

Report to:

**ADULT SOCIAL CARE AND HEALTH SCRUTINY
COMMITTEE**

Relevant Officer:

Arif Rajpura, Director of Public Health

Date of Meeting:

6 October 2022

ALCOHOL CONSUMPTION, HEALTH IMPACTS AND TREATMENT IN BLACKPOOL

1.0 Purpose of the report:

1.1 To update the committee regarding alcohol consumption, alcohol-specific hospital admissions and deaths and alcohol treatment and recovery support in Blackpool.

2.0 Recommendation(s):

2.1 That the committee receives and considers the report and endorses the need for Blackpool Public Health and primary, secondary and mental health care organisations in Blackpool to work together on pathways to address alcohol-specific admissions and deaths.

3.0 Reasons for recommendation(s):

3.1 The committee requested that the following be considered as part of their work plan: Impact of alcohol during lockdowns, levels of alcohol consumption, deaths related to alcohol, the role of the new Alcohol Lead (and details of the strategic needs assessment they are developing), how services can be targeted at women (it was noted that uptake among women is traditionally very low) and what sobriety services are available.

3.2 Is the recommendation contrary to a plan or strategy adopted or approved by the Council? No

3.3 Is the recommendation in accordance with the Council's approved budget? Yes

4.0 Other alternative options to be considered:

4.1 Not applicable

5.0 Council priority:

5.1 The relevant Council priority is

- Communities: Creating stronger communities and increasing resilience.

6.0 Background information

- 6.1 Average levels of alcohol consumption in the population of Blackpool are similar to those in England, yet Blackpool's residents experience greater alcohol-related harms in the forms of dependence, hospital admissions and deaths.
During the COVID-19 pandemic, alcohol consumption in England rose, particularly in the heaviest drinkers who are most at risk of alcohol harm. Levels of increasing and higher risk drinking in England rose and have not returned to pre-pandemic levels.
Actions to prevent riskier levels of alcohol consumption in Blackpool include the Lower My Drinking app, support for Identification and Brief Advice, Personal, Social Health and Economic education support, a designated cumulative impact area for new off-licensed premises and lobbying for Health as a Licensing Objective and the Minimum Unit Price Guarantee.
- 6.2 Rates of alcohol-specific hospital admissions for Blackpool residents are over twice the England average.
At the start of the COVID-19 pandemic, in keeping with all unplanned admissions, alcohol-specific admissions in England decreased rapidly. However, unlike admissions from all causes, they then rose to similar or higher rates than at baseline in summer 2020, staying at a high level until August 2021 when they began to decline. Unplanned admissions for alcoholic liver disease have seen significant and sustained rises since June 2020.
Actions to address the high rate of alcohol-specific admissions in Blackpool include intelligence work on admission patterns and a proposed multiagency task and finish group to act on this issue.
- 6.3 Rates of alcohol-specific deaths are over twice the England average. Alcoholic liver disease is the cause of the vast majority of such deaths.
During the COVID-19 pandemic rates of alcohol-specific death rates rose significantly in England, driven by alcoholic liver disease.
Actions to address the high rate of alcohol-specific deaths in Blackpool include a reinstatement of the alcohol partnership as part of the new Combating Drugs and Alcohol Board, formal review of alcohol deaths in treatment, intelligence sharing with NHS colleagues and consideration of a review process for out-of-treatment alcohol deaths.
- 6.4 Blackpool's alcohol treatment service is provided by Horizon. Of those in treatment, 57% receive treatment for alcohol only, and 43% receive treatment for a combined drug and alcohol issue. Numbers in alcohol only treatment have been falling for a number of years. They declined further in COVID but have returned to pre-pandemic levels. There is a large amount of unmet need for alcohol treatment in Blackpool. Treatment success, as defined nationally, is stable whereas it is declining in England as a whole. Stakeholder feedback on Blackpool's treatment service was sought in 2021/22 and has fed into an action plan for the local alcohol treatment service.
Actions to improve the quality of alcohol treatment in Blackpool include a separate alcohol team and pathway, same-day drop-in assessment provision, enhanced engagement and

recovery support for service users, improved links with Children's Services and provision of clinics in community locations. Blackpool's recovery model is currently being reviewed and a coproduced new model is planned. Views of groups with protected characteristics on alcohol treatment are being sought.

