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The relationship between off-licence density and alcohol harms in young people

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Alcohol Concern
Making Sense of Alcohol

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England is a country that increasingly chooses to drink at home. This is due, at least in part, to the difference in price between alcohol bought from on and off-licensed premises. Over the past 30 years there has been more than a 25% increase in the number of off-licensed premises, such as convenience stores and supermarkets that sell alcohol for consumption elsewhere[1]. Off-licensed sales are the predominant direct and indirect source of access to alcohol for young people under-18-years-old[2] and growing international evidence links off-licence density with various negative alcohol-related consequences[3 4 5].

Alcohol Concern's Youth Policy project commissioned Dr Nikki Coghill, Senior Research Fellow at the University of the West of England, to conduct some statistical analysis into the density of off-licensed premises and alcohol harms in young people in selected areas of England. As far as we are aware, this is the first study of its kind in this country to focus on the links between off-licence density and harms in under-18s. The analysis uncovered a moderate but statistically significant relationship between the density of off-licensed premises and alcohol specific hospital admissions in young people under-18-years-old per 100,000 of population. Our findings suggest that the greater the availability of alcohol, the greater the risk of young people suffering alcohol harm. Therefore, the changing nature of where we buy and consume alcohol may have an impact on the risk of harms to young people. Limitations in the recording of alcohol-related conditions in hospitals and A&E departments means that the results from this study are likely to be an under-representation of the true picture of harms impacting on young people. Effective harm prevention therefore not only requires targeting education, information and support at an individual level among young people, but control of the concentration of alcohol outlets at a community level.

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The impact of alcohol availability on children and young people

Key findings

Statistical analysis was undertaken of the alcohol specific hospital admissions data for persons under-18-years-old per 100,000 of population (a national alcohol indicator) and the density of off-licensed premises by local authority per 100,000 of population. Off-licence density was calculated using off-sales licensing data and Office of National Statistics population estimates. In England, excluding London, there was a moderate but statistically significant relationship between the number of off-licensed premises and underage alcohol specific admissions to hospital. No statistical relationship between off-licence density and harms in young people was found in data from the London boroughs resulting in their exclusion from the findings. This anomaly is likely to be because young people in London consistently consume less alcohol than the average in England and with a lower frequency[6].

The analysis showed that nearly 10% of all alcohol specific hospital admissions in England, excluding London, are directly attributable to off-licence density; meaning availability rather than any other external factor is the cause of one in ten of such harms. In England, excluding London, between 2006 and 2009, 19,367 children and young people under-18-years-old were admitted to hospital with alcohol specific conditions[7]. Our research indicates that over 1900 of those admissions could be directly attributable solely to the density of off-licensed premises in the young person's local area.

Further analysis using linear regression modelling found that nationally on average every two extra off-licences per 100,000 of population results in one alcohol specific hospital admission of a person under-18-years-old per 100,000 of population. In general, as the density of off-licences in an area increases, so do alcohol specific admissions in young people. There is, however, variation by region. Table 1 is a selection of areas with some of the highest and lowest levels of off-licence density.

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Methodological qualification

This study does not set out to establish cause and effect, rather it aims to highlight, for the first time in England, the positive relationship between density of off-licensed premises and harm amongst under-18s; a cohort supposedly protected by existing alcohol licensing regulation. The study does not take into account on-trade density because evidence suggests licensed premises such as pubs are less likely avenues of alcohol access for underage drinkers than off-licensed premises[8]. The study assumes a consistent average of young people per 100,000 of population across all areas and is not adjusted for variance.

Please note this is not a complete picture; comparable density and harms data (where we were able to match licensing authority with local health authority boundaries) was only available for 214 of the 293 English authorities - excluding London - that published alcohol indicator data in the Local Alcohol Profiles for England (LAPE). Representing almost three-quarters (73%) of the total areas published for England this is a figure sufficiently robust to draw strong conclusions.

