Non-Communicable Disease Prevention: Mapping Future Harm

A case for action on health harming products.

About the Non-Communicable Disease Prevention Coalition

The Non-Communicable Disease Prevention Coalition is comprised of nine of Scotland's leading health charities: British Heart Foundation Scotland, Alcohol Focus Scotland, ASH Scotland, Obesity Action Scotland, Scottish Health Action on Alcohol Problems (SHAAP), Asthma and Lung UK Scotland, Cancer Research UK, Diabetes Scotland and Stroke Association.

We have come together to campaign for action on the commercial determinants that drive the consumption of health harming products — alcohol, tobacco and unhealthy food and drinks. We aim to reduce the impact of health harming products through actions to tackle the availability, price and promotion and marketing of health harming products, as well as actions to support the delivery of support services around drinking, smoking cessation and weight management.

Introduction

Non-communicable diseases (NCDs) such as heart disease, cancer, diabetes, stroke, liver disease and lung disease are the leading cause of death in Scotland. These diseases accounted for around 40,000 deaths in 2020, almost two thirds of all deaths.[I] It is estimated that more than 1 in 5 of these deaths could be prevented through public health action on health harming products such as tobacco, alcohol and unhealthy food and drinks.

The use of these products not only affect our health but have a significant negative impact on our economy. Estimates suggest that ill health and disability caused by tobacco, alcohol and unhealthy food and drink costs the Scottish economy between £5.6 and £9.3 billion every year.[II, III, IV] At the same time, companies make millions from the sale of these health harming products. The way in which these products are made widely available, are heavily marketed and how affordably they are priced, drives consumption at the expense of our right to health.

Health harming products also play a substantial role in the widening of health inequalities in Scotland. Analysis shows that health inequalities are significantly influenced by higher levels of smoking, overweight and obesity, and alcohol consumption in the most deprived areas. These disparities are a causal factor in the widening healthy life expectancy gap, with people in the most deprived areas expected to live a healthy life for 24 years less than those in the least deprived areas.[V]

Population-level health interventions are the most successful and cost-effective way to reduce deaths from NCDs and alleviate health inequalities, as they tackle the environmental factors created by commercial determinants which drive consumption of health harming products and are a catalyst for improvement across all communities in Scotland.

The Scottish Parliament has led the way with world-leading, population-level public health policies such as the smoke-free enclosed public places ban and the introduction of minimum unit pricing (MUP). However, this reputation is diminishing, and it is vital that it is reclaimed to save thousands of lives and reduce premature mortality and disability from NCDs.

Without the implementation of bold policy initiatives, we can expect continued and increased deaths and ill health driven by smoking, obesity and alcohol consumption. Addressing deaths from NCDs through effective public health intervention is multifaceted. To see improved health outcomes, we cannot address one health harming product without addressing them all.

There is a misconception that addressing these health harming products through public health action is not supported by the public. However, a recent YouGov poll commissioned on behalf of the NCD Prevention Coalition found that **two thirds (67%) of Scottish adults believe the Scottish Government should be doing more to improve public health**.

This highlights the urgent collective desire in Scotland to see transformative change to make Scotland a healthier place to live. Taking this crucial action would see a significant reduction in deaths, a reduction in health inequalities and a healthier Scotland for future generations.

More than

1 in 5

NCD deaths in Scotland

are estimated to be preventable through public health action on health harming products such as tobacco, alcohol and unhealthy food and drinks.

Public Perception of Public Health Interventions

Not only is urgent public health action needed to improve Scotland's health; it is also supported by the public. A poll of Scottish adults by YouGov, commissioned by the NCD Prevention Coalition, showed 67% wanted to see the Scottish Government do more to improve public health.

To effectively reduce the impact of health harming products in Scotland, we must tackle the commercial drivers that influence our health choices. These include how readily available these products are, how heavily they are marketed and how cheaply they are priced. Our polling asked the public their views on action across these three areas.

Price and Promotion

Availability

Marketing

67%

of Scottish adults believe

the Scottish Government should be doing more to improve public health.

Price and Promotion

The healthy option is not currently being offered as the easiest and most cost-effective one. Price and promotion are two of the key tools used by industry to drive the consumption of health harming products.

In food and drink retail, price promotions are largely used to promote HFSS products, driving consumption and harm.[VI] The Scottish Government recognise this and have committed to introducing legislation which restricts promotions of HFSS food and drinks, and we urge that steps to do this are taken now as part of the upcoming Public Health Bill.

The Scottish public also recognise this divide and our polling shows that **81% of adults in Scotland would support policies that would ensure fruit and vegetable costs are cheaper than unhealthy foods**.

