45	145	367	12	**524**	**29%**
46-55	149	389	9	**547**	**30%**
56-65	52	128	6	**186**	**10%**
Over 65	27	26	0	**53**	**3%**
Unknown	<10	***	23	**31**	**2%**
Total	**514**	**1250**	**65**	**1829**	**100%**
Percent	**28%**	**68%**	**4%**	**100%**	-

SURVEY DATA

Of the 1,829 participants for Dry January in the NWC area, 720 took part in the pre-Dry January survey, and 476 took part in the follow-up post-Dry January survey.[4] Table 3 displays pre-Dry January survey participants by age and gender. Substantially more females than males participated in the pre-Dry January survey from the NWC area, 73% (521) compared to 27% (194). People aged 36 to 45 and 46 to 55 years comprised the biggest proportions of survey participants (222; 31% each).

Table 3. Participation in pre-Dry January survey 2016 by age and gender,[5] NWC area[3]

Age group	Male	Female	Total	Percent
18-25	6	38	**44**	**6%**
26-35	27	76	**103**	**14%**
36-45	56	166	**222**	**31%**
46-55	59	163	**222**	**31%**
56-65	30	67	**97**	**14%**
Over 65	16	11	**27**	**4%**
Total	**194**	**521**	**715**	**100%**
Percent	**27%**	**73%**	**100%**	**-**

[2] Less than five participants identified themselves as transgender, and less than five participants did not wish to disclose their gender; to protect their identities, these records have been included with unknown records.
[3] Please note that for all tables, numbers less than five have been suppressed (***) in line with participant confidentiality. If there is only one number less than five in a category, then two numbers have been suppressed to prevent back calculations from totals.
[4] Comprehensive findings from these surveys are available from Alcohol Concern.
[5] Five participants were under 18/identified themselves as transgender/did not want to disclose their gender; these have been omitted from the table.

As part of the pre-Dry January survey, participants were asked to complete the alcohol AUDIT (WHO, 1993). For all participants (648) the range of alcohol AUDIT scores was 0-36, and the mean score was 13, which indicates an increasing risk of drinking. Of all participants who completed the AUDIT (648), 20%[6] (128) were found to be at lower risk, 46% (299) were at increasing risk, 16% (101) were at higher risk and 19% (120) were found to be drinking at levels of possible dependence. Table 4 displays the range, average score and classification of the alcohol AUDIT by age and gender group (644 participants who completed the alcohol AUDIT, had age and gender groups recorded). On average, males were found to drink more than females for all age groups; females were found to drink less with increasing age group, and, males aged 18 to 25 and 36 to 45 years were found to drink more than any other age group.

Table 4. Alcohol AUDIT ranges, scores and classifications by age and gender groups, NWC area

	Male			Female		
Age group	**Range**	**Average score**	**Classification**	**Range**	**Average score**	**Classification**
18-25	7-22	17	Higher risk	7-28	15	Increasing risk
26-35	3-34	15	Increasing risk	2-35	14	Increasing risk
36-45	0-36	17	Higher risk	1-36	13	Increasing risk
46-55	2-28	14	Increasing risk	1-30	12	Increasing risk
56-65	3-29	15	Increasing risk	4-30	11	Increasing risk
Over 65	1-24	13	Increasing risk	4-19	10	Increasing risk
Total	**0-36**	**15**	**Increasing risk**	**1-36**	**13**	**Increasing risk**

Table 5 displays alcohol AUDIT findings by LA. The LAs with the highest average AUDIT scores among participants of Dry January were Blackpool (18), Barrow-in-Furness (17), Ribble Valley (16) and Liverpool (16).

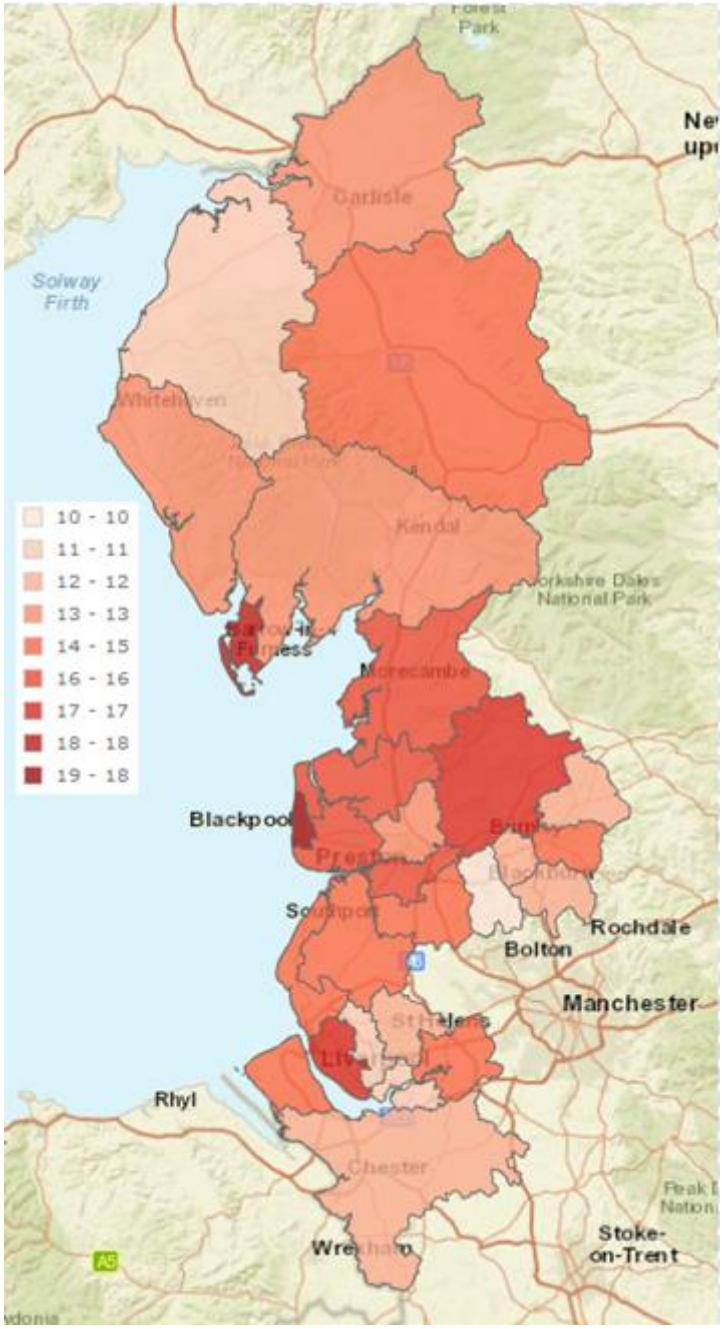
[6] Due to rounding, percentages do not always equal 100%.

Table 5. Alcohol AUDIT ranges and average scores for participants in Dry January 2016 by LA, NWC area

Local Authority	Number of participants	Range	Average score	Classification
Allerdale	11	5-27	11	Increasing risk
Barrow-in-Furness	11	4-28	17	Higher risk
Blackburn with Darwen	41	1-23	10	Increasing risk
Blackpool	17	8-36	18	Higher risk
Burnley	8	6-33	14	Increasing risk
Carlisle	15	4-24	13	Increasing risk
Cheshire West and Chester	49	4-35	12	Increasing risk
Chorley	19	8-25	14	Increasing risk
Copeland	11	8-24	13	Increasing risk
Eden	15	6-22	14	Increasing risk
Fylde	11	7-36	15	Increasing risk
Halton	26	4-24	11	Increasing risk
Hyndburn	18	4-28	12	Increasing risk
Knowsley	26	1-28	11	Increasing risk
Lancaster	26	5-29	15	Increasing risk
Liverpool	55	5-36	16	Higher risk
Pendle	5	6-22	12	Increasing risk
Preston	19	4-24	13	Increasing risk
Ribble Valley	8	5-32	16	Higher risk
Rossendale	7	6-22	12	Increasing risk
Sefton	46	4-28	14	Increasing risk
South Lakeland	18	1-30	13	Increasing risk
South Ribble	20	4-27	15	Increasing risk
St. Helens	30	2-25	12	Increasing risk
Warrington	47	3-28	14	Increasing risk
West Lancashire	21	4-30	14	Increasing risk
Wirral	48	0-34	14	Increasing risk
Wyre	20	4-28	15	Increasing risk
Total	**648**	**0-36**	**13**	**Increasing risk**

Figure 3 maps average AUDIT scores by LA; as shown the highest average scores were found in Barrow-in-Furness, Blackpool and Liverpool LAs.

Figure 3. Average AUDIT scores for participants in Dry January 2016 by LA, NWC area



ANALYSIS OF EMERGENCY DEPARTMENT DATA

Between December 2015 and March 2016 there were 147,494 trauma-related ED attendances to hospitals within the NWC area; of which, 137,423 were by residents of NWC LAs. Since data flow from Warrington Hospital ED was interrupted at the time of this evaluation, 269 residents of Warrington LA who attended out of area EDs have been omitted from these analyses as their inclusion would not have been a true reflection of attendances from Warrington LA. Therefore, the total number of trauma-related ED attendances over this four month period, excluding residents of Warrington LA, was 137,154.

Table 6 displays total ED attendances by injury group and month between December 2015 and March 2016. Of intentional injuries, assaults and DSH each comprised 2% of ED attendances; of unintentional injuries, 78% were classed as 'other' injuries, 9% were falls (falls are only categorised by five out of 16 EDs), 4% were road traffic accidents (RTAs), 4% were sports injuries, and just over 0% were burns and scalds.

Table 6. ED attendances by injury group and month, December 2015 to March 2016, NWC area

Injury group	December 15	January 16	February 16	March 16	Total	Percent
Assault	897	826	719	797	**3239**	**2%**
Burns & scalds	68	47	58	54	**227**	**0%**
DSH	634	702	619	687	**2642**	**2%**
Falls	3034	3160	2610	2911	**11715**	**9%**
Other injuries	26164	26804	25378	28780	**107126**	**78%**
RTA	1501	1624	1499	1470	**6094**	**4%**
Sports injuries	942	1425	1674	2070	**6111**	**4%**
Total	**33240**	**34588**	**32557**	**36769**	**137154**	**100%**
Percent	**24%**	**25%**	**24%**	**27%**	**100%**	-

Figure 4 displays the daily rate of assault ED attendances for each month for 2015/16 and a yearly average for the last five years (2011 to 2015). While attendances for 2016 were substantially lower than the yearly average for the previous five years, the pattern between months was similar. In 2015/16, the decrease in daily attendance rates for assaults between December and January was 7% (the decrease for the five year average was 7%), the decrease between January and February 2016 was 7% (five year average was 3%), the increase between February and March 2016 was 4% (five year average was 3%).

Figure 4. Daily rate of assaults by month for 2015/16 and the average for the previous five years, NWC area

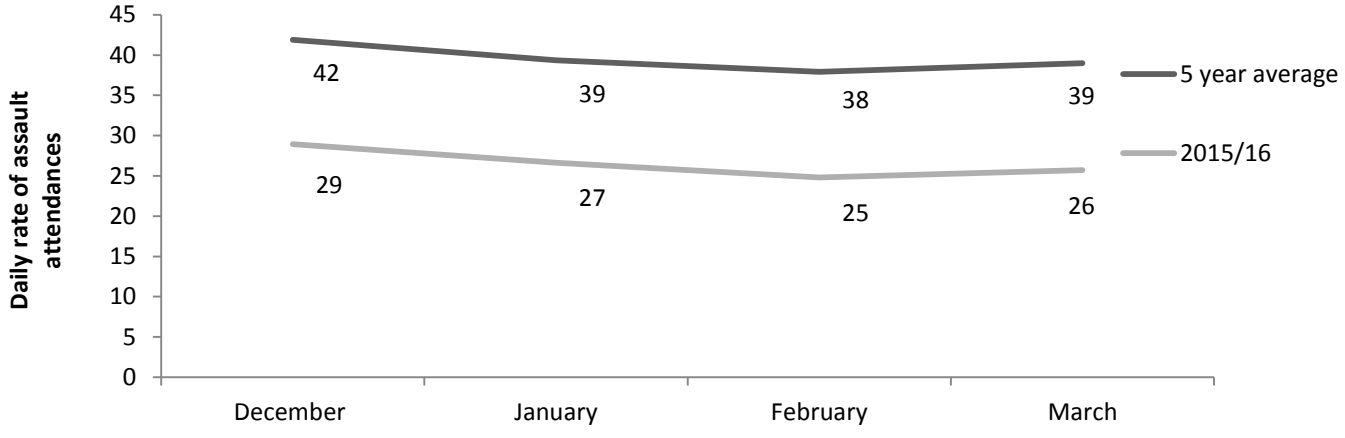


Figure 5 displays the daily rate of DSH ED attendances for each month for 2015/16 and a yearly average for the last five years (2011 to 2015). Attendances for 2016 were a little lower than the yearly average for the previous five years; however, attendances in January 2016 were lower than previous years. In 2015/16, there was no increase in daily attendance rates for DSH between December and January but for the previous five year average attendances increased by 15%. Previous analysis of TIIG data has identified that 54% of DSH attendances are comprised of females aged between 15 and 59 years. Since 59% of participants of Dry January were females aged between 18 and 55 years, and since alcohol and substance use are risk factors for DSH (Cooper et al., 2005), it is possible that the Dry January campaign has led to a reduction in incidents and attendances for DSH among females aged between 18 and 55 years.

