centre for progressive policy

The business case for investment in public health and obesity

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Executive Summary

About this note

- This paper sits within the CPP's wider social infrastructure series. This special edition is concerned with the social infrastructure of public health and focuses on one critical area – obesity in the wake of the pandemic.
- The case for action on obesity has long been known, but governments have consistently failed to go far enough in response. Now as Covid-19 exposes huge health inequalities across the country, and the government seeks to level up economic opportunity, there is a new window for serious joined-up action. The prize is a big one – closing the health gap between the North and the rest of the country would deliver £13.2bn in economic output.

Key points

- People living in the most deprived communities have seen double the death rate from Covid-19 as those living in the most well-off. Obesity has been a key driver of this – with the poorest areas having 10% higher rates of obesity and 16% lower rates of physical exercise (see Table 1).
- Prior to the pandemic, income levels explained 30% of the variation in obesity across England. In the wake of Covid-19 and the subsequent economic shock, it will be even more important to take action on low incomes, the price of healthy food and the accessibility of spaces for physical exercise. Our £1.8bn shovel ready package is designed to do exactly that, although this is just a start:
    - Deliver Healthy Lives Programme providing healthy food to the poorest communities (£330m).
    - Ensure access to SureStart centres for all 0-4 year olds in the poorest neighbourhoods (£510m).
    - Introduce a 10% subsidy on healthy food reducing the average cost of a bag of apples from £1.50 to £1.35 (£991million).
- More broadly, the government's obesity strategy must take a population health approach – seeking to address the socioeconomic, commercial, and environmental causes of poor diets across all age groups alongside the individual and behavioural drivers. This is consistent with a large body of evidence on tackling obesity including the Chief Medical Officer's 2019 report.
- But government action must be joined up. This means government departments working together to improve diets and increase the level of physical activity, particularly in the poorest communities. Announcing new obesity policies while offering 50% discounts on fast food is not a coherent strategy.
- To demonstrate the government's commitment to shifting the dial on population health it should start by setting out a new cross government health inequalities strategy (which includes obesity) and doubling the public health grant. Public health expenditure through the grant is three and a half times more productive than healthcare expenditure.
- Continuing on our current path which prioritises healthcare (NHS) is unaffordable. Due to rising healthcare expenditure, our debt to GDP is projected to exceed 200% by 2050. Prevention not cure is an urgent economic and fiscal priority, and policies that are sustained over decades in acknowledgement that the major benefits to population health are for now and the longer term.
- To support a step-change in health including obesity, the Health Secretary and Prime Minister (as well as the Mayors of Combined Authorities) must be held to account for their successes (and failures) in narrowing health inequalities. Table 1 shows there is a long way to go.

Table 1. Never has the social gradient of health been more relevant

	Mortality		Health behaviours		Access to (un)healthy food	
Decile of deprivation*	**Covid-19 deaths**	**All cause deaths**	**% overweight**	**% physical activity**	**fast food outlets**	**Cost of healthy diet as % of income**
Most deprived decile	139.6	570.0	67.3	57.3	130.1	74.1
Second most deprived decile	134.7	521.5	65.5	62.5	109.2	28.3
Third more deprived decile	122.8	470.6	63.2	66.0	108.2	21.2
Fourth more deprived decile	95.4	418.5	62.2	67.8	97.0	21.9
Fifth more deprived decile	86.8	390.8	62.5	68.3	94.8	19.1
Fifth less deprived decile	79.5	366.9	61.1	69.4	82.2	15.9
Fourth less deprived decile	78.9	354.9	60.8	70.4	82.8	13.2
Third less deprived decile	76.3	341.9	60.5	71.3	76.2	10.9
Second least deprived decile	72.5	330.4	60.6	71.0	68.9	9.4
Least deprived decile	63.4	296.2	57.6	73.5	61.3	6.3

Notes for table

*Deprivation relates to places, i.e. the Covid-19 mortality rate of people living in the most deprived places is 139.6. All data relate to places in England.

Covid-19 deaths and all cause deaths are the age standardised rates per 100,000 between March and June 2020. Source: ONS (2020) 'Deaths involving COVID-19 by local area and socioeconomic deprivation: deaths occurring between 1 March 2020 and 30 June 2020'.

Health behaviours show the percentage of overweight or obese adults and % engaged in physical exercise. Source: Public Health England fingertips local health profiles.

Fast food outlets shows the number of fast food outlets per 100,000 people. We combine data from Public Health England on fast food outlets with English Indices of Multiple Deprivation 2019 local authority district summaries to explore the distribution of outlets by decile.