Such measures are also crucial to tackle health inequalities. Research suggests, in order to meet the Eatwell Guide, the poorest 10% of UK households would need to spend 74% of their disposable income, in comparison to 6% for the richest 10%.[VII]

When it comes to tobacco products, variation in prices are also being used to drive consumption, particularly in Scotland's most deprived communities. Research into how tobacco prices vary in Scottish convenience stores found that a pack of 20 cigarettes was on average 50p cheaper in areas of multiple deprivation in comparison to the most affluent areas.[VIII] Such variation in prices drives the inequalities that exist in smoking rates across Scotland, as well as their subsequent health harms.

There is strong public support for action to tackle this issue and our polling found that **67% of adults would support implementing a minimum and maximum price for tobacco**. Implementing this would restrict tobacco companies from using price as a driver of consumption by marketing high priced 'premium' or 'luxury' brands to subsidise sales of cut-price cigarettes; would make tobacco products less affordable; and lastly, would stop the health benefits of tax increases being weakened by pricing strategies of tobacco companies.[IX]

81%

of adults in Scotland

would support policies that would ensure fruit and vegetable costs are cheaper than unhealthy foods.

Scotland took the bold step of introducing minimum unit pricing (MUP) for alcohol in 2018. Since then, the policy has been successful in reducing off-sales consumption by 3.5% and alcohol-specific deaths reduced by 10% in in the first full year following the introduction of MUP; the lowest level since 2013.

Unfortunately, possibly due to the effects of the pandemic and associated restrictions on drinking patterns, alcohol-specific deaths increased in 2020. This underlines the need to optimise this life-saving policy and tackle the effects of inflation by raising the price from 50p to at least 65p per unit. In the 2019 Scottish Social Attitudes Survey, respondents were almost twice as likely to be in favour of MUP (50%) than to be against it (28%).[X]

To ensure that the opportunity to live a healthy life is equal across society, we must take action to make the healthier option the most affordable one and reduce the commercial promotional tools used by industry that influence the consumption of health harming products in our most deprived communities.

Availability

The environments that people live in have a significant impact on their health. Evidence shows a clear link between increased availability of alcohol,[XI] tobacco[XII] and high fat, salt and sugar (HFSS) food and drinks in communities and poorer health outcomes.

Outlets selling health harming products are higher in density and disproportionately located in areas of deprivation.[XIII] Increased exposure to health harming products has been shown to influence our consumption and is driving health inequalities in Scotland.[XIV]

It is fundamental we tackle the inequalities in our communities and give everyone across Scotland the best chance at a healthy life.

This demand for change is reflected in the opinions of the Scottish public:

75%
of adults support
a ban on the sale of tobacco products near schools and playparks.

59%
of adults support
a limit on the number of tobacco retailer outlets in specific locations with high density or deprivation.

63%
of adults support
a ban on the sale of alcohol near schools and playparks.

People in the most deprived areas are expected to live a healthy life for

24 years less

than those in the least deprived areas.

Marketing

There is an established correlation between exposure to advertising of health harming products and the consumption of these products. The pervasive and consuming landscape of marketing has been associated with changes in attitudes and behaviour and has been shown to influence the future relationship children have with health harming products.[XV]

For example, the alcohol industry maintains that their advertising is aimed at adults and does not target children and young people. However, the widespread nature of advertising means both adults and children are exposed to alcohol products through sport, television and online.[XVI] For instance, an analysis of the broadcast of a Six Nations match between Scotland and Ireland revealed alcohol was referenced once every 12 seconds.[XVII]

62%
of adults in Scotland
support restricting advertising, sponsorship and promotion of alcohol products online, in public spaces and at sport and cultural events.

This picture of marketing driving consumption and harm is common across all health harming products and the Scottish public recognises the need to act on this issue:

62%
of adults support
restricting advertising, sponsorship and promotion of alcohol products online, in public spaces and at sport and cultural events.

78%
of adults support
a ban of all forms of advertising of tobacco and recreational nicotine products.

52%
of adults support
a ban of all online and tv advertising for HFSS food and drinks.

Our results also demonstrate that there is demand for people to be adequately informed about the alcohol products they are purchasing, with nearly **69% of adults wanting to see ingredients and nutritional information placed on their alcohol products**. Similarly, there is demand for people to be warned about their health through health warning labels on alcohol products (68%), including the Chief Medical Officer's low-risk weekly drinking guidelines (63%).

Trend Projections

This section presents projections, produced by BHF Scotland, of the levels of smoking status, alcohol consumption and obesity to 2026. The projections also estimate the effect these risk factors will have on the disease burden of non-communicable diseases (NCDs).