Figure 5. Daily rate of DSH by month for 2015/16 and the average for the previous five years, NWC area

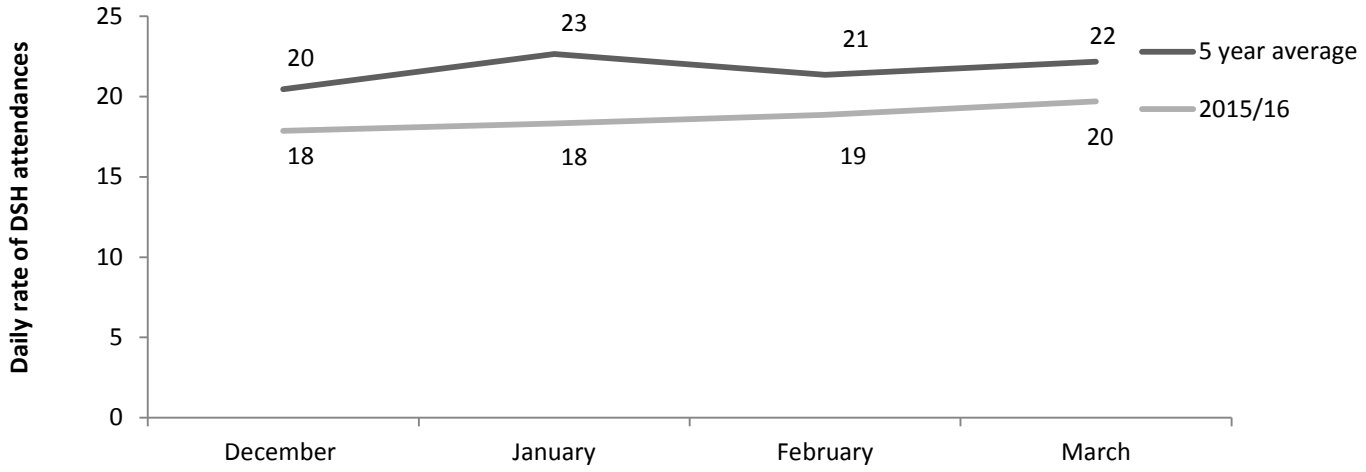
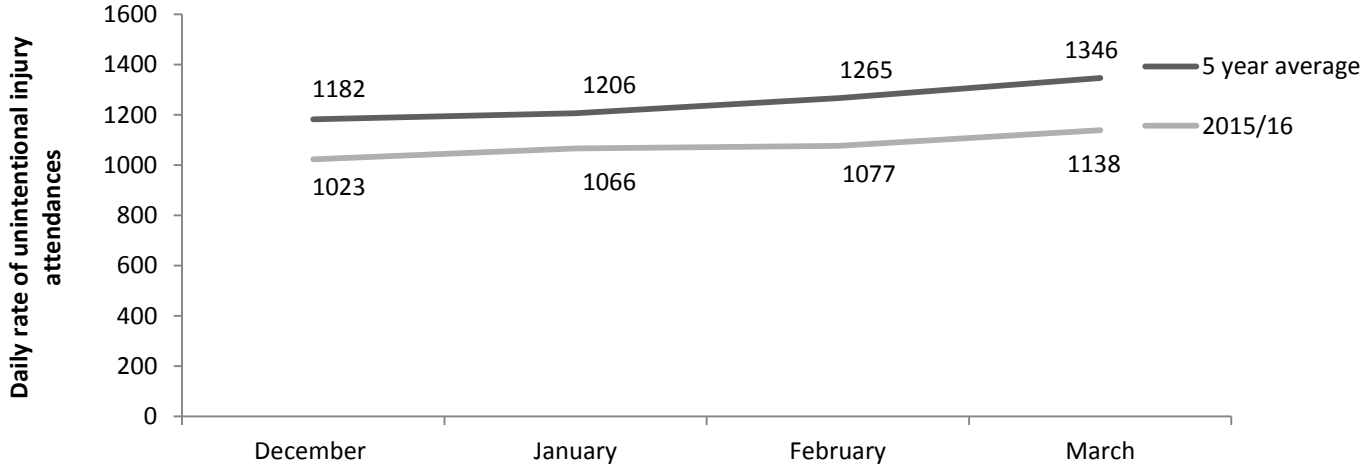


Figure 6 displays the daily rate of combined unintentional injury ED attendances for each month for 2015/16 and a yearly average for the last five years (2010/11 to 2014/15). Attendances for 2016 were lower than the yearly average for the previous five years. In 2015/16, the increase in daily attendance rates for unintentional injuries between December and January was 4% (the increase for the five year average was 2%), the increase between January and February 2016 was 1% (five year average was 5%), the increase between February and March 2016 was 6% (five year average was 6%).

Figure 6. Daily rate of unintentional injuries by month for 2015/16 and the average for the previous five years, NWC area



EMERGENCY DEPARTMENT DATA AND PARTICIPATION RATES

Table 7 displays rates of ED attendances for intentional and unintentional injuries per 100,000 population for January 2016, with participation rates for Dry January 2016. The LAs in the NWC area with the highest rates of intentional injuries were Carlisle (82 per 100,000 population), Knowsley (75 per 100,000 population) and Barrow-in-Furness (74 per 100,000 population). The LAs in the NWC with the highest rates of unintentional injuries were Blackpool (2,589 per 100,000 population), Burnley (1,811 per 100,000 population) and Wyre (1,748 per 100,000).

Table 7. Participation in Dry January 2016, numbers and crude rates per 100,000 population for January 2016 by LA, NWC area

Local Authority	LA population	Dry January Participation rate	Intentional injury ED attendances	Intentional injury ED attendance rate	Unintentional injury ED attendances	Unintentional injury attendance rate
Allerdale	96471	26	48	50	509	528
Barrow-in-Furness	67648	38	50	74	396	585
Blackburn with Darwen	146743	90	27	18	1302	887
Blackpool	140501	42	73	52	3638	2589
Burnley	87291	24	39	45	1581	1811
Carlisle	108022	44	89	82	785	727
Cheshire West and Chester	332210	40	94	28	827	249
Chorley	111607	42	33	30	983	881
Copeland	69832	37	47	67	522	748
Eden	52630	57	15	29	137	260
Fylde	77042	45	16	21	1293	1678
Halton	126354	60	28	22	339	268
Hyndburn	80208	55	27	34	419	522
Knowsley	146407	55	110	75	1977	1350
Lancaster	141277	36	51	36	807	571
Liverpool	473073	37	193	41	4997	1056
Pendle	89840	26	28	31	1213	1350
Preston	140452	36	93	66	1018	725
Ribble Valley	58091	57	***	5	269	463
Rossendale	69168	35	12	17	281	406
Sefton	273531	50	145	53	3586	1311
South Lakeland	103271	37	<12	10	227	220
South Ribble	109077	39	29	27	885	811
St. Helens	177188	45	104	59	870	491
Warrington	206428	60	-	-	-	-
West Lancashire	111940	57	24	21	373	333
Wirral	320914	48	116	36	1925	600
Wyre	108742	44	24	22	1901	1748
Total	**4025958**	**45**	**1528**	**38**	**33060**	**821**

Figure 7 maps the rate of ED attendances for intentional injuries by LA; as shown, the highest rates of intentional injury ED attendances were found in Barrow-in-Furness, Carlisle, Copeland, Knowsley and Preston LAs.

Figure 7. ED attendance rate for intentional injuries by LA for January 2016, NWC area

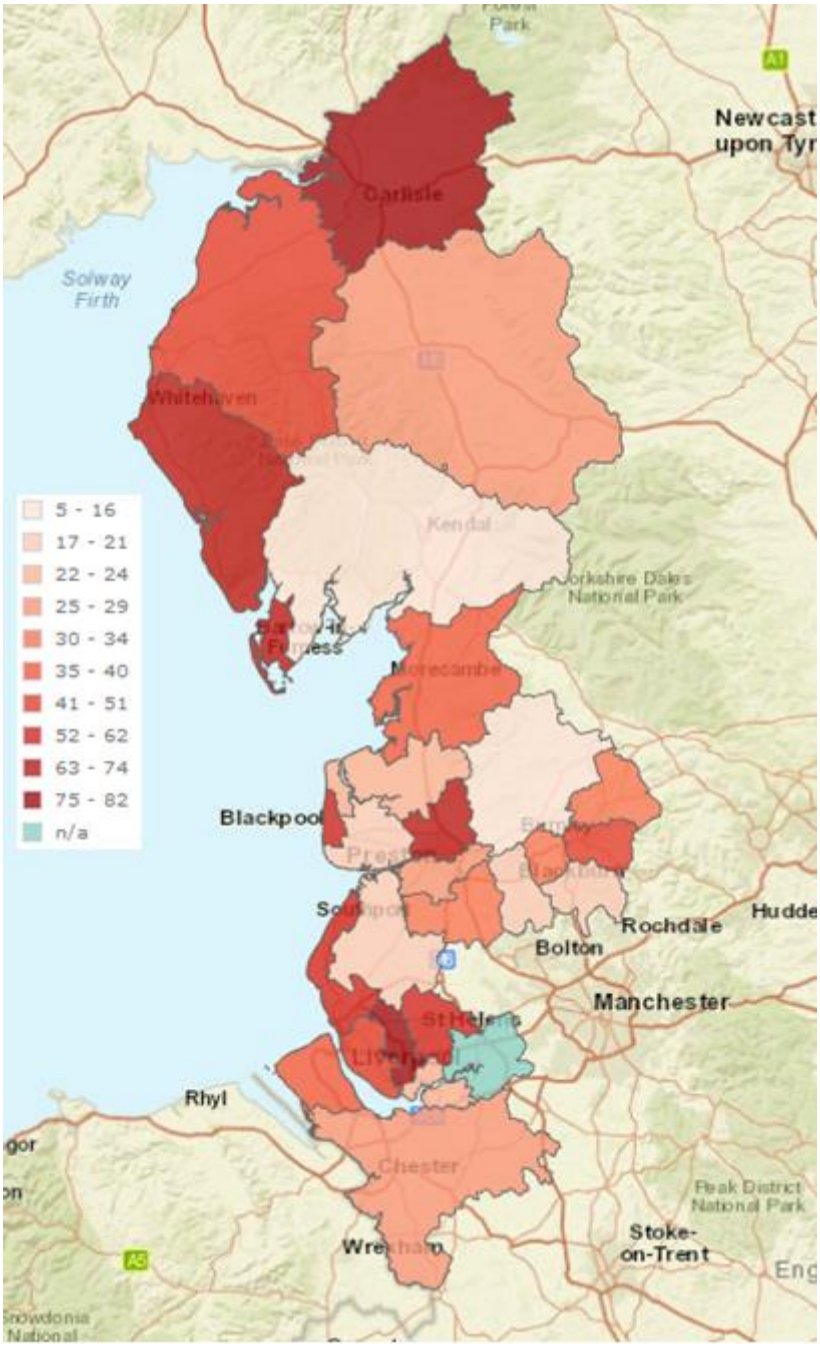


Figure 8 shows the ED attendance rate for intentional injuries and participation rates in Dry January by LA. Despite a high degree of variance, intentional injury attendance rates increased with decreasing Dry January participation rates.

