

LCP on point 

Are we undervaluing measures to keep people well?

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Executive Summary

Are we under-valuing measures to keep people well? ¹

Improved health or prevention of ill health has significant benefits beyond those direct health benefits of the patient and savings to the NHS. Ill health also impacts the Treasury in a range of ways including increased welfare payments to support those who are sick and loss of tax revenue due to reduced productivity of the workforce. Achieving a more productive population through a healthier population is a key objective of the UK Government.

Yet currently we do not assess health interventions in a manner that reflects these wider economic benefits. In particular, the broader value of interventions that prevent ill health is not routinely considered when decision makers assess the value of such interventions.

We argue in this paper that the current exclusion of fiscal costs in assessments could lead to a drastic under-valuation of certain 'preventative' interventions, such as treatments which reduce the prevalence or impact of smoking or obesity. Including this more holistic valuation would better align incentives between fiscal policy and the goal of improving the health of the nation.

Here we propose a novel unit of currency that quantifies (some of) the fiscal value of preventing ill-health to the UK government. Specifically, we estimate the net effects on welfare costs when someone is enabled to stay in work in good health rather than moving onto long-term receipt of sickness-related benefits.

We find that for every one person out of work and on sickness-related benefits rather than standard benefits for the unemployed, there is an additional annual cost of £9,300. Given a typical annual duration of five years for people on working age sickness-related benefits, this could amount to a cumulative £46,500 over the expected five years of their benefit claim. This is money which could be saved by preventative activity, but a return which is ignored by current evaluation approaches.

We then draw on previous estimates by Dame Carol Black for DWP which suggested that around 1 in 3 of those on sickness benefits has a condition linked to obesity. Applying this estimate to current benefit caseloads suggests that around 1.1m recipients of benefits such as Employment Support Allowance (ESA) and Universal Credit (UC) for those with limited capability to work have such conditions today. If their obesity related condition leads them to be out of work and on sickness benefits rather than simply out of work and otherwise healthy, then the additional cost to the Exchequer is 1.1m people multiplied by £9,300, or just over £10 billion per year. This is of a similar order of magnitude to the cost of obesity to the NHS, recently estimated at around £11 billion by the Health Secretary. Yet the benefit costs are routinely ignored when policy interventions are being evaluated.

¹ LCP's Health Analytics team undertakes work for a range of health clients including public bodies, charities and the pharmaceutical industry. However, this paper represents the views of the named authors and has been produced at their own initiative.



In terms of future growth in spending arising from obesity, we present projections which suggest a rise of just over 3 million people of working age with obesity by 2030. Assuming that, as at present, 8.9% of these are on sickness benefits, this implies a growth of around 277,000 people in this situation because of obesity over the next six years. If this growth was avoided through prevention or better management of those living with obesity, around £2bn a year could be saved from the benefits bill by 2030.

We conclude that a priority for government would be to widen the scope of NICE's evaluation of health interventions to capture this fiscal value. Preventative measures which then pass a more comprehensive cost-benefit analysis would be funded by a new health-driven prosperity fund. This would enable increased investment in the population's health today to generate savings over the short to medium term, to the benefit of individuals, the NHS, the taxpayer and the economy.

“We conclude that a priority for government would be to widen the scope of NICE’s evaluation of health interventions to capture this fiscal value. Preventative measures which then pass a more comprehensive cost-benefit analysis would be funded by a new health-driven prosperity fund. This would enable increased investment in the population’s health today to generate savings over the short to medium term, to the benefit of individuals, the NHS, the taxpayer and the economy.”

01 Introduction

When a new medical intervention is under consideration for implementation in England and Wales, a rigorous cost-effectiveness assessment is undertaken by the National Institute for Health and Care Excellence (NICE). The purpose of this assessment is to compare the costs and benefits of the intervention with what is already available for use in a systematic and consistent way.

The NICE remit is to offer guidance that represents an efficient use of available NHS and personal social service (PSS) resources. Under current NICE guidelines^{2,3}, health benefits considered under the reference case (i.e. the default analysis) are narrowed to the individual receiving the intervention, and in some cases carers. NICE states that:

“... perspective on outcomes should be all relevant health effects, whether for patients or, when relevant, other people (mainly carers).”

There may be an immediate impact on patients in terms of enabling them to have a better quality of life and/or a greater length of life, leading to the concept of ‘quality adjusted life years’ (QALYs). QALYs are currently the preferred way of assessing the direct health benefits of an intervention as they allow comparison of benefits across interventions.