6.4 Does the information submitted include any exempt information? No

7.0 List of Appendices:

7.1 Appendix 8(a): Alcohol consumption, health impacts and treatment in Blackpool

8.0 Financial considerations:

8.1 Not applicable.

9.0 Legal considerations:

9.1 Not applicable.

10.0 Risk management considerations:

10.1 Not applicable.

11.0 Equalities considerations:

11.1 Specific consideration of protected characteristics of those entering alcohol treatment have been considered in the national dataset. Further consultation work is proposed to further explore the views of those with protected characteristics.

12.0 Sustainability, climate change and environmental considerations:

12.1 Not applicable

13.0 Internal/external consultation undertaken:

13.1 Detailed in Appendix 8(a) under the heading Stakeholder feedback on Blackpool's alcohol treatment service.

14.0 Background papers:

14.1 None

Appendix 8(a)

Alcohol consumption, health impacts and treatment in Blackpool

Introduction

An estimated 25%, or 1 in 4, of adults in England are drinking at levels that pose some risk to their health.¹ 3.5%, or 1 in 29, of adults in England may have some level of alcohol dependence. Alcohol is the third leading risk factor for death and disability after smoking and obesity, with a resultant high impact on health services. Rates of both alcohol-related deaths and hospital admissions are linked to area deprivation. Alcohol dependence in England is three times as common in men as in women.

A new [Commissioning Quality Standard](#), linked to the new Supplemental Substance Misuse Treatment Recovery Grant, was published in August 2022. This aims to:

- encourage partnership approaches to effective commissioning
- improve the transparency of local alcohol and drug treatment
- increase accountability between local system partners, national and local government, and local councils and the communities they serve
- enable local partners to assess their commissioning practices

It is not expected that local areas will immediately fully meet the standard, but they should aim to make consistent progress towards it.

Data presented below includes routine national statistics and key findings from a needs assessment and treatment service review carried out by Blackpool Public Health in 2021/22. These sources informed Blackpool's recently updated [joint strategic needs assessment on alcohol](#). Information on alcohol consumption, health impacts (hospital admissions and deaths) and on the commissioned treatment service is detailed, alongside action being taken to address current issues in each area. These actions will help Blackpool to meet the commissioning quality standard mentioned above.

The lead practitioner for alcohol (and tobacco) in the public health team is Kerry Burrow. She has been in post since February 2021.

Alcohol Consumption

Data from the Health Survey for England 2015-18 suggests that the consumption of alcohol across Blackpool is similar to the England average. (Table 1) However, Blackpool has high levels of alcohol-related harm (health, disorder, violence) for the size of the population.

¹ [Nomis - Official Labour Market Statistics \(nomisweb.co.uk\)](#) adult resident population England accessed 14.03.2022

Table 1: Patterns of alcohol consumption for Blackpool and England (%)

	Blackpool	England
Adults who abstain from drinking	17.3	16.2
Adults drinking less than 14 units per week	60.0	61.0
Adults drinking more than 14 units per week	22.7	22.8

Source: PHE/NDTMS, Alcohol commissioning support packs, 2022-23

In the UK less affluent people experience a higher rate of alcohol-related health problems, despite people in different socioeconomic groups having similar alcohol consumption levels.² This is known as the ‘alcohol harm paradox’ and is well recognised, although not fully understood. Compared with their more affluent counterparts, less affluent drinkers are more likely to experience combinations of health risks (such as smoking and alcohol use), to drink in harmful patterns (such as binge drinking) and to face barriers to accessing health services.³

Changes in alcohol consumption during the COVID-19 pandemic

While we do not have data at a local level on consumption and purchasing of alcohol before and during the pandemic, we do know that patterns of consumption are similar to national averages.⁴ Thus it can be assumed that consumption will have risen in Blackpool during the pandemic as has been seen elsewhere.

Between 2019 and 2020 (before and during the pandemic), off-trade volume sales of alcohol (sales in shops and off-licenses) increased by 25%. The increase was consistent and sustained for most of 2020.⁵ This suggests that people were drinking more at home during this period.

