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AUTHOR
ICARO REBOLLEDO

CONTRIBUTORS
ISABEL ATKINSON
ADAM BRADSHAW
ROSHNI JOSHI

The Economic Case for Protect Britain, a *Preventative Health Care Delivery Programme*

A Companion to *The Economic Case for Reimagining the State*

TONY BLAIR
INSTITUTE FOR
GLOBAL CHANGE

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Executive Summary

Preventative health care has significant potential to not only improve the nation's health but also the health of the economy by increasing the number of people in work.

In this paper, we explore the economic case for preventative health care, delivered through the Protect Britain programme first proposed by Tony Blair Institute for Global Change (TBI) in December. We focus the bulk of our analysis on a foundational version of the Protect Britain delivery model that aims to use upgraded digital infrastructure, better health checks and a wider uptake of existing treatments to reduce incidences of cardiovascular disease (CVD) by 20 per cent. But we also explore a more future-focused scenario where advances in medical treatments enable similar reductions in disease incidence across a wider range of conditions.

Our analysis shows the following:

- Protect Britain could significantly reduce CVD incidence by making it easier for the public to access preventative health-care services. By increasing uptake of regular health checks and use of existing CVD treatments, particularly statins, Protect Britain could lead to an extra 60,000 to 70,000 people in work per year once fully rolled out.

- Protect Britain would involve a range of costs to operationalise, including £1.6 billion upfront (and £70 million a year in ongoing costs) to upgrade the UK's existing digital-health infrastructure. This would ensure every citizen had a digital health record and access to a significantly upgraded National Health Service (NHS) App.

- We estimate Protect Britain would result in around £0.4 billion in annual net savings to the NHS and social-care system by the end of this parliamentary term in 2029 and £1.3 billion by the end of the next term in 2034. This reflects the net impact of higher health-check and treatment costs (£0.7 billion a year in 2029, £0.9 billion a year in 2034), which are more than offset by lower health-care costs from preventing people from suffering heart attacks, strokes and other CVD events (£1.1 billion a year in 2029, £2.2 billion a year in 2034).

- Using a new model developed by economists Professor Andrew Scott and Yannick Schindler of the London Business School (Schindler and Scott (2024), [1] we estimate that the potential gains to the wider economy are substantial. (Schindler and Scott's modelling also forms the basis of TBI's concurrent report *Prosperity Through Health: The Macroeconomic Case for Investing in Preventative Health Care in the UK*.) By boosting the number of people in work, Protect Britain could generate an extra £1.2 billion a year for the Exchequer by 2029 (and £2.1 billion by 2034) through higher tax revenues and lower benefits spending.

- People living healthier and longer lives also means they will draw on their state pensions for longer. Given the high and rising value of the state pension, preventative health care creates a significant indirect cost to the Exchequer in higher pension payments, which we estimate will be about £1 billion a year by 2029 and £2.1 billion by 2034.

- Summing up across these costs and benefits, we find that the foundational version of Protect Britain would create around £0.6 billion per year in net fiscal savings by the end of this parliamentary term and £1.2 billion per year by the end of the next. The latter figure would rise to £1.4 billion if the savings from the programme were used to pay down the national debt and reduce debt-interest payments.

- Preventative health care can thus provide a triple benefit of a healthier population, a stronger economy with more people in work and an improved fiscal position.

All of the above figures are based on a narrow assessment of the potential for preventative health care to reduce CVD using existing treatments. But there is a wide range of upcoming medical breakthroughs that Protect Britain could seek to incorporate in the near future. These include advances in early detection of Parkinson's and melanoma, the widespread rollout of novel drug treatments such as GLP-1 RAs to reduce the prevalence of a wide range of conditions and the advent of personalised disease treatments through the use of CRISPR gene-editing technology.