Regarding costs, these are generally narrowed to the perspective of the healthcare system. Evaluations that consider benefits to the government outside of the NHS and PSS must be pre-agreed with the Department of Health and Social Care.

² [7 Assessing cost effectiveness | The guidelines manual | Guidance | NICE](#)

³ [NICE health technology evaluations: the manual](#)

If they are included, they are considered a non-reference case analysis.

NICE states that:

“The perspective adopted on costs should be that of the NHS and PSS... Some technologies may have substantial benefits to other government bodies (for example, treatments to reduce drug misuse may also reduce crime). These issues should be identified during the scoping stage of an evaluation. Evaluations that consider benefits to the government outside of the NHS and PSS will be agreed with the Department of Health and Social Care and other relevant government bodies as appropriate.”

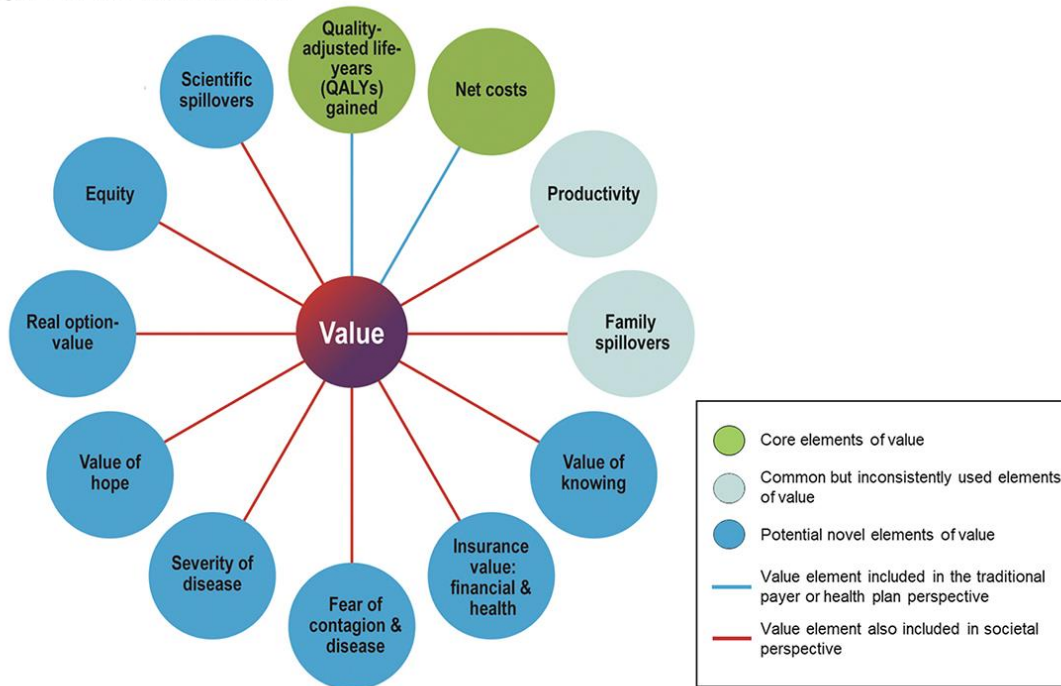
In other words, while costs and benefits to the NHS or Social Services are routinely assessed, other benefits – such as savings in other government departments – are not routinely included, and only on a case-by-case basis.

However, in recent years there has been increasing conversation as to whether the true value of healthcare interventions is adequately captured by current methods of evaluation.

For example, the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) has developed the concept of a ‘value flower’⁴, which reflects a much wider range of potential benefits of interventions, and this concept is now increasingly widely used in the US. Figure 1 shows some of the wider potential costs and benefits which could be considered.

⁴ [ISPOR - Novel Elements of the Value Flower: Fake or Truly Novel?](#)

Figure 1. The Value Flower.



Adapted from Lakdawalla et al.² QALY indicates quality-adjusted life-year.

Meanwhile, in Europe, other value elements, including insurance value⁵, paid and unpaid production⁶, are increasingly being studied. But despite this, such wider benefits are not routinely considered by NICE.

In this paper, we argue that this exclusion could lead to a drastic under-valuation of certain 'preventative' interventions, such as treatments which reduce the prevalence or impact of smoking or obesity. We propose that there is an opportunity to better align valuation and incentives between a medicine manufacturer on the one hand and Health Technology Assessment bodies (such as NICE) / government priorities on the other.