Survey data shows that whilst most people reported drinking the same volume and the same frequency during the pandemic as they did before, those who did report drinking more tended to be heavier drinkers. In other words heavier drinkers, those at most risk of alcohol harm, brought about the overall increases in alcohol consumption seen during lockdown.⁶

The proportion of respondents drinking at increasing- or higher-risk levels was higher than previous years throughout much of the year of the pandemic and into 2021.

Figure 1 shows the prevalence of increasing and higher risk drinking for males and females in England. It can clearly be seen that while rates did decline from the high in 2020, at the end of 2021 they were not back to pre-pandemic levels and were increasing again for males.

² [Bellis, M. A., Highes, K., Nicholls, J., Sheron, N., Gilmore, I. and Jones, L. \(2016\) The alcohol harm paradox: using a national survey to explore how alcohol may disproportionately impact health in deprived individuals, BMC Public Health, 16:111](#)

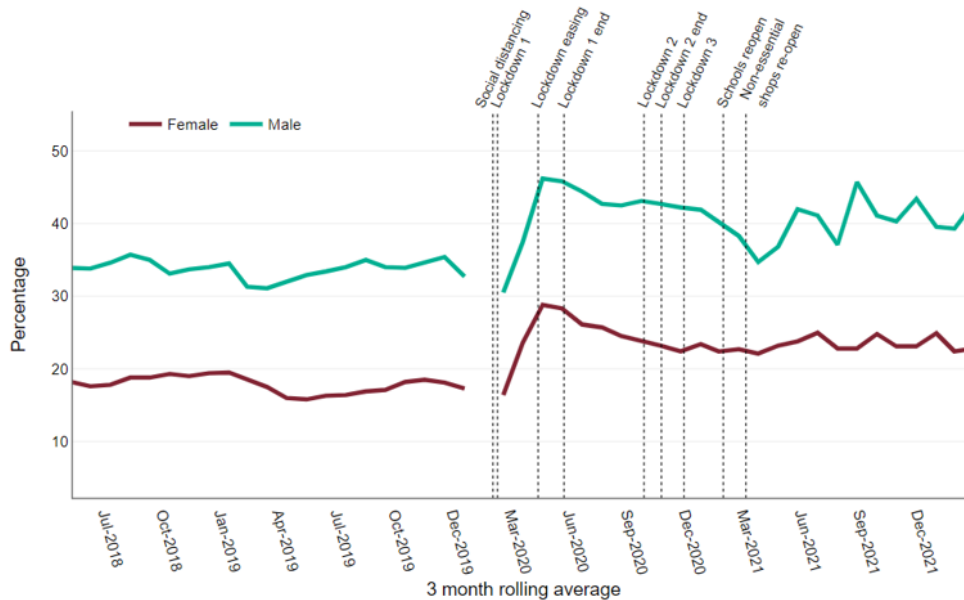
³ Drinkaware, [Understanding the alcohol harm paradox](#)

⁴ PHE/NDTMS, *Alcohol commissioning support pack, 2022-23*

⁵ OHID, [Wider impacts of COVID-19 on Health \(WICH\) monitoring tool](#), Behavioural risk factors, August 2022

⁶ PHE, *Monitoring alcohol consumption and harm during the COVID-19 pandemic*, July 2021

Figure 1: Prevalence of increasing and higher risk drinking (AUDIT-C) in England by sex



Source: OHID, Wider impacts of COVID-19 on Health (WICH) monitoring tool, Behavioural risk factors, August 2022

Action on consumption

- The [Lower My Drinking app](#) was commissioned by the council in January 2020 to prevent alcohol-related harm in the general population. It takes people through a validated alcohol consumption screening tool and gives different advice or support tailored to their level of risk from alcohol:
 - Lower risk drinkers (less than 14 units weekly) receive positive reinforcement
 - Increasing risk drinkers receive Brief intervention and advice
 - Higher risk drinkers are offered an Extended Brief Intervention (personalised 4 week programme)
 - Possibly dependent drinkers are directly signposted to Blackpool's treatment service (Horizon)

To date, 924 people have accessed the app and 94% of these have completed the alcohol screen. The vast majority of those using the app are screened as at or above increased risk drinking levels. This is in contrast to survey data on the general population which suggests that only around 23% of Blackpool residents are drinking at or above increased risk levels. This would suggest that the app is reaching the target audience of those with risky levels of alcohol consumption in Blackpool. 65% of those using the app are women, in contrast to 40% of those accessing the alcohol treatment service.

