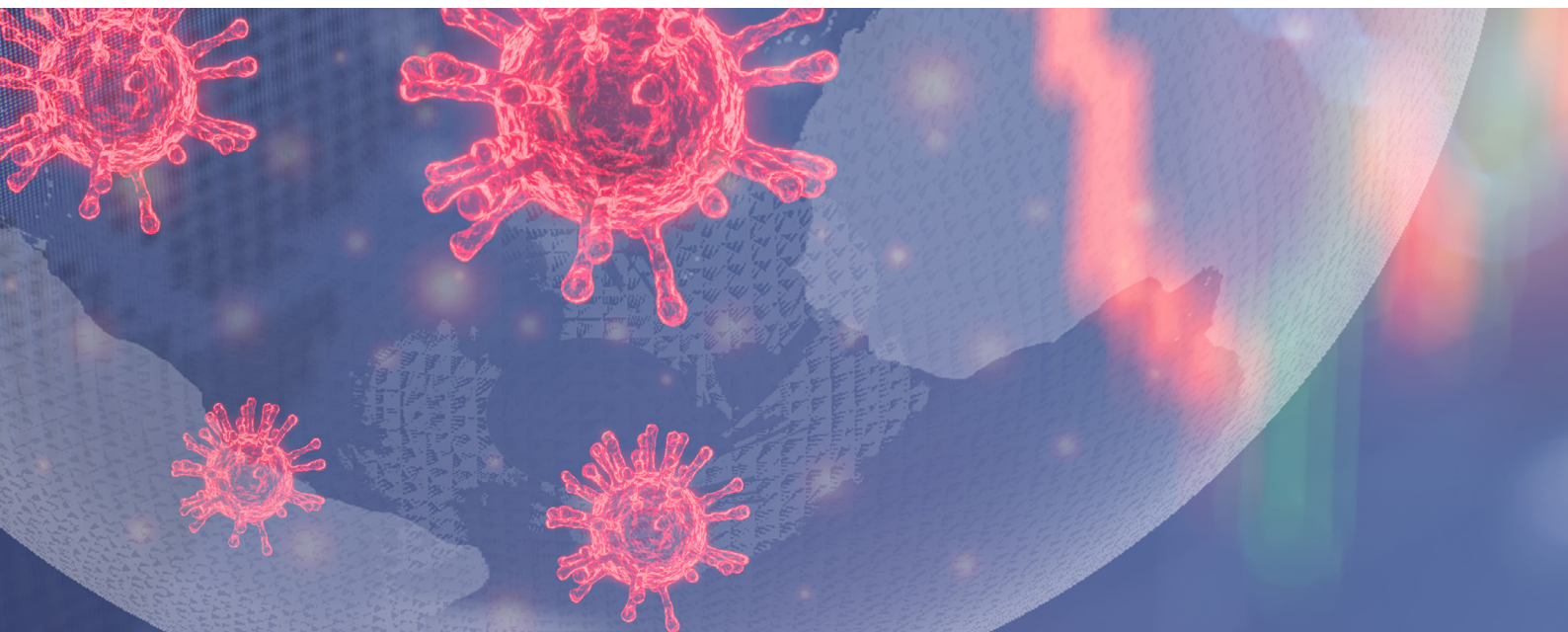# The COVID hangover

Addressing long-term health impacts
of changes in alcohol consumption
during the pandemic

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IAS | Institute of Alcohol Studies

HEALTH LUMEN

The COVID hangover: addressing long-term health impacts of changes in alcohol consumption during the pandemic

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About the Institute of Alcohol Studies

IAS is an independent institute bringing together evidence, policy and practice from home and abroad to promote an informed debate on alcohol's impact on society.

Our purpose is to advance the use of the best available evidence in public policy discussions on alcohol. The IAS is a company limited by guarantee (no. 05661538) and a registered charity (no. 1112671).

About HealthLumen

HealthLumen is a leader in the field of mathematical modelling of NCDs and assessing the impact of interventions over time.

Our capability is based on a powerful, and extensively validated, microsimulation-based platform which is used to generate evidence to quantify the future impact of interventions on NCDs when scaled across the population. Such interventions include policy, prevention, screening, and treatment interventions.

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Foreword by Professor Linda Bauld OBE

More than two years have passed since the beginning of the COVID-19 pandemic, and attention is shifting towards the longer-term recovery and the policy responses needed to improve preparedness, narrow inequalities, and address the indirect consequences of the pandemic.

One such indirect consequence has been changes in drinking patterns. As a result of the changes in alcohol consumption that have happened since 2020, this modelling study projects there could be thousands of additional premature deaths and large costs to the health service in England by 2035. The research provides a snapshot of a small number of the many diseases related to alcohol, meaning the true impact is likely to be far greater.

This long-term modelling matches up with what has already been seen in the real world in the short term, with rises in alcohol-specific deaths in 2020 and 2021, seen across all four UK nations.

Evidence already exists for policy responses that can reverse these trends and prevent these longer-term consequences for health and healthcare systems. Nine years ago, I led the development of an independent evidence-based alcohol strategy for the UK called *Health First*. However progress has been limited on many aspects, particularly in England, and consequently many of the recommendations presented in this report are similar to the recommendations made in *Health First* in 2013.

The pandemic has brought many lessons and highlighted areas for improvement in our systems and approaches. The hope is that this research draws attention to alcohol harm as one of the indirect effects of the pandemic, and that there is appetite for dialogue together with action to reverse these worsening trends.

Professor Linda Bauld OBE, FRSE, FRCPE, FAcSS, FFPH (Hon)

Bruce and John Usher Professor of Public Health, Usher Institute, The University of Edinburgh

Director, SPECTRUM Consortium

Interim Chief Social Policy Adviser, Scottish Government

Institute of Alcohol Studies Trustee

The COVID hangover: addressing long-term health impacts of changes in alcohol consumption during the pandemic

Summary

Drinking patterns in England changed during the COVID-19 pandemic

There has been an increase in the number of higher risk drinkers, and the heaviest drinkers have increased their consumption the most, which brings a risk of more alcohol-related health problems. Changes in alcohol consumption have continued beyond the national lockdowns of 2020 and 2021.

There was a 20% increase in alcohol-specific deaths in England in 2020 compared with 2019, and this trend persisted through 2021. There have also been changes in healthcare access during the pandemic, which could mean other aspects of alcohol harm worsen but become less visible. The long-term indirect effect of the pandemic on alcohol harm is unknown.

Methods: a microsimulation model to project future alcohol harm

This modelling study used the HealthLumen microsimulation model along with a range of survey and healthcare data to predict the impact of changes in alcohol consumption on future alcohol-related harm. Future trends in alcohol consumption are uncertain. To account for this uncertainty, three different scenarios for future alcohol consumption were created. This study projected the impact of changes in alcohol use on rates of nine of the main diseases linked to alcohol (high blood pressure, stroke, liver disease, and six forms of cancer) up to 2035.

Key findings from the microsimulation model

This microsimulation model projects that even if the changes seen to alcohol consumption are short-lived, there are knock-on effects on alcohol harm over the longer term.

Depending on future trends in alcohol consumption, the model projects there will be between 2,860 and 147,892 additional cases of the nine alcohol-related diseases studied in England by 2035.

This is projected to lead to between 2,431 and 9,914 extra premature deaths, and to impact the less well-off in society the most.

The costs to the National Health Service are estimated to be between £363 million and £1.2 billion.

These projections are consistent with recent real-world increases in alcoholic liver disease emergency hospital admissions and alcohol-specific deaths.

Conclusions

Changes in alcohol consumption during the COVID-19 pandemic, even if short-lived, will result in a significantly increased health and economic burden in England. If drinking patterns do not revert to pre-COVID patterns, the disease burden will be far higher.

These increases in alcohol harm and costs to society could be prevented as part of COVID-19 recovery planning. This will prevent avoidable ill-health and premature deaths, reduce the impact on the healthcare system, and save money.

Evidence already exists on the health benefits and cost-effectiveness of various alcohol control policies, which can complement other ongoing policy agendas. They can offer return on investment, are low cost, or can generate revenue, contributing to the health, social and economic recovery from the pandemic.

Recommendations

A **new national alcohol strategy** for England is needed, with the following evidence-based policies taking priority:

1. **Increase funding and resources for alcohol treatment and support,** over and above what is promised in the new Drug Strategy, based upon anticipated need. Alongside this, increase resources for primary and secondary prevention, such as screening and brief interventions.

2. **Capitalise on the opportunities presented by the new alcohol duty system** commencing in 2023. The principle of a strength-based system is welcome, but duty rates should be consistent across different categories and must automatically increase in line with inflation.

3. **Introduce minimum unit pricing for alcohol.** This would align England's policy with Scotland and Wales. Regarding the minimum price level, others have recommended that Scotland uprates their minimum price to 65p per unit .

4. **Add protecting and improving public health as a fifth objective of the alcohol licensing system** in England, as it is in Scotland. This will enable health more broadly to be part of local decision-making on alcohol availability.

5. **Improve the regulatory approach to alcohol marketing to reduce exposure and influence among the vulnerable.**

Abbreviations and Glossary

Terms	Meaning
ABC1	Occupational social grade grouping covering junior, intermediate and higher managerial and professional roles, which can be an indicator of a socio-economic status
Alcohol-related	In this report, broad term to describe harms where alcohol is among the causes. Can include health (e.g. chronic diseases, accidents and injuries), harms to others (e.g. violence, impact on families), impacts on healthcare (e.g. hospital admissions), or costs (e.g. to healthcare, other public services).
Alcohol-specific death	Deaths where the underlying cause of death was classed as alcohol-specific. For details of the conditions included, see: Alcohol-specific conditions
ATS	Alcohol Toolkit Study, conducted by University College London
AUDIT-C	Alcohol Use Disorders Identification Test – Consumption. Shorter 3-item version of the 10-item AUDIT questionnaire, used to identify increasing and higher risk drinkers (defined as those scoring 5+ AUDIT-C).
Baseline scenario	Where 2019 levels of alcohol intake continue, assuming no change in alcohol intake within age and sex group from 2019.
C2DE	Occupational social grade grouping covering skilled, semi-skilled, unskilled and casual roles, along with pensioners and unemployed people, which can be an indicator of socioeconomic status
Direct cost	The expenditure that is directly attributable to the utilisation of healthcare resources.
Lockdown	Periods of time where the population faced legal restrictions and further guidance to combat the spread of COVID-19. All lockdowns were different, but shared common features, such as venue closures, stay at home requirements, and limits on social contact
Microsimulation	A computer model that replicates real life as closely as possible using national population and disease statistics. It can test the long-term impact of a range of different scenarios on future outcomes. This model is referred to as 'the microsimulation'
NCD	Non-communicable disease
NHS	National Health Service
Off-trade	The sale of alcohol in supermarkets, off-licenses and shops who do not have permission for their customers to consume alcohol on site
OHID	Office for Health Improvement and Disparities, formerly part of PHE
On-trade	The sale of alcohol in pubs, restaurants and venues where their customers can consume alcohol on site
PHE	Public Health England (until 2021)
Prevalence	This is the total number of cases (both pre-existing and newly occurring) of a disease in a particular population over a given time period

Background

The ongoing global pandemic of coronavirus disease (COVID-19) caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has so far led to 522 million recorded cases and over 6 million deaths worldwide (as of May 2022) (1). In addition to the direct effects of the virus, the pandemic has also had numerous indirect effects on health and wellbeing.