To illustrate our argument, we model the effects on social security costs when someone is enabled to stay in work in good health rather than moving onto long-term receipt of sickness-related benefits. We find that the potential cost savings are huge – dwarfing the cost savings which are assessed such as the NHS costs of treating such individuals.

This analysis is particularly timely with a new government focused on high rates of economic inactivity due to long-term sickness.

⁵ [An Insurance Value Modeling Approach That Captures the Wider Value of a Novel Antimicrobial to Health Systems, Patients, and the Population - PubMed \(nih.gov\)](#)

⁶ [Waiting for prosperity: Modelling the economic benefits of reducing elective waiting lists in the NHS | IPPR](#)



For example, as pointed out in the 2023/24 Annual Report of the DWP⁷:

“The working-age economic inactivity rate increased from 20.5% (8.55 million people) in December 2019 to February 2020, to 22.1% (9.38 million people) in January to March 2024: an increase of 832,000 people. During the same period, long-term sickness has also been rising and is now the most common reason given for being economically inactive”. (p47)

The new government has stressed that it wishes to tackle these issues in a holistic way, with people on benefits given support not only in looking for a job but also supported to overcome health-related barriers to work. In a keynote speech in July 2024, the new Secretary of State, Liz Kendall MP, said⁸:

“Over the last 14 years the DWP has focused almost entirely on the benefits system, and specifically on implementing Universal Credit, and nowhere near enough attention has been paid to the wider issues – like health, skills, childcare and transport – that determine whether people get work, stay in work and get on in work.”

In that spirit, this paper looks at how spending money on public health interventions such as tackling obesity or smoking-related conditions could have benefits well beyond the savings to the NHS. If an assessment of these wider benefits was integrated into the approval process for new treatments, we may well see much greater uptake with gains to the public purse, the economy and the individuals concerned.

The remainder of this paper is structured as follows:

- Using obesity as an example, we begin by looking at the impact on the public purse when an individual moves out of paid work because of ill health. We describe the different benefits that may be available to someone in this situation. We then use official data on the numbers of people receiving different rates of benefit, and model likely durations on benefit, to calculate with an overall ‘cost of sickness’ to the taxpayer via the benefits system – a cost which can potentially be prevented by appropriate early interventions.
- Next, we set these estimates in the context of the sorts of cost savings typically used in appraisals of medical interventions and consider whether including ‘wider societal benefits’ such as social security savings would be likely to affect uptake of such treatments.
- Finally, we make policy recommendations for how the findings of this paper could be developed and applied.

⁷ [DWP annual report and accounts 2023 to 2024 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/123456/dwp-annual-report-and-accounts-2023-to-2024.pdf)

⁸ [Kendall launches blueprint for fundamental reform to change the DWP from a ‘Department of Welfare to a Department for Work’ - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/kendall-launches-blueprint-for-fundamental-reform-to-change-the-dwp-from-a-department-of-welfare-to-a-department-for-work)

02 Evaluating the social security related fiscal gains to government from public health interventions

In this chapter, we look at the impact on the ‘public purse’ when someone leaves employment because of ill health and starts to receive benefits for sickness and/or disability. This is a cost that could potentially be avoided by a preventative public health intervention⁹ or better management of a chronic condition to prevent impact on the ability to work.

For simplicity, we consider a ‘binary’ scenario – a base case where someone receives a treatment (or preventative intervention) and is able to remain in work in good health compared with one where they go off sick and start receiving benefits. In reality, of course, an intervention could have a spectrum of impacts, such as reducing (though not preventing) the length of time spent out of work on sickness benefits. We are also dealing here with broad-brush averages, but this analysis could be refined if an intervention targets a particular demographic group whose likelihood of claiming particular benefits may be different to the average.

In terms of the public purse, if someone previously in employment leaves their job, we would expect multiple negative impacts on the Exchequer.

These would include:

- Loss of direct tax revenues (income tax, employee and employer National Insurance Contributions) as the individual is no longer in work and paying tax.
- Loss of indirect tax revenues (VAT, petrol duties etc) as the individual’s spending power is reduced following their loss of employment.
- Increase in social security costs as the individual now starts to receive sickness and/or disability benefits.