Using analysis of data from the National Records of Scotland, the Scottish Health Survey and the Global Burden of Disease, we have also modelled a range of outcomes showing how varying levels of policy intervention could impact the prevalence of these risk factors, by calculating a halving and doubling of current trends.

To measure the disease burden of these risk factors, we assessed both the number of attributable NCD deaths and NCD-related DALYs[1] for each risk factor. To ensure validity and consistency within our projections, we used the data up to 2019 to build the model due to the probable effects of the pandemic on the data beyond that. (Further information can be found in the methodology on page 17.)

Alcohol

Since 2003, the prevalence of hazardous or harmful drinking has decreased, however this decrease has slowed and rates have stalled from 2017–2019 at around 24%, showing no positive progress. Concerningly the same period of 2017–2019 has seen an increase in NCD deaths attributed to alcohol, which can be seen in figure 2.

These figures demonstrate that progress in reducing deaths from NCDs has stalled and rates remain high in comparison to the 1980's. The leading cause of these deaths are NCDs including liver disease, cancers and cardiomyopathy.

Those living in our most deprived communities have lower overall levels of alcohol consumption. However, of those who drink above the low-risk drinking guidelines, it is people in the most deprived communities who consume the most. Consequently, **alcohol harm is much higher in our most deprived communities with people 4.3 times more likely to die from an alcohol-specific death, than those in our least deprived communities**.[XVIII]

If the trend continues at the rate seen in 2019, 20% of the population will be harmful or hazardous drinkers by 2026, with an estimated range of between 17% and 24% based on policy action. However, these projections are built upon data prior to the pandemic to ensure validity and consistency, therefore, we must consider the influence and impact Covid-19 will have on future trends of heavy drinking.

The pandemic has created a shift in our relationship with alcohol, and tragically the number of alcohol-specific deaths increased by 17% in 2020.[XIX] Research suggests that this could relate to an increase in drinking amongst groups that were already drinking at higher risk levels.[XX] Given the levels of uncertainty around patterns of alcohol consumption and related harm as we emerge from the pandemic, we have decided not to project trends of death and DALYs. We would also predict that the picture of hazardous consumption following the pandemic will be worse than our projection on pre-pandemic data.

What is clear, however, is that bold policy action is taken now to limit the impact that these harmful changes in consumption may have.

1. Disability-Adjusted Life Years (DALYs) for a disease are the sum of the years of life lost due to premature mortality and the years lived with a disability.