Limitations in recording alcohol harm

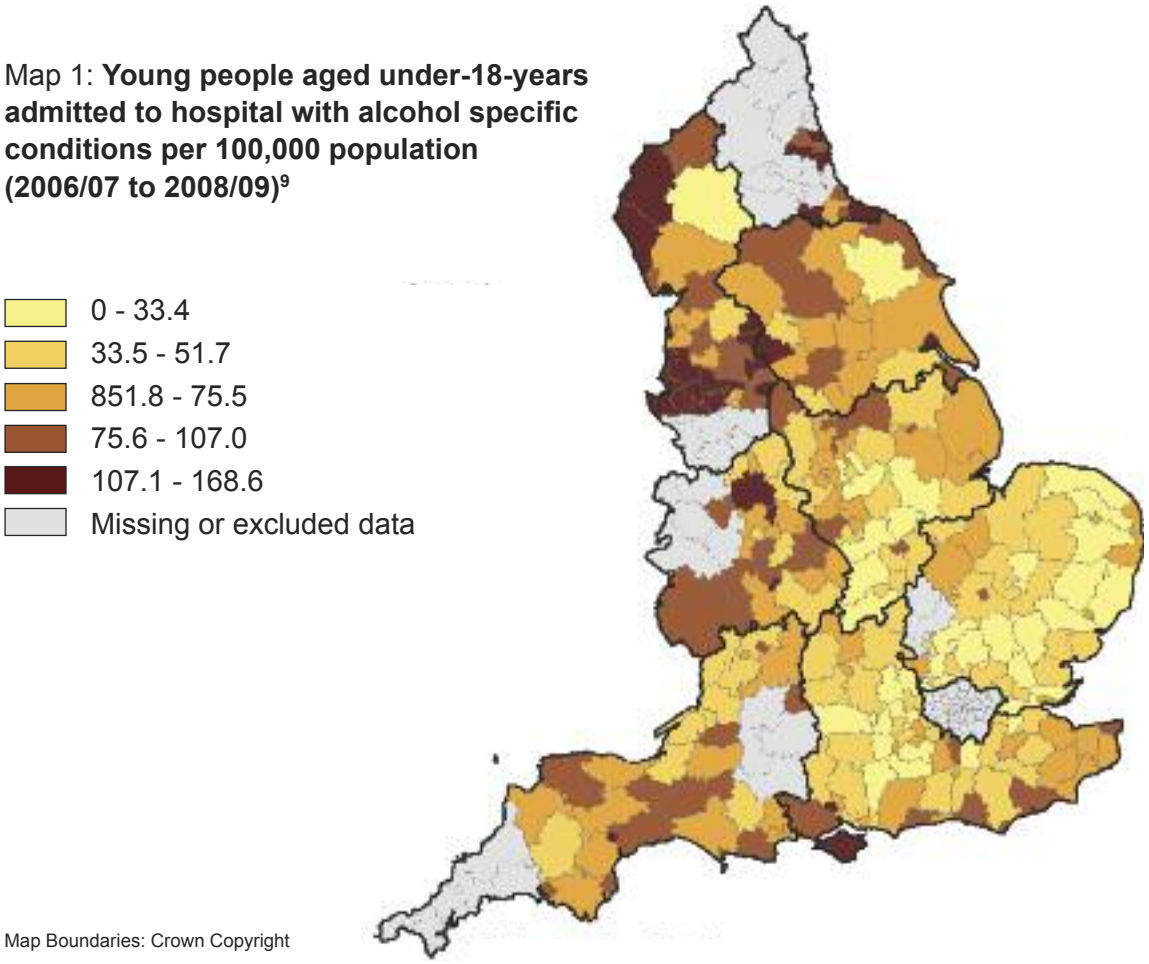
This relationship needs to be interpreted in light of the fact that it is based only on alcohol specific* harms, such as alcohol poisoning, and excludes conditions related to alcohol** such as head injuries or sprains resulting from alcohol-related assaults or falls, or attendances that are dealt with only at A&E. In addition, hospital admissions that are specific to alcohol consumption may not necessarily be recorded as such. They are often only recorded according to the treatment provided and not the cause of the event. Weaknesses in the recording of the causes of admission in hospital settings mean that the relationship between off-licence density and harm is likely to be stronger than our available data demonstrated. Importantly, this study did not attempt to calculate the numerous other negative consequences associated with alcohol such as crime, violence or traffic accidents.