One of these indirect effects in England has been changes in alcohol consumption. Measures necessary to control the spread of COVID-19, described as non-pharmaceutical interventions, are one factor behind the indirect effect of the pandemic on alcohol consumption and harm. Non-pharmaceutical interventions have included restrictions on movement and social contact, stay at home orders, the closure of services and non-essential businesses; measures collectively now known as 'lockdowns'.

Non-pharmaceutical interventions have influenced where and how alcohol has been purchased. Before the pandemic, typically, the on-trade comprised approximately one-third of alcohol sales, with the other two-thirds of alcohol sales taking place in the off-trade (supermarkets, off-licences etc.) (2). During lockdowns in England, on-trade premises which sell alcohol to be consumed on-site, such as pubs and restaurants, were closed. In total there have been seven and a half months of on-trade closures, with the dates summarised in a 2021 report from Public Health England (PHE) (3).

When hospitality has been open, there have been various restrictions at different points in time. Examples of these included a ban on indoor dining, table service only, limits on table sizes, 10pm curfews, and a requirement to have 'substantial meals' when ordering alcohol. As well as restrictions, there was also Government support for the hospitality sector through a temporary VAT reduction, relaxations on licensing laws allowing more 'pavement dining', and the 'Eat Out To Help Out' meal discount scheme in summer 2020. The dates of on-trade closures and details of alcohol policy-relevant changes are detailed for the whole of the UK in this interactive timeline. In addition to closures and restrictions themselves, other effects such as sharp falls in disposable income may also have led to changes in alcohol use, because affordability is a key driver of alcohol consumption (4).

What has happened to alcohol consumption?

On-trade closures saw alcohol consumption displaced into the off-trade (5). A large-scale repeated cross-sectional survey found, that at a population level, the introduction of the first lockdown in Spring 2020, the easing of restrictions in summer 2020, and the reintroduction of restrictions in Autumn 2020 all led to no significant changes in four measures of weekly alcohol use overall (number of alcohol units, the proportion of people drinking more than 14 units, the average number of heavy drinking occasions, or the average number of drinking days) (5).

However, as early as April 2020 (in the first month of the first UK lockdown), data from opinion polls and reports of consumer spending indicated changes to individuals' drinking patterns. A report synthesising the emerging evidence base in June 2020 identified that different surveys repeatedly found between a fifth and a third of people reported drinking more during lockdown (6). Where the proportion of people drinking less during lockdown had also been reported, this was often similar to or exceeded the proportion drinking more during lockdown. However, 'drinking more' was often not well-defined, and constituted a combination of increases in frequency of consumption, increases in

quantity per occasion, and/or increases in heavy episodic drinking (6).

One survey which measures higher risk drinking and has been conducted continuously throughout the pandemic (with a change in delivery mode from face-to-face to telephone) is the Alcohol Toolkit Study (ATS). The ATS is a monthly cross-sectional survey, and shows an increase in the proportion of people who are drinking at increasing or higher risk levels which has been sustained over the course of the pandemic (Figure 1).
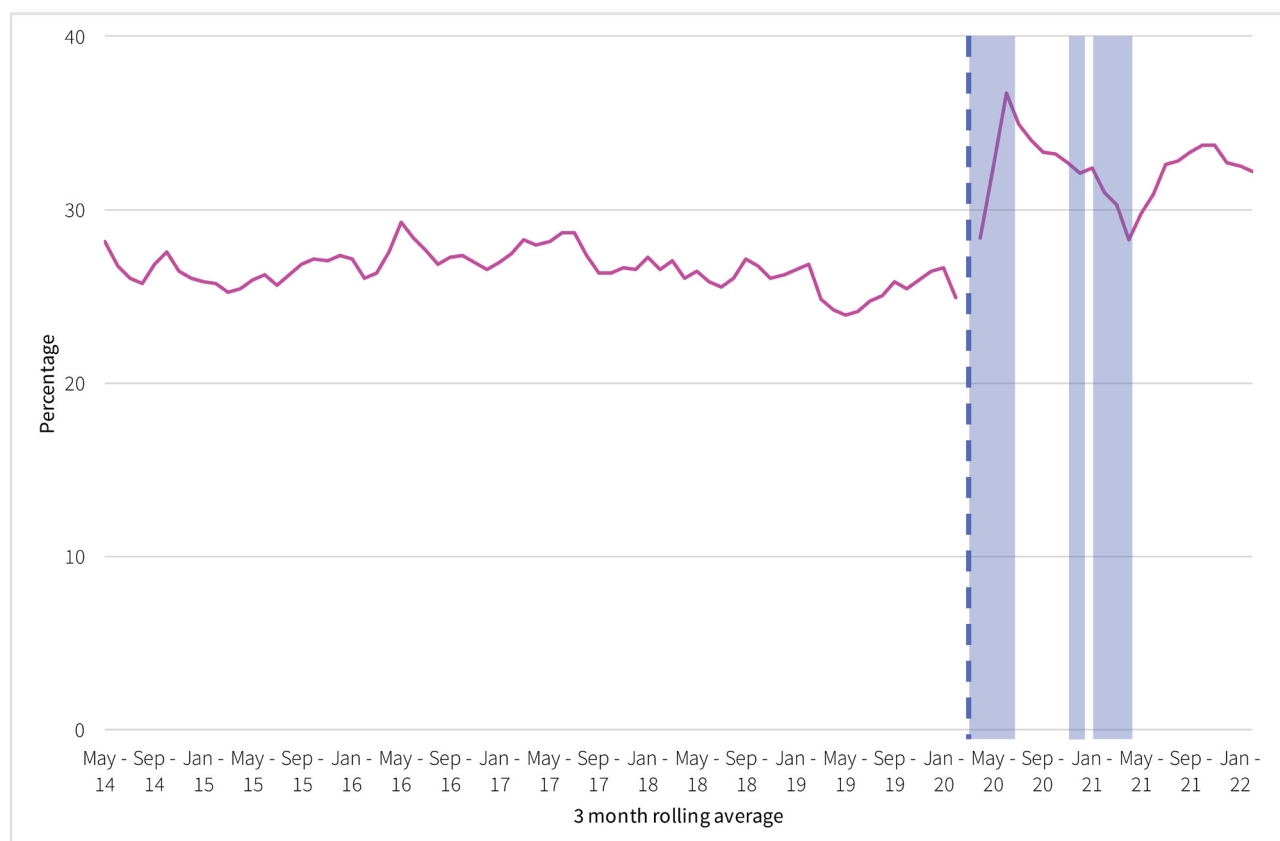
Figure 1: Prevalence of increasing and higher risk drinking (AUDIT-C score 5+) in England. Source: Alcohol Toolkit Study, UCL, from OHID's Wider Impacts of COVID-19 tool (7).

Note: Shading represents on-trade closures. Various other restrictions were in place. Due to the pandemic the March 2020 survey did not complete face-to-face collection at short notice and is missing.

Surveys have experienced interruptions in data collection due to the pandemic and have limitations around using self-reported consumption measures such as recall bias. This means it is also valuable to examine revenue from alcohol duty receipts and the total amounts of ethanol released for sale by HM Revenue and Customs. Different comparisons of these data indicate there has been a change in the overall amount of alcohol released for sale in the UK since the start of the pandemic. For the calendar year 2020 there was no difference in the volume of duty-paid alcohol (an increase of 0.04%) compared to 2019 (3). Taking an average of the years 2015-19 as the comparison instead, total ethanol clearances released by HMRC were 1.8% higher in 2020, and 4.9% higher in 2021 (year to October) (8,9). There have been interruptions to payment timings and an increase in spoilage during the pandemic, both of which could affect the comparability of figures. These aggregate data mask the changes in individuals' consumption that are much more evident in some of the individual-level self-reported data.

Nevertheless, these data show a small increase in the volume of alcohol cleared for sale or receipts from alcohol duty over the course of the pandemic. This effect has been sustained and is still ongoing.

Heavier drinkers are drinking more

The increase in the prevalence of drinking at increasing and higher risk levels is not spread evenly across different groups in society.

A more detailed analysis examined the ATS data from August 2018 to the end of the first national lockdown in July 2020 (10). This found a significant increase in high-risk drinking (defined in this study as AUDIT-C score of 5+) during the COVID-19 lockdown (+39.5%), contrasted against a small decline (−7.8%) during the same time period in 2018/19. This increase did not differ by age group, but there were greater increases among women (+55.4%) than men (+30.7%). There were also greater increases in high risk drinking among participants categorised as belonging to lower occupational social grades ('C2DE', +63.9%) than those belonging to higher occupational grades ('ABC1', +29.2%) (10).

PHE published a major report on alcohol consumption and harm during COVID-19 in July 2021, which summarised existing surveys and analysed alcohol purchasing data. Among existing surveys that measured participants' drinking before the pandemic, these found that people who reported drinking more during the pandemic than before tended to be heavier drinkers (3). PHE's analysis of off-trade alcohol purchasing data also found heavier drinkers disproportionately increased their alcohol purchasing. There were 12.6 million extra litres of alcohol bought in the off-trade in 2020-21 relative to 2019-20, an increase of 24% (3). The top 20% of alcohol purchasers in the two years before COVID-19 accounted for 42% of this total increase in alcohol purchasing, and the top 40% of alcohol purchasers in the two years before COVID-19 accounted for 68% of the total increase in alcohol purchasing (3).

Other studies have corroborated these findings. A separate study (which used the same off-trade alcohol purchasing data as the PHE analysis above) compared off-trade alcohol purchasing in 2020 with 2015-19, finding that alcohol purchasing increased the most in more deprived households, and in the higher alcohol purchasing households (11). A report by the Department of Health and Social Care and Office for National Statistics (ONS) published in September 2021 analysed longitudinal Understanding Society data. This report found that among those who had recently had an alcoholic drink, 12% of participants who drank four or more times a week reported drinking more than before the pandemic. An increase in frequency was much less common among less frequent drinkers (12). In another study which used a longitudinal design, risky drinking at baseline was associated with increasing alcohol consumption by follow-up, as was reporting drinking alcohol to cope. However this study had a small and self-selecting sample (n=186 completing multiple survey waves) (13).

The findings that increased alcohol consumption may be concentrated within specific groups, such as women, those who are disadvantaged, and people who were heavier drinkers to begin with, not only have potential health consequences but may also widen health inequalities.

What has happened to diseases and deaths due to alcohol?

There are over 200 health conditions linked to alcohol, and many of these are chronic conditions including cardiovascular diseases and seven types of cancer (14). In England, more working years are lost to alcohol than to the ten leading causes of cancer death combined (15).