Figure 1. Alcohol consumption (guidelines) by deprivation quintile

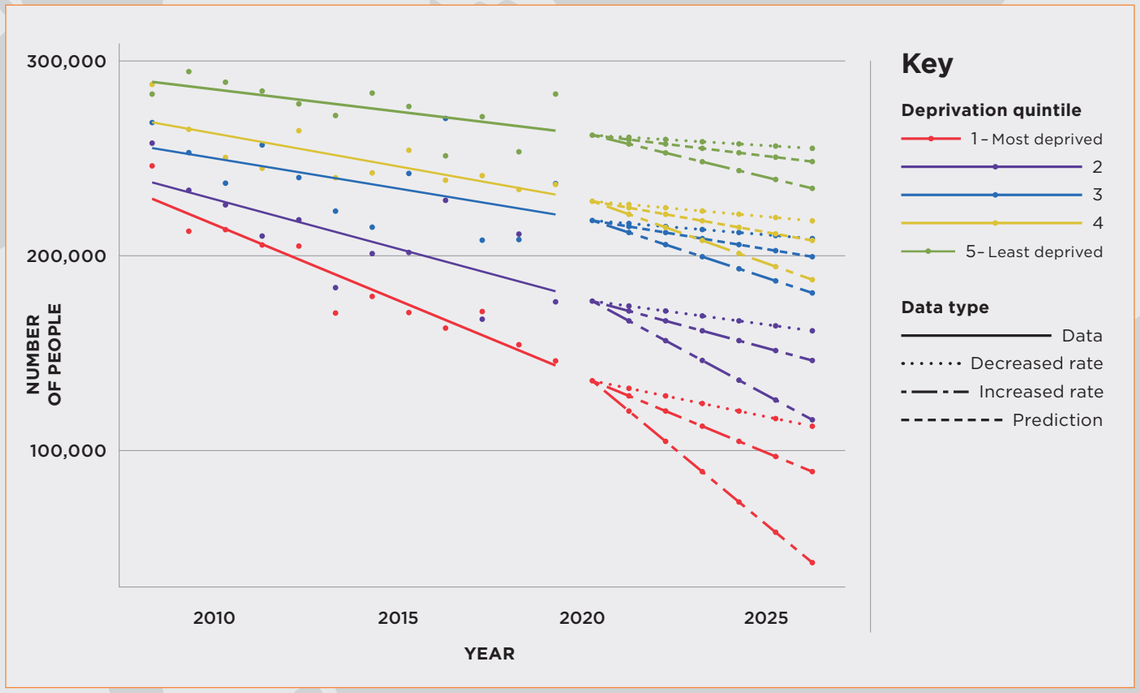
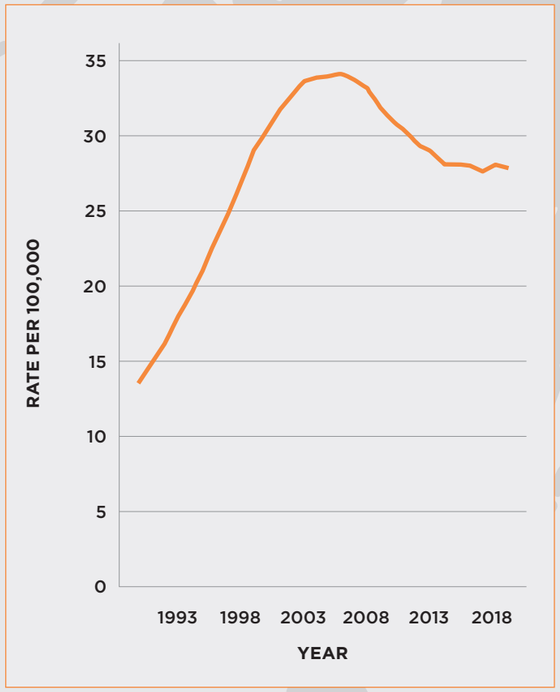
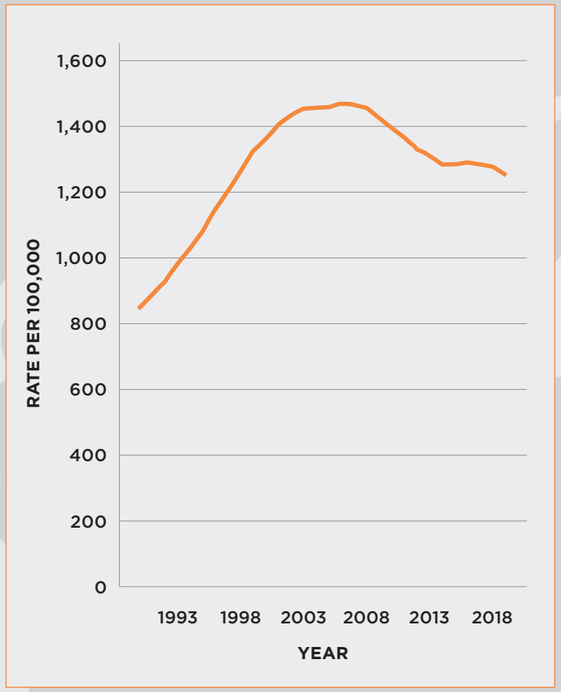


Figure 2. Burden of disease

Rate per 100,000 of non-communicable disease **deaths due to alcohol use**



Rate per 100,000 of non-communicable disease **DALYs (Disability-Adjusted Life Years) due to alcohol use**



Smoking

As of 2018, around 772,000 adults in Scotland identified as smokers (17% of all adults) according to the Scottish Health Survey. Whilst this figure has steadily declined in recent decades, progress has slowed in recent years.

The burden of tobacco is not felt equally across Scotland, with 1 in 16 (6%) adults in the least deprived areas smoking in 2019, compared to nearly 1 in 3 (32%) in the most deprived areas.

Nearly a decade ago, the Scottish Government set an ambitious tobacco free generation target for only 5% of the adult population smoking by 2034, and existing projections by Cancer Research UK suggest that this is currently set to be missed.[xxi]

If our projections to 2026 were to be extended to 2034, we also predict that the smoke free generation target will be missed. However, if this rate were to decline by 1% annually, a rate slightly above the current trend, it is possible for the target be met. **But this would require renewed action to support over 530,000 people to quit or not take up smoking by 2034**.

At the current rate, our trend projections suggest smoking rates will continue to decrease to 13% by 2026, however, with a continuation of current inequalities. **For example, if current rates were to continue, smoking levels in the least deprived areas could decrease to 5% while smoking in the most deprived areas would remain above 20% by 2026.**

Our projections also show the impact that reducing smoking levels will have on deaths from NCDs. They project that the age-standardised rate of death of NCDs attributable to smoking will slow from its historic trajectory with only a slight decrease in death rates attributable to smoking up to 2026. This picture is also seen in the wider burden of smoking related illness from NCDs.

