

Evaluation of the Wirral's Drink Less Enjoy More intervention

Hannah Grey, Zara Quigg

Contents

Contributions	1
Acknowledgements	1
Summary	2
1. Introduction	3
2. Findings	6
2.1 Baseline pre-intervention findings	6
2.1.1 Pseudo-intoxicated actor alcohol test purchases	6
2.1.2 Nightlife user survey	7
2.2 Pre and post-DLEM intervention comparisons	10
2.2.1 Pseudo-intoxicated actor alcohol test purchases	10
2.2.2 Nightlife user survey (selected questions)	10
2.3 Post-intervention nightlife user survey: intervention awareness	. 12
3. Conclusion	13
4. References	9
5. Appendix 1: Supplementary table	10

Contributions

Overall project management and evaluation design:

Zara Quigg, Nadia Butler, Kim Ross-Houle

Data collection:

Hannah Grey, Nadia Butler, Kim Ross-Houle, Rebecca Bates, Emma Begley, Claire Poole, Carey Owen

Data inputting:

Claire Poole, Rebecca Bates, Charlotte Bigland

Data analysis:

Rebecca Bates, Hannah Grey, Nadia Butler

Report write up:

Hannah Grey, Zara Quigg, Nadia Butler

Front cover design:

Laura Heeks, Sophie Orrett

Acknowledgements

We would like to thank all those who contributed to the development and implementation of the Drink Less Enjoy More intervention, and the evaluation process. In particular:

- The intervention and evaluation funders CHAMPS Public Health Collaborative and Wirral Local Authority.
- The Drink Less Enjoy More steering group.
- All nightlife users who participated in the surveys.
- The actors for supporting the implementation of the pseudo-intoxicated actors study.

Findings presented in this report form part of a broader study evaluating the expansion of the Drink Less Enjoy More Intervention from Liverpool to all local authorities across Cheshire and Merseyside. Full findings from the overall study can be found here: Quigg, Z. et al (2018). Evaluation of the Cheshire and Merseyside Drink Less Enjoy More Intervention. Public Health Institute, Liverpool John Moores University, Liverpool.

Summary

- Drink Less Enjoy More (DLEM) is a community based multi-component intervention aiming to prevent excessive alcohol consumption and related harms in nightlife settings through, in the first instance, raising adherence to and knowledge of UK legislation prohibiting the sale of alcohol to, or purchasing of alcohol for, drunk people.
- DLEM has been implemented across Liverpool City Centre's nightlife since 2014, and in 2017/18 was expanded across Cheshire and Merseyside, including Wirral Local Authority Area.
- As part of an evaluation of DLEM across Cheshire and Merseyside, surveys with nightlife users and alcohol test purchases using pseudo-intoxicated actors (a proxy measure for the sale of alcohol to drunk people) were implemented pre and postintervention, across selected nightlife settings, including Birkenhead, Oxton and Heswall (Wirral Local Authority).
- This report provides a summary of information collected specifically across Wirral, including data from: alcohol test purchases (pre-intervention = 20; post-intervention = 19) and nightlife user surveys (pre-intervention = 44; post-intervention = 34).
- Across Wirral, the DLEM intervention was implemented from October to November 2017.
- Whilst small sample sizes mean that findings should be interpreted with caution, findings suggest some positive outcomes over this time period:
 - Post-intervention¹, 41.4% of survey participants were aware of the DLEM intervention; of these:
 - o 70.0% agreed² it demonstrated that people who are drunk would not get served more alcohol in nightlife venues.
 - o 40.0% agreed it would make them drink less alcohol before going on a night out.
 - 20.0% agreed it would make them drink less alcohol whilst on a night out.
 - o 40.0% agreed it made them feel safer on a night out.
 - o 30.0% agreed that it would make them more likely to go on a night out.
 - The proportion of survey participants recognising that serving alcohol to customers who are already drunk is illegal increased from 62.8% pre-intervention to 81.3% post-intervention.
 - The proportion of survey participants recognising it is illegal for a person to buy alcohol for a friend who was already drunk rose from 53.3% pre-intervention to 71.9% post-intervention.
 - There was a significant reduction in the proportion of alcohol test purchases that resulted in the sale of alcohol to a pseudo-intoxicated actor from 90.0% pre-intervention to 36.8% post-intervention.
- Implementation of DLEM across Wirral nightlife settings appears to be associated with a significant reduction in sales of alcohol to pseudo-drunks in on-licensed premises, and improvements in nightlife user knowledge of associated alcohol legislation.

¹ Post-intervention measurements were taken during November 2017.

² Including strongly agree/agree.