In this paper, a companion to *The Economic Case for Reimagining the State*, we therefore also explore a forward-looking scenario whereby novel treatments would enable a 20 per cent reduction in disease incidence across a wide range of other conditions (including musculoskeletal disease, cancer, mental health, diabetes and respiratory illness) within a decade. Given that the foundational costs of setting up the Protect Britain programme would already have been met, this expanded version of the programme would build on the existing fiscal savings – creating net fiscal savings of £4.3 billion a year within the decade (or £4.9 billion if the net savings from the programme were also used to pay down the national debt). These figures include the cost of higher pension payments, which are substantial (worth £3.3 billion by 2034). However, given the scale of improvement in healthy life expectancy enabled by this preventative health-care model, this could spark a broader debate about pension reform, including whether the pension age should rise more quickly as people live longer, healthier lives. In a scenario where the pension age rose to offset the improvement in healthy life expectancy, Protect Britain could generate net benefits to the Exchequer worth around 1 per cent of GDP by the middle of the century.

02

How Preventative Health Care Can Help Protect Britain's Health and Wealth

The NHS is facing significant challenges. There is a rising tide of chronic illness and morbidity, 7.6 million cases[2] are waiting weeks or months to be dealt with, and public satisfaction[3] with the NHS is at an all-time low. This is despite health spending now accounting for about 40 per cent of day-to-day government expenditure. The pandemic accelerated some of these trends, yet many were already evident.

This paper illustrates the economic case for preventative health care as a strategy to both improve the health of the nation and the health of the economy, by enabling more people to live longer, healthier lives and remain economically active. The paper draws heavily on new research by Professor Andrew Scott and Yannick Schindler that, for the first time, estimates the macroeconomic benefits of improved health on the labour market (Schindler and Scott, 2024).[4] We apply this model to assess the benefits and costs of a particular example of preventative health care – the Protect Britain programme[5] we have advocated for in the past.

Below we first set out a model for how the Protect Britain programme could be delivered in practice. We then explore the economic costs and benefits of implementing a foundational version of the programme where the enabling infrastructure is fully set up, but where the programme is focused narrowly on reducing cardiovascular disease (CVD), as the evidence linking health interventions to economic outcomes is strongest for CVD. Finally, we explore a forward-looking scenario that examines the wider potential for Protect Britain to draw on emerging medical innovations to target prevention across a larger number of biomarkers, treat a larger number of diseases and thus have a bigger economic impact.

03

Design of the Protect Britain Delivery Model

At its core, Protect Britain seeks to improve the health of the population through two key mechanisms:

- **Earlier identification of emerging health risks:** The programme would significantly expand health checks across the population to improve information about the baseline health risks affecting individuals and the nation as a whole, enabling better targeting of research and treatment resources.

- **Earlier, more tailored interventions:** The programme would utilise improved data on health risks to intervene earlier, identifying health interventions for individuals and providing access to treatments long before conditions result in major disease events. In addition, the programme would use better data to tailor interventions more effectively to the specific needs of individuals and help maximise uptake through the use of digital "nudge" tools.

Figure 1 outlines the various steps required to roll out the programme across the UK. In this section we look at some of these elements in more detail.

FIGURE 1

Delivery stages for Protect Britain

1	2	3	Impact
Upgrade the UK's digital-health infrastructure including creating digital-health records and upgrading the NHS App	Expand the UK's health-screening programme to better identify health risks across the population	Expand availability of preventative health-care treatments and increase uptake through the use of digital "nudge" tools	Improved health outcomes lead to more people in work and an improved fiscal and economic outlook

Source: TBI

1. Upgrade the UK's Digital Health Infrastructure

Protect Britain would build on the UK's existing digital infrastructure, including NHS health records and the NHS App. In some cases, this would require upgrading health data (particularly as some records are still only available in a paper-based format) as well as making existing digital data sets interoperable. It would also involve a significant upgrade to the NHS App to enable citizens to access their existing health data, receive personalised advice on how to improve their health, book appointments and request repeat prescriptions, and upload data from their own health-tracking tools (such as wearable heart-rate monitors) to augment their data and receive more personalised advice.