Concerningly the data presents an increase in the most recent years in both deaths and ill health (figure 4) and suggests that the improvements in health in previous years from smoking interventions may be slowing and highlights the case for urgent and bold action to ensure continued progress.

We predict that the smoke free generation target for

2034

will be missed.

Figure 3. Smoking status by deprivation quintile

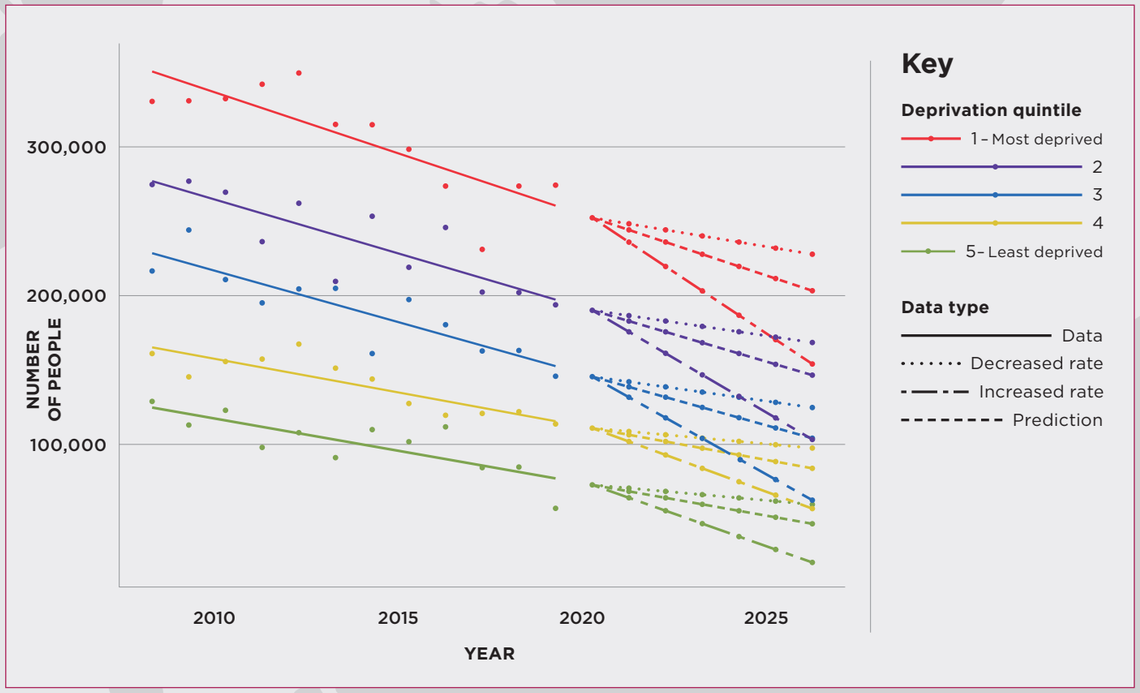
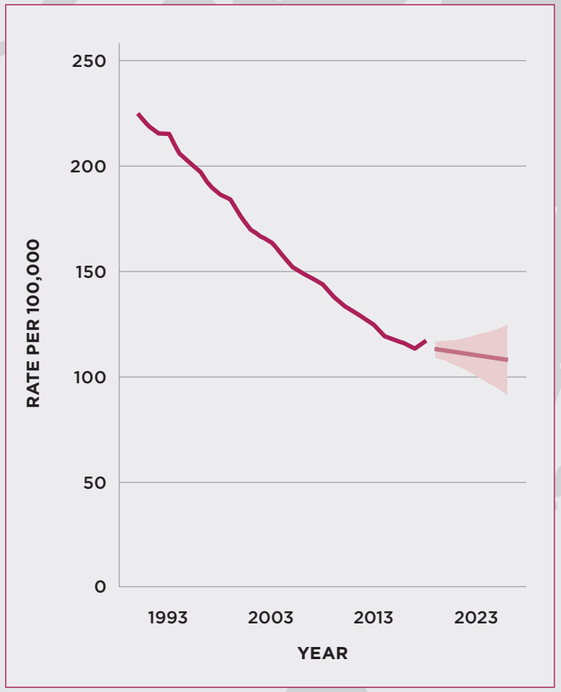
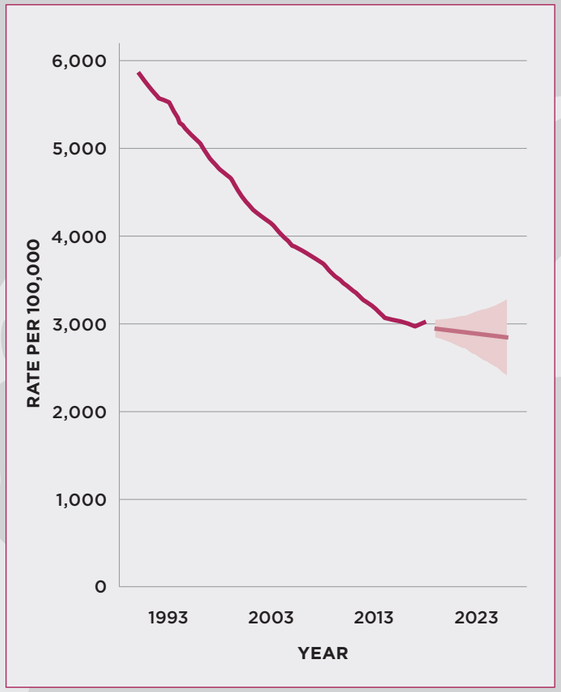