1. Introduction

The night time economy (NTE) is considered to be an environment that is associated with high levels of drunkenness and alcohol related harm [1-3], as well as being a place that provides local employment, economic investment, cultural events and regeneration in cities and towns. Despite the potential positive elements the NTE can bring to an area, drinking to excess can damage health whilst placing higher demands on police, local authorities and health services who must manage nightlife drunkenness and associated problems such as anti-social behaviour, violence and alcohol related injuries [4]. The high prevalence of harm warrants specific interventions to make the NTE a safe and inclusive place for all those who want to participate. A broad range of policies and interventions have been employed to reduce such harms, including high profile policing, changes to licensing laws and environmental measures to improve the NTE. While some evidence suggests that such measures can contain and manage alcohol related harms, they are limited in their ability to reduce levels of intoxication or address harmful and pervasive cultures of nightlife drunkenness [1-2, 5]. In 2013, the first UK study exploring the propensity of bar staff to serve alcohol to customers who were displaying signs of intoxication was undertaken in Liverpool City Centre. This found that 84% of purchase attempts by pseudo-intoxicated actors resulted in the sale of alcohol [6]. This is despite it being an offence to knowingly sell alcohol to, or buy alcohol for, someone who is clearly intoxicated [7]. Violation of these laws can result in fines being imposed on the person selling alcohol, the holder of the premise licence, the premise supervisor, or the person who purchases alcohol on behalf of an intoxicated individual. Despite this, until recently, enforcement, awareness and compliance of this legislation has been typically low [6, 8].

Studies conducted elsewhere have suggested that reductions in the over service of alcohol to drunk people and related harms can be achieved through multi-agency interventions that incorporate community mobilisation, enforcement of the law around the service of alcohol and responsible bar server training [9-12]. Based on this, since 2014 the Drink Less Enjoy More (DLEM) intervention has been implemented to address sales of alcohol to drunk people, drunkenness and related harms in Liverpool's nightlife [1-2, 13]. DLEM aims to achieve this through, in the first instance: increasing awareness of legislation prohibiting the sale of alcohol to, and purchasing of alcohol for drunk people; supporting and increasing bar staff compliance with the law; and promoting responsible alcohol consumption amongst nightlife users. Following earlier evaluation of DLEM, which suggested positive changes in public awareness and bar staff adherence to the laws [14], in 2017 DLEM was expanded across the Cheshire and Merseyside area, including Wirral Local Authority area (see Box 1).

Building on the Liverpool DLEM intervention, local partners across Wirral developed and implemented DLEM, relevant to their community settings (see Box 1). The Public Health Institute at Liverpool John Moores University was commissioned to implement a research study to evaluate key elements of the expansion of DLEM across Cheshire and Merseyside. Specific to Wirral, the objectives of the study were to:

- Explore the tendency of bar servers to sell alcohol to pseudo-intoxicated actors (a proxy measure for sales of alcohol to drunk people).
- Assess nightlife users' knowledge of alcohol legislation regarding sale of alcohol to, and purchasing of alcohol for, drunk people.
- Provide an understanding of nightlife user alcohol consumption patterns, attitudes relating to drunkenness, perceptions of the nightlife environment, and prevalence of adverse nightlife events.
- Explore potential changes in bar staff adherence to, and nightlife user awareness of alcohol legislation over the intervention implementation period.
- Explore nightlife user awareness of DLEM and their perceptions of it.

This report provides a summary of findings specific to Wirral Local Authority Area.

To meet study objectives and to allow for comparisons with past studies (and the broader Cheshire and Merseyside DLEM evaluation [15]), research methods used in previous evaluations were repeated [13-14]. These included:

Nightlife user surveys: A short anonymous survey was conducted opportunistically with users of Wirral's NTE on a Friday night in September (pre-intervention; N=44) and November (post-intervention; N=34) 2017. The surveys were conducted through face-to-face interviews on the street in Wirral's NTE areas (Birkenhead, Heswall, and Oxton) between 8.30pm and 1.40am. The survey explored: knowledge of legislation on service of alcohol to, and purchasing of alcohol for, drunk people; drinking behaviours on the night of survey; use of the nightlife environment; and, expectations and tolerance of drunkenness. To ascertain the prevalence of harms (e.g. assaults), participants were asked whether they had experienced a number of adverse events on, or after nights out in the area in the previous three months. Post-intervention, participants were also asked about their awareness and perceptions of DLEM, and potential behaviour change as a result of the intervention.