The app is regularly promoted through council social media channels and in alignment with Alcohol Awareness week and Dry January, as well as by colleagues in health, care and the Voluntary, Community and Faith sector (VCFS).

- [Identification and Brief Advice](#) is an evidence-based approach to helping people understand their alcohol intake and take some positive action to reduce their risk. It is promoted in primary

and secondary care, and in addition training in this intervention is offered by one of the council's public health trainers. Specific training for the Children's Social Care workforce is being rolled out from October 2022.

- Public Health Blackpool have a Personal, Social, Health and Economic education Support Officer for Blackpool schools who signposts school staff to appropriate resources on alcohol and can offer training.
- Blackpool has a designated cumulative impact area where the Council considers that the number of licensed premises is at an excessive level. Alcohol related crime and hospital admissions are particularly prevalent for residents here. A licensing assessment is applicable to any applications for new off-licence premises and variations to existing ones. The overall effect of this assessment is to create a rebuttable presumption that any applications listed above will be refused a licence. To rebut this presumption, an applicant would be expected to show through the operating schedule, and where appropriate, with supporting evidence, that the operation of the premises will not add to the cumulative alcohol harm impact already being experienced in the area.
- Our Director of Public Health continues to lobby for Health as a Licensing Objective and for a minimum unit price guarantee on alcohol in England.

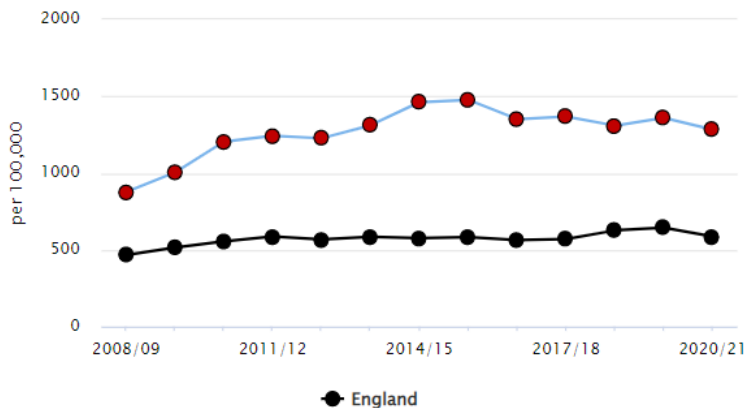
Health impacts of alcohol

1. Alcohol-specific hospital admissions

Alcohol-specific admissions are those where either the main or a secondary cause of the admission is a condition wholly due to the use of alcohol.

There were 1,740 alcohol-specific hospital admissions of Blackpool residents in 2020/21. Around two-thirds of these admissions were for males. Rates are over two times higher than the England average. The trend has been static over the last five years.

Figure 2: Trend in admissions for alcohol-specific conditions, all persons, Blackpool and England



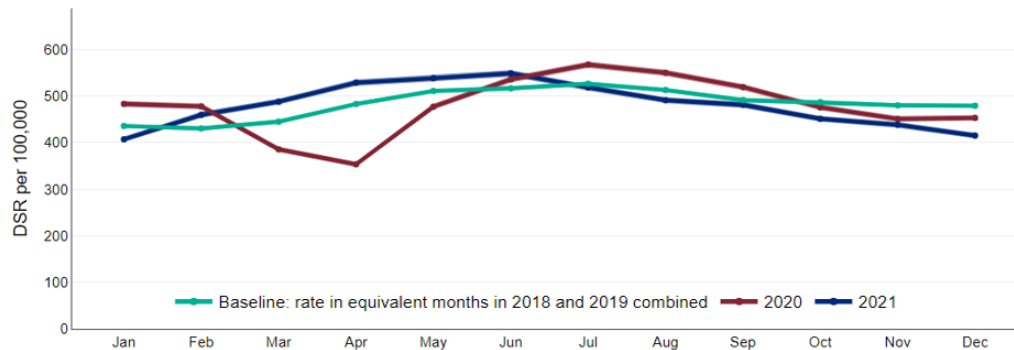
Source: PHE, Local Alcohol Profiles for England, February 2022