During the pandemic, healthcare as a whole has not been accessed as it normally would have been. This was particularly the case in the early stages of the pandemic and in the first lockdown, when overall healthcare utilisation reduced sharply (16,17), including for substance use disorders (18). Recent data show overall emergency department attendances and

emergency admissions by early 2022 were closer to pre-pandemic levels (19), but total NHS outpatient referrals are at lower levels than those prior to the pandemic, particularly for GP referrals (20). NHS waiting lists are also at record levels of six million people (21), performance against cancer waiting time targets has fallen (22), and ambulance call response times are the longest since this indicator was introduced in 2017 (23). Taking this together with the increases in higher risk drinking, there is a continued risk that alcohol harm persists or worsens but becomes less visible.

Overall rates of unplanned admissions to hospital for alcoholspecific causes decreased by 3.2% in 2020 compared to 2019. PHE stated that this is related to reduced admissions for mental and behavioural disorders due to alcohol use, which may in be turn linked to the pattern of reduced healthcare utilisation across the board. Despite these findings, there was a significant increase of 13.5% in unplanned admissions for alcoholic liver disease in 2020 (3). The most recent data show that this increase has also persisted through 2021 (Figure 2).
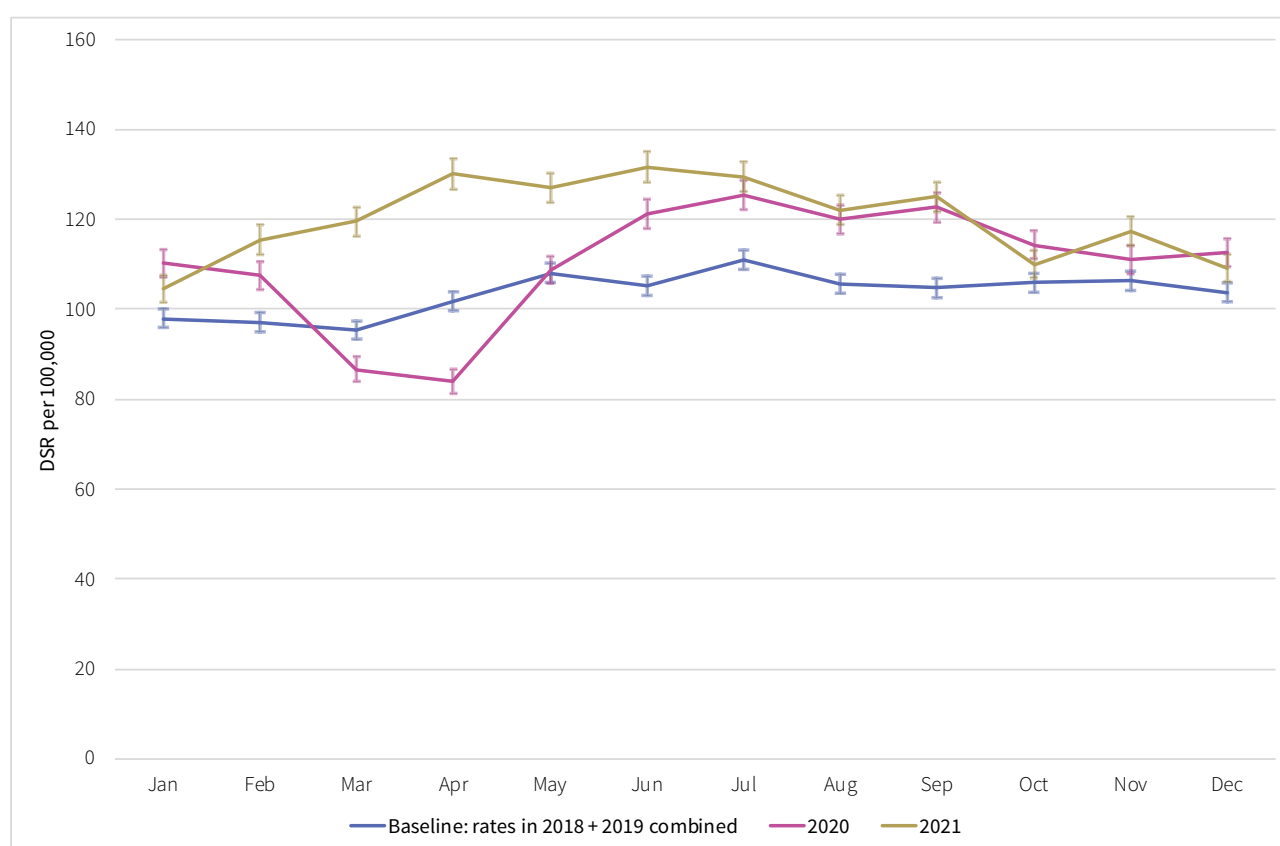
Figure 2: Monthly trend in emergency hospital admissions for alcoholic liver disease in England - all persons. DSR = directly age-standardised-rate per 100,000 population. Source: Hospital Episode Statistics from OHID's Wider Impacts of COVID-19 tool (7)

There has also been an increase in the number of alcohol specific deaths. These were first reported by the ONS and are also included in the PHE report. In 2020, there was a 20% increase in alcohol specific deaths in England compared to 2019 (3).

Again, the most recent data show that this increase has persisted through 2021 and into 2022 (Figure 3).
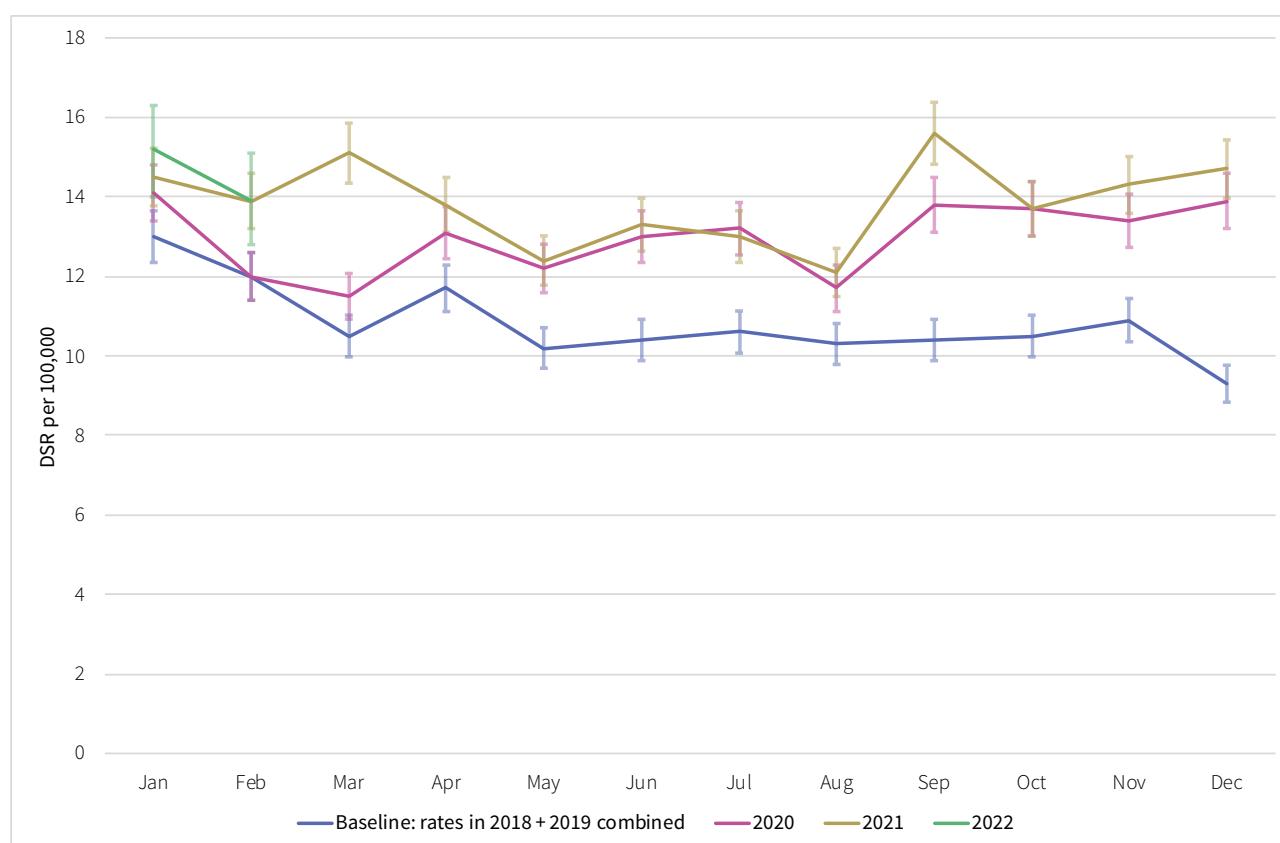
Figure 3: Monthly trend in mortality for all alcohol-specific conditions in England - all persons. Source: Mortality data from Office for National Statistics from OHID's Wider Impacts of COVID-19 tool (7)

Looking at substance use treatment services (alcohol and/or other drugs), there was no change in the numbers entering treatment between April 2020 and March 2021 (24). However, there is some evidence that substance use treatment outcomes have worsened during the pandemic. There was a 27% relative increase in deaths in substance use treatment: in 2020-21 3,726 people died while in contact with treatment services (1.4% of all adults in treatment) compared with 2,929 in 2019-20 (1.1%) (24). The increase was the largest among 'alcohol only' clients[1], with a 44% increase in deaths during treatment during 2020-2021, from 741 deaths in 2019-20 (1.6% of all adults in treatment) to 1,064 deaths in 2020-21 (2.3%) (24). Most people with alcohol dependence are not in

contact with treatment (25), so these worsening outcomes among the treatment group may be a signal of a larger problem.

Future trends in consumption and harm are uncertain

The COVID-19 pandemic is not over, and the economic and social consequences will be experienced for some time to come. The House of Commons Health and Social Care, and Science and Technology Committees' 'lessons learned' report in October 2021 stated 'existing social, economic and health inequalities were exacerbated by the pandemic' (26). Before the pandemic, alcohol-related mortality rates in the most disadvantaged group were 70%

1   The National Drug Treatment Monitoring System divides people in treatment into 4 substance groups: opiate, non-opiate, non-opiate and alcohol, and alcohol only. 'Alcohol only': people who have problems with alcohol but do not have problems with any other substances. Of the people who said they had a problem with alcohol, 60% (52,220) said it was their only problem substance. For more information please see Adult substance misuse treatment statistics 2020 to 2021: report

higher than those in the least disadvantaged group, and alcohol-specific mortality rates in the most disadvantaged group were 2.4 times those in the least (27). The north of England has long had higher rates of alcohol-related and alcohol-specific mortality than the south (27). The increase in alcohol specific deaths that has occurred since May 2020 onwards has also been concentrated in more disadvantaged groups (7).

There is very limited evidence from past pandemics regarding the short or longer term impacts on alcohol consumption and harm (28). The longer term consequences of the pandemic now coincide with the unprecedented rise in the cost of living, due to rising energy costs alongside inflation measured at 7.8%, the highest levels for 40 years (29). There is evidence that these consequences impact on alcohol consumption in multiple ways: in economic crises, overall alcohol consumption tends to fall (30), but high risk drinking also increases in some groups (31). It is possible alcohol consumption becomes increasingly polarised, with consequences for alcohol harm and health inequalities (32).