Alcohol test purchase attempts: Alcohol test purchase attempts were made by pseudo-intoxicated actors in 20 venues³ over two nights (Friday, 10 venues; Saturday, 10 venues) in September 2017, between the hours of 8.30pm and 1am. The test purchase attempts were repeated in November 2017 with 19 of the same venues⁴. The test purchases were made with one actor and one researcher in a pair, and followed a protocol adapted from previous studies [6, 14].

Full study methodology⁵ and findings from the full Cheshire and Merseyside study are available here: Quigg, Z. et al (2018). Evaluation of the Cheshire and Merseyside Drink Less Enjoy More Intervention. Public Health Institute, Liverpool John Moores University, Liverpool.

⁴ One venue had closed down and therefore a re-test was not possible.

³ Selected by local partners.

⁵ Ethical approval for the study was granted by Liverpool John Moores University Research Ethics Committee (LJMU research ethics committee reference: 15/EHC/073).

Box 1: Wirral's Drink Less Enjoy More (DLEM) intervention

Intervention site

- Wirral is located in Merseyside, an area of the North West of England.
- The total population is approximately 322,796 (mid-year 2017); around 63,634 are aged 18-35 years [17].
- Wirral has a number of small NTEs including Birkenhead, Oxton and Heswall.

Local alcohol and violence context [18, 19]

- Alcohol-specific mortality rate: 15.5 per 100,000 population (2014-16) (higher than the national average).
- Hospital admission episodes for alcohol related conditions (narrow definition): 889 per 100,000 population (2016-17) (higher than the national average).
- Percentage of adults drinking over 14 units of alcohol a week: 26.3% (2011-14) (similar to the national average).
- Emergency hospital admissions for violence: 89.3 per 100,000 population (2014/15-2016/17) (higher than the national average).
- Violent crime (violence against the person offences): 17.0 per 1,000 population (2016-17).

DLEM intervention aims

To make the NTE a safer space and reduce alcohol related harms across Wirral, through in the first instance:

- Raising awareness of nightlife user and bar staff awareness of UK laws around the sale of alcohol to, and purchasing of alcohol for, drunk people;
- Supporting bar staff and licensees to refuse the service of alcohol to drunk people; and,
- Promoting responsible drinking amongst nightlife users.

DLEM intervention components

The intervention involved the collective implementation of three core components, implemented via a multi-agency partnership (public health, licensing, police) between October and November 2017:

Community mobilisation and awareness raising: A range of awareness raising activities (i.e. on alcohol legislation) were targeted towards different audiences, particularly towards the local alcohol trade and public. Communication materials with the DLEM branding were created and included posters and information sheets for display in venues, staff t-shirts, bar runners and badges. Additionally, a social media campaign was run on Facebook and Twitter.

Responsible bar server (RBS) training: Training ran on one day across two sessions, morning and afternoon. Twenty venues received training using the online DLEM RBS training video, which was developed to raise awareness of the key messages and deliver the knowledge needed to recognise signs of drunkenness, refuse service and recognise the role that bar staff can play in improving the NTE. The training sessions were led by Wirral Council Licensing team and supported by Merseyside Police. The sessions focused on the impact of the irresponsible sale of alcohol, emphasising the important role that bar staff play when working in licensed premises. Training was also provided which raised awareness of sexual assaults, and the role of staff in identifying and supporting potential victims of sexual assault.

Strengthened law enforcement: Alcohol test purchases for sales of alcohol to pseudo-drunks implemented. Premises shown to have served alcohol to the pseudo-intoxicated actors were advised and local police discussed issues around the effects of alcohol related crime and disorder. It was also stressed that action would be taken with regard to enforcement for selling to a drunk person.

2. Findings⁶

2.1 Baseline pre-intervention findings

2.1.1 Pseudo-intoxicated actor alcohol test purchases

Alcohol test purchases by a pseudo-intoxicated actor were made in twenty venues, including pubs, bars and clubs, prior to the implementation of the DLEM intervention. Nine out of ten (90.0%) pre-intervention test purchases resulted in the service of alcohol, with one venue attempting to upsell (i.e. suggesting a double measure instead of a single). Of the two venues refusing the service of alcohol, both involved a direct refusal, and telling the actor they would not be able to serve them alcohol due to being too drunk. One of these venues went further and offered a soft drink and used caring statements to refuse the service of alcohol. Notes from the actors suggest that occasionally bar staff recognised signs of drunkenness and still proceeded with the sale of alcohol. Examples of the interactions that occurred between the drunk actor and bar staff are displayed in Box 1.

To characterise venues, ten established markers of poorly managed and problematic (PMP)⁷ bars were drawn from the observational data using an established tool by Graham et al (2006) as used in previous research [6, 2]. Only one venue had no PMP markers, whilst seven had one or two, eight had three or four and four venues had five to seven markers (Table 1). The service rate was significantly higher in venues with more PMP markers.