Table 1: **A selection of areas with the some of the highest and lowest off-licence density and harms in young people compared with the average for England**

Local Authority	Off-licence density†	Alcohol specific under-18s hospital admissions‡
Salford	135.5	117.0
Lincoln	116.4	107.0
Gateshead	114.3	114.8
England average	**62.9**	**79.4**
Tunbridge Wells	48.3	48.4
Swale	35.6	57.7
Malvern Hills	26.7	82.4

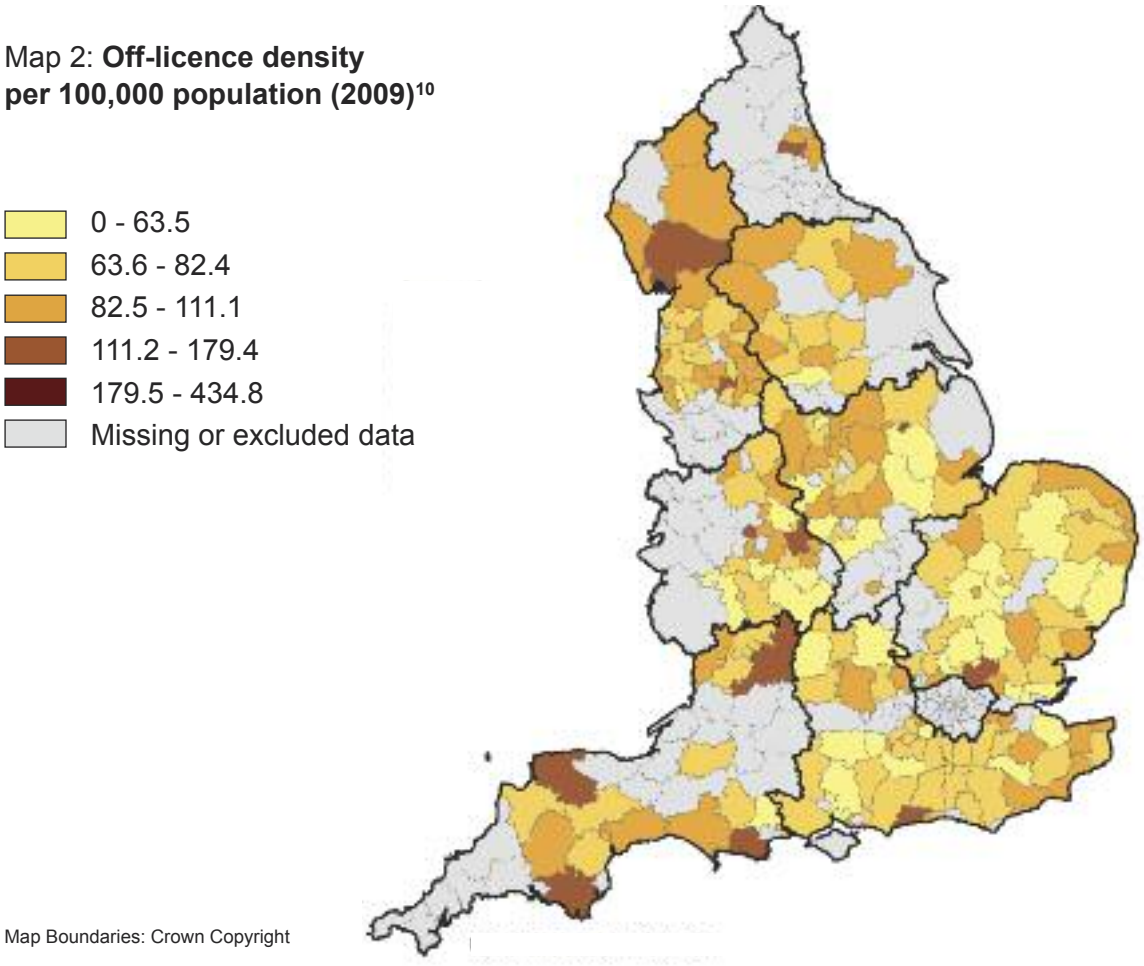
† Per 100,000 population [2009] ‡ Crude Rate per 100,000 population [2006/07 to 2008/09]