Most of the health consequences of any changes in alcohol consumption will take time to be realised, as many of the health consequences of alcohol are chronic conditions that develop over a long period of time.

Because of this uncertainty, there is a need to model scenarios of future trends to identify the scale of the future disease burden, and the kinds of policy responses and resources needed.

Research aims and objectives

This study aims to quantify the longer-term impact of changes in alcohol consumption during the COVID-19 pandemic on epidemiological (alcohol-related disease incidence, premature mortality) and economic (healthcare costs) outcomes using a peer-reviewed and well-validated microsimulation model (33–37).

Because of the uncertainty around future consumption trends, this study models what will happen to alcohol harm if alcohol consumption goes back to pre-pandemic levels imminently, after a delay, or if these new drinking patterns are permanent.

Methods

This study used the peer-reviewed and well-validated HealthLumen microsimulation model (33–35). The Organisation for Economic Co-operation and Development names microsimulation the most appropriate method for risk-factor and non-communicable disease modelling (38).
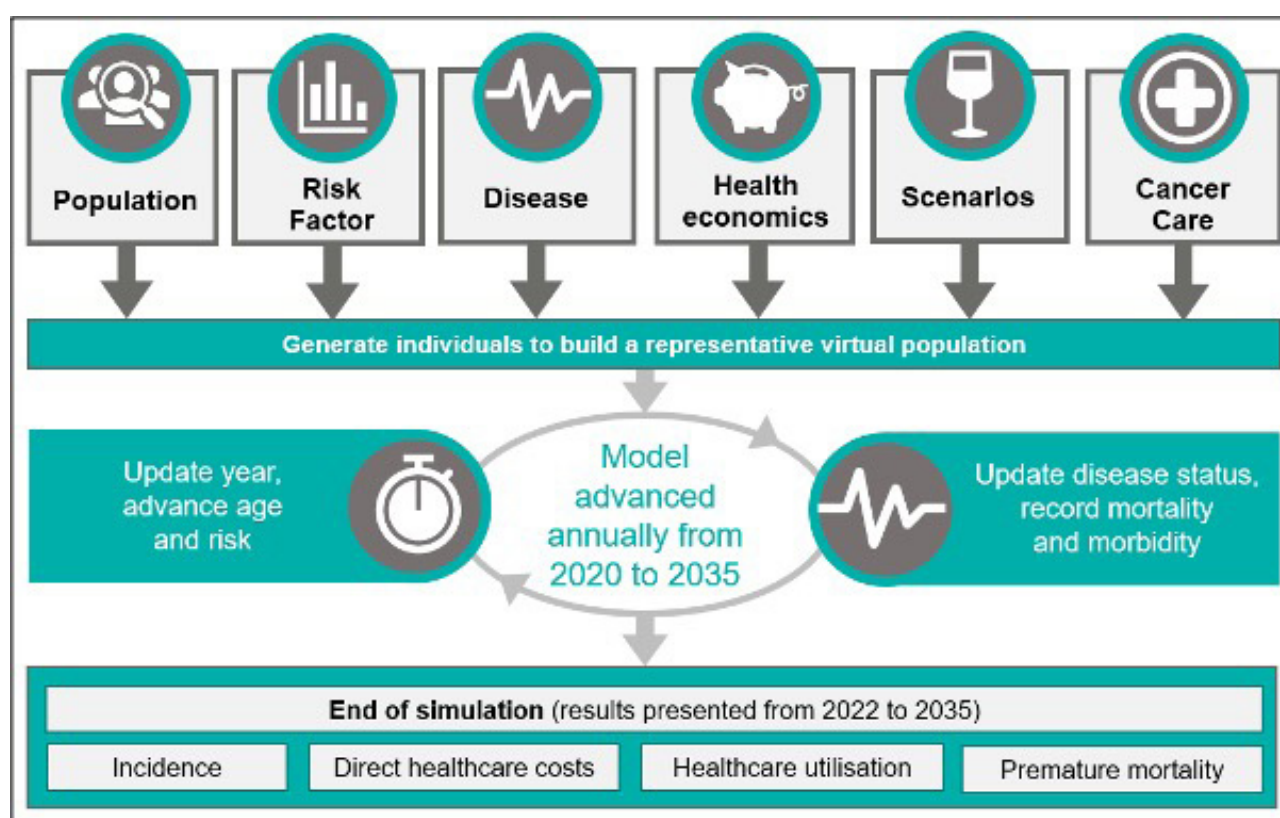
Figure 4: Schematic overview of the modules in the microsimulation model

Data used in the microsimulation model

Inputs for the microsimulation comprised six modules:

- **Module 1: Population.** Three populations were simulated, each of 100 million individuals: one that is representative of the total population of England, and two that are representative of the two standard groupings of Approximated Social Grades (ASGs), ABC1 and C2DE, based on occupation as defined by The National Readership Survey (39). All results were then scaled to the sizes of these populations in England.

- **Module 2: Risk Factor**. Alcohol consumption estimates were derived for males and females in three age groups (15-39, 40-59, and 60+) and two occupational social grade groups (ABC1, and C2DE), using the Alcohol Toolkit Study data (40) from between January 2019 and November 2021 (i.e. including pre and during pandemic). The ATS measured alcohol consumption through monthly household interviews with representative samples of approximately 1,800 English participants aged 16+. These groups were chosen to allow the highest level of stratification while maintaining a large enough sample size by which to model robust effects. There was a switch in modality of the ATS, from face-to-

face to telephone delivery from April 2020 onwards, necessitated by the pandemic

- **Module 3: Disease**. Nine diseases for which alcohol consumption is known to be a risk factor were modelled for this study. These included six cancers: breast cancer, colorectal cancer, liver cancer, mouth cancer, oesophageal cancer, and throat cancer; in addition to hypertension, liver cirrhosis, and stroke. These were chosen to represent some of the most prevalent diseases caused by alcohol, and was guided by availability of data. Cancer incidence, mortality, and survival were extracted by age and sex from the Cancer Research UK (CRUK) online data and statistics portal (41). Relative risks of alcohol consumption on the incidence of modelled cancers were extracted from a meta-analysis (42). For hypertension, liver cirrhosis, and stroke, literature reviews were conducted to source incidence, prevalence, mortality, survival, and relative risk data by sex and age group, where available (detailed in NIHR Journals Library report and appendices). In the microsimulation model, individuals with a given alcohol consumption value (units per week) have a given probability of contracting, dying from or surviving an alcohol related disease. These probabilities are informed by dose-response relationships and relative risks drawn from the literature such that for every unit increase in alcohol consumption there is an increased probability of disease or death. Monte Carlo errors are calculated and presented to account for uncertainties.

- **Module 4: Health economics.** Annual direct costs for each modelled disease were calculated by multiplying the annual direct cost per patient by the number of prevalent cases output in the model in a particular year. The costs of each disease per patient were identified or derived from the literature (detailed in NIHR Journals Library report and appendices).

- **Module 5: Scenarios.** In the microsimulation, at the start of 2020, an individual is assigned a certain probability of moving between alcohol consumption groups. To calculate the bidirectional movement between the low risk, increasing risk and high-risk consumption groups (by age, sex, and socioeconomic status), the size of the groups in 2019 was compared against the size of the consumption groups in 2020 (January to December) and 2021 (January to November). The net change in the size of each group was estimated. In addition to a baseline scenario, whereby individuals within the microsimulation continue consuming alcohol at 2019 levels, three scenarios were modelled based upon alcohol consumption between April 2020 and November 2021. These correspond to the number of years taken for alcohol consumption to return to pre-pandemic levels:

  a. 'Short-term' scenario, in which the alcohol consumption patterns of 2020 and 2021 remain for 2022 only, before returning to pre-pandemic levels at the start of 2023.

  b. 'Medium-term' scenario, in which the alcohol consumption patterns of 2020 and 2021 remain between 2022 and the end of 2024, before returning to pre-pandemic levels at the beginning of 2025

  c. 'Long-term' scenario, in which the alcohol consumption patterns of 2020 and 2021 remain indefinitely (from 2022 until the end of the microsimulation in 2035).

- **Module 6: Cancer care.** The projected increased utilisation of cancer care services between 2022 and 2035 was calculated based on the probability of undergoing chemotherapy, radiotherapy, and tumourectomy, for each cancer, in their first year of treatment. Additionally, excess hospital bed days for colorectal and breast cancer (in the first year of treatment) were also calculated. Results for cancer care are available in the NIHR Journals Library report.

Model outputs

The microsimulation was run between 2020 and 2035, and results are presented for 2022 to 2035 for:

- **Additional cases of disease.** Additional cumulative incidence for cases of all modelled diseases, under the short-term, medium-term, and long-term scenarios compared to the baseline scenario.

- **Premature deaths.** Additional cumulative premature (before age 75 (43)) mortality, between 2022 and 2035, under the short-term, medium-term, and long-term scenarios compared to the baseline scenario.

- **Healthcare costs.** Additional cumulative direct healthcare costs, between 2022 and 2035, under the short-term, medium-term, and long-term scenarios compared to the baseline scenario. Costs are presented in 2021 GBP.

Full technical details on the model inputs, the model engine, and the model structure are available in NIHR final report through NIHR Journals Library.

Results

This is a summary of the main results of the study, with more detail available in the NIHR final report.

Additional cases of nine alcohol-related diseases
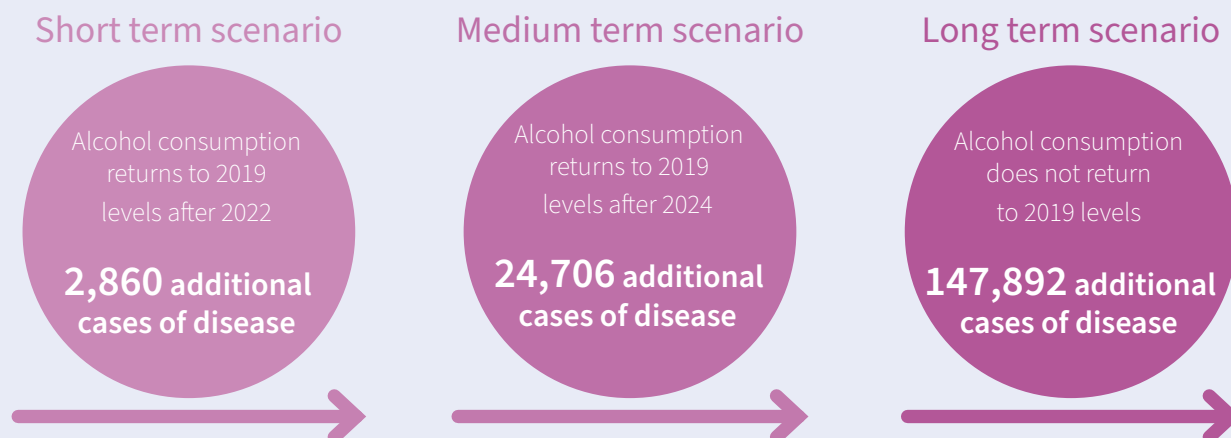
By 2035 it is projected there could be:

Short term scenario

Alcohol consumption returns to 2019 levels after 2022

2,860 additional cases of disease

Medium term scenario

Alcohol consumption returns to 2019 levels after 2024

24,706 additional cases of disease

Long term scenario

Alcohol consumption does not return to 2019 levels

147,892 additional cases of disease

Cumulative additional incident cases of disease, each compared to the baseline scenario (i.e. no pandemic). Diseases are hypertension, stroke, liver cirrhosis and six alcohol-related cancers.