Table 1: Service rates to pseudo-intoxicated actors in venues with and without markers of poorly managed and problematic (PMP) bars, Wirral Local Authority (pre-DLEM, 2017)

		N	% served	p
Number of PMP markers	None	1	0.0	
	1 or 2	7	85.7	
	3 or 4	8	100.0	
	5 to 7	4	100.0	
	8 to 10	0	-	<0.05

⁶ All data were entered, cleaned and analysed in SPSS v23. Analyses used descriptive statistics, chi-squared, t-tests, Mann-Whitney U and Kruskal-Wallis tests.

⁷ PMP, poorly managed and problematic bars: low seating, <50% venue floor area with seating; young bar staff, >50% appear <age 25; young customers, most appear <age 25; drinks promotions, general and cheap drinks promotions; noisy bar, crowded bar, poor lighting, dirty bar, rowdy bar, drunk customers, ratings of five or above on scales of 0 to 9 grading the presence of the marker (e.g. noisy bar; 0=very quiet/easy to talk, 9=hurts ears/cannot talk).

Box 1: Example extracts from actors' notes on exchanges with bar servers (Wirral, pre-DLEM, 2017)

Test purchases resulting in alcohol service:

- o I asked how much... told me that it was 'two for one'... [server] was laughing throughout the exchange, especially when I had trouble counting my money.
- Staff kept looking and acknowledging drunkenness, but no attempt made to offer water or decline service.
- Asked me if I'd had a long night and told me that this would be the last drink he'd serve me.
- Staff offered and then insisted I drank water before I drank the [alcoholic drink].
- I was served with no problems. When I couldn't count my change [server] helped me with it.

2.1.2 Nightlife user survey

Sample characteristics

Forty four nightlife users took part in the pre-intervention survey on a Friday night in September 2017. Surveys were completed between 8.50pm and 1.40am, with 72.8% being completed between 8.50pm and 11.59pm. Around half (52.3%) of the pre-intervention respondents were male. Participants' ages ranged from 20 to 61 years, with a mean age of 35 years. Just over one in five (22.7%) reported that they were currently a student, and the majority (86.0%) reported living locally.

Nightlife usage

The majority (81.1%) of respondents reported that they usually go on a night out at least once a month. On the night of the survey, 15.9% reported that they had come out between 12pm and 5.59pm, 22.7% between 6pm and 7.59pm, 43.2% between 8pm and 9.59pm, 11.4% between 10pm and 11.59pm, and 6.8% between 12am and 1.40am. One third (32.6%) of participants said they expected to leave the areas nightlife between 10pm and 11.59pm, 25.6% between 12am and 1.59am, 27.9% between 2am and 3.59am, 9.3% between 4am and 5.59am, and 4.7% after 6am. Overall, the mean time survey participants expected to be out in the NTE was five hours.

Alcohol consumption⁸ and drunkenness

The majority (93.2%) of participants had consumed alcohol prior to taking part in the survey (termed drinkers from here). A quarter (26.8%) had their first drink between 12pm and 17.59pm, 36.6% between 6pm and 7.59pm, 31.7% between 8pm and 9.59pm, and 4.9%

⁸ To calculate the amount of alcohol consumed by nightlife patrons, drinks were coded into standard UK units using the following conversion: small glass (125ml) of wine, 1.5 units; standard (175ml) glass of wine, 2.1 units; large (250ml) glass of wine, 3.0 units; pint of lager/beer/cider, 2.0 units; bottle of lager/beer/cider, 1.7 units; can of lager/beer/cider, 2.0 units; bottle of alcopops, 1.5 units; single (25ml) shot of spirits, 1.0 unit; and a pitcher of cocktail, 6.0 units.

between 10pm and 11.59pm. Four in ten (43.9%) participants had drank at home or a friend's house before entering the NTE (i.e. preloading). Overall, drinkers reported consuming a median of 9.4 units prior to survey participation. Participants were asked if they intended to consume more alcohol during the rest of their night out. Overall, 81.8% of all participants (82.9% of drinkers) reported that they would drink more alcohol. The median number of units expected to be consumed was 8.0. In total, the median expected number of units consumed over the course of the night was 13.7, including what had been drank and what was expected. Further to this, 11.6% of participants said they planned on drinking more once they had left the NTE (e.g. at home).