Cost of healthy diet as % of income: shows the costs of the NHS' Eatwell guide as a % of disposable income (after housing costs). Source: Food Foundation (2018).

Why invest in public health?

What is public health?

Public health has been defined as the science and art of promoting and protecting health and wellbeing, preventing ill-health and prolonging life through the organised efforts of society.[1] In this context, the role of public health professionals is highly diverse but includes:

- embedding population health within the design and implementation of national and local policy – such as taxation, housing and planning.[2]
- identifying the health risks facing different groups within the population and designing interventions to address these – such as drug and alcohol policies and programmes.
- understanding the healthcare needs of populations and ensuring health services are the most effective, most efficient and equally accessible.
- responding to emergent public health threats such as pandemics and biohazards – i.e. by understanding the immediate risk to the local population and recommending necessary actions.

Why is public health so relevant?

The Covid-19 pandemic has revealed the devastating state of health inequalities in the UK. People who are overweight, living in deprived areas or who are Black, Asian and Minority Ethnic (BAME) have seen high death rates.[3] For example, people living in the most deprived communities have seen double the death rate of those living in the most well off (See Table 1).

It has long been known that someone's health will differ markedly depending on where they live, but never has it been exposed as quickly and brutally as during this crisis. Healthcare is important in addressing this unfairness, but it is only one of many factors – the interplay of social, commercial, and economic forces have a far greater role.[4]

Prevention through public health interventions and approaches is the way out of this crisis and the government has gone some way to acknowledging this with new measures to combat obesity including: an information campaign, legislating to end the promotion of foods high in fat, sugar or salt and banning the advertising of such foods being shown on TV and online before 9pm.[5]

This is a good start and it will be important that the government delivers on each of its commitments.[6] But it is indicative of a long-run failure of joined-up thinking across the government that the new obesity strategy comes at a time when the government has made the cost of fast food and eating out much cheaper through their Eat out to Help Out scheme. Obesity prevention and public health in the round will require substantial further investment and a truly pan-government approach given the extent of long-standing health inequalities and their multi-faceted causes.

The investments and interventions described below are not trivial, but the opportunity is a big one. Improving the health of communities will have substantial economic benefits and contribute to the levelling up agenda.

Investment in public health over the last decade

Recent public health investments and interventions span a very wide spectrum of activity from local delivery through the public health grant, to national programmes such as childhood vaccination and new regulations and legislation such as the smoking ban. Below is a brief look at some of the major recent trends.

The public health grant is a crucial resource for enabling local authorities to provide services that help maintain and improve community health. This includes obesity programmes, sexual health services and drug and alcohol services (amongst others). It also supports public health professionals to embed health into other policy areas – such as children's services and planning.

Between 2014/15 and 2019/20 there was a reduction of almost a quarter in spending per person on the public health grant.[7] This year, there was a 2.6% increase in the grant, but it remains very low by historical standards[8]. To put it into context, today the public health grant is

[1] Faculty of Public Health (2016): https://www.fph.org.uk/media/1305/short-guide_good-public-health-practice_april-2016.pdf
[2] With regard to the diverse role for public health on obesity see for instance, the Government Office for Science (2007), *Foresight,* Tackling Obesities: Future Choices – Project Report, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf
[3] For a review of evidence and analysis see: PHE (2020) Disparities in the risk and outcomes of COVID-19: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/892085/disparities_review.pdf
[4] Past research suggests that healthcare accounts for between 15% and 43% of health with the rest determined by other circumstances including the socioeconomic environment and health behaviours. Buck, D. and Maguire, D. (2015) Inequalities in life expectancy Changes over time and implications for policy. The Kings Fund. https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/inequalities-in-life-expectancy-kings-fund-aug15.pdf
[5] DHSC (2020) Tackling obesity: empowering adults and children to live healthier lives https://www.gov.uk/government/publications/tackling-obesity-government-strategy/tackling-obesity-empowering-adults-and-children-to-live-healthier-lives#covid-19-and-obesity
[6] The government's policies are not new in the sense that many have been advocated for decades. See for instance, NAO (2001) Tackling Obesity in England: https://www.nao.org.uk/wp-content/uploads/2001/02/0001220.pdf
[7] Finch et al (2018) Taking our health for granted, Health Foundation: https://reader.health.org.uk/taking-our-health-for-granted
[8] Finch (2020) https://www.health.org.uk/news-and-comment/news/response-to-public-health-grant

equivalent to just over 2% of NHS spend – down from 2.8% in 2013/14.[9]