Compared to the baseline scenario, the projected additional cases of the nine alcohol-related diseases modelled between 2022 and 2035 is as follows:
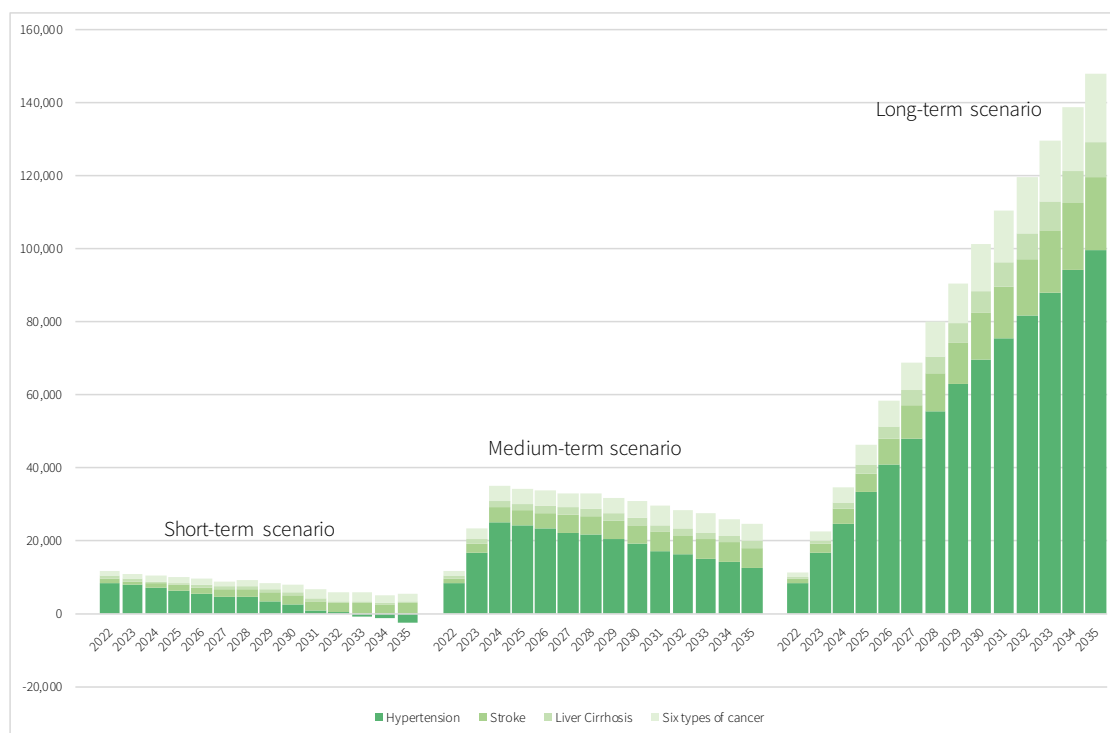
Figure 5: Additional cumulative incidence of nine alcohol-related diseases in England, 2022-2035

Cumulative additional incident cases of disease, each compared to the baseline scenario (i.e. no pandemic). Additional results for individual conditions, confidence limits, and results for ABC1 and C2DE subpopulations are available in the Data Appendix.

Additional premature deaths from nine alcohol-related diseases

By 2035 it is projected there could be:

Short term scenario

Alcohol consumption returns to 2019 levels after 2022

2,431 additional premature deaths

Medium term scenario

Alcohol consumption returns to 2019 levels after 2024

3,725 additional premature deaths

Long term scenario

Alcohol consumption does not return to 2019 levels

9,914 additional premature deaths
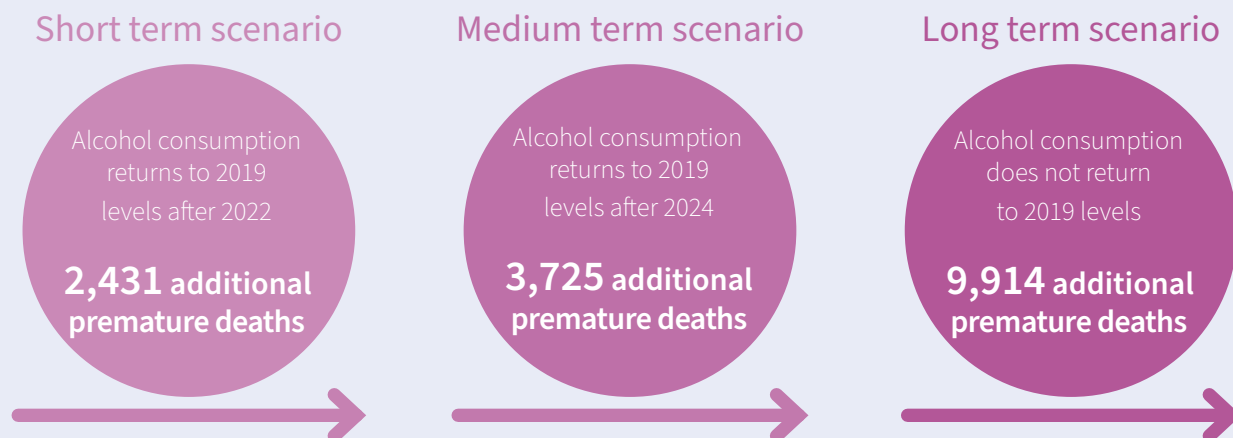
Cumulative additional premature (before age 75) deaths from hypertension, stroke, liver cirrhosis, and six alcohol-related cancers, compared to the baseline scenario (i.e. no pandemic).

Compared to the baseline scenario, the projected additional premature deaths from the nine alcohol-related diseases modelled between 2022 and 2035 is as follows:
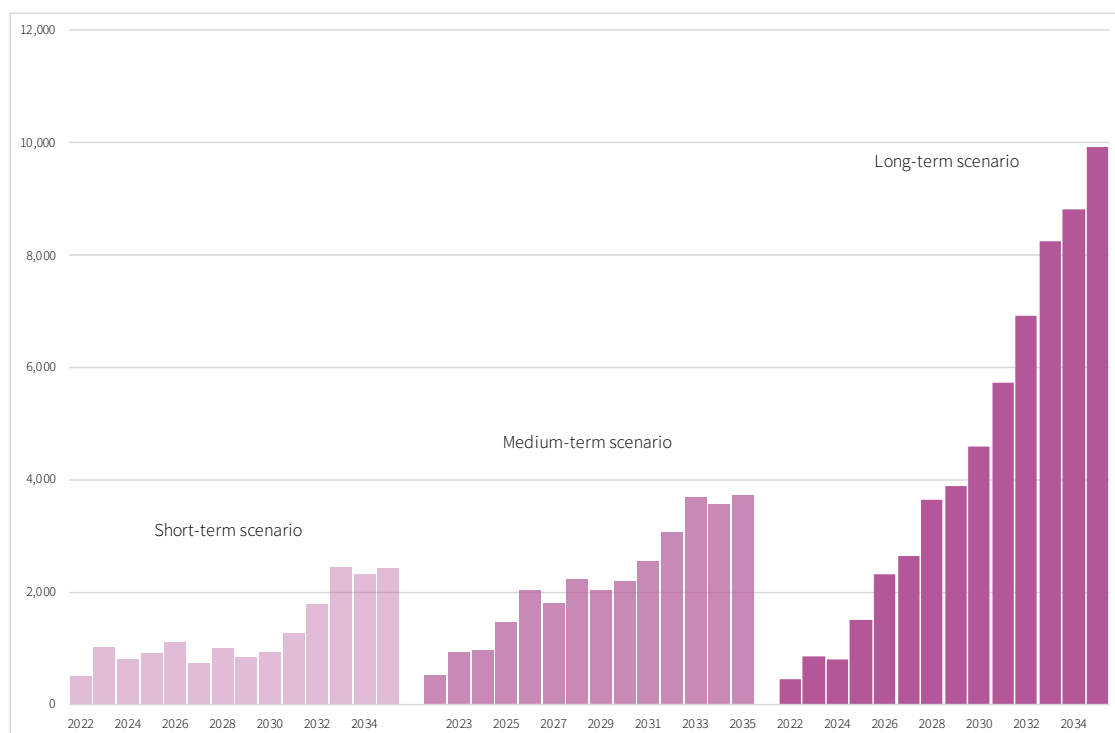
Figure 6: Cumulative additional premature deaths from nine alcohol-related diseases in England, 2022-2035

Cumulative additional premature mortality for three scenarios, each compared to the baseline scenario (i.e. no pandemic). Diseases are hypertension, stroke, liver cirrhosis, and six alcohol-related cancers. Additional results for ABC1 and C2DE subpopulations are available in the Data Appendix

Between 2022-2035, the projected number of additional premature deaths per 100,000 population is higher in the lower occupational social grade group (C2DE) than the higher occupational social grade group (ABC1) under all scenarios, compared to baseline:

■ Short-term scenario: approximately 200% more premature deaths in the lower occupational social grade group than the higher occupational social grade group

■ Medium-term scenario: approximately 125% more premature deaths in the lower occupational social grade group than the higher occupational social grade group