Using a scale of 1 (completely sober) to 10 (very drunk), participants were asked: how drunk they felt at the time of the survey, how drunk they thought they would be when they left the NTE, and how drunk they thought people typically get in the area whilst on a night out (Figure 1). Of those who had consumed alcohol prior to the survey, the mean level of reported drunkenness was 4.1. Four (10.0%) drinkers reported feeling completely sober. The mean score for how drunk drinkers (including those who had not drank alcohol prior to the survey but intended to do so on the remainder of their night out) felt they would be when they left the city's nightlife that night was 6.4. The mean level of reported drunkenness that people reach on nights out in the area was 8.0.

Drunkenness ratings of those who had consumed alcohol prior to the survey were grouped into two categories: low (one to five) and high (six to ten). At the time of the survey, one in five (20.0%) reported their current level of drunkenness as high, 66.7% reported their expected levels of drunkenness to be high by the end of the night, and 80.5% felt that people typically reach high levels of drunkenness on nights out in the area.

Adverse nightlife events

Participants were asked whether they had experienced a range of adverse negative events while they were on a night out in the local NTE in the previous three months (Figure 2). Over one third (34.9%) had vomited whilst on a night out, 32.6% had had a serious verbal argument, 25.6% had been so drunk they needed help walking, 20.9% had been involved in a physical assault, 14.0% had been injured, 7.0% had unprotected sex, 4.7% had experienced a sexual assault (including sexual harassment), and 2.3% regretted having sex with someone. One third (16.3%) of participants had tried to appear more sober to gain entry into a venue, and 11.6% tried to appear more sober to get served at the bar. Almost one in ten (9.3%) had been refused entry to a venue for being too drunk, 7.0% had been asked to leave somewhere because they were too drunk, 2.3% had been refused service at the bar because they had been too drunk, and 2.3% had asked a friend to buy them alcohol because they were too drunk to get served themselves.

⁻

⁹ For ethical reasons no visibly drunk individuals were invited to participate, thus the median units consumed may represent an underestimate of alcohol consumption levels and/or patterns. The study also relied on self-reported levels of alcohol consumption which were not verified and could therefore be under or over estimated.

Figure 1: Participants' perceptions on their and other nightlife users' level of drunkenness, Wirral nightlife users (pre-DLEM, 2017)

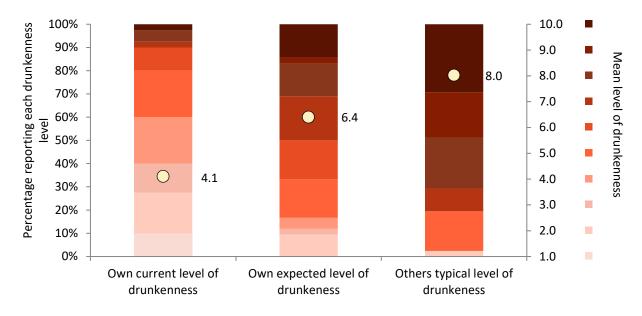
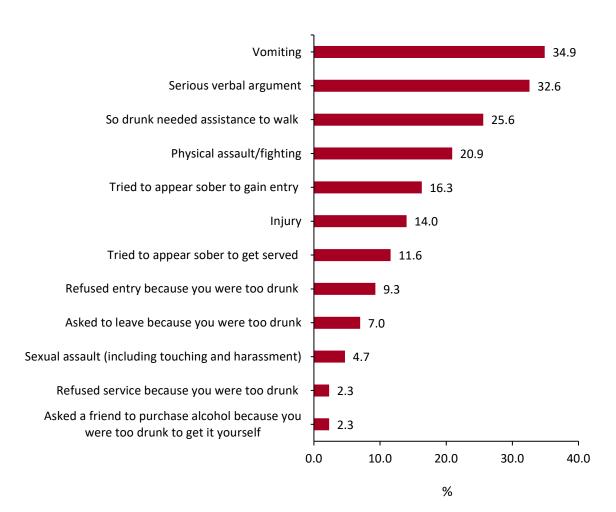


Figure 2: Proportion of participants who experienced an adverse nightlife event whilst on, or after a night out in the past three months, Wirral nightlife users (pre-DLEM, 2017)



2.2 Pre and post-DLEM intervention comparisons

2.2.1 Pseudo-intoxicated actor alcohol test purchases

Nineteen of the twenty test purchase attempts were repeated following implementation of the intervention. There was a significant reduction in the proportion of alcohol test purchases which resulted in the sale of alcohol to a pseudo-intoxicated actor from 90.0% pre-intervention to 36.8% post-intervention (p<0.001). Half (50.0%) of the venues that served in the pre-intervention test went on to refuse service in the post-intervention test attempt. One in 10 (11.1%) refused service in both the pre and post-intervention test purchase attempts however, nearly four in ten (38.9%) served in both the pre and post-intervention test.