However, unless we think that the job previously occupied by the person who has gone off sick simply disappears, this list of Exchequer costs risks overstating the true effect. In reality, the newly created vacancy may be filled by someone previously unemployed, or perhaps that the vacancy is filled through internal promotions and a new vacancy is created elsewhere in the firm.¹⁰ In either case, there would be relatively little net effect on tax revenues from one person going off sick and being replaced in some way by someone else.

But what would be different from the taxpayer’s point of view is the impact on the benefits bill.

⁹ We concentrate here on preventative action, which, for example, might help to prevent someone from becoming obese and developing obesity related health conditions. But many of these arguments would apply equally to treatments designed to reduce the impact of such conditions after they have occurred.

¹⁰ There may of course be a ‘friction cost’ if, for example, there is a period when the job in question remains vacant pending recruitment of a replacement. If the intervention under examination helps to prevent this cost then that would be an additional saving, though beyond the scope of our assessment here which focuses on social security spending.

If we assume that the vacancy is simply filled by someone previously on unemployment benefits, then a net cost will arise if the person who has gone off sick starts to receive a higher rate of benefit – through sickness and/or disability – than the unemployed person who has gone into work.

To come up with an estimate of the potential cost, we need to make a range of assumptions:

What benefits would the person who goes off sick receive?

These could include:

- Income-related benefits such as Universal Credit or Employment Support Allowance (ESA)
- Disability benefits such as Personal Independence Payment (PIP)

What benefits would the newly employed person have previously been receiving, if any?

We simply assume that the newly employed person would have been on the standard rate of Universal Credit. We note however that in some cases a job vacancy created when someone goes off sick may be filled by someone who had not previously been on benefit, in which case the fiscal impact would be much worse.

How long would this situation last?

Clearly the cost to the Exchequer would be much greater if the person who leaves work moves into a period of long-term benefit receipt.

How many people could benefit?

Whilst the evaluation of a new drug or intervention tends to be at the individual level (expected cost of the treatment vs expected benefit per person / cost saving to the NHS), a key question is how significant this new framework could be at an aggregate level. We consider each in turn.

What benefits would the person who goes off sick receive?

There are currently three types of benefit potentially received by those who go off sick which are either paid at higher rates than to those who are unemployed, or which are not available to those who are unemployed.¹¹

The first are ‘income-related’ benefits, designed to bring the income of the individual (and/or their household) up to a minimum level. The main working age income-related benefit in the UK benefits system is Universal Credit, currently paid to more than 7 million people.¹² This brings all recipients up to a minimum income level but has additional elements for those deemed to need a higher minimum income level such as those who have a disability.

¹¹ We do not consider help with rent/council tax which is in principle equally available to those who are unemployed and those who are sick, so this would cancel out in our analysis.

¹² [Stat-Xplore - Table View \(dwp.gov.uk\)](https://www.dwp.gov.uk/stat-xplore-table-view)

The second type is 'contributory' benefits, payable to those who have a sufficient record of National Insurance Contributions. The main such benefit of relevance here is Employment Support Allowance (ESA). Those who are unable to work because of sickness and who meet the National Insurance requirements can receive ESA for at least 12 months, or longer if they are more severely disabled. Note that any income from ESA would be reduced entitlement to Universal Credit, so the main value of ESA is to those who would not qualify for UC, such as those with a working partner or those with significant levels of savings.

The third type of benefits are 'extra costs' benefits, designed to recognise that people with disabilities may face costs as a result of those disabilities. Such benefits may be paid whether the disabled person is in or out of work and regardless of income or National Insurance record. The main 'extra costs' benefit is the Personal Independence Payment (PIP), which is gradually replacing the previous system of Disability Living Allowance. PIP is available to those who have extra costs arising from care needs and/or mobility needs, and each element is payable at a higher/lower or nil rate.

The key point about all of this is that someone who is out of work because of sickness or disability could receive benefits (such as PIP) which would either not be available at all to an otherwise healthy unemployed person and/or other benefits (such as UC) which would only be paid at a lower rate to those who were not disabled.

In terms of income-related benefits, DWP data suggests that the large majority of people recently making a claim for income replacement benefits for sickness are claiming Universal Credit, so we will focus on that benefit. If they are found to be unfit for work, around four fifths are allocated to the group with 'Limited Capability for Work- or Work-Related Activity' (LCWWRA). Being placed in this group entitles the claimant to a higher rate of benefit.