■ Long-term scenario: approximately 23% more premature deaths in the lower occupational social grade group than the higher occupational social grade group
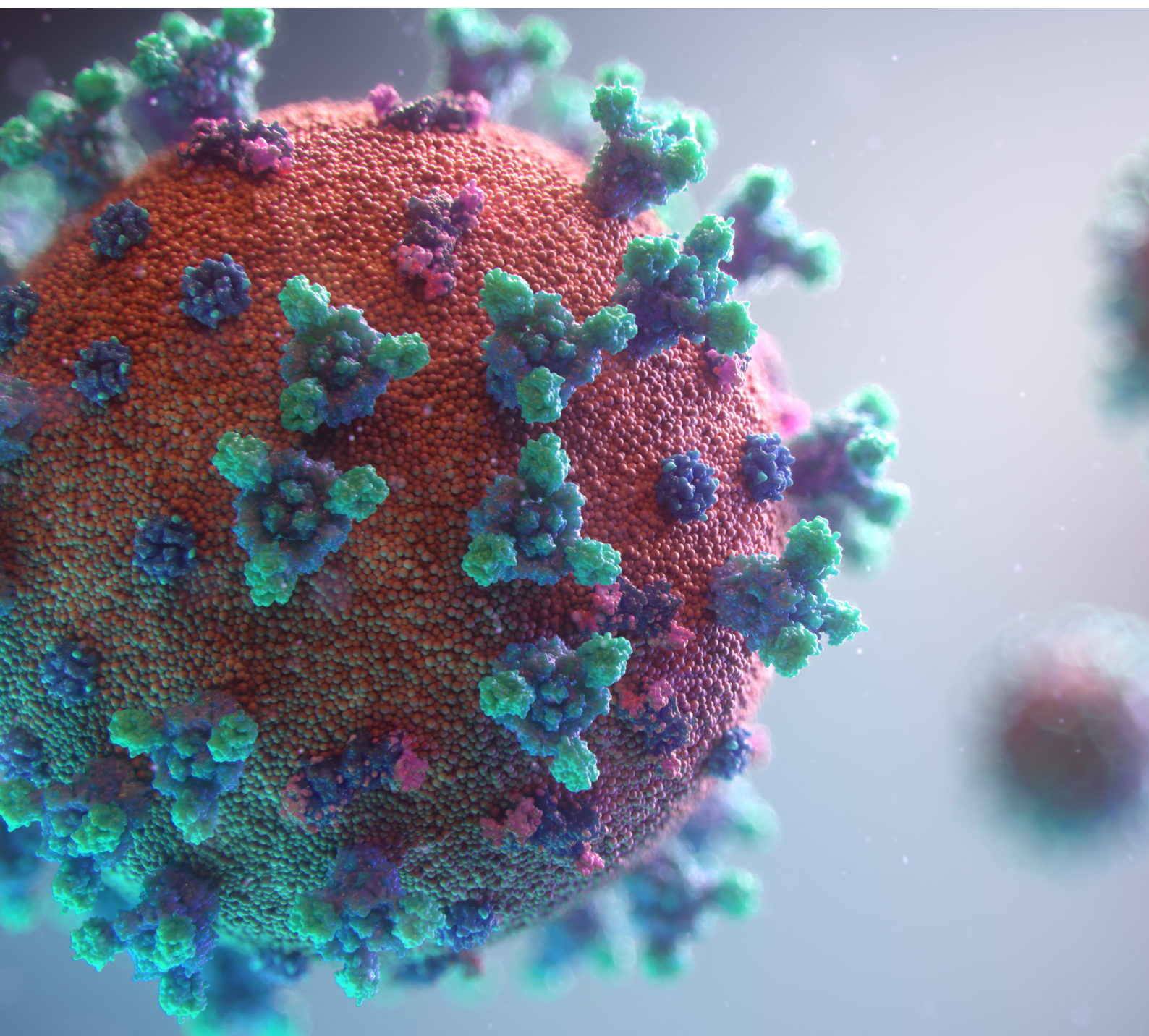
Additional healthcare costs of nine alcohol-related diseases

By 2035, the cumulative additional healthcare costs of the nine diseases modelled is projected as:

Short term scenario

Alcohol consumption returns to 2019 levels after 2022

£363 million

Medium term scenario

Alcohol consumption returns to 2019 levels after 2024

£568 million

Long term scenario

Alcohol consumption does not return to 2019 levels

£1.2 billion

Cumulative additional direct healthcare costs from hypertension, stroke, liver cirrhosis, and six alcohol-related cancers, compared to the baseline scenario (i.e. no pandemic).

Compared to the baseline scenario, the cumulative additional healthcare costs of the nine diseases modelled between 2022 and 2035 is as follows:
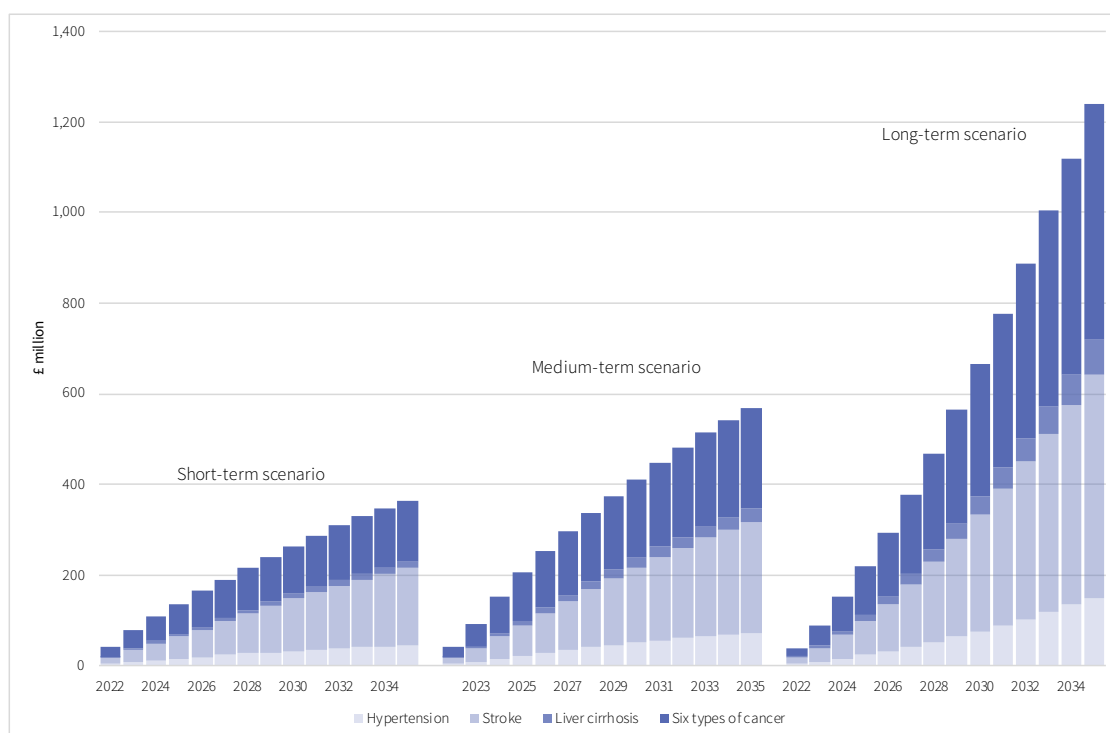
Figure 7: Cumulative additional healthcare costs from nine alcohol-related diseases in England, 2022-2035

Cumulative additional direct healthcare costs for three scenarios, each compared to the baseline scenario (i.e. no pandemic). Additional results for individual conditions and confidence limits are available in the Data Appendix

Discussion

Summary of results

This microsimulation modelling study projected that, for all three scenarios, trends in alcohol harm are set to worsen substantially as an indirect result of the pandemic. Depending on how long the changes in alcohol consumption persist for, this is between 2,860 and 147,892 additional cases of nine alcohol-related diseases by 2035. This is projected to lead to between 2,431 and 9,914 extra premature deaths, impacting those less well-off in society the most. Finally, the extra costs to the National Health Service are estimated to be between £363 million and £1.2 billion.

All the health outcomes modelled to 2035 are chronic non-communicable diseases which develop over many years, meaning the increases in alcohol harm are not inevitable and can be prevented. The conditions modelled are only a small number of health conditions caused by alcohol, meaning the number of cases and healthcare costs in this study underestimates the full extent of the harm from alcohol.

Comparison to other evidence

There is limited other evidence to compare these findings with. Within England, these findings are consistent with the real-world increases already observed in alcoholic liver disease emergency hospital admissions (3) and alcohol-specific deaths (3). The increase in alcohol-specific deaths has been observed in all four nations of the UK, to different extents (44).

There is also some evidence emerging of similar increases in alcohol harm in other countries, for example the United States (45,46). A microsimulation modelling study in the US found that a one-year increase in alcohol consumption (based on that observed in the US in 2020) would lead to 100 additional deaths and 2,800 additional cases of liver failure by 2023. Over the longer term, the one-year increase in alcohol consumption was projected to result in 8,000 additional deaths from alcohol-related liver disease, 18,700 cases of liver failure, and 1,000 cases of liver cancer by 2040 (47). As in this study, even if changes in drinking patterns as a result of the pandemic are not sustained over the longer term, the health consequences are still significant.

Research comparing changes in alcohol consumption during the first wave of the pandemic, however, found that the UK and Ireland were the only countries in the European region to drink more alcohol during the first wave of the pandemic (48). Therefore, while the findings of this study for England may have some relevance for other UK home nations, the findings of this study cannot be applied to other non-UK countries.

This research is focused on alcohol harm and the longer-term indirect effects of the pandemic. There have been varied alcohol policy-related responses to control the spread of COVID-19 infection globally, for example the closure of hospitality venues, changes in opening hours, capacity restrictions, and relaxations on aspects of licensing such as more pavement drinking and dining. This research was not designed to inform such responses to control the spread of COVID-19. We deliberately make alcohol policy recommendations in the context of England's longer-term recovery from the pandemic and its indirect effects. Alcohol policy responses during the pandemic are being synthesised for a range of countries globally – including the UK – as part of an ongoing international research project called Alcohol PoliMap (49).

Finally, other modelling studies of future alcohol harm as a result of COVID-19 are scarce, but separate ongoing research is also modelling the impact of a range of alcohol consumption scenarios on health, healthcare, NHS costs and health inequalities using the Sheffield Alcohol Policy Model. There remains uncertainty around

the future course of the pandemic, and even higher uncertainty around alcohol consumption trends, so it will be valuable to have two independent sets of findings estimating the future disease burden for England.

Strengths and limitations of this research

Strengths of this research include the use of a well-validated microsimulation modelling approach which enabled the projection of increased alcohol consumption in millions of individuals over time (rather than groups/cohorts using weighted averages, as in many studies). This allows for differences in disease incidence, prevalence, mortality, and costs to be identified between different groups.

Flexibility in the microsimulation model was leveraged to account for some of the uncertainty surrounding the expected duration of changes in drinking patterns that occurred during the pandemic by modelling scenarios that consider three possible future durations of changes in alcohol consumption. The scenarios were based on up-to-date consumption data collected routinely throughout the pandemic and were agreed following consultation with members of the public.

We modelled the impact of changes in alcohol consumption on selected health conditions (hypertension, stroke, liver cirrhosis and six types of cancer) that were chosen to present a range of different outcomes and were informed by the availability of data. The modelled diseases only capture part of the burden of alcohol harm on health and healthcare. Alcohol causes over 200 health conditions (50), so the results presented illustrate the scale of the problem but not its full extent. It would have been beyond the scope of this study to model the impacts of changes in alcohol consumption on every aspect of alcohol harm. There may also be interactions between alcohol use and poorer outcomes following COVID-19 infection, including liver damage (51) and greater odds of hospitalisation and all-

cause mortality among people with alcohol use disorder (52), although evidence is currently scarce to model this.

The impacts of alcohol on other aspects of health and wellbeing including mental health, quality of life, and harms to others such as the effects on children and families, drink-driving collisions, or domestic violence were not included in this study. Although not quantified, these impacts are also important to consider in population-level policies as part of pandemic recovery planning. Enhanced resources for surveillance and reporting of, for example, mental health conditions would make it possible to include a wider range of outcomes in future modelling studies that can be used to inform evidence-based policy recommendations.

The main source of consumption data used was the ATS. As a result of the pandemic, the survey mode changed from face-to-face to telephone delivery from April 2020 onwards. There is evidence that survey mode can influence measurement of alcohol consumption (53). However, prior research using the ATS investigated the comparability of the telephone and face-to-face survey modes in a sensitivity analysis, and concluded it is reasonable to compare data from before and during lockdown (10). There were limited alternatives for self-reported alcohol consumption since many surveys were interrupted or paused as a result of the pandemic. Since there have been increases in alcohol harm (liver disease emergency admissions, alcohol specific mortality, deaths in alcohol treatment) since the pandemic began, the increases in higher risk drinking observed in the ATS can be corroborated.