Changes in alcohol-specific hospital admissions during the COVID-19 pandemic

Data on changes to hospital admissions during the pandemic is only available at a national level. All

unplanned admissions, irrespective of their cause, sharply decreased as the pandemic took hold in 2020. The rate of alcohol-specific admissions decreased rapidly around the time of the first national lockdown. However, unlike admissions from all causes, alcohol-specific admissions increased to similar, or significantly higher, than baseline in the summer months of 2020. Rates continued to be higher than the baseline during the first half of 2021 before falling to just below baseline from August onwards.

Figure 3: Monthly trend in emergency hospital admissions for all alcohol-specific conditions in England - all persons



Source: OHID, *Wider impacts of COVID-19 on Health (WICH) monitoring tool, Behavioural risk factors, August 2022*

Unplanned admissions for alcoholic liver disease were the only alcohol-specific unplanned admissions to increase between 2019 and 2020. From June 2020 onwards, there have been significant and sustained increases in the rate of unplanned admissions for alcoholic liver disease.

Action on hospital admissions

- Blackpool Public Health Intelligence Team have done specific analysis on alcohol-specific admissions which will be shared with partners via the multiagency alcohol and drugs meeting convened by Blackpool Teaching Hospitals
- Blackpool Public Health are liaising with health colleagues via Primary Care Network operational partnerships, Blackpool Victoria Hospital's specialist liver and alcohol teams and via the ICB's newly formed Alcohol Services Pathway Group to initiate a task and finish group to look specifically at admissions prevention and follow-up

2. Alcohol-specific mortality

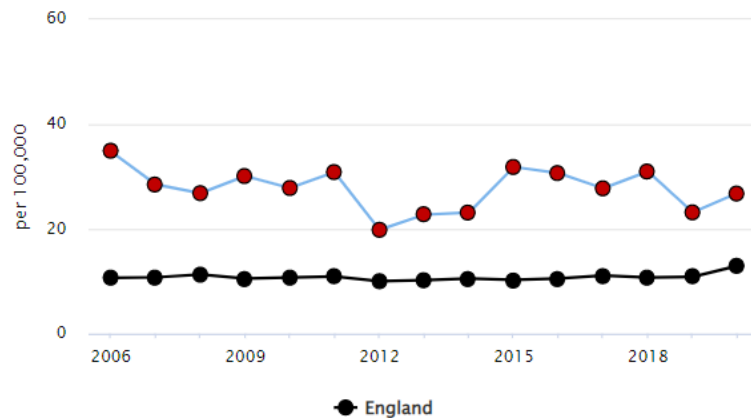
Alcohol-specific deaths are those where a condition wholly due to the use of alcohol is the underlying cause of death.

There were 48 such deaths of Blackpool residents in 2021 (provisional data). Over the last decade, there has been an average of 43 alcohol-specific deaths a year in residents of the town. Around two-thirds of these deaths are in males. Rates are over two times higher than the England average.

The trend has been static over the five years to 2020. (Figure 4)

Alcoholic liver disease is the main cause of death for those dying from an alcohol-specific cause.

Figure 4: Alcohol-specific mortality rate 2006-2020, Persons, Blackpool and England



Source: OHID, Local Alcohol Profiles for England

Changes in alcohol-specific mortality during the COVID-19 pandemic

Data on changes to mortality during the pandemic is only available at a national level. In 2020, there was a 20% increase in total alcohol-specific deaths compared to 2019. The alcohol-specific mortality rate was significantly higher from May 2020 until at least February 2022 (latest data).

The upward trend in total alcohol specific deaths was brought about by increases in deaths from alcoholic liver disease, which accounted for 80.3% of total alcohol specific deaths in 2020. Although alcohol related cirrhosis can take a decade or more to develop, most deaths occur as a result of acute-on-chronic liver failure due to recent alcohol intake, which is strongly linked to heavy drinking.