For a single person with no other income, their weekly universal credit in 2024/25 is simply:

- Standard Personal Allowance: £90.80
- LCWWRA premium: £96.05
- Total: £186.85

DWP data also shows that around 63% of people in the LCWWRA group will also be getting Personal Independence Payment.

The main rates of PIP in 2024/25 are:

Daily Living

- Enhanced £108.55
- Standard £ 72.65

Mobility

- Enhanced £75.75
- Standard £28.70

We have derived estimates¹³ for the number of people on UC for sickness reasons and also on PIP who are getting the different combinations of PIP rates.

We can therefore split 100 people on UC for sickness reasons as follows:

UC only (no PIP) 37

UC plus PIP 63

Of which:

Rates of PIP	Number (per 100)	Rate
Enhanced Mobility, Enhanced Daily Living	21	£184.30
Enhanced Mobility, Standard Daily Living	7	£148.40
Enhanced Mobility, Nil Daily Living	1	£75.75
Standard Mobility, Enhanced Daily Living	8	£137.25
Standard Mobility, Standard Daily Living	10	£101.35
Standard Mobility, Nil Daily Living	1	£28.70
Nil Mobility, Enhanced Daily Living	3	£108.55
Nil Mobility, Standard Daily Living	12	£72.65
All (and weighted average rate)	63	£132.10

In summary, for 100 people who end up on Universal Credit because of sickness, we can expect the following:

- 37 people receiving £186.85 Universal Credit per week
- 63 people receiving £318.95 Universal Credit per week (£186.85 plus £132.10 PIP)

This gives a weighted average weekly benefit (UC/PIP) of £270 per week.

¹³ Further details are available on request

What benefits would the newly employed person have previously been receiving, if any?

A simple assumption, which mirrors the previous section, is that the previously unemployed person was a single person on the main personal allowance rate of Universal Credit – currently £90.80 per week.¹⁴

If this assumption is correct, then the amount saved each time a person in work is prevented from needing to go off sick is:

Out of work benefit (UC/PIP) (weighted average):	£270
Less Ongoing benefit to unemployed person:	£91
Benefit saving – per week	£179
Benefit saving – per year	£9,308

How long will this situation continue?

Durations on sickness related benefits can be hard to predict and can change over time. In addition, there is no publicly available data which follows those who start a claim for PIP to see how long they remain on that benefit.

However, we do have detailed cross-sectional data on the number of people on PIP at any point in time, subdivided by the duration of their claim to date. We can use this data to create a ‘synthetic’ longitudinal data set, by looking, for example, at those who had been on benefit for 0-1 years at a baseline date and then those who had been on benefit 1-2 years one year later. A comparison of the two numbers allows us to estimate a likelihood of flowing off benefit during the first year of a claim. We can repeat the process for those with durations of 2-3 years and 3-4 years.

Although there is some limited evidence that likelihood of flowing off benefit declines with length of time on benefit (which seems intuitively plausible) a reasonable rule of thumb based on the latest data is that around 10% of people on PIP in a given year have flowed off a year later.¹⁵ This would imply that the median duration (50% of people) for someone starting a new PIP claim would be around 5 years.¹⁶

If so, every one person who moves out of work and onto benefit could cost an annual £9,300 or around £46,500 over the expected five years of their benefit claim, even allowing for savings from someone moving off benefit and into their old job.

¹⁴ Clearly, some people who take the jobs vacated by the newly sick will not have previously been on Universal Credit. On the other hand, some people who leave jobs and become sick will not necessarily qualify for Universal Credit (perhaps because of a partner’s earnings or capital). Without better data, it seems reasonable to make the symmetric assumption that everyone who goes into work comes off UC and everyone who leaves work goes onto UC (plus sickness premia and PIP as appropriate).

¹⁵ Our 2023 report: “Could early intervention prevent a retirement disability benefit timebomb”, estimated that outflow rates were around 12% for those on PIP for 1-2 years and 2-3 years, and around 8% for those in receipt for 3-4 years.

¹⁶ Note that mean durations are likely to be higher than this, especially as PIP receipt does not end at pension age but can continue indefinitely, provided that the care/mobility need continues.

How many people could benefit?