Figure 4. Burden of disease

Rate per 100,000 of non-communicable disease **deaths due to smoking**



Rate per 100,000 of non-communicable disease **DALYs (Disability-Adjusted Life Years) due to smoking**



Obesity

Recent analysis by Obesity Action Scotland, has highlighted that the average weight of adults in Scotland has risen steadily and significantly since records began in 1995 and the proportion of adults living with severe obesity has been increasing.[XXII] In 2019, 29% of Scotland's adults were classified as having obesity, with a clear disparity between the least (23%) and most (36%) deprived communities. Beyond 2026, analysis by Cancer Research UK estimates that 4 in 10 of the UK adult population are estimated to have obesity by 2040.[XXIII]

Currently, rates of obesity are highest in the two most deprived quintiles. **If trends were continue, by 2026 the prevalence of obesity in the two most deprived quintiles (1 and 2) is predicted to be 37% & 39% compared to 22% in the least deprived**. The graph on the following page highlights this gap in obesity prevalence.

The obesity related NCD death rate decreased by 38% from 1990 to 2014 but the historic increasing rates of obesity are now being reflected in death and ill health since 2014. Trends project that by 2026, the rate of obesity related NCD deaths could increase by 10%. Similarly, for obesity related illness, DALYs are projected to increase from 1,858 per 100,000 to 1,923 per 100,000.

Research conducted by the London School of Hygiene and Tropical Medicine[XXIV] recognises the damaging impact increasing rates of obesity and diabetes are having on the health of people in Scotland, undoing the benefits of action in other areas such as the reduction in heart attacks and strokes seen from the smoking ban. Their research estimates that the increasing prevalence of diabetes in Scotland has contributed to nearly as many heart attacks as the decline in smoking prevented. The positive impact we have seen from early successes in public health interventions related to NCDs could be diminishing with the increase in obesity.

Projections suggest that to reduce the prevalence of adult obesity by 5% by 2026, more than 200,000 people would need to lower their BMI or keep it below 30. Moreover, to simply keep rates of obesity at the current level (29%) by 2026, the current rate of increase would need to be halved.

Policy action is needed urgently to reduce the increasing harm being caused by obesity in Scotland. As our projections show, any delay to action will result in significant death and ill health across Scotland, with the greatest impact in deprived communities.

Trends project that in the next 5 years, the rate of obesity related NCD deaths

could increase by

10%.