During the post-intervention test purchases, over half (52.6%) of the venues were displaying the DLEM materials (e.g. posters). Of the venues which displayed DLEM material, half (50.0%) served the actor. Different tactics were used by bar staff to refuse the service of alcohol to the actor in the post-intervention test purchases. Where actors were refused service, all (100.0%) of the venues refused the service of alcohol directly. Four in ten (41.7%) bar staff in the venues also offered the actor an alcohol free drink, and bar staff in one venue (8.3%) ignored the drunk actor to avoid serving them. Examples of interactions between the bar staff and pseudo-intoxicated actor that occurred when sales were refused are given in Box 2.

Box 2: Example extracts from actors' notes on exchanges with bar servers (Wirral, post-DLEM, 2017)

Test purchases resulting in refusal of alcohol service:

- She said "I'm sorry, you are too drunk and I can't serve you, I could lose my job".
- o [Server] was apologetic and said he couldn't serve me as I was "a bit too drunk" and offered me a soft drink.
- Bar server turned to researcher (i.e. sober actor) and said "has she had too many?
 I'm sorry, I can't serve you".
- We waited for about 10 minutes and they just ignored me... eventually, I asked to get served and [server] said "sorry I can't serve you".
- The [server] signalled to the manager who came over and said "not a chance, you are too drunk".

2.2.2 Nightlife user survey (selected questions)

Sample characteristics

There were no statistically significant differences in sample characteristics between pre and post-intervention survey participants in: gender, age group, student status, or regularity of nightlife user (Table A1, Appendix 1). There was a significantly lower proportion of Wirral residents in the post-intervention survey (47.1%) compared to the pre (86.0%; p<0.01). There was also a significant difference in age of participants between the pre and post-intervention survey (p<0.01).

Knowledge of the law

The proportion of respondents recognising that it was against the law for bar staff to serve alcohol to customers who were already drunk was higher in the post-intervention survey results compared with the pre-intervention survey (pre, 62.8%; post, 81.3%). Similarly, participants recognising that it was illegal for a person to buy alcohol for a friend who was already drunk was higher in the post-intervention results compared to pre (pre, 53.5%; post, 71.9%) (Figure 3).

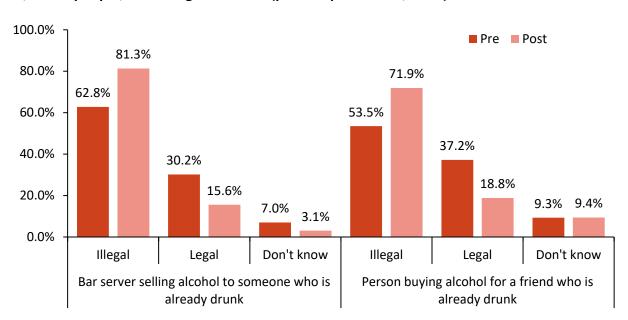


Figure 3: Participant awareness of the law around serving alcohol to, and purchasing alcohol for, drunk people, Wirral nightlife users (pre and post-DLEM, 2017)

Drunkenness

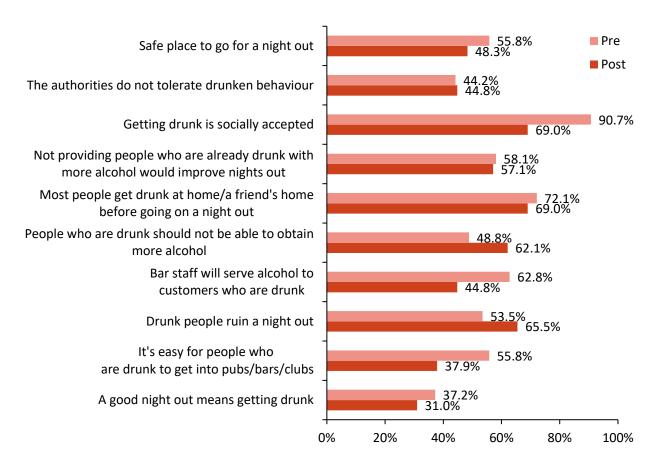
Participants were asked how much they agreed or disagreed with a range of statements relating to drunkenness across Wirral nightlife using a six point scale from strongly agree to strongly disagree (Figure 4). The proportion of participants agreeing¹⁰ that bar staff will serve alcohol to someone who is drunk was lower (>5%) in the post-intervention survey results (44.8%), compared with pre (62.8%), as was the proportion who agreed that it's easy for people who are drunk to enter venues (post, 37.9%; pre, 55.8%). Further, a lower proportion (>5%) agreed that a good night out means getting drunk in the post-intervention survey (31.0%) compared to the pre (37.2%). The proportion of participants agreeing with the following statements was higher (>5%) in the post-intervention survey results, compared with pre:

- People who are drunk should not be able to obtain more alcohol;
- Getting drunk is socially acceptable in Wirral's nightlife; and,
- Drunk people ruin a night out.