As indicated earlier, the growing number of people on sickness- or disability-related benefits is a matter of central concern to the government. For example, there are currently over 4.7 million people receiving PIP or its predecessor benefit DLA, and the combined cost of these two benefits is currently over £32 billion per year. This total cost is expected to rise in real terms by nearly 25% in just the next four years.¹⁷

Whilst there are currently no reliable estimates of how far specific public health measures or drug treatments could reduce such costs, there is some indication of the extent to which those on these benefits have conditions which might have been caused or exacerbated by factors such as smoking or obesity – two areas where potential interventions are rapidly developing.

Taking obesity as an example in further detail, we estimate that working age obesity prevalence in the UK will grow from 28.5% currently in 2024 to 35.6% by 2030.¹⁸ This equates to almost an additional 3.1 million people with obesity of working age over the next 6 years.

Regarding, obesity, a 2016 report by Dame Carol Black estimated¹⁹ that around 1/3 (800,000) of the caseload of people on Employment Support Allowance (ESA) had conditions which might be associated with, or exacerbated by, obesity to varying degrees. We estimate that this accounted for 8% of the UK working age obesity population aged 16-64 in 2016. Given claimant numbers increased by roughly one third between 2016 and 2024, we can assume the number of working age people with obesity requiring benefits to have grown to around 1.1 million from 800,000. This equates to an estimated 8.9% of the current working age obesity population requiring out of work benefits.

Looking forward, of the expected 3.1 million additional working age people with obesity over the next six years, we can therefore expect roughly 8.9% (or 277,000 people) may need to move out of the workforce due to obesity or an obesity related complications and onto benefits.

Preventing just these additional new cases of obesity (rather than the total stock of people living with obesity) and associated workforce exit could therefore save over £2 billion per year in additional welfare spending (277,000 people £9,300).

Yet savings could be even greater if the government look to manage the ‘stock’ of people with obesity and requiring out of work benefits, rather than just prevent the additional cases as per the recent pilot announcement aiming to help people into employment by using anti-obesity medications.²⁰

¹⁷ UK Department for Work and Pensions [Benefit expenditure and caseload tables 2024](#)

¹⁸ We used ONS UK population data, historical Health Survey for England adult obesity prevalence and World Obesity Atlas 2030 predicted obesity prevalence estimates and adjusted these to be working age obesity estimates. The adjustment factor of 0.963 was made for all years based on the ratio of actual 2021 working age prevalence to actual working age obesity prevalence in 2021, data obtained from HSE 2021.

¹⁹Page 62. [An Independent Review into the impact on employment outcomes of drug or alcohol addiction, and obesity 2016](#)

²⁰ [Obesity: Unemployed could get weight loss jabs to return to work - BBC News](#)



Based on our estimate of 8.9% of the working age population living with obesity being on sickness-related benefits, this would suggest a 'stock' of around 1.1million people. If each of these is receiving £9,300 more than their healthy counterpart on benefit, the total obesity-related bill could be around £10.2 billion per year. Successfully managing this population, through pharmacological treatment for example, could reduce this cost by several billion pounds.

In summary, the prize is potentially great. The saving per head if someone can be helped to remain in work rather than need to go off sick is substantial. But when multiplied by the numbers who might otherwise find themselves on benefit because of preventable factors, the aggregate Exchequer saving from preventative activity is deserving of serious government attention far beyond the Department of Health and Social Care.

03 How do the benefit savings compare with potential NHS savings?

Obesity and smoking are two of the most significant public health challenges, incurring significant healthcare and societal costs.

A recent study has estimated the full annual cost of obesity in England to be £74.3bn, £11.4bn of which is borne directly by the NHS.²¹ Other elements of this total include loss of workplace productivity, increased social care costs and a valuation of the deterioration in quality of life of those who develop obesity.

Annual estimates of the cost of smoking have been estimated at £46bn, £1.9bn in healthcare costs alone²². These figures highlight the critical need for effective prevention measures.

Yet previous studies have typically considered welfare payments attributable to obesity as transfer payments, so either excluded or explored in a limited manner. Furthermore, regulatory bodies, such as NICE also generally omit costs, or cost savings that occur outside of the healthcare perspectives.

Value of prevention

Preventative strategies offer significant benefits beyond immediate cost savings. For obesity, prevention can mitigate risks and expenses associated with acute care conditions like diabetes, hypertension, stroke, and joint replacements.