Figure 5. Obesity by deprivation quintile

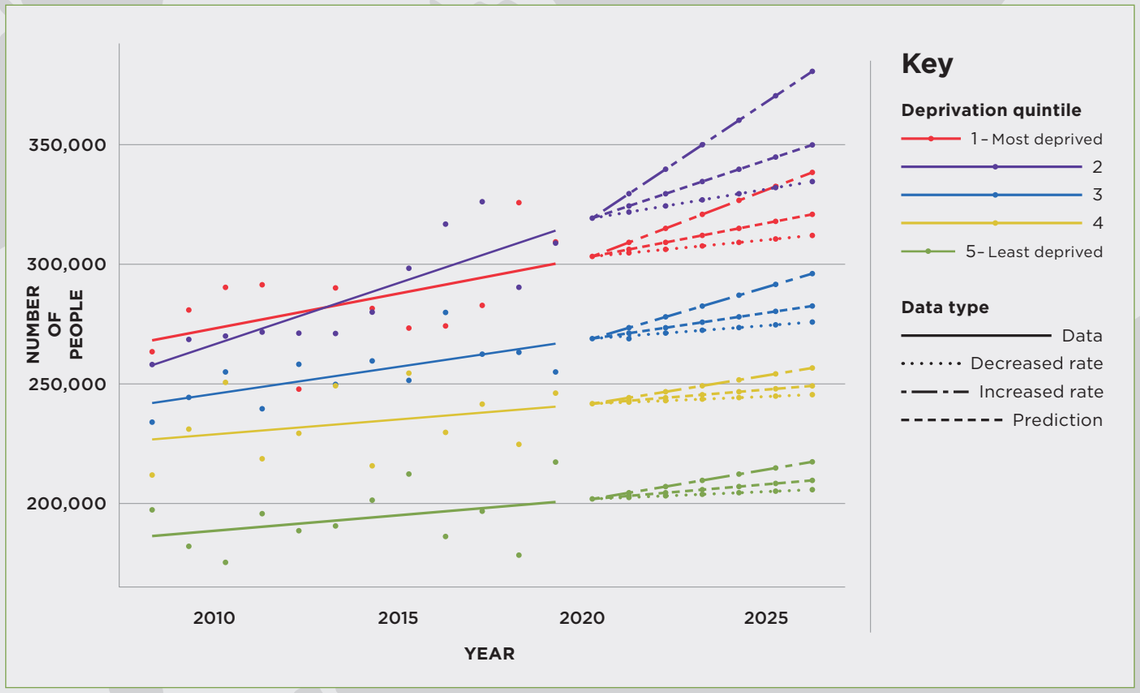
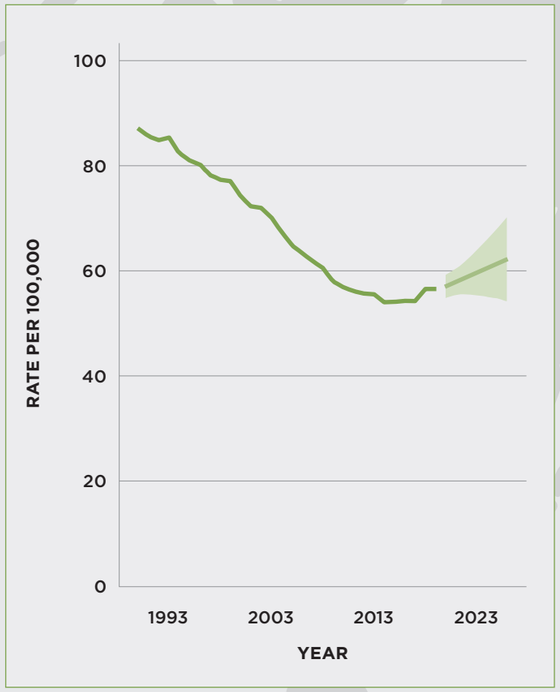
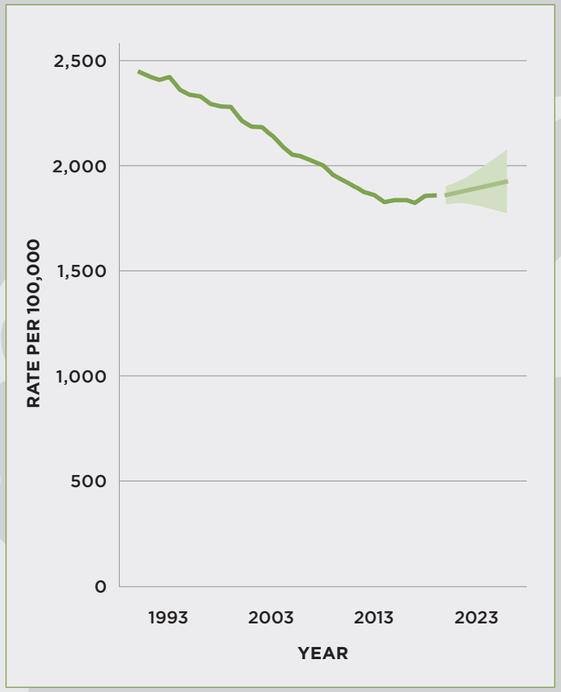


Figure 6. Burden of disease

Rate per 100,000 of non-communicable disease **deaths due to high body-mass index**



Rate per 100,000 of non-communicable disease **DALYs (Disability-Adjusted Life Years) due to high body-mass index**



Conclusion

With increasing levels of harm being caused by both obesity and alcohol consumption, as well as stalled progress in reducing tobacco harm, the projections presented in this report demonstrate the urgency for action on health harming products.