Aside from the public health grant, the NHS delivers several public health activities – with childhood vaccinations being one of the most cost effective if there is high take up. It costs an estimated £144.5m a year for the NHS to fund GP practices to provide seven pre-school vaccinations. In 2019, the National Audit Office reported that there had been a general fall in uptake of pre-school vaccinations in England since 2012-13 and, in many cases, uptake of these vaccinations was below the Department of Health's performance standard.[10] The NHS also commissions national cancer and non-cancer screening programmes throughout England costing an estimated £660m per year.[11]

Two of the most high-profile public health interventions of the last decade or so have been the smoking ban in 2007 which banned smoking in enclosed public spaces and the sugar tax in 2018 which put a levy on soft drinks. These two measures show that, on occasion, governments have been willing to intervene in a big way through taxation and legislation to pursue specific public health objectives. The smoking ban has been linked to a reduction in the number of hospital admissions of children with asthma, while the soft drinks levy has led to a 29% fall in the consumption of associated drinks.[12,13]

It is worth putting such legislative interventions into historical perspective. Smoking and Health was published by the Royal College of Physicians in 1962.[14] It included several recommendations including increasing taxes on cigarettes, restricting advertising and labelling health risks and restricting smoking in public. Yet it took over 40 years for the recommendations to be enacted.

How can investment deliver the best outcomes for society?

The benefits of getting it right

Public health spending is efficient

A recent study of the impacts of the English public health grant on mortality found that a £3,800 investment in public health buys someone another year of good quality life. This compares with a £13,500 investment for healthcare. In other words, public health expenditure through the grant is three and a half times more productive than healthcare expenditure.[15] In a large academic review of public health interventions, the median return on investment was 14.3 to 1, and median cost benefit ratio was 8.3.[16] These are not one-off studies – there is an extensive body of evidence which consistently finds strong returns for public health interventions and spending. It goes to demonstrate that continuing to fund healthcare without also having a joined-up strategy for health promotion, ill health prevention and social services is doomed to failure.

Ever-rising healthcare spending will cripple the government's finances

The current long run fiscal outlook is dire with debt to GDP projected to reach over 200% by 2050.[17] Spending on the NHS is the main driver of this increase due to a combination of population ageing, increased chronic conditions and lower productivity in the healthcare sector than the economy as a whole.[18] With obesity leading to many chronic conditions like diabetes and cancer, it is estimated to cost the NHS £6bn a year and wider society £27bn. By 2050, this is projected to rise to £9.7bn for the NHS and £49.9bn for wider society.[19]

Better health will boost the economy and help "Level Up"

It has been consistently shown that healthier children are more likely to attend and thrive at school, increasing their knowledge and cognitive ability while healthier adults make more productive workers who are likely to stay in the labour force for longer.[20]

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[9] Finch et al (2018) https://reader.health.org.uk/taking-our-health-for-granted
[10] NAO (2019) Investigation into pre-school vaccinations https://www.nao.org.uk/wp-content/uploads/2019/08/Investigation-into-pre-school-vaccinations-Summary.pdf
[11] The Independent Review of Adult Screening Programmes in England: https://www.england.nhs.uk/wp-content/uploads/2019/02/report-of-the-independent-review-of-adult-screening-programme-in-england.pdf
[12] The smoking ban has been linked to a reduction in the number of hospital admissions of children with asthma. See Millet et al (2013) Hospital Admissions for Childhood Asthma After Smoke-Free Legislation in England, Pediatrics vol. 131,2 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4528337/
[13] Public Health England (2019) Sugar reduction: report on progress between 2015 and 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/839756/Sugar_reduction_yr2_progress_report.pdf
[14] Royal College of Physicians (1962), Smoking and Health
[15] Martin et al (2019) Is an Ounce of Prevention Worth a Pound of Cure? Estimates of the Impact of English Public Health Grant on Mortality and Morbidity, CHE Research Paper 166, University of York.
[16] Masters et al (2017), Return on investment of public health interventions: a systematic review, J Epidemiol Community Health 2017;71:827–834
[17] OBR Fiscal Sustainability Report – July 2020. This is the central projection of public sector net debt. See chart 4.5.
[18] For more on health cost pressures see OBR: https://obr.uk/docs/dlm_uploads/Health-FSAP.pdf
[19] PHE (2017) Health matters: obesity and the food environment. For original costing methodology see Government Office for Science (2007) Tackling Obesities: Future Choices – Project report. NB. the wider cost to society is based on earlier work from the Health Select Committee linking obesity to reduced employment.
[20] See for instance: Bloom, D. and Canning, D. (2007) Commentary: The Preston Curve 30 years on: still sparking fires. International Journal of Epidemiology, 36 (3): 498–499.