Future alcohol consumption was modelled based on changes to alcohol consumption as a result of the pandemic. While the model accounted for changes in the demographic composition of the population, we did not explore the impact of continuing trends in alcohol consumption, for example the documented decline in young people's alcohol consumption in the UK over the

past two decades (54). However, this decline has stalled in recent years, and as most alcohol harm is chronic and occurs from middle-age onwards, this would mitigate the potential impact on the findings.

We did not consider additional pathways by which the pandemic may impact on alcohol consumption into the future, for example children being more exposed to alcohol from parents drinking at home during lockdown, decreased disposable income, or poorer mental health. We also did not attempt to model the impact of expected forthcoming policy changes, such as the UK's new alcohol duty system from 2023.

The longer term impacts of the pandemic now overlap with the cost of living crisis, which has multiple causes. This is likely to impact on the affordability of alcohol as people have less disposable income, and to have an impact on inequalities. We have not modelled the impact of the cost of living crisis on future alcohol consumption and harm, and this is something that future research should address, as evidence of the impact on alcohol consumption in different groups becomes more apparent.
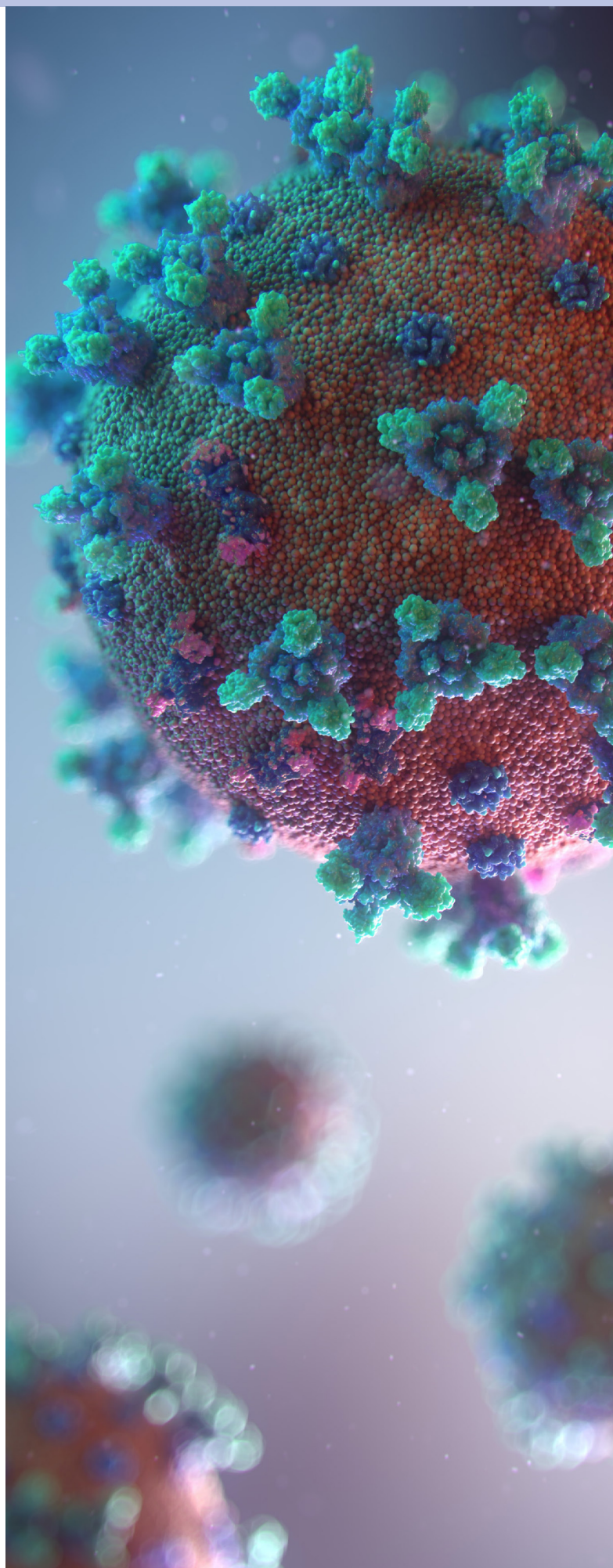
Recommendations

There is already a strong evidence base for policies to reduce alcohol harm. PHE's 2016 evidence review concluded several policies would be both effective and cost-effective (4), and similarly, the World Health Organization (WHO) has a 'SAFER' alcohol control initiative (55) and a range 'best buy' policies (56) to reduce alcohol harm. A recent Organisation for Economic Co-operation and Development report concluded that policies to tackle harmful alcohol consumption are cost-effective and provide an excellent return on investment (57).

Recommendation 1

Increase funding and resources for alcohol treatment and support, over and above what is promised in the new drug strategy, based upon anticipated need. Alongside this, increase resources for primary and secondary prevention, such as screening and brief interventions.

In terms of alcohol treatment and support, PHE's 2016 evidence review concluded identification and intervention for drinkers at risk of harm and specialist treatment for harmful or dependent drinkers both reduce consumption and harm in these groups (4). Similarly, WHO's 'SAFER' alcohol control initiative recommends member states facilitate access to screening, brief interventions and treatment (55). PHE have estimated that every £1 invested in treatment has a return on investment of £3 (58).

December 2021's UK drug strategy proposed £780m extra funding over 3 years for drug and alcohol treatment and recovery support (59) (drug and alcohol services are integrated), and the 2022-23 funding allocations have been announced (60). Through a phased expansion, it is planned there will be at least 54,500 new drug and alcohol treatment places, a 19% increase on current numbers (59). Some of this funding will be ring-fenced, so will be less vulnerable to budget cuts (61). This has been described as the 'biggest ever' investment in treatment (62),

however over the past decade there have been cuts to drug and alcohol treatment services through reductions in the public health grant. Between 2013/14 and 2018/19, there was a 27% decrease (£212 million) in annual funding for drug and alcohol treatment services in England, and this was estimated to be associated with 6,430 fewer people in treatment, 3,523 fewer people new to treatment, and 4,350 fewer people successfully completing treatment (63). This is in addition to a longstanding treatment gap with only a minority of people who could potentially benefit from alcohol treatment being in receipt of such support (25).

It has been suggested that December 2021's announcement brings funding back to approximately 2010 levels (64), meaning capacity is unlikely to meet the need arising from the pandemic. In 2020, the Royal College of Psychiatrists estimated that as a result of the pandemic there may be an additional 3.6 million people now drinking at higher risk levels, warning addiction services could be overwhelmed by post-pandemic demand (65). A further addictions strategy is expected, but the time frame for this is not currently known. Public support for access to help for alcohol problems for those who need it is very high (94%, based on a September 2021 survey of 1,653 adults) (66).

Recommendation 2

Capitalise on the opportunities presented by the new alcohol duty system commencing in 2023. The principle of a strength-based system is welcome, but duty rates should be consistent and must automatically increase in line with inflation.

PHE's 2016 evidence review stated that combining an increase in alcohol taxation alongside the introduction of minimum unit pricing was estimated to lead to substantial reductions in alcohol harm as well as increased fiscal revenue (4). Raising prices on alcohol through excise taxes and pricing policies is one of the WHO 'SAFER' recommendations (55), and

increased taxation is one of WHO's 'best buys' for reducing the harmful use of alcohol (56).

A new alcohol duty system for the UK was announced by the Chancellor in the autumn 2021 budget, to begin February 2023. In the new system, all products will be taxed according to their strength, meaning different products will be taxed in a more consistent way. This also has a good level of public support (55%) (66). The proposed new rates mean the duty charged on strong cider will increase, but for other drinks, the duty will decrease (67). A new duty system has the potential to raise revenue for the Government, but under the current proposals HM Treasury estimates the changes to the alcohol duty system will cost the Government £115 million in revenue in the first year (this is referred to as cost-neutral by HM Treasury) (68).

The new duty system rationalises the old system for the long-term, and should not be seen as competing with the cost of living crisis. Alcohol became 14% more affordable in the decade to 2020 (66), and in the autumn 2021 budget, a freeze in alcohol duty rates for 2022-23 was also announced, the ninth year out of ten that duty has not kept up with inflation (67). Increasing duty rates and the new duty system will not be detrimental to the hospitality sector in its recovery from the pandemic, as cuts and freezes to alcohol duty are of little benefit for pubs and hospitality (67).

Recommendation 3

Introduce minimum unit pricing for alcohol. This would align England's policy with Scotland and Wales. Regarding the minimum price level, others have recommended that Scotland uprates their minimum price to 65p per unit .

When combined with increased taxation, minimum unit pricing was estimated to lead to substantial reductions in harm in PHE's 2016 evidence review (4), and is also one of the WHO 'SAFER' recommendations (55).

The last national alcohol strategy was published in 2012 (70), and minimum unit pricing was of the major commitments made in this strategy which has not been realised in England. There have been more alcohol policy developments in the devolved nations meaning policies are not harmonised across the home nations.

Scotland and Wales introduced minimum unit pricing of 50p per unit in May 2018 and March 2020 respectively (71), and 28 organisations recently wrote in support of this being uprated to 65p per unit in Scotland (72) in order to account for inflation. Outside the UK, minimum unit pricing was legislated for in Ireland in 2018 (at €1 per standard drink at 10g/12.7ml pure alcohol) and was introduced in January 2022 (71), and as a result it is under consideration in Northern Ireland to have a consistent all-island approach. In the first two years following the introduction of minimum unit pricing in Scotland, there was a reduction in per adult alcohol consumption of 7–8%, and that reduction was greatest among the heaviest drinkers (73). During 2020, minimum unit pricing may explain the smaller increase in alcohol-specific deaths in Scotland (a 15.6% increase) than England (a 19.3%) increase (44). Minimum unit pricing also has potential to narrow inequalities in alcohol harm, because the cheapest alcohol is disproportionately bought by those on lower incomes (74).

Since 2014, across the UK there has been a ban on 'below cost sales', below the rate of duty and VAT (excluding invoice and transportation costs) (71). However PHE's evidence review concluded that in its current form this does not impact on public health (4), with far stronger evidence supporting higher taxation and minimum unit pricing. In England, 45% of people are supportive of a minimum unit price of 50p per unit (66). In the context of the cost of living crisis, moderate drinkers would not face large consequences from the introduction of minimum unit pricing. Previous modelling of a 50p minimum price found moderate drinkers would spend an extra £2 a year on alcohol (75). Similarly to alcohol duty reform, minimum unit pricing will not impact the hospitality sector's recovery from

the pandemic. Minimum unit pricing targets off-trade alcohol sales and is unlikely to have an impact on the on-trade (57).

Recommendation 4

Add protecting and improving public health as a fifth objective of the alcohol licensing system in England, as it is in Scotland. This will enable health more broadly to be part of local decision-making on alcohol availability.

PHE's 2016 evidence review concluded that reducing alcohol availability through reducing the hours it is available for sale can substantially reduce alcohol-related harm in the night-time economy, and this is cost-effective when it is enforced and targeted at the most densely populated areas (4). WHO's 'SAFER' alcohol control initiative recommends stronger restrictions on alcohol availability (55), and reduced availability through reducing hours of sale is also one of WHO's 'best buy' policies for reducing the harmful use of alcohol (56).