11

¹⁰ Including strongly agree/agree.

Figure 4: Proportion of participants agreeing¹⁰ with selected statements on drunkenness, Wirral nightlife users (pre and post-DLEM, 2017)



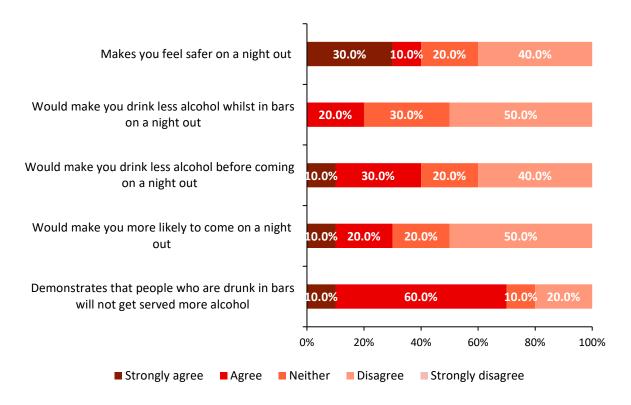
2.3 Post-intervention nightlife user survey: intervention awareness

Participants of the post-intervention survey were asked if they were aware of the DLEM intervention; one in five (20.7%; n=6) reported that they had heard of the intervention. Respondents were then informed about the intervention, shown an intervention poster and asked to confirm whether or not they were aware of the intervention or had seen the posters. At this stage, an additional six respondents said they were aware of the intervention. Overall, 41.4% (n=12) of post-intervention survey participants reported some awareness of DLEM. Of all individuals who were aware of the intervention, 25.0% had seen the posters. Four in ten (40.0%) had seen the information displayed in a venue on a bar runner, and 30.0% had seen the information on staff badges/t-shirts. Over fifth (20.0%) had heard about the intervention from radio discussions/adverts, whilst three in ten (30.0%) had seen the information displayed on social media and one participant had seen it on a bus stop advert.

The post-intervention survey participants who were aware of DLEM were asked how much they agreed or disagreed with a range of statements about the intervention (Figure 5). Seven in ten (70.0%) participants agreed¹⁰ that the intervention materials demonstrated that people who are drunk would not get served more alcohol. Four in ten (40.0%) agreed the materials made them feel safer on a night out across Wirral; 20.0% agreed it would make them drink less whilst on a night out and 40.0% agreed that it would make them drink less before going

on a night out. Three in ten (30.0%) agreed that the intervention would make them more likely to go on a night out in Wirral.

Figure 5: Perceptions of the DLEM intervention, Wirral nightlife users aware of DLEM (post-DLEM, 2017)



3. Conclusion

This small-scale study aimed to assess the initial impact of the implementation of DLEM across nightlife settings in Wirral Local Authority over an eight week period in 2017. Findings suggest that the intervention is associated with a positive impact, critically that the service of alcohol to pseudo-drunks was significantly lower post-intervention than pre-intervention and that knowledge of the laws amongst nightlife users has increased. Altering the attitude and expectation that you will get served no matter how drunk you are is an important step in reducing drunkenness and alleviating pressures on public services. Changing the culture of drinking to excess in nightlife environments is a complex task however that will likely take time to achieve. Given the expected levels of alcohol consumption and drunkenness amongst Wirral nightlife users, and the positive changes observed in this study, DLEM should form part of broader alcohol policy and prevention activity that aims to reduce excessive and risky alcohol consumption across NTEs in Wirral.