Figure 8. ED attendance rate for intentional injuries and participation rates in Dry January by LA, NWC area

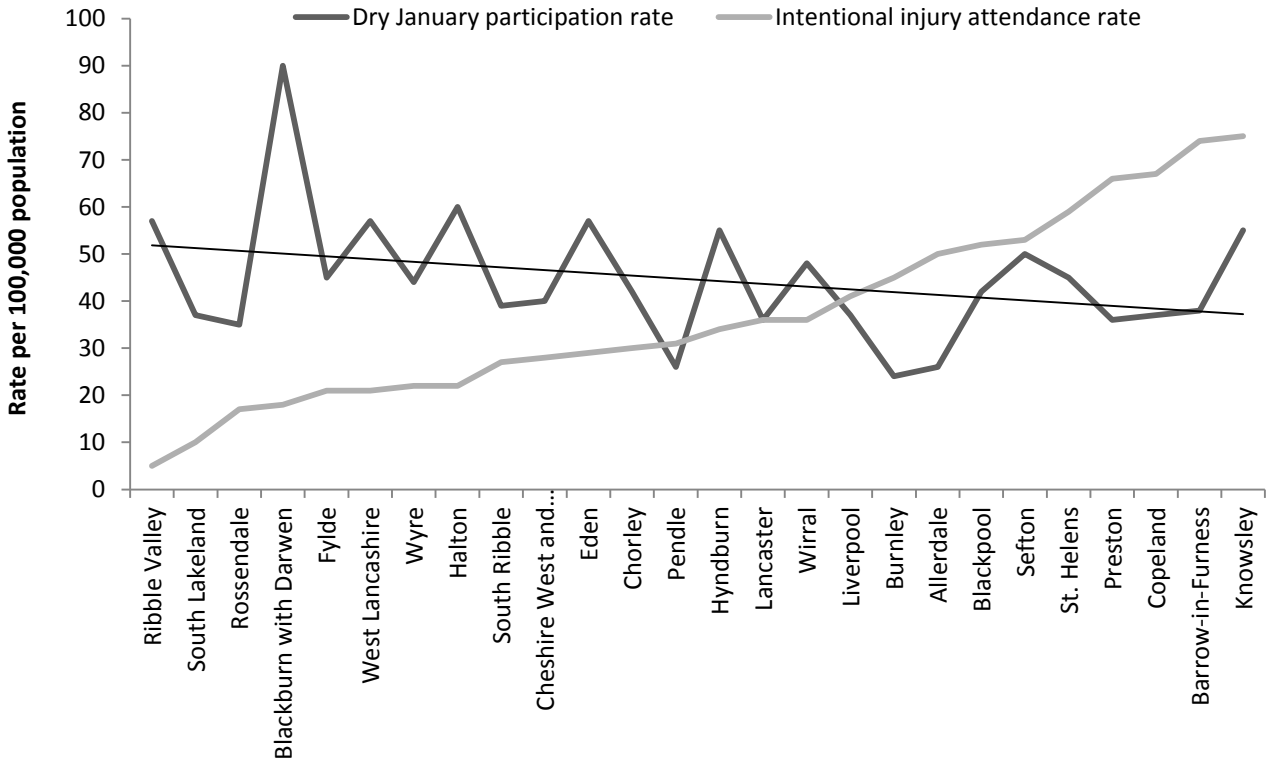


Figure 9 shows the ED attendance rate for unintentional injuries and participation rates in Dry January by LA. Unintentional injury attendance rates increased with decreasing Dry January participation but to a lesser degree than for intentional injuries.

Figure 9. ED attendance rate for unintentional injuries and participation rates in Dry January by LA, NWC area

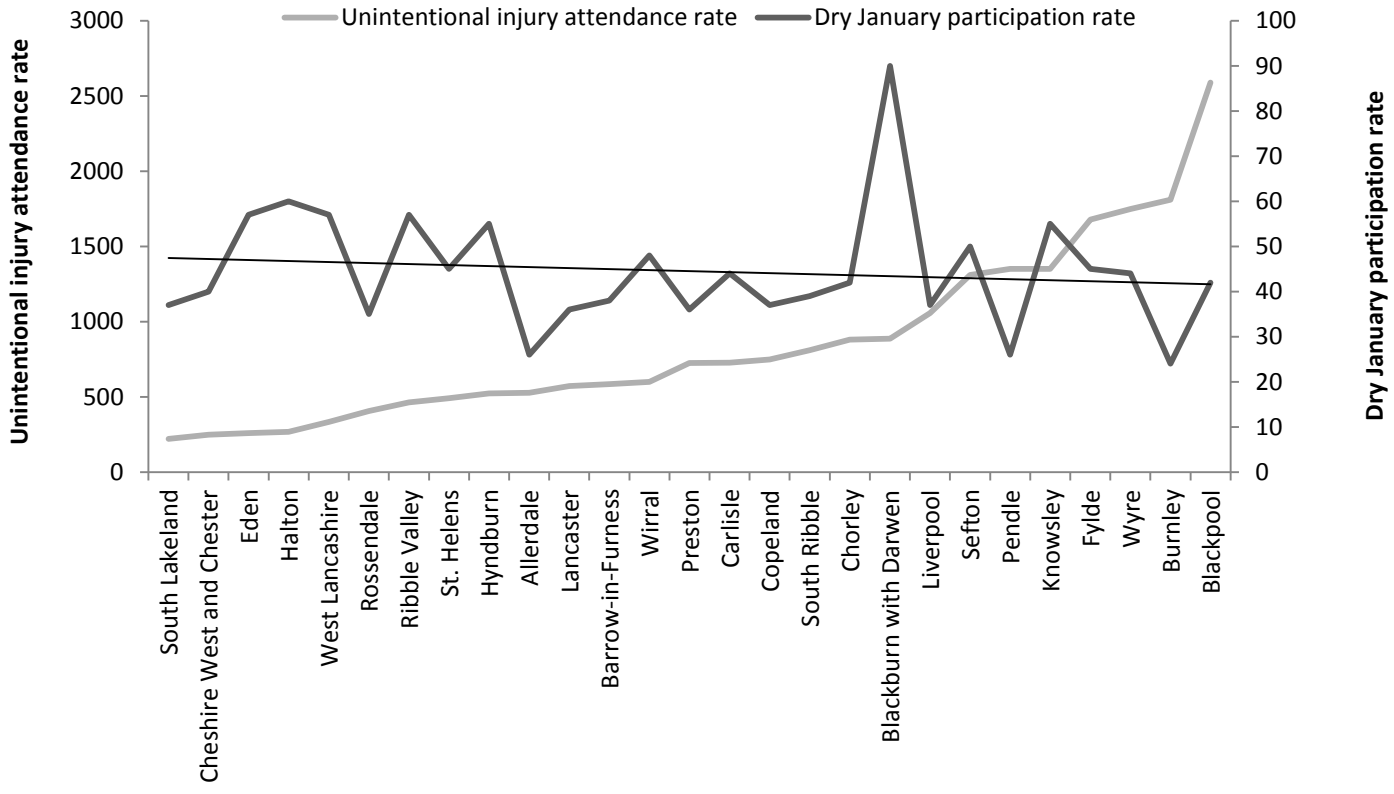


Figure 10 maps the rate of ED attendances for unintentional injuries by LA; as shown, the highest rates of unintentional injury ED attendances were found in Blackpool, Burnley, Fylde and Wyre LAs.

Figure 10. ED attendance rate for unintentional injuries by LA for January 2016, NWC area

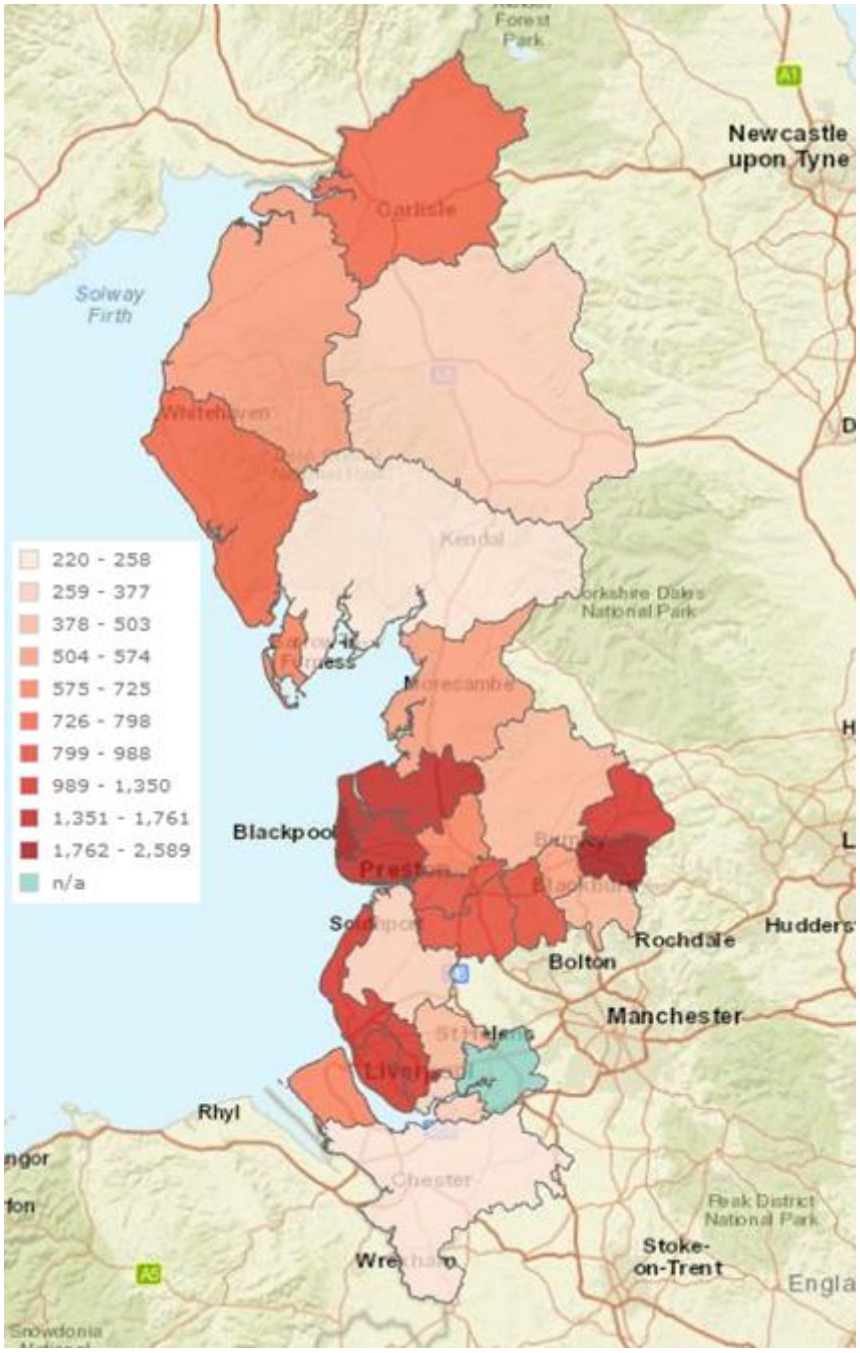


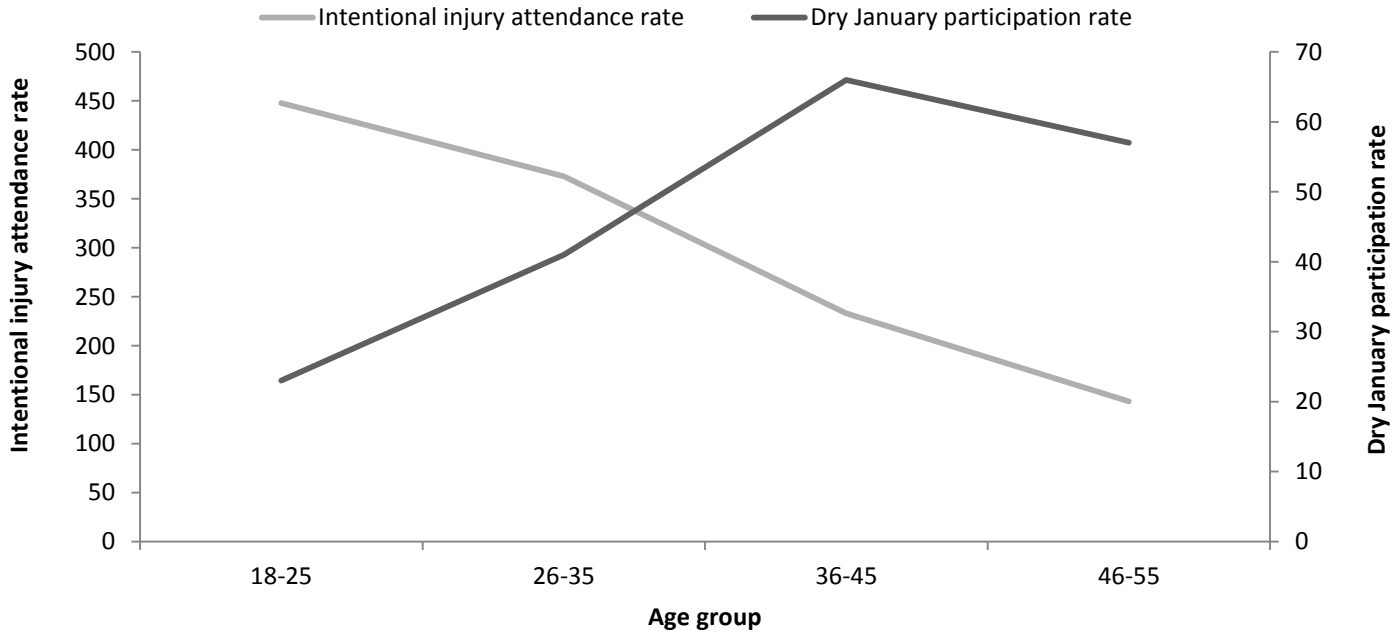
Table 8 displays intentional and unintentional injury attendance rates per 100,000 population for males with Dry January participation rates. Intentional injury attendance rates peaked among males aged 18 to 25 years (448 per 100,000 population), followed by males aged 26 to 35 years (373 per 100,000 population). Unintentional injury attendance rates peaked among males aged over 65 years (3,980 per 100,000 population), followed by males aged 18 to 25 years (3,950 per 100,000 population).