Map 1: **Young people aged under-18-years admitted to hospital with alcohol specific conditions per 100,000 population (2006/07 to 2008/09)[9]**



Map Boundaries: Crown Copyright

Map 2: **Off-licence density per 100,000 population (2009)[10]**



Map Boundaries: Crown Copyright

At a local level

By way of illustration, the following tables provide a more detailed breakdown of data for selected local authorities in greater Manchester with high off-licence density and high levels of alcohol harm in young people. Table 2 shows off-licence density and young people's alcohol specific admissions in Salford, Tameside and Wigan respectively compared with the national average.

Table 2: **Off-licence density per 100,000 of population and alcohol specific admissions of persons under-18-years per 100,000 of population**

Local Authority	Off-licence density	Alcohol specific under-18s hospital admissions
Salford	135.5	117.0
Tameside	98.0	123.4
Wigan	88.7	121.4
England average	**62.9**	**79.4**

Levels of consumption

Significant numbers of young people regularly drink in all three local authorities increasing the risk of other alcohol-related negative consequences (see Table 3).

Table 3: **Frequency of alcohol consumption amongst 14 to 17 year olds (2009)**[11]

Local Authority	Drinking twice a week or more (%)	Drinking once a week (%)	Drinking 1-3 times a month (%)	Drinking less than once a month (%)	Never drink (%)
Salford	17	21	20	25	17
Tameside	19	19	23	21	18
Wigan	18	21	24	23	14

Associated risks

There are a range of associated risks related to excessive alcohol consumption. In particular there are a number of possible links between teenage conception and alcohol consumption[12]. Table 4 shows that the rate of teenage conceptions in Salford, Tameside and Wigan (59, 60 and 50 per 1000 of population respectively) is well above the national average (40 per 1000).

Table 4: **Rate of conceptions amongst 15 -17 year olds per 1000 of the population (2004 – 2008)**[13]

Local authority	2004	2005	2006	2007	2008
Salford	57	61	59	62	59
Tameside	54	60	54	55	60
Wigan	51	59	53	54	50
England average	**42**	**41**	**41**	**42**	**40**

Growth in off-licence trade

Over recent years there has been a shift towards drinking at home that has contributed to the falling number of pub-goers. This is explained, at least in part, by the disparity in price between on and off-licensed trade; alcohol bought from off-licences now costs on average around one third of the cost of alcohol bought from pubs and other on-trade premises[14]. In the UK, sales from off-licensed premises now account for nearly 50% of all alcohol consumption[15]. Since 1992, the volume of alcoholic drinks brought into the home in the UK has increased from 527ml per person per week to 706 ml in 2008 whilst the amount of alcohol sold by the on-trade has dropped by 40 per cent between 2001 and 2008[16]. In England and Wales the number of off-licensed premises has risen significantly over the last 40 years[17] fuelled by the expansion of supermarket premises. (See table 5). Greater numbers of off-licensed premises lead to an increasingly competitive alcohol market-place resulting in still lower prices. In these circumstances an increase in consumption, and therefore alcohol harms, would be expected[18].

Greater off-licence density may increase the volume of alcohol in the home, as well as friends' and family's access to alcohol and the number of opportunities for shoulder-tapping. These ultimately translate into increased harms...