2. Expand the UK's Health-Checks Programmes

A foundational element of the Protect Britain programme is gathering better data on the health of the population. Only around half of eligible 40- to 74-year-olds make use of the free five-yearly NHS Health Check, so an initial focus of the programme will be to incentivise uptake of this offer. This would build on existing plans to roll out a digital NHS Health Check to expand coverage.[6]

One of the major barriers to uptake of the NHS health check is that it is inconvenient.[7] The Protect Britain programme would aim to overcome this barrier by meeting citizens where they are – online, at home and on the high street.

- **Online:** An upgraded version of the NHS App would enable citizens to perform some basic health checks digitally, for example by asking citizens to enter key biometric data (height, weight, heart rate) or by using innovative camera-based phone applications to assess blood pressure.

- **At home:** Protect Britain would seek to maximise use of low-cost home-testing kits delivered directly to a person's home. This is common in the US and China, and has been successfully trialled in the UK for sexually transmitted infections, bowel screening and Covid-19.

- **On the high street:** For those diagnostics and therapeutics that require in-person checks, the Protect Britain programme would aim to expand the number of locations where physical checks are possible. This would include going beyond traditional GP surgeries and pharmacies to NHS-approved sites within commercial retailers. Such checks could include taking blood, administering vaccinations or conducting early detection tests.

3. Expand Availability and Uptake of Preventative Health-Care Interventions

Better health data combined with more ways for citizens to interact with the health service will enable the Protect Britain programme to both identify individuals at high risk of disease and intervene earlier to offer them health-care treatments before they present with adverse conditions. For example, CVD is both a leading cause of chronic ill health in the population and a disease where a wide range of cost-effective preventative treatments already exists, particularly statins. The main problem is not availability, it is uptake. Two of the key barriers[8] to uptake are a lack of awareness (citizens either do not know treatments exist or do not understand why they should take them when they currently feel healthy) and inconvenience (citizens lack time to visit GPs to get diagnosed or arrange and collect prescriptions). Protect Britain would help overcome these barriers by providing personalised and evidence-based advice to individuals via the NHS App – helping to raise awareness – and by making it easier to access preventative health-care services by expanding the number of locations and methods to access them. Over time, the programme could also experiment with reward-based incentives to increase uptake further.

04

The Costs and Benefits of Protect Britain

In this section, we assess how much a foundational version of the Protect Britain programme – focused narrowly on CVD – would cost to set up and run and what fiscal benefits it could lead to. This section is split into four elements: costs of the core digital infrastructure; the net costs to the health-care system to pay for more health checks and early intervention costs, offset by lower costs for treating disease later in life; direct fiscal benefits from keeping people in work; indirect costs associated with higher state-pension payments linked to the fact that Protect Britain keeps people alive for longer.

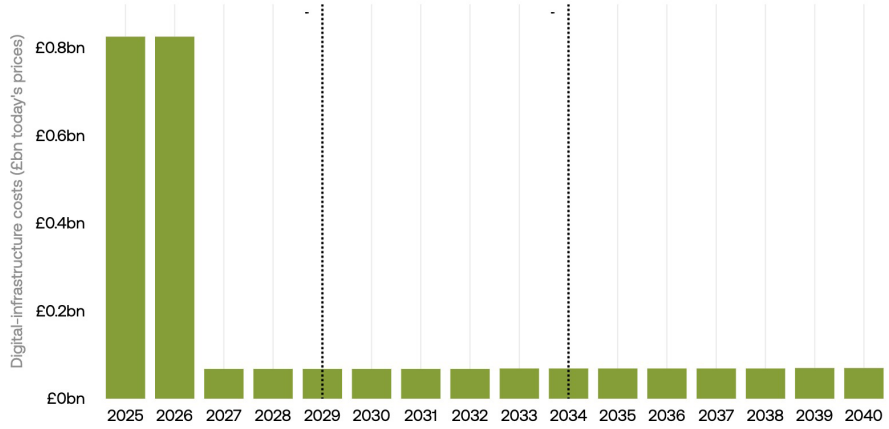
Core Digital-Infrastructure Costs

- **Setup costs:** A number of countries are investing in the digitalisation of their health-care systems in a similar way to how we envisage Protect Britain operating. For instance, Italy is developing an electronic health record that allows for the interoperability of an individual's health data across the various parts of the health-care system,[9] which required an initial investment of €1.67 billion. Scaled up by the UK's population and converted into pounds, this would suggest the UK would have to pay **around £1.65 billion to upgrade its core digital-health infrastructure**.