Action on mortality

- Reinstate the Alcohol Partnership as part of the new Combating Drugs and Alcohol Board
- Alcohol-only deaths in treatment will be formally reviewed at the multiagency Drug Related Death panel going forward
- Blackpool Public Health Intelligence Team have done specific analysis on alcohol-specific deaths which will be shared with partners via the multiagency alcohol and drugs meeting convened by Blackpool Teaching Hospitals.
- A process for identifying out-of-treatment alcohol only deaths is under consideration with police colleagues with a view to deciding on the need for a separate system of death reviews in addition to the Drug Related Death panel

Alcohol Treatment

1. Horizon Integrated Treatment Service

Horizon is the integrated drug and alcohol treatment service for residents of Blackpool. The service provides planned care and integrated community based treatment for drug and alcohol clients. Delphi Medical and Renaissance are the organisations that provide Horizon's treatment services for alcohol. Renaissance provides assertive outreach.

'Unstructured', or short-term, and longer, 'structured' interventions are available for people presenting with alcohol problems. One to one and group interventions are available. Treatment options depend upon the needs and complexities of each client. Alcohol clients are usually seen at the main treatment centre but home visits can be arranged if required. Structured treatment is care planned and consists of community based psychosocial interventions and clinical treatment. Community detoxification and residential rehabilitation are also available to clients who would benefit from these approaches. Specific police and probation programmes are delivered to people where alcohol is related to offending behaviours and these include alcohol interventions to support treatment and offender prevention.

2. Numbers in treatment

Our data for alcohol treatment comes from the National Drug Treatment Monitoring Service (NDTMS). It is not possible to split this data into adults and young people.

In 2020/21, there were 693 clients seen in structured treatment in Blackpool with an alcohol problem. Of these, 394 were receiving treatment for alcohol only, whilst 299 had a problem with alcohol and at least one other drug. In comparison to England, Blackpool's treatment service consistently sees a higher proportion of complex drinkers - people who are using at least two other drugs alongside alcohol. Numbers in structured treatment for alcohol only were falling even before COVID, with a declining trend seen since 2010/11. This coincides with alcohol services being merged together with drug provision, alongside less investment in alcohol specific services. (Of note, it is possible that there have been changes in the approach to recording/coding numbers in treatment for alcohol during the last decade due to changing provider).

Numbers in treatment for alcohol remain low in comparison to local prevalence estimates and rates of unmet need for alcohol treatment⁷. The 2018/19 estimate of the number of dependent drinkers living in Blackpool is 3,867, a rate of 35 per 1,000 population. This is 2.5 times higher than the England rate of 13.7 per 1,000.⁸ Around 57% of those estimated to have dependence are likely to be amenable to entering treatment.⁹ In 2018/19 there were 667 adults in treatment for alcohol only or alcohol and a non-opiate drug. This equates to approximately 30% of those estimated to be alcohol dependent and amenable to having treatment.

Changes to numbers in alcohol treatment during the COVID-19 pandemic

Numbers in alcohol only treatment did decline during the first lockdown, nationally as well as locally. Across Blackpool, numbers fell by almost a fifth between March and May 2020 (Figure 5). Numbers in treatment remained lower than normal during 2020 before beginning to rise again in 2021.

New presentations into treatment remained relatively static throughout and were the same as before the pandemic.

Overall the average number in treatment was 193 per month during the two years Feb-18 to Jan-20. The