The Northern Science Health Alliance recently estimated the economic impact of poor health to the north of England. They found health contributed over 30% to the difference in GVA per-head (difference of £4,754.43) and in employment rates (difference of 2.1 percentage points) between the North and the rest of the country. In the North, those in better health are 17% more likely to be in employment. Closing the health gap would deliver £13.2bn in economic output.[21]

Given this outlook, there is an urgent economic and fiscal imperative to expand from a system of healthcare that focuses on treating and curing illness to one that prevents ill health in the first place. "Curb rather than just cure".

Conditions all investments must meet

A community's health is determined by many different factors including the social and economic environment, the physical environment and a person's individual characteristics and behaviours.[22] Public health is concerned with addressing each of these, but as shown above, its ability to do so is hampered by the current level of funding and a long-run emphasis on healthcare over public health.

In the context of the obesity challenge, the government will need to take a multifaceted approach which goes beyond better calorie information, new apps and banning adverts to address the full breadth of issues driving people to live unhealthily and become overweight. The Chief Medical Officer's 2019 obesity report is a good starting point, containing just shy of 50 recommendations covering issues as diverse as the built environment, product marketing, taxation and regulation, schools and nurseries and data and technology (amongst others).[23] These recommendations echo many other seminal reports on obesity which emphasise the multi-dimensional nature of the problem and the importance of bold interventions on several fronts.[24] It is only by government at the very highest level owning such a wide-ranging policy programme that real progress on obesity will be achieved.

The obesity challenge will be made harder by the current economic crisis. Poverty makes healthy food options tougher. The Food Foundation estimates that for someone to eat everything that makes up the NHS's Eatwell Guide would cost the poorest 10% more than 70% of their disposable income[25]. CPP analysis finds that income deprivation accounts for over a third of the variation in obesity seen across the country. Our findings reveal income to be particularly important even after controlling for education levels which suggests that health information and education will only be a part of the solution[26].

Supporting better diets amongst the poorest will require doubling down action on low incomes, the accessibility of healthy food, and the local environment such as the availability of fast food and easy access to leisure centres and green spaces.

'Shovel ready' investments in this area

Public health investment

Embed population health into all layers of the government: In the context of obesity, this means government departments working together to improve diets and increase the level of physical activity, particularly amongst the poorest groups. Announcing new obesity policies while offering 50% discounts on fast food is not a coherent strategy. A better approach would be a cross government health inequalities strategy (including obesity) as advocated by the Kings Fund and the Marmot Review - 10 years on.

More investment, better targeted: The Health Foundation has shown that to restore the public health grant to its 2014/15 levels and ensure better deprivation targeting without leaving any communities worse off would **cost £3.2bn – doubling the current public health grant**. This could be achieved through a phased approach – first restoring the grant to its 2014/15 level (£0.7m), before aligning community spending with the recommendations of the Advisory Committee on Resource Allocation (£2.5bn).

Obesity and children's health

The government should take further action on low incomes and the price of (un)healthy food including:

Introduce Healthy Lives programme: The Healthy Start programme which provides vouchers to buy healthy food should be reformed as the Healthy Lives programme.[27] The programme should be expanded to include all those living in the most deprived areas who have children aged under 15. People living in these areas should be automatically enrolled into the scheme and the amount should be set at £6.20 per week for all children under 15. This will go some way to directly addressing food security and diet in the

[21] Bambra, Munford, Brown et al (2018) Health for Wealth: Building a Healthier Northern Powerhouse for UK Productivity, Northern Health Sciences Alliance, Newcastle.
[22] See: Dahlgren G., Whitehead M. (1991) Policies and strategies to promote Social Equity in Health. Stockholm: Institute for the Futures Studies
[23] Davies (2019) Time to solve childhood obesity: CMO special report
[24] See Government Office for Science (2007), *Foresight,* Tackling Obesities: Future Choices – Project Report, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf
[25] Scott et al (2018) Affordability of the UK's Eatwell Guide, report for The Food Foundation.
[26] Based on a cross-sectional regression analysis of proportion of people overweight or obese across local authority districts. We control for different indices of deprivation including education and skills, crime and indoors living environment as well as regional differences. Income remains strong and significant.
[27] Currently available for those claiming benefits, pregnant women and children over one and under four years old can get one £3.10 voucher per week. Children under one year old can get two £3.10 vouchers (£6.20) per week.