Table 8. Dry January participation rates, intentional and unintentional injury attendance rates per 100,000 population for males by age group, January 2016, NWC area[7]

		Males					
Age group	**NWC Population[8]**	**Dry January participation number**	**Dry January participation rate**	**Intentional injury attendances**	**Intentional injury attendance rate**	**Unintentional injury attendance number**	**Unintentional injury attendance rate**
0-17	383244	***	1	307	80	14496	3782
18-25	192236	44	23	861	448	7593	3950
26-35	218817	89	41	817	373	8381	3830
36-45	221260	145	66	516	233	6627	2995
46-55	260212	149	57	371	143	6855	2634
56-65	222915	52	23	128	57	5402	2423
Over 65	301863	<30	9	58	19	12014	3980
Total	**1800547**	**509**	**28**	**3058**	**170**	**61368**	**3408**

Figure 11 shows intentional injury attendance rates for males aged 18 to 55 years with Dry January participation rates. While intentional injury attendance rates fall with increasing Dry January participation rates, this association is not necessarily causative.

Figure 11. Intentional injury attendance rates per 100,000 population for males aged 18 to 55 years with Dry January participation rates, NWC area



[7] There were 73 records where age and/or gender were not disclosed; these have been omitted from tables 8 and 9 and figures 8 and 9.
[8] Excluding Warrington LA.

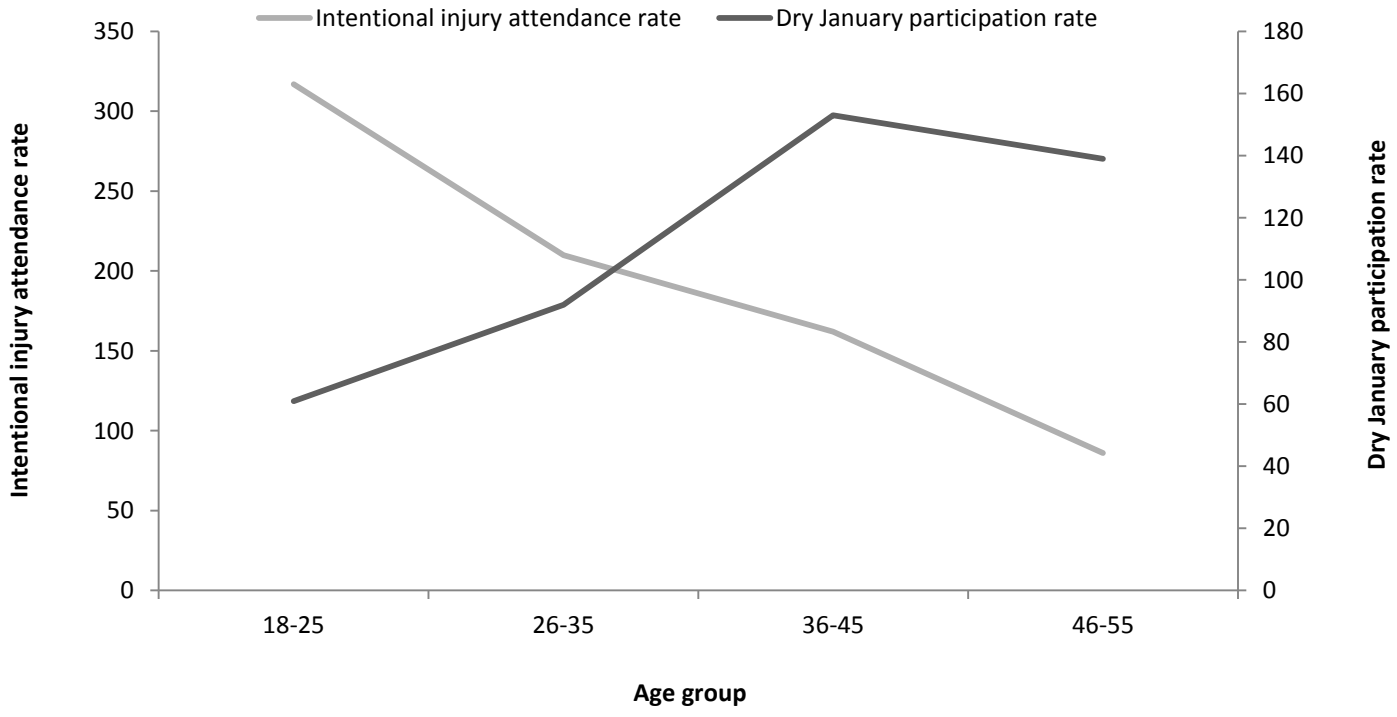
Table 9 displays intentional and unintentional injury attendance rates per 100,000 population for females with Dry January participation rates. Intentional injury attendance rates peaked among females aged 18 to 25 years (317 per 100,000 population), followed by females aged 26 to 35 years (210 per 100,000 population). Unintentional injury attendance rates peaked among females aged over 65 years (4,264 per 100,000 population), followed by females aged 18 to 25 years (3,573 per 100,000 population).

Table 9. Dry January participation rates, intentional and unintentional injury attendance rates per 100,000 population for females by age group, January 2016, NWC area[6]

		Females					
Age group	**NWC Population[6]**	**Dry January participation number**	**Dry January participation rate**	**Intentional injury attendances**	**Intentional injury attendance rate**	**Unintentional injury attendance number**	**Unintentional injury attendance rate**
0-17	380167	5	1	372	98	11763	3094
18-25	198220	120	61	628	317	7082	3573
26-35	231474	212	92	486	210	7133	3082
36-45	239639	367	153	389	162	5957	2486
46-55	280204	389	139	242	86	6822	2435
56-65	237054	128	54	107	45	5451	2299
Over 65	381513	26	7	51	13	16266	4264
Total	**1948271**	**1247**	**64**	**2275**	**117**	**60474**	**3104**

Figure 12 shows intentional injury attendance rates for females aged 18 to 55 years with Dry January participation rates. Similar to males, intentional injury attendance rates fall with increasing Dry January participation rates.

Figure 12. Intentional injury attendance rates per 100,000 population for females aged 18 to 55 years with Dry January participation rates, NWC area



ALCOHOL

Within the NWC area, 10 of 16 EDs record whether alcohol was consumed prior to the attendance for an assault and three EDs record whether alcohol was consumed prior to the attendance for all injury groups. Using previous analysis of TIIG data for EDs that record alcohol data for all injury groups, table 10 displays the percentage of attendances in which attendees had consumed alcohol prior to the attendance.

Table 10. Whether alcohol was consumed prior to attendance, April 2012 to March 2015, selected EDs

Injury group	Consumed alcohol 3 hours previous to incident Percentage of attendances
Assault	49%
DSH	41%
Other injuries	7%
RTA	2%
Sports injuries	0%
Total intentional injuries	**47%**
Total unintentional injuries	**7%**
Total all injuries	**8%**

Table 11 displays whether alcohol was consumed prior to assault attendances and all injury attendances between December 2015 to March 2016. Owing to data quality issues for this data item, one ED was omitted from analyses; Warrington ED was also omitted; therefore, eight EDs comprise the analyses for assaults. Three EDs collect all injury alcohol data but one Trust, which accounts for two EDs does not collect this data comprehensively, and has been omitted from analyses; therefore all injury alcohol data is taken from one ED. While the number of assaults was lower in January, compared to December and March, which also have 31 days, the percentage of attendances in which alcohol, had been consumed was higher (44% compared to 35% and 36% respectively). For other injury groups, the percentage of attendances in which alcohol had been consumed was generally lower than the average for the three years previous, but data are taken from one ED and findings should be interpreted with caution.

Table 11. Whether alcohol was consumed prior to assault attendances and all injury attendances, December 2015 to March 2016, NWC area

Injury group		December 15	January 16	February 16	March 16	3 year average
Assaults (8 EDs)	**N**	401	374	327	375	
	Alcohol consumed	35%	44%	41%	36%	49%
DSH (1 ED)	**N**	49	41	53	60	
	Alcohol consumed	37%	34%	32%	22%	41%
Other injuries (1 ED)	**N**	1782	1667	1571	1860	
	Alcohol consumed	7%	6%	6%	4%	7%
RTA (1 ED)	**N**	145	150	146	135	
	Alcohol consumed	5%	2%	5%	3%	2%
Sports injuries (1 ED)	**N**	99	159	167	189	
	Alcohol consumed	0%	0%	0%	0%	0%

ATTENDANCE DETAILS

Table 12 displays the number and percentage of intentional and unintentional injury attendances by the day of the week for the period December 2015 to March 2016. Attendances on Fridays, Saturdays and Sundays, especially for intentional injuries, can be indicative of alcohol use and/or injuries incurred while engaging with night-time economies. In January, weekend attendances (Friday to Sunday) accounted for 57% of intentional injury attendances compared to 46% of unintentional injury attendances. The percentages of intentional injury attendances which occurred on Fridays and Sundays were higher in January compared to all other months; the percentages of unintentional injury attendances which occurred on Fridays, Saturdays and Sundays were also higher in January compared to all other months.

Table 12. Number and percentage of intentional and unintentional injury attendances by the day of the week, December 2015 to March 2016, NWC area

Day		December 15		January 16		February 16		March 16	
		Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional
Monday	**N**	188	4726	193	4877	226	6032	213	5470
	%	12%	15%	13%	15%	17%	19%	14%	18%
Tuesday	**N**	231	5418	179	4279	169	4417	212	6277
	%	15%	17%	12%	13%	13%	14%	14%	20%
Wednesday	**N**	199	5115	140	4296	152	4151	194	5525
	%	13%	16%	9%	13%	11%	13%	13%	18%
Thursday	**N**	204	4856	145	4291	166	4297	199	5326
	%	13%	15%	9%	13%	12%	14%	13%	17%
Friday	**N**	156	3753	308	5034	160	4128	189	4107
	%	10%	12%	20%	15%	12%	13%	13%	13%
Saturday	**N**	258	3717	243	5108	218	4159	226	4237
	%	17%	12%	16%	15%	16%	13%	15%	14%
Sunday	**N**	295	4124	320	5175	247	4035	251	4343
	%	19%	13%	21%	16%	18%	13%	17%	14%
Total	**N**	**1531**	**31709**	**1528**	**33060**	**1338**	**31219**	**1484**	**35285**
	%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 13 displays the number and percentage of intentional and unintentional injury attendances by the time group of attendance for the period December 2015 to March 2016. In January, the largest proportion of intentional injury attendances presented to EDs between 02:00 and 03:59 (13%); while the largest proportion of unintentional injury attendances presented to EDs between 10:00 and 11:59 (15%). There were no substantial differences in the time group of ED attendance for either intentional or unintentional injuries when comparing January to other months.

Table 13. Number and percentage of intentional and unintentional injury attendances by the time of day, December 2015 to March 2016, NWC area[9]

Time group		December 15		January 16		February 16		March 16	
		Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional
00-1:59	**N**	165	1512	164	1384	146	1269	140	1318
	%	11%	5%	11%	4%	11%	4%	9%	4%
2-3:59	**N**	181	1684	192	1652	148	1351	143	1518
	%	12%	5%	13%	5%	11%	4%	10%	4%
4-5:59	**N**	177	1390	150	1357	100	1314	109	1430
	%	12%	4%	10%	4%	7%	4%	7%	4%
6-7:59	**N**	91	1482	86	1529	67	1457	65	1671
	%	6%	5%	6%	5%	5%	5%	4%	5%
8-9:59	**N**	105	3187	94	3620	79	3620	110	4119
	%	7%	10%	6%	11%	6%	12%	7%	12%
10-11:59	**N**	143	4590	132	4884	130	4679	131	5218
	%	9%	14%	9%	15%	10%	15%	9%	15%
12-13:59	**N**	122	4078	115	4452	119	3836	135	4498
	%	8%	13%	8%	13%	9%	12%	9%	13%
14-15:59	**N**	84	3203	113	3470	98	3233	97	3643
	%	5%	10%	7%	10%	7%	10%	7%	10%
16-17:59	**N**	110	3299	115	3521	98	3515	122	3917
	%	7%	10%	8%	11%	7%	11%	8%	11%
18-19:59	**N**	97	3265	122	3279	118	3290	134	3764
	%	6%	10%	8%	10%	9%	11%	9%	11%
20-21:59	**N**	115	2408	117	2533	114	2330	143	2711
	%	8%	8%	8%	8%	9%	7%	10%	8%
22-23:59	**N**	140	1609	128	1377	121	1324	154	1478
	%	9%	5%	8%	4%	9%	4%	10%	4%
Total	**N**	**1530**	**31707**	**1528**	**33058**	**1338**	**31218**	**1483**	**35285**
	%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Referral source, arrival mode and disposal method can give an indication of the severity of injuries suffered. Table 14 displays the number and percentage of intentional and unintentional injury attendances by referral source for the period December 2015 to March 2016. In January, 32% of intentional injury attendances were referred by the emergency services and 48% self-referred, compared to unintentional injuries where 25% were referred by the emergency services and 53% self-referred. There were no substantial differences between January and other months in terms of referral source.