As with minimum unit pricing, licensing is another example of a different approach to alcohol policy across the home nations. Protecting and improving public health is included as a fifth licensing objective as part of the 2005 Licensing Act in Scotland (76), whereas there is not a health objective in England. While effective local public health advocacy is necessary for this objective to be met in practice (77), adding health as a licensing objective in England would be a suitable response to the recent liberalisation of licensing laws in the on-trade and could re-shape the night-time economy to reduce alcohol harm (78). This approach has a high level of public support, with 72% of people in England agreeing that public health should be considered when applications are made for alcohol outlets (66).

Recommendation 5

Improve the regulatory approach to alcohol marketing to reduce exposure and influence among the vulnerable.

PHE's 2016 evidence review found that industry self-regulation of alcohol marketing is unlikely to be effective, finding evidence instead supporting advertising bans and specific actions to protect children from being exposed to alcohol marketing (4). WHO's 'SAFER' alcohol control initiative recommends bans or comprehensive restrictions on alcohol advertising, sponsorship and promotion (55), and advertising restrictions are also one of WHO's 'best buy' policies for reducing the harmful use of alcohol (56).

The current self-and co-regulatory approach to alcohol marketing fails in its stated aims of protecting children and young people, and issues such as the impact on heavier drinkers and people in recovery and the rapid development of digital marketing have not been adequately addressed (79). There is a high level of public support (76%) for the introduction of stronger measures to limit children and young people's exposure to alcohol advertising (66).

There are many elements to improving alcohol marketing regulation, many of which require legislation. The most effective approach would be a comprehensive statutory restriction on all alcohol marketing, but as a first step, priority areas for legislation are restricting brand marketing of various forms, including indirect marketing, the inclusion of mandatory health warnings, and controls on display and promotion retail environments. The Scottish government is due to consult on alcohol marketing regulation (80), and in response Alcohol Focus Scotland's Expert Network has published a framework for alcohol marketing control (81) This presents a comprehensive range of policy recommendations based on scientific evidence and case study research, that could be applied to other UK nations. Lessons from other unhealthy commodities, such as tobacco,

show that limiting harms from marketing has been successful (82,83), with this being achieved incrementally over a long period of time. Current developments in regulation of high fat, salt and sugar foods and gambling may also be transferable to alcohol.

Conclusions

Changes in alcohol consumption during the COVID-19 pandemic will result in a significantly increased health and economic burden in England from the alcohol-related diseases studied. If drinking patterns do not revert to pre-COVID patterns, the disease burden is far higher. The indirect effects of the pandemic, such as increases in alcohol harm, cannot be ignored in COVID-19 recovery planning.

Preventing alcohol harm has benefits beyond improving population health. It will help narrow socio-economic and regional inequalities and contribute to the Government's 'levelling up' agenda. Averting alcohol harm will also reduce the alcohol-related workload for the NHS, meaning resources can be used elsewhere to benefit patients and 'build back better' from the pandemic. This is critical given the record waiting times that have built up over the pandemic.

Action is needed through a comprehensive alcohol strategy, to harmonise policies across the UK, with a coherent set of policies to prevent avoidable ill health and reduce the impact on the healthcare system and save money. Policies to reduce alcohol harm can complement other ongoing policy agendas, and offer return on investment, or are low cost or can generate revenue, contributing to the health, social and economic recovery from the pandemic.

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Table 1: Excess cumulative incidence of nine alcohol-related diseases

Population of England						
	Short-term scenario		Medium-term scenario		Long-term scenario	
	Number of cases	Confidence limit	Number of cases	Confidence limit	Number of cases	Confidence limit
Hypertension	-2,580	± 3,605	12,690	±3,608	99,563	±3,622
Stroke	2,994	± 2,062	5,514	±2,062	20,046	±2,066
Liver cirrhosis	423	± 644	1,902	±645	9,498	±652
Cancers (subtotal for all 6)	2,023		4,600		18,785	
Breast cancer	940	± 1,248	1,667	±1,248	5,163	±1,250
Colorectal cancer	456	± 1,162	965	±1,163	3,511	±1,164
Liver cancer	181	± 434	251	±434	1,074	±435
Mouth cancer	385	± 422	840	±423	3,359	±426
Oesophageal cancer	231	± 520	800	±520	3,955	±524
Throat cancer	-170	± 327	77	±328	1,723	±331
Total	**2,860**		**24,706**		**147,892**	

ABC1 social grade population						
	Short-term scenario		Medium-term scenario		Long-term scenario	
	Number of cases	Confidence limit	Number of cases	Confidence limit	Number of cases	Confidence limit
Hypertension	-667	± 2,667	6,904	± 2,669	49,747	± 2,678
Stroke	931	± 1,495	2,241	± 1,496	9,328	± 1,498
Liver cirrhosis	222	± 470	945	± 471	4,512	± 476
Cancers (subtotal for all 6)	1,675		2,836		9,432	
Breast cancer	1,011	± 927	1,391	± 927	2,951	± 928
Colorectal cancer	718	± 846	911	± 846	2,025	±847
Liver cancer	59	± 314	60	± 314	523	± 315
Mouth cancer	67	± 308	292	± 308	1,491	± 311
Oesophageal cancer	-37	± 377	215	± 378	1,682	± 380
Throat cancer	-143	± 238	-33	± 238	760	± 240
Total	**2,161**		**12,926**		**73,019**	

	C2DE social grade population					
	Short-term scenario		Medium-term scenario		Long-term scenario	
	Number of cases	Confidence limit	Number of cases	Confidence limit	Number of cases	Confidence limit
Hypertension	-1,912	± 2,426	5,786	±2,428	49,816	± 2,438
Stroke	2,062	± 1,420	3,273	±1,420	10,718	± 1,423
Liver cirrhosis	201	± 439	957	±440	4,985	± 445
Cancers (subtotal for all 6)	348		1765		9,351	
Breast cancer	-71	± 836	275	±836	2,212	± 837
Colorectal cancer	-262	± 797	55	±798	1,486	± 799
Liver cancer	122	± 299	191	±299	551	± 300
Mouth cancer	319	± 289	549	±289	1,867	± 292
Oesophageal cancer	267	± 358	585	±358	2,272	± 361
Throat cancer	-27	± 225	110	±225	963	± 227
Total	699		11,781		74,870	

Table 2: Cumulative excess premature mortality from nine alcohol-related diseases

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Population of England														
Short term scenario	512	1,026	804	922	1,105	735	1,005	845	934	1,265	1,795	2,437	2,318	2,431
Medium term scenario	523	931	969	1,465	2,030	1,804	2,226	2,037	2,203	2,557	3,062	3,683	3,560	3,725
Long term scenario	454	852	810	1,516	2,316	2,648	3,632	3,875	4,597	5,719	6,921	8,237	8,797	9,914
ABC1 social grade population														
Short term scenario	191	140	-280	-268	-318	-651	-348	-214	-147	-166	100	524	592	621
Medium term scenario	188	13	-266	-64	73	-193	217	268	343	319	543	974	1,034	1,118
Long term scenario	152	-5	-308	-71	161	186	877	1,162	1,620	1,969	2,593	3,390	3,823	4,453
C2DE social grade population														
Short term scenario	320	886	1,084	1,190	1,423	1,386	1,354	1,059	1,081	1,431	1,695	1,913	1,726	1,809
Medium term scenario	335	918	1,235	1,530	1,958	1,997	2,009	1,769	1,860	2,238	2,518	2,709	2,526	2,606
Long term scenario	302	857	1,118	1,588	2,155	2,462	2,755	2,713	2,976	3,750	4,327	4,847	4,974	5,461

IAS | Institute of Alcohol Studies

HEALTH LUMEN

The COVID hangover: addressing long-term health impacts of changes in alcohol consumption during the pandemic

Summary

Drinking patterns in England changed during the COVID-19 pandemic

There has been an increase in the number of higher risk drinkers, and the heaviest drinkers have increased their consumption the most, which brings a risk of more alcohol-related health problems. Changes in alcohol consumption have continued beyond the national lockdowns of 2020 and 2021.

There was a 20% increase in alcohol-specific deaths in England in 2020 compared with 2019, and this trend persisted through 2021. There have also been changes in healthcare access during the pandemic, which could mean other aspects of alcohol harm worsen but become less visible. The long-term indirect effect of the pandemic on alcohol harm is unknown.

Methods: a microsimulation model to project future alcohol harm

This modelling study used the HealthLumen microsimulation model along with a range of survey and healthcare data to predict the impact of changes in alcohol consumption on future alcohol-related harm. Future trends in alcohol consumption are uncertain. To account for this uncertainty, three different scenarios for future alcohol consumption were created. This study projected the impact of changes in alcohol use on rates of nine of the main diseases linked to alcohol (high blood pressure, stroke, liver disease, and six forms of cancer) up to 2035.

Key findings from the microsimulation model

This microsimulation model projects that even if the changes seen to alcohol consumption are short-lived, there are knock-on effects on alcohol harm over the longer term.

Depending on future trends in alcohol consumption, the model projects there will be between 2,860 and 147,892 additional cases of the nine alcohol-related diseases studied in England by 2035.

This is projected to lead to between 2,431 and 9,914 extra premature deaths, and to impact the less well-off in society the most.

The costs to the National Health Service are estimated to be between £363 million and £1.2 billion.

These projections are consistent with recent real-world increases in alcoholic liver disease emergency hospital admissions and alcohol-specific deaths.

Conclusions

Changes in alcohol consumption during the COVID-19 pandemic, even if short-lived, will result in a significantly increased health and economic burden in England. If drinking patterns do not revert to pre-COVID patterns, the disease burden will be far higher.

These increases in alcohol harm and costs to society could be prevented as part of COVID-19 recovery planning. This will prevent avoidable ill-health and premature deaths, reduce the impact on the healthcare system, and save money.

Evidence already exists on the health benefits and cost-effectiveness of various alcohol control policies, which can complement other ongoing policy agendas. They can offer return on investment, are low cost, or can generate revenue, contributing to the health, social and economic recovery from the pandemic.

Read the full report on the IAS website

Recommendations

A **new national alcohol strategy** for England is needed, with the following evidence-based policies taking priority:

1. **Increase funding and resources for alcohol treatment and support,** over and above what is promised in the new Drug Strategy, based upon anticipated need. Alongside this, increase resources for primary and secondary prevention, such as screening and brief interventions.

2. **Capitalise on the opportunities presented by the new alcohol duty system** commencing in 2023. The principle of a strength-based system is welcome, but duty rates should be consistent across different categories and must automatically increase in line with inflation.

3. **Introduce minimum unit pricing for alcohol.** This would align England's policy with Scotland and Wales. Regarding the minimum price level, others have recommended that Scotland uprates their minimum price to 65p per unit .

4. **Add protecting and improving public health as a fifth objective of the alcohol licensing system** in England, as it is in Scotland. This will enable health more broadly to be part of local decision-making on alcohol availability.

5. **Improve the regulatory approach to alcohol marketing to reduce exposure and influence among the vulnerable.**