The estimated savings of over £46,000 per person over five years on benefit far exceed typical costs from spells of care that may be required of people who live with obesity and/or smoke. The savings we describe here would be equivalent to the NHS resources needed for:

- 261 weeks of Wegovy (NHS indicative pricing of £175.80 for Semaglutide 2.4mg in 0.75ml pre-filled syringe, for maintenance)²³
- 6 knee replacements (costing £7,540 each^{24 25}) or
- 12 strokes (costing £3,710 each²⁶) or
- 16 heart attacks (costing £2,797 each²⁷) or
- 18 lower limb amputation for arterial disease (costing £2,504 each²⁸) or
- 52 spells of diabetes with hypoglycaemic disorders (costing £880 each²⁹) or
- 456 spells of hypertension (costing £456 each³⁰).

²¹ [Unhealthy Numbers: The Rising Cost of Obesity in the UK \(institute.global\)](https://www.institute.global/press-releases/unhealthy-numbers-the-rising-cost-of-obesity-in-the-uk)

²² ashresources.shinyapps.io/ready_reckoner/

²³ [Medicinal forms | Semaglutide | Drugs | BNF | NICE](#)

²⁴ Costs sourced from [NHS Tariffs 2024/25](#)

²⁵ HRG code: HN22D

²⁶ HRG code: AA35D

²⁷ HRG code: EB10C

²⁸ HRG code: YQ26B

²⁹ HRG code: KB01E

³⁰ HRG code: EB04Z



Reduction in acute demand is a primary focus of government health policies, aiming to alleviate pressure on healthcare services and improve population health outcomes. Therefore, the cost savings preventative interventions can have on direct health care costs, such as those listed above for which smoking and/or obesity are risk factors, are clear.

However, preventive interventions – whether preventing disease onset or preventing illness in those living with a chronic condition - offer far greater savings than those traditionally considered from a healthcare perspective only. These substantial savings reinforce the importance of adopting a 'health-in-all-policy' approach, transcending traditional economic evaluation silos. Programs like the National Diabetes Prevention Programme (NDPP) exemplify the cost-effectiveness of prevention, with evaluations showing that such initiatives provide health benefit whilst also reducing costs³¹. If broader societal benefits, such as the ones quantified in this paper, are considered as part of those costs the economic case for prevention of amenable health issues will only strengthen.

By broadening the scope to include societal economic benefits, policymakers can more accurately value and incentivise comprehensive preventive strategies. Such an integrated approach not only enhances cost-saving potential but also fosters a healthier, more productive society.

³¹ [Evaluating the Long-Term Cost-Effectiveness of the English NHS Diabetes Prevention Programme using a Markov Model | PharmacoEconomics - Open \(springer.com\)](#)



04 Public policy implications

The logic of our paper is that if a medical treatment or public health intervention can save substantial sums in social security benefits, it would be desirable to include these wider gains when appraising a potential intervention. Without this, there is a risk that as a society we are missing the opportunity to generate a positive return by investing in preventative public health measures or medical interventions.

In terms of the public finances, there is always a problem with this sort of reasoning, which is that the expenditure tends to be front loaded whilst the returns are spread over a number of years. HM Treasury is understandably sceptical of those who claim that extra public money should be spent now in the hope of potential future savings at a later stage.

However, there is a clear recent precedent for this in the form of the 'Work Programme'³². This was a DWP initiative which used third-party providers to help people who were unemployed or on sickness benefits back into work. A significant part of the remuneration of the Work Programme providers was performance-related, with providers being rewarded for getting someone into work and further rewarded if that work was sustained. In all cases these targets were benchmarked against an estimate of what would have happened in any case, so that the financial reward was for 'additionality', thereby removing the risk of 'deadweight cost' where providers were being paid for people who probably would have found a job in any case without their help.

In principle, this 'spend-to-save' approach could be adopted for the appraisal of new drug treatments or public health interventions. Whilst there is an up-front cost to these interventions, our modelling suggests that savings could potentially flow for many years into the future. Disregarding these wider societal benefits risks our society 'under-consuming' such measures.

A further issue lies in that NICE are currently only asked to evaluate health-related interventions from the NHS perspective, and this is too narrow of a remit to capture broader value. NICE understandably consider healthcare benefits and NHS costs as a priority, however broader societal value, such as those outlined in this paper, are also clearly impacted by improving population health. As such, optimal use of public finances should aim to more broadly quantify the value of both prevention and curative treatments.