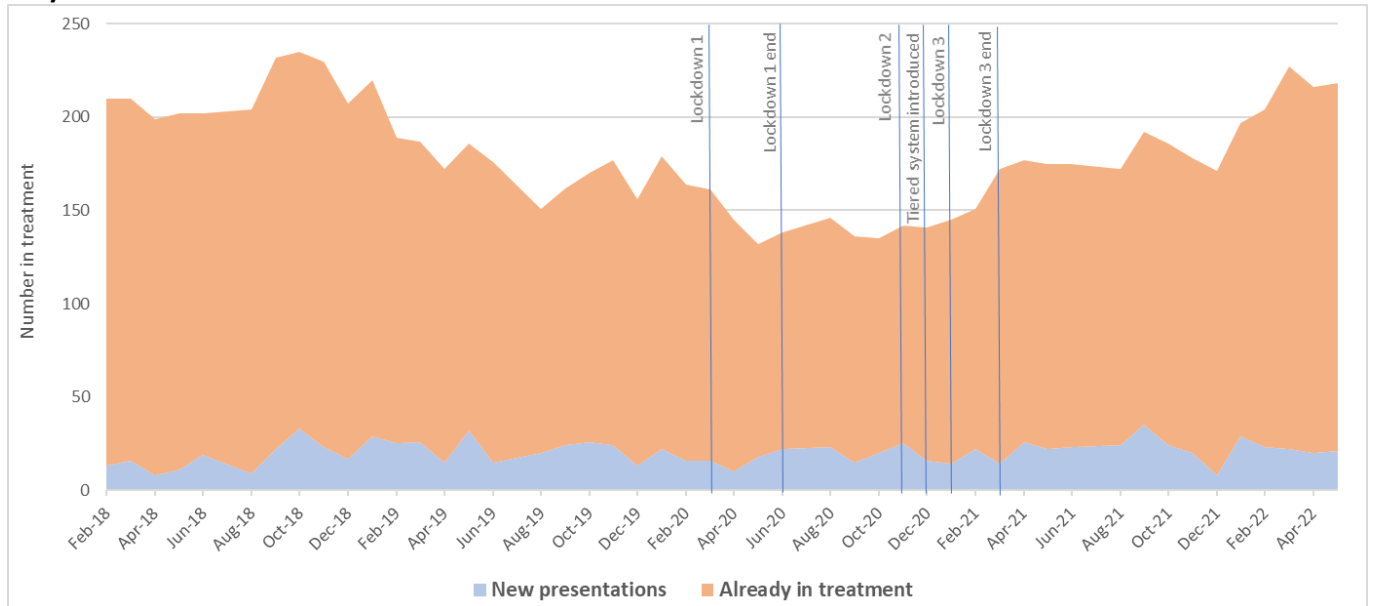
⁷ Public Health England – Adults Alcohol Commissioning Support Pack 2021-22: Key Data. Planning for alcohol harm prevention, treatment and recovery in adults. Blackpool.

⁸ PHE, [Alcohol dependence prevalence in England](#), March 2021

⁹ [Estimates of Alcohol Dependence in England based on APMS 2014.pdf](#)

following two years, Feb-20 to Jan-22 saw an average of 160 per month in treatment. Numbers in treatment in 2022 now seem to be back to the pre-pandemic levels seen in 2018.

Figure 5: Trend in the numbers of Blackpool residents in ‘Alcohol only’ treatment by month, Feb-18 to May-22



Source: NDTMS, Impact of COVID-19 on treatment activity monitoring reports, May 2022

Horizon delivered a hybrid service throughout the period of COVID-related social restrictions comprising a mixture of telephone appointments and face to face contacts depending on risk. This move to virtual/phone consultations worked well for many service users and these will continue to be offered within a hybrid model moving forward. Face to face consultations have now returned. Assertive Outreach at the hospital was suspended during the pandemic due to visiting restrictions, but referrals from the hospital to the treatment service were still made. This service recommenced as soon as restrictions were lifted.

Inpatient detoxification (IPD) decreased during COVID restrictions during 2020/21 due to a reduction in the number of beds available to allow social distancing. This number has now risen to above pre pandemic levels and we are seeing significant investment in this area with an increase in places available through extra funding.

3. Characteristics of people in alcohol treatment

Table 2 shows a demographic breakdown of clients in alcohol only treatment for 2020/21. During this period the gender and age split of those accessing treatment was broadly in line with the national picture for treatment services.

60% of those in alcohol treatment in Blackpool in 2020/21 were male and 40% were female. The Health Survey for England (HSE) 2018 found that twice as many men as women drank at increasing or higher risk levels (anything over 14 units weekly). Higher risk drinkers, the group most likely to need

treatment, are defined as males drinking over 50 units weekly and females drinking over 35 units weekly. In HSE 2018 62.5% of this group were male and 37.5% were female. In other words, the gender split seen entering our treatment service is broadly in keeping with the gender split we would expect in the population of highest risk drinkers.

The ethnic group of those in structured alcohol treatment is broadly in keeping with Blackpool’s general population. NDTMS data does not allow further comment on other protected characteristics due to small numbers.