4. References

- 1. Quigg, Z., Hughes, K., Ford, K. J., Hunt, A., Hardcastle, K., & McGee, C. (2015). Evaluation of the Liverpool Say No to Drunks Pilot Intervention. Liverpool: Centre for Public Health, Liverpool John Moores University.
- 2. Quigg, Z., Ford, K., McGee, C., Grey, H., Hardcastle, K., & Hughes, K. (2016). Evaluation of the Liverpool Drink Less Enjoy More intervention. Liverpool: Centre for Public Health, Liverpool John Moores University.
- 3. Wilkinson, C. (2009). Raising the bar: preventing aggression in and around bars, pubs and clubs. Drug Alcohol Rev. 28: 696–97.
- 4. Burton, R., Henn, C., Lavoie, D., O'Connor, R., Perkins, C., Sweeney, K., Greaves, F., Ferguson, B., Beynon, C., Belloni, A., Musto, V., Marsden, J. and Sheron, N. (2016). A rapid evidence review of the effectiveness and cost-effectiveness of alcohol control policies: an English perspective. The Lancet. 389: 1558-80
- 5. Bellis, M. A., & Hughes, K. (2011). Getting drunk safely? Night-life policy in the UK and its public health consequences. Drug and Alcohol Review, *30*(5), 536-545.
- 6. Hughes, K., Bellis, M. A., Leckenby, N., Quigg, Z., Hardcastle, K., Sharples, O., & Llewellyn, D.J. (2014). Does legislation to prevent alcohol sales to drunk individuals work? Measuring the propensity for night-time sales to drunks in a UK city. Journal of Epidemiology and Community Health, 68, 453-456.
- 7. CPS. (2005). Licensing of Alcohol 2003. Retrieved from Legislation.gov.uk: https://www.legislation.gov.uk/ukpga/2003/17/contents [Accessed on 05th April 2018]
- 8. Hughes, K. & Anderson, Z. (2008). Identifying drunkenness and preventing sales of alcohol to intoxicated customers in Manchester. Liverpool: Centre for Public Health, Liverpool John Moores University.
- 9. Andreasson, S., Lindewald, B. & Rehnman, C. (2000). Over-serving patrons in licensed premises in Stockholm. Addiction; 95(3): 359-63.
- 10. Jones, L., Hughes, K., Atkinson, A.M. and Bellis M.A. (2011). Reducing harm in drinking environments: a systematic review of effective approaches. Health Place. 17: 508–18.
- 11. Lenk K. M., Toomey T. L. & Erickson D. J. (2006). Propensity of alcohol establishments to sell to obviously intoxicated patrons. Alcoholic Clinical and Experimental Research; 30: 1194-1199.
- 12. Wallin, E., Gripenberg, J. & Andréasson S. (2005). Overserving at licensed premises in Stockholm: effects of a community action program. Journal of Studies on Alcohol and Drugs; 66(6): 806-814.
- 13. Butler, N., Quigg, Z., Wallis, S., Grey, H., & Bigland, C. (2017) Liverpool's Drink Less Enjoy More intervention Progress monitoring report. Liverpool: Public Health Institute, Liverpool John Moores University.
- 14. Quigg, Z., Hughes, K., Butler, N., Ford, K. J., Canning, I., & Bellis, M. A. (2018). Drink Less Enjoy More: effects of a multi-component intervention on improving adherence to, and knowledge of, alcohol legislation in a UK nightlife setting. Addiction, 23 (2), 529-845.
- 15. Quigg, Z., Butler, N., Bates, R., Grey, H., Ross-Houle, K. and Bigland, C. (2018b) Evaluation of the Cheshire and Merseyside Drink Less Enjoy More Intervention. Public Health Institute, Liverpool John Moores University, Liverpool.
- 16. Graham, K., Bernards, S., Osgood, D. W., & Wells, S. (2006). Bad nights or bad bars? Multi-level analysis of environmental predictors of aggression in late-night large-capacity bars and clubs. Addiction, 101(11), 1569-1580.
- 17. Population estimates for England, Wales, Scotland and Northern Ireland. Data accessed on 5/10/18:https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland
- 18. Local Alcohol Profiles. Data accessed on 5/10/18: https://fingertips.phe.org.uk/profile/local-alcohol-profiles/data#page/0/gid/1938132984/pat/6/par/E12000002/ati/102/are/E06000049
- 19. Public Health Outcomes Framework. Data accessed on 5/10/18: https://fingertips.phe.org.uk/profile/public-health-outcomes-framework/data#page/0/gid/1000041/pat/6/par/E12000002/ati/102/are/E06000049

5. Appendix 1: Supplementary table

Table A1: Sample characteristics, Wirral nightlife users (pre and post-DLEM, 2017)

Characteristic		Pre (Sept 2017)	Post (Nov 2017)	p
	(N)	44	34	
Age group (years)	18-21	2.3%	23.5%	
	22-29	40.9%	44.1%	
	30+	56.8%	32.4%	<0.01
	Male	52.3%	61.8%	NS
	Student	22.7%	15.2%	NS
	Local resident	86.0%	47.1%	<0.01
	Regular nightlife user ^a	81.8%	70.6%	NS

Note. NS = Not significant. ^a Usually go on a night out in the town centre at least once a month