NICE base decisions for reimbursement by balancing costs and health benefits, where benefits are Quality adjusted life years (QALYs). If an intervention is cost saving and gives greater QALYs, the intervention will be reimbursed. However, where an intervention is more costly, but also improves health, then the cost per additional QALY needs to be assessed. For most technologies, NICE currently use a willingness to pay (WTP) threshold of £20,000-30,000 per QALY, with higher willingness-to-pay for severe conditions or for highly specialised technologies. In practice this means that for every additional QALY a new intervention provides compared to current practice, NICE are willing to pay £20,000-30,000 for it. Yet NICE only consider costs from the NHS and Personal social services perspective.

³²See, for example, [The Work Programme \(publishing.service.gov.uk\)](https://publishing.service.gov.uk)

One obvious first step would be for the NICE framework to be expanded so that these wider benefits, such as impact on welfare payments – suitably evidenced and where appropriate – could be included routinely rather than only on an ad hoc basis.

To give a sense of the potential impact of including these wider factors, we can look at how an exercise referral scheme, deemed not cost effective by NICE in 2013³³, could have been impacted the inclusion of broader elements of value. The exercise referral scheme was found to be more costly than traditional care approaches. The difference was £225 per person, with the intervention costing £4,572 vs £4,346 for usual care, as shown in row a of Table 1.

However, the intervention improved outcomes (by 0.003 QALYs per person) leading to an increment cost-effectiveness ratio of £76,059 per QALY gained. As this is far above the NICE willingness to pay threshold of £20,000-£30,000 per QALY gained, the scheme was deemed to be not cost effective.

So how would an evaluation like this have looked if wider fiscal benefits had been considered? In row b of Table 1 we show what the total costs and health benefits would be for a *population* of 100 people.

Next we consider how the calculation would look if we assume the intervention prevents just one additional person per hundred from exiting the workforce and requiring welfare. This is shown in row c of Table 1. In this case, the exercise programme, net of fiscal savings, costs less than normal treatment and also improves public health. Factoring in this cost saving would now deem the intervention to be ‘dominant’ – it is now both cost saving and provides health benefit.

Whilst this example may be a simplification of the modelling required to integrate broader costs into cost effectiveness analysis, it serves as an illustration that factoring in costs and cost savings beyond the immediate NHS has the potential to influence decision making and to lead to greater uptake of preventative interventions.

		Mean cost	Mean QALY	Incremental cost	Incremental QALY	ICER
a)	With exercise referral scheme	£4,572	18.136	£225.40	0.003	£76,059
b)	With exercise referral scheme	£457,200	1813.6	£22,540.00	0.300	£76,059
c)	With exercise referral scheme	£411,200	1813.6	-£23,400.00	0.300	Dominates
d)	Usual care	£434,600	1813.3	-	-	-

³³NICE PH54 2013 [Appendix 3 Technology Assessment Report template guide \(nice.org.uk\)](https://www.nice.org.uk/appendix-3-technology-assessment-report-template-guide)

Other cost effectiveness analysis of preventative interventions suggest that restricting the promotion of high, fat, salt and sugar products³⁴ would save the NHS £137m per year, averaged over 21.7m adults, this would suggest a saving to the NHS of just over £6 per head per year. By contrast, we find that an intervention (such as anti-obesity programmes or smoking cessation programmes) which could help to prevent someone from going off sick could save £9,300 per head per year.

Broadening the scope of economic evaluations submitted to NICE would require further methodological consideration. Firstly, the current £20,000-30,000 'Willingness to Pay' (WTP) threshold has been developed and used specifically with the NHS budget in mind, if a broader perspective is used then the benchmark WTP threshold against which evaluations are judged may need to be amended. Secondly, including fiscal savings due to welfare payments could result in prioritisation of spending on interventions which help to keep working aged people healthy more than similar interventions for pensioners. Earmarking additional funds for interventions that are proven to boost productivity, could help to prevent age related inequities.

It is hard to believe that including figures of this order of magnitude would not result in a radical appraisal of which interventions are a) launched and b) approved. We would expect to see more incentive for the pharmaceutical industry to develop and launch interventions if these wider fiscal benefits were included as they would see a higher chance of getting approval. The result would be substantial net savings to the taxpayer, improvement to the quality of life of the individual, and a substantial boost to the economy. Provided that these cost savings can be robustly assessed, it is hard to see why this broader approach should not be implemented as a matter of urgency.

³⁴ Harrison et al 2021 [Long-term cost-effectiveness of interventions for obesity: A mendelian randomisation study | PLOS Medicine](#)

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