How young people access alcohol

For young people under-18, greater off-licence density does not necessarily translate into increased opportunity for the direct purchase of alcohol. Rather, greater off-licence density increases the general availability of alcohol in the home and through friends, family and from passers-by – through what is known as 'shoulder-tapping' outside alcohol retail outlets. In fact the proportion of young people who regularly bought alcohol from an off-licence has declined since 1996, from 27% to 15% in 2008. However, this is matched by an increase in the proportion who said they usually bought it from a friend or relative, from 9% in 1998 to 24% in 2008[19]. Stricter enforcement and implementation of laws banning the sale of alcohol to minors does not necessarily reduce the access or availability of alcohol to young people. Research shows that the most common ways for young people aged 11-15 years to access alcohol were being given it by friends (24% of those surveyed) or parents (22%); asking someone else to buy alcohol (18%); or taking alcohol from home with permission (14%). For older pupils surveyed, home was still an important source of alcohol – 36% of 15 year olds had been given alcohol by parents and 25% had taken it from home – but they were much more likely to have obtained it from friends (50%) or to have asked someone else to buy it for them (41%) than younger pupils[20]. Greater off-licence density may increase the volume of alcohol in the home, as well as friends' and family's access to alcohol and the number of opportunities for shoulder-tapping. These ultimately translate into increased harms including alcohol specific hospital admissions. Thus rigorous enforcement of the Licensing Act which bans the sale of alcohol to minors may only have a limited impact on the general access and availability of alcohol to young people.

Growing evidence

A growing body of international evidence underlines the risks associated with greater off-licence density for both young people and young adults. In the US, alcohol outlet density has been significantly linked to the initial likelihood and frequency of obtaining alcohol through various sources including retail outlets, shoulder-tapping, home or family members[21]. In New Zealand, increased off-licence density has been linked to the quantities of alcohol consumed by teenage drinkers[22]. Other studies indicate that greater regulation of alcohol outlet density may be a useful public health tool for reducing consumption and related harms[23]. Alcohol Concern's Youth Policy project findings highlight the clear need for further culturally relevant research in England that explores the relationship between off-licence density and harm in young people and feeds into harm-reducing public health strategies.

Lacking the powers to sufficiently control licence density

Current licensing legislation obliges licensing committees to approve all new licence applications and extensions unless particular concerns about possible contravention of licensing objectives have been raised. There is no licensing objective in England and Wales to protect public health. In practice, this means that there is little licensing committees can do to circumvent a high density of licensed premises. Although local authorities can introduce saturation policies to prevent further licences being granted in high-density areas, this is not statutory and decisions to decline new licences can be overturned on appeal.

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Table 5: **Off-licensed premises including supermarkets in England and Wales**[24]

	1910	1930	1950	1970	1989	2009
Number of off-licensed premises	24,438	22,166	23,532	27,910	45,507	49,074

Conclusion and recommendations

Conclusion

Demonstration of the positive relationship between off-licence density and harms in underage drinkers in England, excluding London, suggests that the current availability of alcohol shapes the risk a young person faces as they grow up. One in ten alcohol specific hospital admissions - such as alcohol poisoning - may be attributable to the density of off-licensed premises locally. Unfortunately, the narrowness of alcohol specific hospital admission codes means this is likely to be a considerable under-representation of underage harm. More accurate and consistent recording of alcohol-related conditions in hospitals and A&E departments would reveal a truer picture of the relationship between harms and off-licence density. These findings suggest that there may be consequences to the changing patterns of where we buy and consume alcohol: increasingly in the home, which is a reflection of the growth in off-licensed premises.

Relying simply on better enforcement of regulation banning the sale of alcohol to minors may not therefore be enough protection as young people access alcohol through the home, friends and family. It is likely to be the greater general availability of alcohol, attributable to local off-licence density that has a direct impact on the risks of harm that a young person faces. Clearly more research is needed to better understand this correlation, but the challenge for government is how to respond to this in policy terms to protect young people.