poorest places while automatic enrolment into the scheme should maximise take-up. **Assuming 80% take-up of the scheme, this would cost £330m.**[28]

Subsidise healthy food: The sugar tax has led to a dramatic reduction in the consumption of sugary drinks but there is no accompanying incentive to support healthier diets. The government should consider a 10% subsidy for healthy food reducing the average cost of a bag of apples from £1.50 to £1.35. **This would have an estimated cost of £991 million.**[29]

Provide access to SureStart centres for all young children in deprived areas: The Institute for Fiscal Studies found SureStart had major health benefits for children in poorer areas - the poorest 30% of areas saw the probability of any hospitalisation fall by 11% at age 10 and 19% at age 11. Earlier evaluations showed it reduced worklessness of families accessing the centres. **It would cost approximately £510m to provide Surestart access to all children aged 0-4 in the poorest 30% of areas.**[30]

Maintain and strengthen safety nets for the poorest families: Currently more than 1 in 10 children live in households with incomes below 40 per cent of the median.[31] This is contributing to worse diets and poorer health. In response to Covid-19, the government has delivered an extra £20 per week in the basic level of universal credit and tax credits, more help for low-income renters and an easing of restrictive benefit rules facing the self-employed. At the very least, this enhanced safety net must be maintained to support food security during the crisis and beyond.

More broadly, the government should implement the CMO's obesity recommendations: The government should commit to the recommendations set out in the CMO's 2019 report taking heed of the recommendations from the many reports that preceded it, and should urgently set up a taskforce for implementation reporting directly to the Prime Minister.

How will we know if the investments have been successful?

Success must be defined as improved health for all groups in society and a narrowing of health inequalities. The Health Secretary and Prime Minister (as well as the Mayors of Combined Authorities) must be held to account for their success in narrowing these inequalities as part of the government's Levelling Up programme, albeit with the caveat that progress on inequalities will not be achieved overnight and requires a sustained generational effort.

The key measures to monitor are well known and data at a granular level is readily available from Public Health England.[32] They include (but are not limited to):

Health outcome indicators

- Life expectancy, healthy life expectancy and disability free life expectancy by decile of deprivation
- Avoidable and preventable mortality rate by decile of deprivation
- Age standardised mortality rate by decile of deprivation

Health behaviours indicators

- The rate of overweight and obese people by decile of deprivation
- Alcohol, drug and smoking prevalence by decile of deprivation
- Physical activity by decile of deprivation

Ability to access (un)healthy products and services

- Cost of healthy food as a proportion of income by decile of deprivation
- Access to fast food outlets by decile of deprivation
- Access to parks, green spaces and leisure centres by decile of deprivation

As Table 1 above showed, the social gradient for health and obesity has never been more relevant. Without action the situation is only likely to get worse - Public Health England estimate the gap in childhood obesity by deprivation is continuing to rise.[33] While the stakes could not be higher in terms of our health, economic and political future, the challenge is not insurmountable. The investments outlined here are a useful starting point, but it will require a true pan-government commitment to prioritising population health in all policies and places to really shift the dial.

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[28] Assumes £6.20 vouchers are accessed by 80% of under 15s in the 10% most deprived lower super output areas as defined by the Indices of Multiple Deprivation (2019). This cost is likely to be an overestimate no account of the people in decile 1 who can already claim.

[29] Flores and Rivas (2017) Cash incentives and unhealthy food consumption, https://www.bath.ac.uk/announcements/use-food-subsidies-as-carrot-to-encourage-healthier-eating-habits-for-obese/

[30] This is based on an average per child cost of £416 as calculated by the IFS and applied to all children aged 0-4 currently living in Lower Super Output Areas that are in 30% of the most deprived placed according to IMD 2019 (deciles 1, 2 and 3).

[31] Brewer et al (2020) The Living Standards Audit 2020, Report for Resolution Foundation: https://www.resolutionfoundation.org/app/uploads/2020/07/living-standards-audit.pdf

[32] See for instance, PHE's Local Authority Health Profiles for England: https://fingertips.phe.org.uk/profile/health-profiles

[33] Public Health England (updated 2020) Patterns and trends in childhood obesity. Slide pack (slide 29): https://khub.net/documents/135939561/283231753/PHE+Obesity+Child+SlideSet+England+2020.pptx/b3cd82af-be82-12dd-a0e9-70976bf55a42?version=1.0&t=1582198692303&download=true

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