We welcome the commitment of the Scottish Government to introduce a Public Health Bill within this Parliament to address key challenges including, improving "public health, with action to cut tobacco use, tackle alcohol misuse and reduce obesity"[xxv]. But the data from this report shows that the longer the Scottish Parliament and Government delays action to reduce this harm, the more detrimental the impact will be.

It is vital that a bold and ambitious Bill is brought forward at the earliest opportunity to maximise harm reduction from health harming products for the people of Scotland.

The trend projections in this report shows the increasing burden on non-communicable disease prevalence, driven by health harming products, will result in increased death and ill health across Scotland. Without action, by the end of this parliamentary term, we will see concerning outcomes:

- **Targets set out by the Scottish Government to halve childhood obesity and create a smoke free generation will be substantially missed.**
- **Increasing rates of death and disability from NCDs, which could have been prevented through public health action.**
- **The burden of health harming products will worsen.**
- **The gap in health inequality between the richest and poorest will widen further.**

We believe there are four key areas which should be prioritised to reduce the growing burden of NCDs: **availability, price and promotion, marketing and support services**.

In September 2021 we set out 6 priorities to address health harming products that we wanted to see implemented within this Parliamentary year:

1. **Introduce regulations to Parliament on the domestic advertising of e-cigarettes following a public consultation on the measures.**
2. **Consult on restricting the advertising and promotion of alcohol as was committed to in the 2020–2021 Programme for Government.**
3. **Review the minimum unit price for alcohol in line with the Scottish Government's commitment and uprate the minimum unit price for alcohol to at least 65p per unit.**
4. **Introduce a bill to restrict the promotion of high fat, sugar and salt food and drink.**
5. **Publish an Out of Home (healthy food choices when eating out) Strategy with clear actions.**
6. **Improve weight management, alcohol treatment, and smoking cessation services so they meet people's needs, ensuring they become core services in the Covid-19 recovery.**

Whilst significant steps have been taken towards many of these calls, and we recognise the role of the Public Health Bill in the implementation of them. We are calling on the Scottish Parliament and Government to take urgent action on these measures to save thousands of lives within this Parliament, alleviate pressure on our NHS and economy, and create a fairer, healthier future for Scotland.

Methodology of Trends Data

Risk Factor Trends

Our trend projections show the rates we expect to see for smoking, alcohol consumption and obesity and the effect these risk factors will have on non-communicable diseases (NCDs) by the end of this parliamentary term in 2026. This work was carried out using analysis of data between 2008–2019 from the National Records of Scotland and the Scottish Health Survey.[xxvi, xxvii]

The risk factors we refer to are defined as:

- **Alcohol consumption:** drinking more than 14 units per week, which is classified as hazardous/harmful.
- **Obesity:** having a body mass index (BMI) of 30 or more.
- **Smoking status:** being a 'current smoker' which excludes those only smoking cigars or pipes.

Where possible, these risk factors were examined by sex (male or female) and deprivation quintile (using the Scottish Index of Multiple Deprivation, or SIMD) to examine existing health inequalities and to show how trends will affect those specific populations. The deprivation quintile ranges from 1 as most deprived to 5 as least deprived.

Using the data from 2019 survey fieldwork allowed us to provide accuracy and validity in the projections, which were not influenced by the Covid-19 pandemic or suspensions of face-to-face interviews for the Scottish Health Survey.

We used a linear regression model to predict the prevalence of each risk factor from 2020 to 2026. This assumes the prevalence data for each risk factor would not be greatly impacted by the pandemic at the population-level. The linear model shows how many people would be expected to have each risk factor if the trend continues as it is, with no policy interventions. We also modelled what the trend would look like if the rate of change doubled or halved, increasing, or decreasing the trends respectively.

Attributable Mortality and Morbidity Trends

To understand the disease burden of these risk factors, we used Global Burden of Disease[xxviii] data from 1990 to 2019 to assess the attributable morbidity and mortality for alcohol consumption, obesity and smoking. The mortality burden was evaluated based on the number of deaths attributable to each risk factor and Disability Adjusted Life-Years (DALYs) were used to assess attributable morbidity. DALYs for a disease are the sum of the years of life lost due to premature mortality and the years lived with a disability.

A full paper outlining the trend projections can be found on the BHF Scotland website.[xxix]

YouGov Polling

The NCD Prevention Coalition commissioned YouGov plc to poll adults in Scotland about various public health interventions related to tobacco, alcohol and diet, to ascertain the level of support for each. 1002 adults took part online between the 10th–14th March 2022. These figures have been weighted and are representative of all Scottish adults (aged 18+).

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