Recommendations

- Government should fund further research into the relationship between alcohol harm in young people and alcohol outlet density. There is a clear need for culturally relevant research findings to feed into harm-reducing public health strategies.

- A new health objective should be included in the Licensing Act to enable local authorities to reduce alcohol-related harm. Health-harms data should always feed into licensing decision-making and licensing authorities must be given the power to proactively refuse new applications/extensions on the basis of local health considerations.

- Government should develop and introduce standard systems to more effectively measure and record the levels of alcohol-related harm for all patients in both accident and emergency departments and via hospital admissions. This will allow for improved analysis of alcohol-related harm.

Footnotes and references

* A number of conditions are defined as wholly attributable to alcohol consumption. These conditions and their ICD-10 codes are as follows; Alcohol-induced pseudo-Cushing's syndrome (E24.4); Mental and behavioural disorders due to use of alcohol (F10; combines ICD 9 codes for alcoholic psychosis, alcohol dependence and alcohol abuse); Degeneration of nervous system due to alcohol (G31.2); Alcoholic polyneuropathy (G62.1); Alcoholic myopathy (G72.1); Alcoholic cardiomyopathy (I42.6); Alcoholic gastritis (K29.2); Alcoholic liver disease (K70); Chronic pancreatitis (alcohol induced) (K86.0); Ethanol/methanol poisoning (T51.0, T51.1); Toxic effect of alcohol, unspecified (T51.9); Accidental poisoning by and exposure to alcohol (X45)

** Each alcohol-related admission is assigned an attributable fraction that represents the proportion of admissions that can be attributed to alcohol and is based on a review of the available research. These conditions and their ICD-10 codes are as follows; E24.4 Alcohol-induced pseudo-Cushing's Syndrome; I47-I48 Cardiac arrhythmias; F10 Mental and behavioural disorders due to use of alcohol; I60-I62, I69.0-I69.2 Haemorrhagic stroke; G31.2 Degeneration of nervous system due to alcohol; I63-I66, I69.3, I69.4 Ischaemic stroke; G62.1 Alcoholic polyneuropathy; I85 Oesophageal varices; G72.1 Alcoholic myopathy; K22.6 Gastro-oesophageal lacerationhaemorrhage syndrome; I42.6 Alcoholic cardiomyopathy; K73, K74 Chronic hepatitis, not elsewhere classified and Fibrosis and cirrhosis of liver; K29.2 Alcoholic gastritis; K85, K86.1 Acute and chronic pancreatitis; K70 Alcoholic liver disease; L40 excluding L40.5 Psoriasis; K86.0 Chronic pancreatitis (alcohol induced); O03 Spontaneous abortion; T51.0 Ethanol poisoning; V02-V04 (.1, .9), V06.1, V09.2, V09.3 Pedestrian traffic accidents; T51.1 Methanol poisoning § Road traffic accidents (driver/rider); T51.9 Toxic effect of alcohol, unspecified ;V90-V94 Water transport accidents; X45 Accidental poisoning by and exposure to alcohol; V95-V97 Air/space transport accidents; C00-C14 Malignant neoplasm of lip, oral cavity and pharynx; W00-W19 Fall injuries; C15 Malignant neoplasm of oesophagus; W24-W31 Work/machine injuries; C18 Malignant neoplasm of colon; W32-W34 Firearm injuries; C20 Malignant neoplasm of rectum; W65-W74 Drowning; C22 Malignant neoplasm of liver and intrahepatic bile ducts; W78-W79 Inhalation of gastric contents/Inhalation and ingestion of food causing obstruction of the respiratory tract; C32 Malignant neoplasm of larynx; X00-X09 Fire injuries; C50 Malignant neoplasm of breast; X31 Accidental excessive cold; G40-G41 Epilepsy and Status epilepticus; X60-X84, Y10-Y33 Intentional self-harm/Event of undetermined intent; I10-I15 Hypertensive diseases X85-Y09 Assault

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Alcohol Concern

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