Table 2: Age and gender of adults in alcohol only treatment for Blackpool and England 2020-21

	Total adults	Male (%)	Female (%)	Age 18-29 (%)	Age 30-59 (%)	Age60+ (%)
Blackpool	394	60	40	12	78	9
England	76,740	58	42	9	78	12

Source: PHE/NDTMS, Alcohol commissioning support packs, 2022-23

4. Treatment outcomes

The national measure of successful treatment is a count of those who had a planned exit from the treatment service and did not represent within 6 months.

In 2020/21, 62% of those in alcohol only treatment left, of which 62% left treatment successfully. This figure of 38% of those in treatment for alcohol only completing successfully is comparable to the England figure of 35%. However, whilst in Blackpool the trend for successful completion has been static over the last five years, it is declining for England.¹⁰

5. Recovery support

At present a review of the recovery support available in Blackpool is being carried out, led by the Lived Experience Team. This will feed into the design of a new, coproduced recovery model involving commissioned services and the Voluntary, Community and Faith sector.

Acorn, a lived experience organisation in the North West, are subcontracted by Delphi to deliver a number of recovery programmes, available to both alcohol and drug clients. These include the Reduction and Motivation Programme (RAMP), Dependency and Emotional Attachment Programme (DEAP – a community rehabilitation programme) as well as Open Minds (a low level Cognitive Behavioural Therapy group) and PACES (Personal responsibility And Commitment to Emotional Intelligence and Self-awareness). Delphi also run ‘My Recovery’ groups for people with both drug and alcohol problems as well as a bespoke alcohol brief intervention group over a rolling 6 week period. Further SMART Recovery groups will start running in the autumn to enhance the ‘Freedom’ component of Horizon’s offer. Acorn also provide a dedicated Early Abstinence Recovery Support worker in the Alcohol team at Horizon. Horizon also connect people with mutual aid organisations such as Alcoholics

¹⁰ OHID Local Alcohol Profiles for England 2022

Anonymous and Narcotics Anonymous where appropriate.

6. Stakeholder feedback on Blackpool's alcohol treatment service

During the latter part of 2021 and in early 2022 Blackpool Public Health sought feedback from stakeholders on the commissioned alcohol treatment service. This was done through meetings with primary and secondary care health colleagues and via a survey of stakeholders and service users carried out by Infusion Research. The response rate to the survey was low, most likely due to the ongoing impact of the pandemic in early 2022 when it was carried out.

Despite the low numbers, some important and consistent messages were received. Responses came from those with a variety of health, council and third sector roles as well as from service users.

Key messages included:

- Some good relationships with staff, effective staff
- Good group work
- Would like to see a wider range of support and treatment available, including alternatives to groups
- Would like improved waiting times and quicker appointments, including for detoxification
- Would like more proactive promotion and communication
- More need to 'think family'
- Active and dynamic approaches needed for engagement and retention

Action on alcohol treatment

- A specific alcohol action plan for completion by December 2022 has been agreed with Horizon building on the findings of the needs assessment and service review.
- Some actions from this plan are already completed:
 - The establishment of a separate alcohol team and pathway within Horizon, operating at a separate site from the drug team and with a single point of contact.
 - Provision of drop-in same day assessment clinics for alcohol only clients Monday to Friday
 - System established for routine correspondence with primary care on alcohol clients progress
 - Enhanced engagement work to follow up those who are referred but do not attend assessment
 - Enhanced recovery support through routine follow up contacts at 3 and 6 months after discharge from treatment
 - Colocation of Horizon worker alongside children's services and routine attendance at Multiagency Risk Assessment Conferences (MARAC) and Multiagency Safeguarding Hub (MASH) meetings
 - Community sites for clinics being offered in Claremont and at the Women's Centre every week

- Blackpool Public Health are commissioning focus group work to consult with people with certain protected characteristics who have (or have had) problematic alcohol use and find out their experiences and views with regards to either not feeling able to, or choosing not to, engage with alcohol services, with a view to shaping future service design. These will include people who identify as: men, women, LGBTQ+, having a disability
- Horizon is also an active partner in Blackpool's work with people experiencing multiple disadvantage, such as Changing Futures and Project ADDER. This enables flexible outreach work with those who are alcohol dependent and have other multiple complex needs. It has improved access into detoxification pathways for this group as a result.