[9] There were seven records for which a time group was not recorded; these have been omitted from table 13.

Table 14. Number and percentage of intentional and unintentional injury attendances by referral source, December 2015 to March 2016, NWC area[10]

Referral source		December 15		January 16		February 16		March 16	
		Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional
Emergency services	**N**	450	7412	435	7452	366	6654	385	7096
	%	33%	26%	32%	25%	31%	23%	29%	22%
GP	**N**	9	789	18	945	9	940	17	1081
	%	1%	3%	1%	3%	1%	3%	1%	3%
Healthcare provider	**N**	50	2511	45	2391	49	2228	38	2571
	%	4%	9%	3%	8%	4%	8%	3%	8%
Other	**N**	110	1931	118	1853	117	1904	142	2182
	%	8%	7%	9%	6%	10%	7%	11%	7%
Parent/ guardian	**N**	22	1134	17	1341	34	1332	49	1541
	%	2%	4%	1%	4%	3%	5%	4%	5%
Police	**N**	76	91	69	83	60	79	56	81
	%	5%	0%	5%	0%	5%	0%	4%	0%
Self-referral	**N**	666	15076	653	15928	564	15214	620	17505
	%	48%	52%	48%	53%	47%	54%	47%	55%
Total	**N**	**1383**	**28944**	**1355**	**29993**	**1199**	**28351**	**1307**	**32057**
	%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 15 displays the number and percentage of intentional and unintentional injury attendances by arrival mode for the period December 2015 to March 2016. In January, 45% of intentional injury attendances arrived by ambulance and 55% arrived by other means, compared to 28% and 78% respectively for unintentional injuries. There were no substantial differences between January and other months in terms of arrival mode.

Table 15. Number and percentage of intentional and unintentional injury attendances by arrival mode, December 2015 to March 2016, NWC area[11]

Arrival mode		December 15		January 16		February 16		March 16	
		Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional
Ambulance	**N**	739	9362	688	9205	584	8316	626	8839
	%	48%	30%	45%	28%	44%	27%	42%	25%
Other	**N**	791	22338	840	23846	754	22883	858	26433
	%	52%	75%	55%	78%	56%	79%	58%	80%
Total	**N**	**1530**	**31700**	**1528**	**33051**	**1338**	**31199**	**1484**	**35272**
	%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[10] There were 12,565 records for which a referral source was not recorded; these have been omitted from table 14.
[11] There were 52 records for which an arrival mode was not recorded; these have been omitted from table 15.

Table 16 displays the number and percentage of intentional and unintentional injury attendances by disposal method for the period December 2015 to March 2016. In January a slightly higher proportion of intentional injury attendances were admitted to hospital compared to other months (25% compared to 24%, 23% and 24%), similarly a lower proportion were discharged with no follow-up treatment required compared to other months (33% compared to 36%, 36% and 35%), which may indicate a higher severity of injury. A higher proportion also left the ED before treatment in January compared to other months (8% compared to 6%, 6% and 5%).

Table 16. Number and percentage of intentional and unintentional injury attendances by disposal method, December 2015 to March 2016, NWC area[12]

Disposal		December 15		January 16		February 16		March 16	
		Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional	Intentional	Unintentional
Admitted	**N**	364	6745	385	6948	312	6352	356	6591
	%	24%	21%	25%	21%	23%	20%	24%	19%
Discharged	**N**	551	13234	507	13577	478	12949	522	14855
	%	36%	42%	33%	41%	36%	42%	35%	42%
Follow-up	**N**	355	7331	348	7925	292	7421	356	8280
	%	23%	23%	23%	24%	22%	24%	24%	23%
Left before treatment	**N**	98	523	116	554	78	523	80	668
	%	6%	2%	8%	2%	6%	2%	5%	2%
Other	**N**	85	2087	98	2352	110	2334	107	2957
	%	6%	7%	6%	7%	8%	7%	7%	8%
Referred	**N**	78	1739	68	1651	68	1623	63	1937
	%	5%	5%	4%	5%	5%	5%	4%	5%
Total	**N**	**1531**	**31659**	**1522**	**33007**	**1338**	**31202**	**1484**	**35288**
	%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

[12] There were 156 records for which a disposal method was not recorded; these have been omitted from table 16.

ANALYSIS OF NORTH WEST AMBULANCE SERVICE DATA

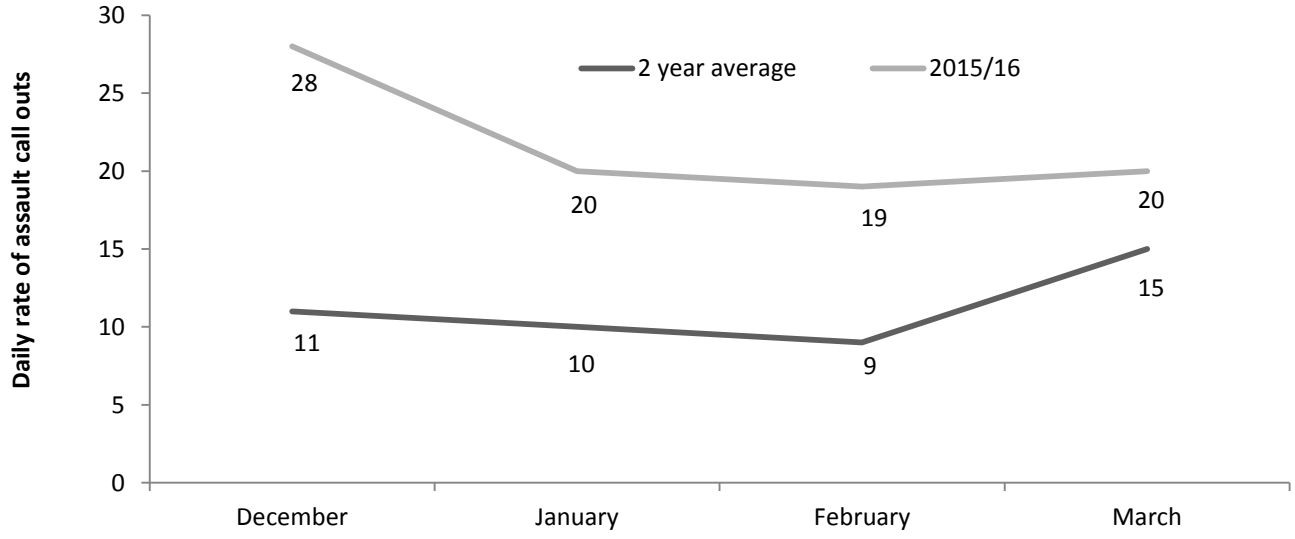
Between December 2015 and March 2016 there were 42,330 trauma-related NWAS call outs within the NWC area; call out geography is provided as the call out location, not the patient address and all geographic analysis relates to call out location. Table 17 displays total call outs by injury group and month between December 2015 and March 2016. Of intentional injuries, assaults (including 'assault/sexual assault' and 'stab/gunshot/penetrating trauma') comprised 6% of call outs, self-harm (including 'psychiatric/suicide attempt' and 'overdose/poisoning [ingestion]') comprised 20% of call outs. Of unintentional injuries, falls comprised 43% of call outs, burns and scalds 1% and RTAs 8%. Other injuries (including 'allergies/envenomations-sting/bite', 'animal bites/attacks', 'choking', 'drowning (near)/diving accident', 'electrocution/lightning', 'eye problems/injuries', 'haemorrhage/lacerations', and 'traumatic injuries) comprised 21% of NWAS call outs.

Table 17. NWAS call outs by injury group and month, December 2015 to March 2016, NWC area

Injury group	December 15	January 16	February 16	March 16	Total	Percent
Assault	867	631	562	620	**2680**	**6%**
Burns & scalds	115	102	100	95	**412**	**1%**
Falls	4860	4694	4256	4392	**18202**	**43%**
Other injuries	2190	2223	2076	2383	**8872**	**21%**
RTA	1030	920	802	792	**3544**	**8%**
Self-harm	2367	2147	2011	2095	**8620**	**20%**
Total	**11429**	**10717**	**9807**	**10377**	**42330**	**100%**
Percent	**27%**	**25%**	**23%**	**25%**	**100%**	-

Figure 13 displays the daily rate of assault call outs for each month for 2015/16 and a yearly average for the previous two years (2014 to 2015). Call outs for 2015/16 were substantially higher than the yearly average for the previous two years;[13] however, the decrease in call out rates between December 2015 and January 2016 was greater than the average for the previous two years (29% compared to 9%); however this may be explained by an unusually high relative rate in December.

Figure 13. Daily rate of assault call outs by month for 2015/16 and the average for the previous two years, NWC area



[13] This may not represent actual change but may also reflect changes in recording and categorisation processes.

Figure 14 displays the daily rate of self-harm call outs for each month for 2015/16 and a yearly average for the previous two years (2014 to 2015). Call outs for self-harm were higher in 2015/16 than the yearly average for the previous two years. The rate between December 2015 and January 2016 fell by 9% compared to previous years where there was no change. The decrease was maintained between January and February and there was a further decrease between February and March 2016 compared to the average for the previous two years which increased between February and March by 8%.

Figure 14. Daily rate of self-harm call outs by month for 2015/16 and the average for the previous two years, NWC area

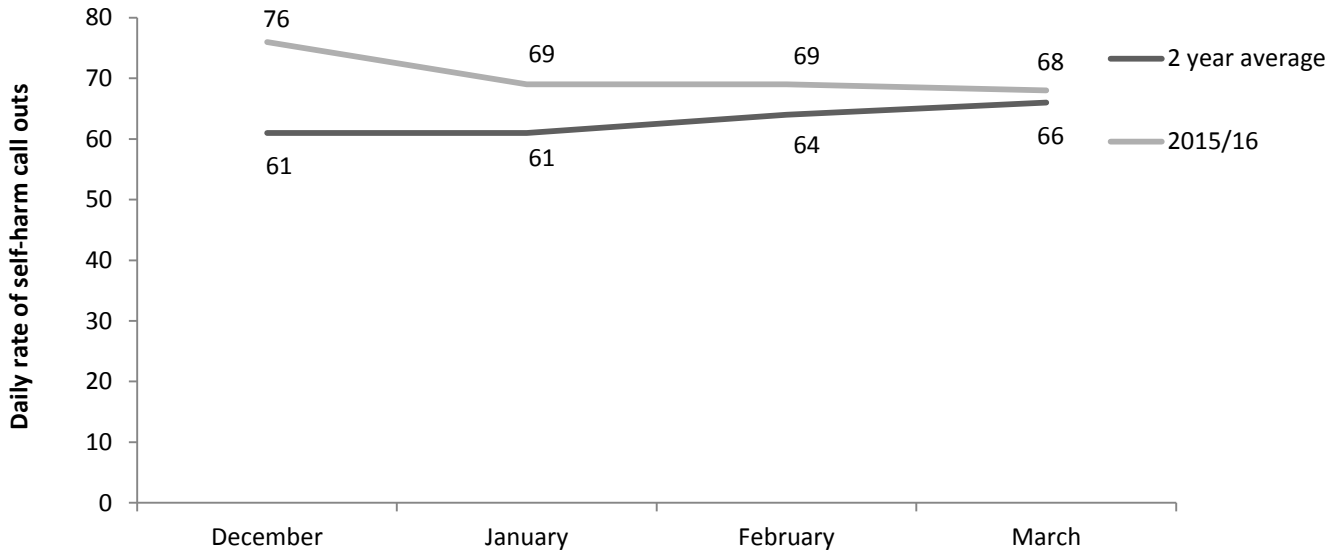


Figure 15 displays the daily rate of unintentional injury call outs for each month for 2015/16 and a yearly average for the previous two years (2014 to 2015). Call out rates for unintentional injuries were lower in 2015/16 compared to the yearly average for the previous two years. The average decrease between December and January for previous years was 6% compared to 3% in 2015/16. Call out rates for unintentional injuries continued to decrease in 2016, unlike previous years where call out rates increased between February and March by 4%, compared to 2016 where call out rates decreased by 1%.

Figure 15. Daily rate of unintentional injury call outs by month for 2015/16 and the average for the previous two years, NWC area

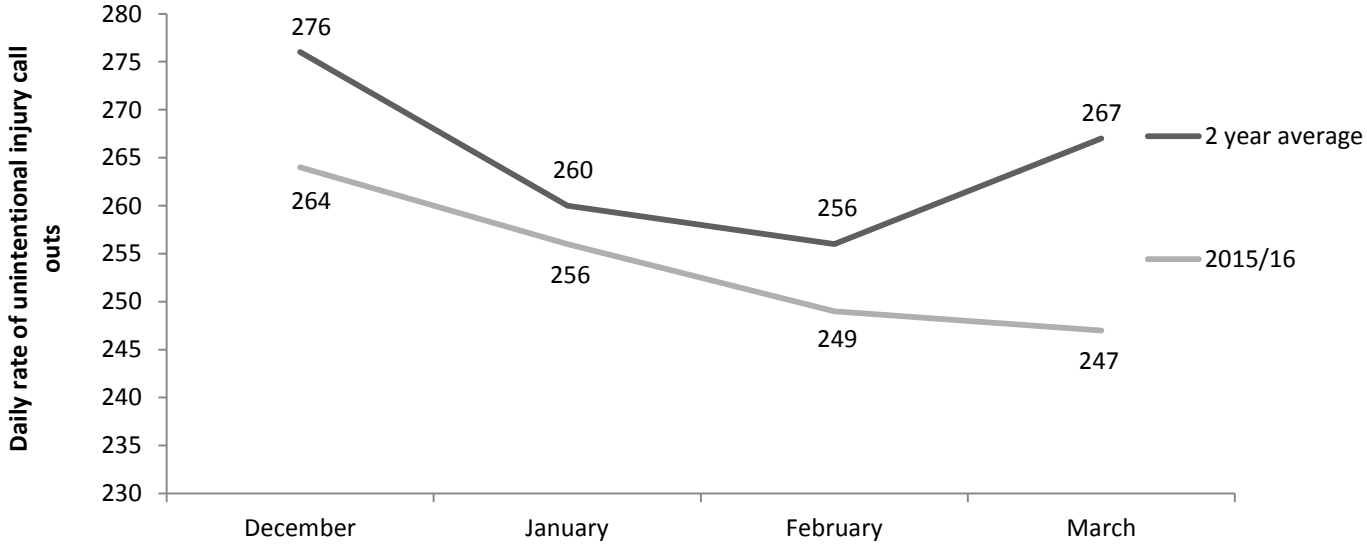


Table 18 displays call out rates for intentional and unintentional injuries per 100,000 population for January 2016, with participation rates for Dry January 2016. The LAs in the NWC area with the highest rates of intentional injury call outs were Blackpool (168 per 100,000 population), Liverpool (101 per 100,000 population) and Barrow-in-Furness (98 per 100,000 population). The LAs in the NWC with the highest rates of unintentional injuries were Blackpool (254 per 100,000 population), South Lakeland (246 per 100,000 population) and Wirral (228 per 100,000).

Table 18. Participation in Dry January 2016, numbers and crude rates per 100,000 population for January 2016 by LA, NWC area

Local Authority	LA population	Dry January Participation rate	Intentional injury call outs	Intentional injury call out rate	Unintentional injury call outs	Unintentional injury call out rate
Allerdale	96471	26	46	48	146	151
Barrow-in-Furness	67648	38	66	98	145	214
Blackburn with Darwen	146743	90	124	85	259	176
Blackpool	140501	42	236	168	357	254
Burnley	87291	24	79	91	150	172
Carlisle	108022	44	84	78	200	185
Cheshire West and Chester	332210	40	172	52	661	199
Chorley	111607	42	59	53	190	170
Copeland	69832	37	43	62	111	159
Eden	52630	57	8	15	84	160
Fylde	77042	45	53	69	160	208
Halton	126354	60	60	47	220	174
Hyndburn	80208	55	51	64	161	201
Knowsley	146407	55	101	69	263	180
Lancaster	141277	36	90	64	300	212
Liverpool	473073	37	476	101	1041	220
Pendle	89840	26	49	55	136	151
Preston	140452	36	120	85	279	199
Ribble Valley	58091	57	17	29	107	184
Rossendale	69168	35	32	46	114	165
Sefton	273531	50	167	61	571	209
South Lakeland	103271	37	53	51	254	246
South Ribble	109077	39	42	39	175	160
St. Helens	177188	45	128	72	347	196
Warrington	206428	60	83	40	394	191
West Lancashire	111940	57	48	43	183	163
Wirral	320914	48	227	71	732	228
Wyre	108742	44	64	59	199	183
Total	**4025958**	**45**	**2778**	**69**	**7939**	**197**

Figure 16 maps the call out rate of intentional injuries by LA; as shown, call out rates for intentional injuries were highest in Blackpool, Liverpool and Barrow-in-Furness LAs.

Figure 16. NWAS call out rate for intentional injuries by LA for January 2016, NWC area

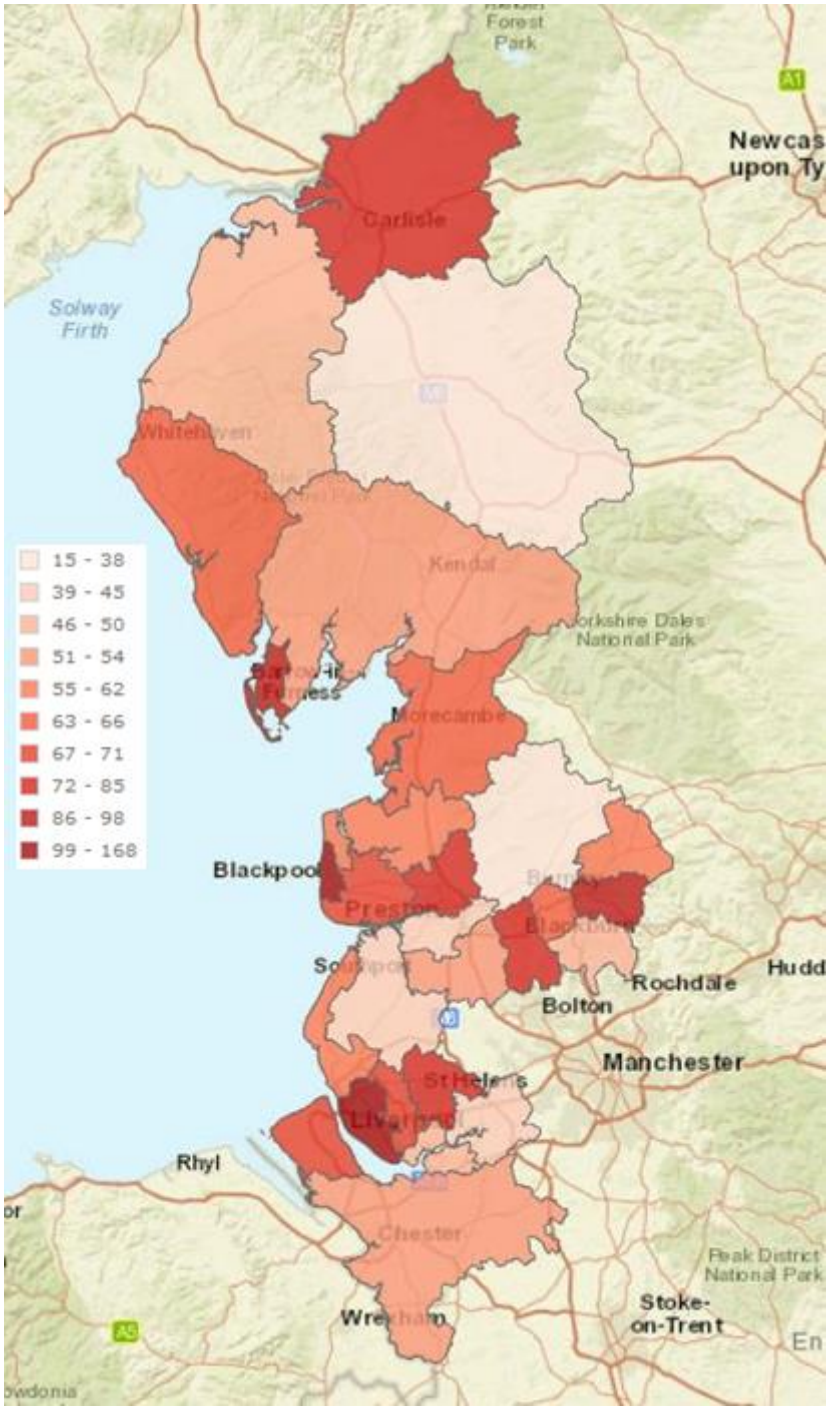


Figure 17 shows the call out rate of intentional injuries and participation rates in Dry January by LA. Despite a high degree of variance, intentional injury call out rates increased with decreasing Dry January participation rates.

Figure 17. Call out rate for intentional injuries and participation rates in Dry January by LA, NWC area

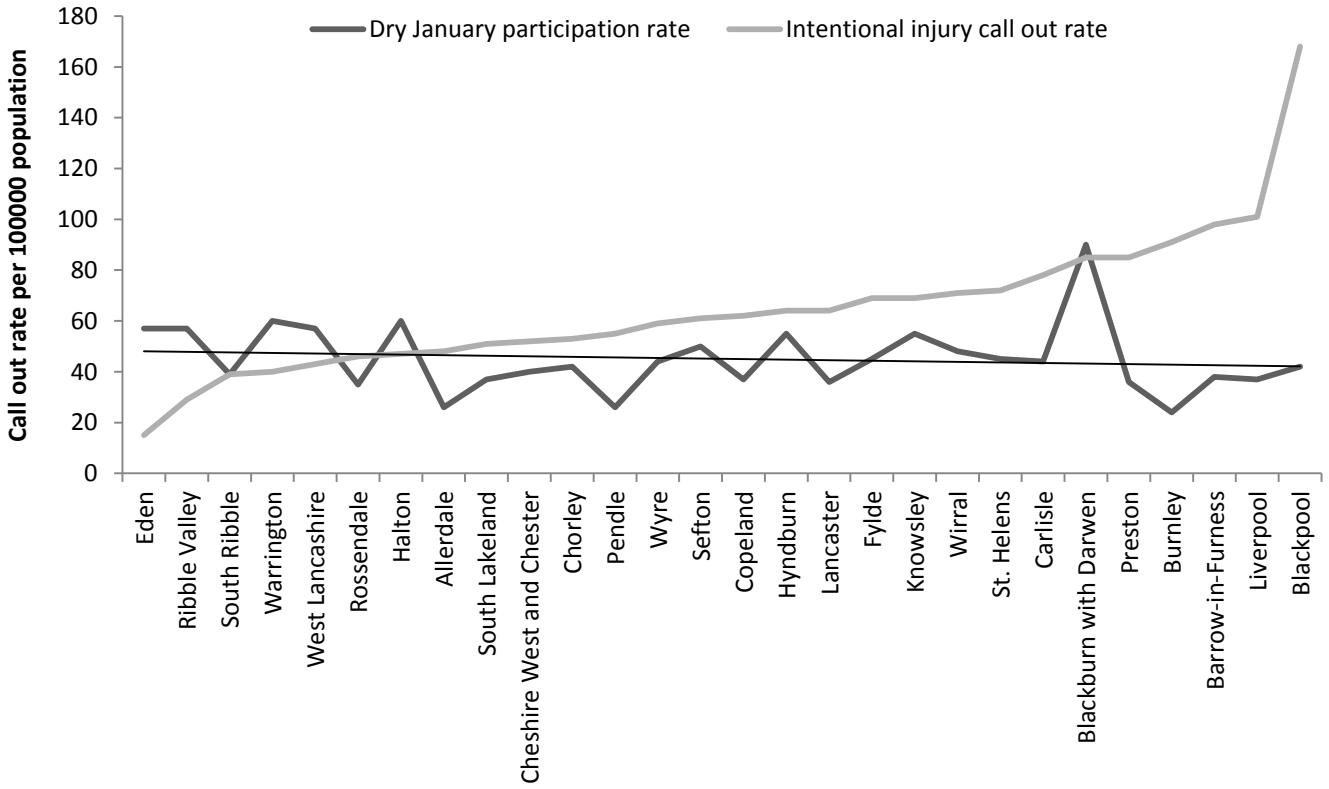


Figure 18 shows the call out rate of unintentional injuries and participation rates in Dry January by LA. Unintentional injury call out rates show no association with Dry January participation rates.

Figure 18. Call out rate for unintentional injuries and participation rates in Dry January by LA, NWC area

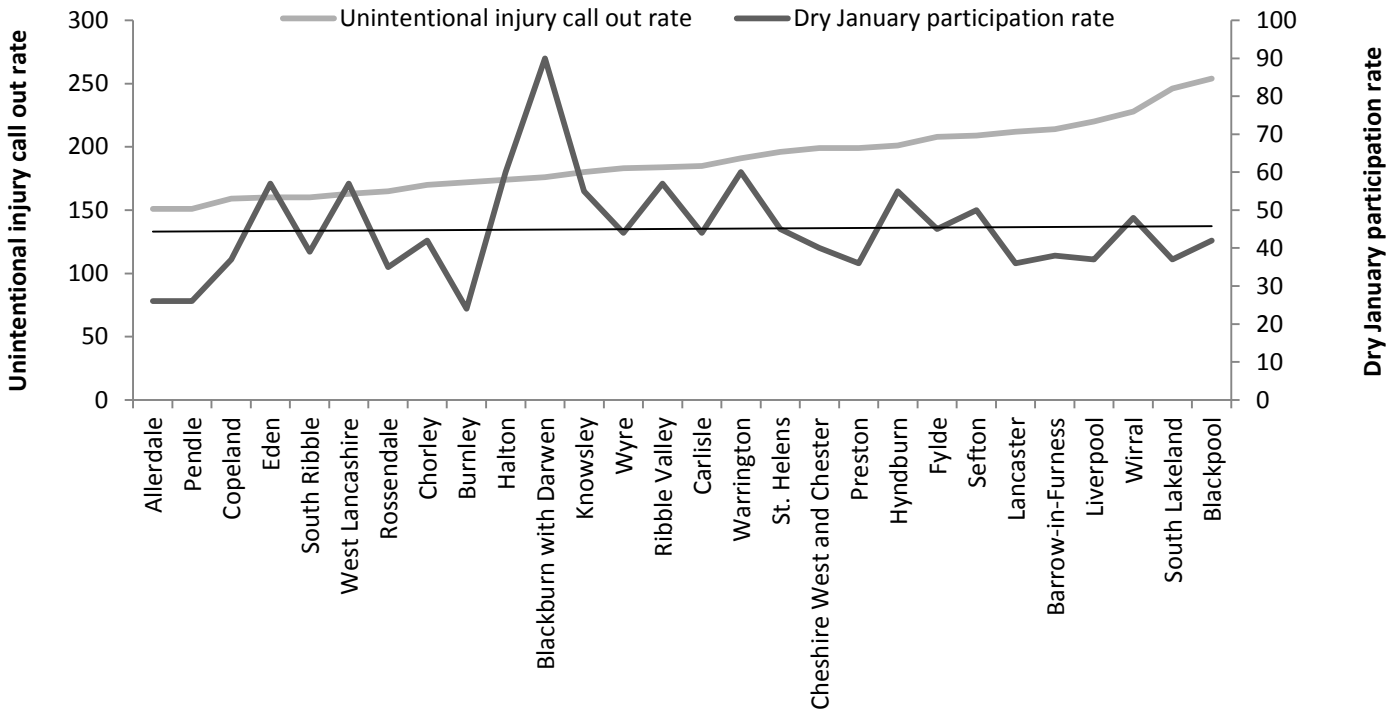


Figure 19 maps the call out rate of unintentional injuries by LA; as shown, call out rates for unintentional injuries were highest in Blackpool, South Lakeland and Wirral LAs.

Figure 19. NWAS call out rate for unintentional injuries by LA for January 2016, NWC area

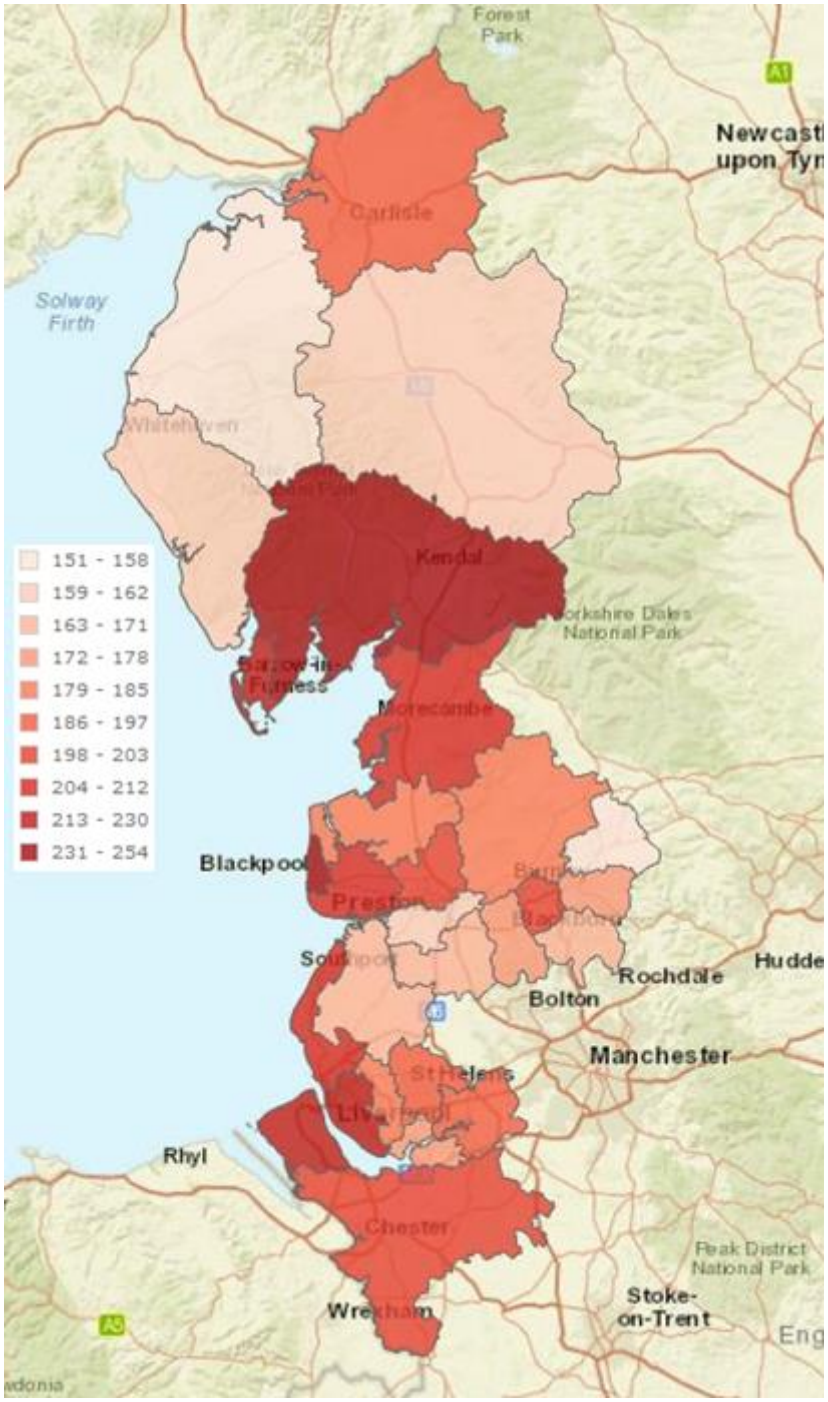


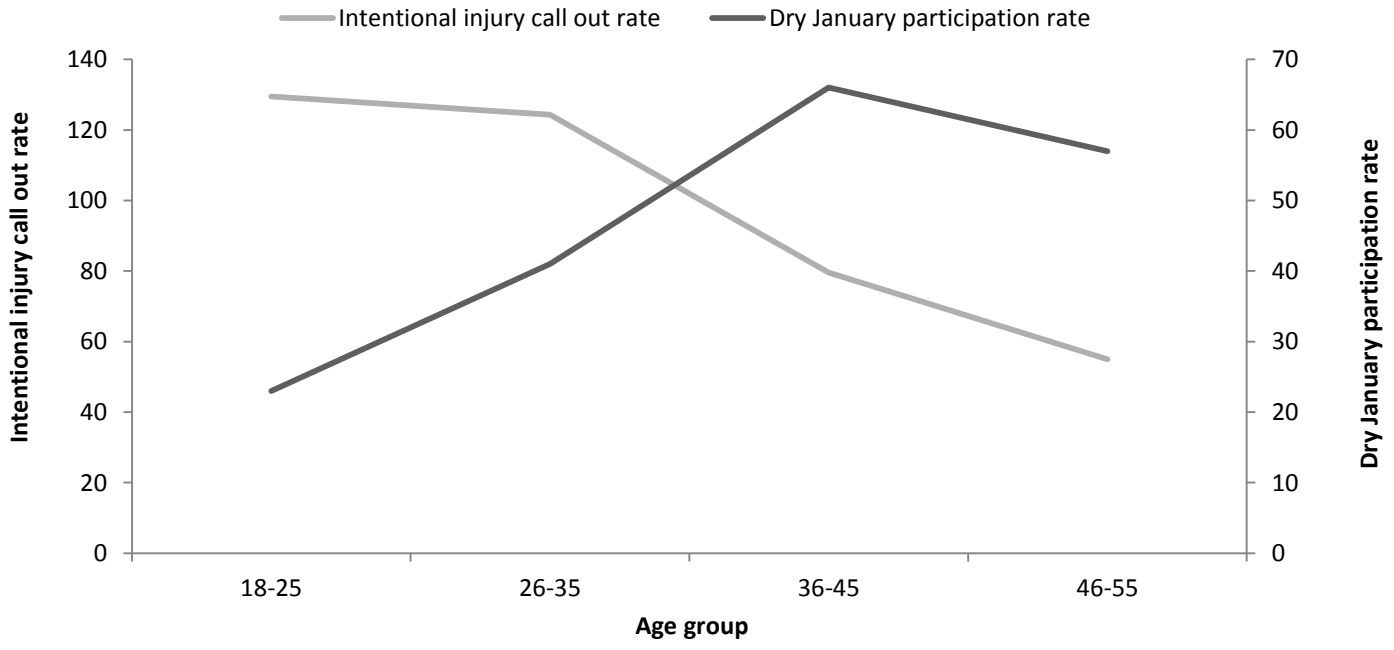
Table 19 displays intentional and unintentional injury call out rates per 100,000 population for males with Dry January participation rates. Intentional injury call out rates peaked among males aged 18 to 25 years (130 per 100,000 population), followed by males aged 26 to 35 years (124 per 100,000 population). Unintentional injury attendance rates peaked among males aged over 65 years (585 per 100,000 population), followed by males aged 56 to 65 years (152 per 100,000 population).

Table 19. Dry January participation rates, intentional and unintentional injury call out rates per 100,000 population for males by age group, January 2016, NWC area[14]

		Males					
Age group	**NWC Population**	**Dry January participation number**	**Dry January participation rate**	**Intentional injury attendances**	**Intentional injury attendance rate**	**Unintentional injury attendance number**	**Unintentional injury attendance rate**
0-17	383244	***	1	55	14	303	79
18-25	192236	44	23	249	130	261	136
26-35	218817	89	41	272	124	243	111
36-45	221260	145	66	176	80	262	118
46-55	260212	149	57	143	55	341	131
56-65	222915	52	23	49	22	339	152
Over 65	301863	<30	9	37	12	1766	585
Total	**1800547**	**509**	**28**	**981**	**54**	**3515**	**195**

Figure 20 shows intentional injury call out rates for males aged 18 to 55 years with Dry January participation rates. Between the ages of 18 and 45, intentional injury attendance rates fall with increasing Dry January participation rates; however, this association is not necessarily causative.

Figure 20. Intentional injury call out rates per 100,000 population for males aged 18 to 55 years with Dry January participation rates, NWC area



[14] There were 164 records where age and/or gender were not disclosed; these have been omitted from tables 19 and 20 and figures 20 and 21.

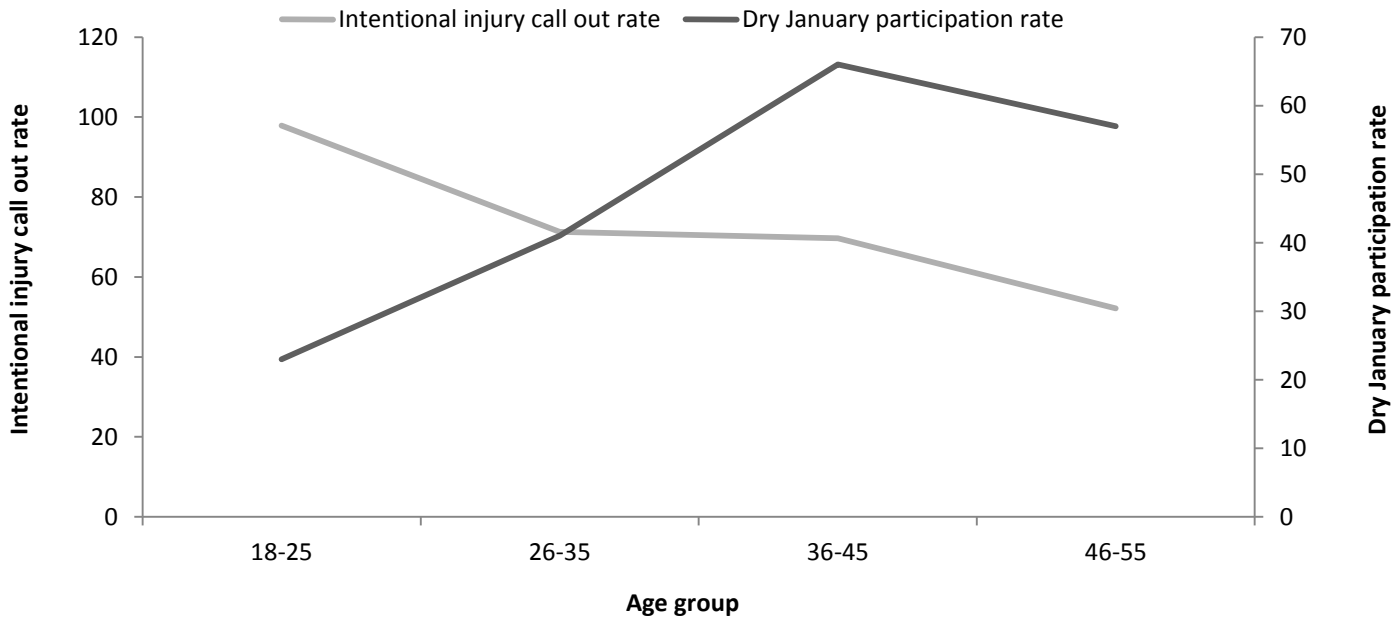
Table 20 displays intentional and unintentional injury call out rates per 100,000 population for females with Dry January participation rates. Intentional injury call out rates peaked among females aged 18 to 25 years (98 per 100,000 population), followed by females aged 26 to 35 years (71 per 100,000 population). Unintentional injury call out rates peaked among females aged over 65 years (656 per 100,000 population), followed by females aged 56 to 65 years (123 per 100,000 population).

Table 20. Dry January participation rates, intentional and unintentional injury call out rates per 100,000 population for females by age group, January 2016, NWC area[12]

		Females					
Age group	**NWC Population[6]**	**Dry January participation number**	**Dry January participation rate**	**Intentional injury attendances**	**Intentional injury attendance rate**	**Unintentional injury attendance number**	**Unintentional injury attendance rate**
0-17	380167	5	1	88	23	220	58
18-25	198220	120	61	194	98	198	100
26-35	231474	212	92	165	71	176	76
36-45	239639	367	153	167	70	165	69
46-55	280204	389	139	146	52	225	80
56-65	237054	128	54	62	26	291	123
Over 65	381513	26	7	56	15	2502	656
Total	1948271	1247	64	878	45	3777	194

Figure 21 shows intentional injury call out rates for females aged 18 to 55 years with Dry January participation rates. Similar to males, between the ages of 18 and 45, intentional injury call out rates fall with increasing Dry January participation rates.

Figure 21. Intentional injury call out rates per 100,000 population for females aged 18 to 55 years with Dry January participation rates, NWC area



QUALITATIVE DATA ANALYSIS

HOW PARTICIPANTS BECAME INVOLVED IN THE DRY JANUARY CAMPAIGN

The participants who were interviewed were facilitators for the campaign within their workplaces and tended to have a specialism in alcohol and substance use either through their role as specialist alcohol nurses or as health and wellbeing leads. They discussed how it was considered good practice to run alcohol-related health campaigns with staff, and in some cases stakeholders, to help facilitate awareness of how much they drink and to encourage them to reduce this. Alcohol consumption was seen as a critical issue and campaigns such as Dry January were viewed as important in fostering positive changes in staff health and wellbeing.

All but one of the participants' workplaces had participated in the Dry January campaign in previous years and were able to make comparisons around the level of support received from senior management. Many participants, and especially those who worked in the NHS, discussed how high levels of alcohol consumption have become an increasing concern on the public health agenda. This had led to there being more of a focus on the Dry January 2016 campaign by senior management within some organisations compared to previous years. Some of the participants who had been leads for the campaign in previous years discussed how they felt they had received additional support in the 2016 campaign. However it was also noted that the budget for the 2016 campaign was more restrictive than in previous years, and therefore whilst there might have been more support from senior management the campaign for the most part had to be run digitally.

MONITORING THE DRY JANUARY CAMPAIGN

The majority of the participants did not monitor sign up, participation or completion rates within their workplaces. This was generally because of the way the campaign was promoted through communication departments who provided potential participants with information about the campaign and details about how to sign up on social media and their organisation's intranet. Some organisations made a conscious decision not to encourage staff to officially sign up as they felt it could be a deterrent and prevent people from taking part in Dry January.

> *"We said to people if you're not feeling like you want to sign up that's fine however if you want to make a personal pledge to yourself this is all the information that you need... I'm not so concerned about numbers on paper that wasn't what it was about, it was about very much a wide spread, changes of stance in the spectrum of alcohol related harm and getting safe limits." (Participant 2 NHS)*

> *"Sometimes people just back away from things like that [signing up]; they don't mind the seed being planted, but they don't want hounding about it." (Participant 6 NHS)*

Those participants who were from organisations that did monitor the number of staff who signed up to take part in Dry January struggled to collect data and did not feel that the figures they had were an accurate reflection of staff participation. They felt that more staff took part in Dry January than officially signed up and gave a number of reasons for this. Firstly, there was a general consensus amongst all participants that the majority of people who decided to take part in Dry January had already made the decision before they were exposed to marketing of the campaign. Therefore these people may have taken it upon themselves to sign up, or may have decided to do the challenge without officially signing up.

"I think people have made their mind up well before January… The people who were going to do it already did it and the people who weren't going to do it weren't interested." (Participant 3 NHS)

"I think one of the issues with this campaign is it's in the national awareness now, people know about Dry January; I'm not sure they actually sign up to do Dry January. Many people do it, but I don't think they sign up." (Participant 9 Local Authority)

Additionally, even if the marketing from the organisation had inspired people to do the Dry January challenge, it was noted that they might not want to officially sign up because they did not want to fundraise for Alcohol Concern.

"It [Alcohol Concern] may not be a charity that they support; they may have other charities that they support themselves." (Participant 10 Local Authority)

IMPLEMENTATION OF DRY JANUARY CAMPAIGN

All participants discussed how they used the central communications team in their workplace to distribute information about the campaign through email and on intranet sites. The majority of participants also discussed how the communications teams would also post on social media sites. Twitter was the most commonly cited social network site that was used to promote the campaign and some organisations also used Facebook. There were mixed responses with regards to how successful the communication teams were in promoting the campaign, with some discussing how they were not as active as they would have wished and others feeling they did a good job and that it was an effective way promoting the campaign to a large number of people.

"We have quite a well-established staff intranet page, so we posted on there, we started up a whole section on that intranet page for specifically for Dry January so that was quite effective… I think it was somewhere around 300 to 400 people had looked at it so that was quite good." (Participant 1 NHS)

"Our Comms [Communications Department] didn't promote it as we'd agreed that they were going to… We had an agreement, or at least I thought we had an agreement, that we would promote it on our intranet, and then in the Christmas period, and then in the New Year period, we were going to promote it on corporate email as well… But that didn't happen. So we had it promoted in terms of word of mouth, and we promoted it through all our contracted business." (Participant 7 Local Authority)

Some of the participants set up stalls in communal areas to promote the campaign. Again there were mixed responses to how effective these were with some participants reporting people were quite despondent about taking part. Other participants felt the stalls worked well in engaging people with the campaign although they noted that it was generally those who had already decided that they wanted to do something similar to Dry January that engaged with them.

"It was just a small stall, it was loads of literature on health promotion, all the literature that we give out to our people that we screen, so there was like leaflets on alcohol creeping up on you and knowing your limits and we also did a section on it from the mental health point of view, from the physical effects, the benefits of giving up drinking, how it makes you feel better and things that you can expect to happen when you gave up drinking. We gave out some wristbands and things like that, the old things from the Dry January last year we had so it was just a colourful presentation really to get people looking at their alcohol problems." (Participant 4 NHS)

One participant had paid for official Alcohol Concern Dry January materials and several others had promotional materials left over from previous years. All participants discussed budget limitations as being an issue for their campaigns and that the cost of the Alcohol Concern materials meant that, with the exception of the one that paid for them this year, they were unable to purchase any and had to rely on digital promotion. The majority of participants commented that decreasing budgets were likely to be an issue in future years and as such it was expected that the campaign would continue to be increasingly implemented online.

> *"People generally like a freebee don't they and this is what we discussed as a team and I think it would have been really useful if we could have had some maybe the wrist bands or something like that, something that we could give to people. I mean we were sent leaflets which were useful but we didn't really have the capability to print the number we probably needed." (Participant 1 NHS)*

> *"I think there should be a pot of money for agencies such as us or for occupational health within big employers to tap into a pot of promotional stuff that they didn't have to pay for. We haven't got a budget for these sort of things." (Participant 3 NHS)*

Some participants felt that if they had been able to purchase the materials then they might have had more success with their campaign. However, the organisation that did purchase some Alcohol Concern merchandise were sceptical about how effective it was, and stated that if they promoted the campaign again next year they would likely buy less merchandise and focus more on the online aspects of the campaign that they felt were more effective in encouraging participation in Dry January.

> *"I think people were just, you know, picking up a wristband or a badge, and just not doing anything about it." (Participant 9 NHS)*

It was also discussed how the Dry January campaign was now one of many health campaigns that receive a lot of media attention and that this could lead to potential participants becoming despondent because of over-exposure to health campaigns.

> *"We found that the noise of everything else that was going on, like there were like lots of different alcohol campaigns, smoking, you know, fitness etc., it got lost in that." (Participant 5 Local Authority)*

This led to one participant suggesting that they may not run the Dry January campaign in their workplace next year, but may run another alcohol awareness event at a different time of year or incorporate it as an element alongside other general health and wellbeing awareness campaigns. Another participant suggested that they were considering running an alcohol campaign in the summer as opposed to Dry January with the focus being on losing weight. Other changes participants may implement next year included having a stall for one participant who ran a mainly digital campaign and further use of social media which was discussed by a small number of participants who did not believe it had been used enough in the 2016 campaign.

> *"I think I might possibly do a stall next year. You know, have it running up to the lead up to Christmas, you know, make it a bit of fun." (Participant 6 NHS)*

> *"We didn't use social media. I think that we've got a lot to do in terms of comms [communications] on the Health and Wellbeing campaigns, in terms of using social media, tweeting things." (Participant 8 NHS)*

INCENTIVES FOR TAKING PART IN DRY JANUARY

Improving health and wellbeing through better sleep, feeling more energised and losing weight were the most commonly cited reasons why people took part in Dry January according to the participants. Saving money and feeling challenged were also reasons why participants believed people took part and the participants also believed that some staff who took part were also aware of the benefits that abstaining from alcohol had on mental health and cancer prevention and that these were further incentives. Two of the participants had tried to collect data from those taking part in their workplace to investigate what their incentives were but received limited responses. Therefore their responses about why people participate were mainly based on informal discussions.

> *"The feedback that we generally got from the few people that I spoke to about it was it was healthier for them. They felt like they needed to do it because especially with it being post-Christmas people had often indulged, over-indulged, at Christmas And they wanted to detox so to speak for January… it was quite a competition for them in good spirits, who could stick to it and who couldn't." (Participant 11 Business)*

STAFF HEALTH AND WELLBEING

Participants were able to offer perceptions about the potential impacts of the Dry January campaign in terms of staff health and wellbeing but these were not based on evidence. There was a general consensus that this would be difficult to monitor. The participants were aware of the effects that alcohol consumption can have on general health and wellbeing. They felt that abstaining from alcohol for a month would help staff get more sleep and feel more energised in the day, thus making it more likely that they would be productive.

> *"Obviously healthy and happy staff reduces our sickness, doesn't it?" (Participant 11 Business)*

> *"I genuinely think people who do it [Dry January] do experience a physical improvement, depending on how much they were drinking of course but I heard a lot of people saying they were sleeping better and that they'd lost a bit of weight and all that kind of thing so yeah I think it definitely has a positive impact on health and wellbeing." (Participant 1 NHS)*

> *"I think what's really helped this year is that the guidelines have changed so it's worked very very well for us really because people have come out of Dry January and then we've managed to be able to hit them with new guidelines so moving forward then, I suppose it's that reinforcement of safer drinking patterns." (Participant 2 NHS)*

Only two of the participants believed that staff had been absent from work due to alcohol consumption the previous night, although it is important to note that participants did not have access to data that would have confirmed this and therefore discussions around absenteeism were speculative. Others appreciated that some staff absences may have been due to them feeling run down as a result of excessive alcohol consumption.

> *"I'd say there's a strong link between people's performance at work and what they did the night before, so obviously if you've got a hangover you're probably not going to be focusing as much as perhaps you should be at work." (Participant 1 NHS)*

Some of the participants who worked in the NHS noted that due to the nature of the work carried out by staff, there were strict regulations relating to staff being fit for work and that they would be sent home if under the influence of alcohol, or unable to carry out their work safely due to alcohol consumption from the previous night.

> *"If they over-indulge [on alcohol], they are responsible for themselves, and they know there are policies and procedures in place if they came in under the influence." (Participant 6 NHS)*

Some participants also questioned how useful the Dry January campaign was overall in helping reduce drinking. It was noted that those who did not drink much alcohol were more likely to take part. Therefore it is possible that the campaign is not appealing to those who would benefit from addressing their alcohol consumption. Furthermore, one participant questioned whether taking part in Dry January might lead to excessive drinking in February.

> *"I know there's quite a bit in the media about this – do you have Dry January and then binge February? Do people make up for it thereafter." (Participant 7 Local Authority)*

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