- **Ongoing cost:** Across the UK there are already small-scale initiatives that seek to make the most of the existing health-data records to empower citizens through the use of data analytics. These incur several costs, including integration with the existing NHS App, analytic functionalities and training of the various agents involved. Industry experts estimate the cost of the existing systems ranges from £0.80 to £2 per person enrolled. We assume a cost of £1 per citizen – towards the lower end of this range – on the basis that rolling out at scale will enable some economies of scale. When scaled by the UK's population, this implies an **ongoing cost to run the digital infrastructure of around £70 million a year**.

FIGURE 2

Digital-infrastructure costs associated with the Protect Britain programme



Source: Italian Presidency of the Council of Ministers, conversations with industry experts and TBI calculations

Intervention Costs and Health Cost Savings

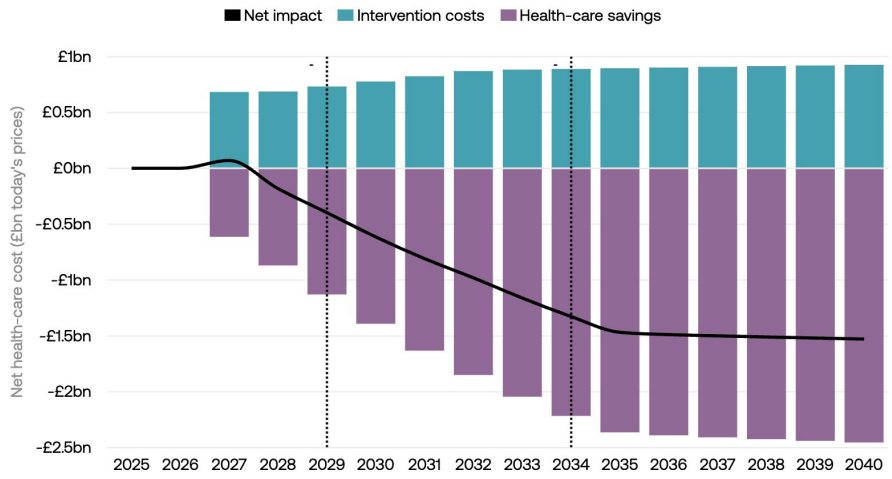
There is a wide range of potential treatments to tackle CVD that each have different costs, different impacts on the population and can interact with each other. Given this complexity, we draw on the University of Sheffield and Public Health England's 2016 Cardiovascular Disease Prevention Return on Investment Tool to estimate the costs of reducing CVD incidence.[10] We calibrate the model so that it delivers a 20 per cent reduction in CVD incidence, principally by modifying parameters about uptake of health checks and statins use. Then we derive the costs of those interventions from the model, and scale them up from 2016 to 2024 prices to account for inflation.

Overall, Protect Britain would involve additional health-care costs to pay for extra health checks, statins and other treatments, which together are estimated to cost £0.7 billion a year in today's prices by the end of the first parliamentary term in 2029 and £0.9 billion a year by the end of the next term in 2034. But the interventions also lead to cost savings within the

health-care system, by reducing the number of heart attacks, strokes and other CVD incidences and the treatment costs associated with those. These cost savings amount to £1.1 billion per year by 2029 and £2.2 billion by 2034. Taking into account both effects, even this narrow version of Protect Britain focused only on CVD would lead to a net saving on the health-care system of £0.4 billion a year by 2029 and £1.3 billion by 2034 (Figure 3).

FIGURE 3

Additional health-care intervention costs and cost savings from reducing incidences of cardiovascular disease by 20 per cent



Source: Public Health England and University of Sheffield CVD Prevention Return on Investment Tool and TBI calculations

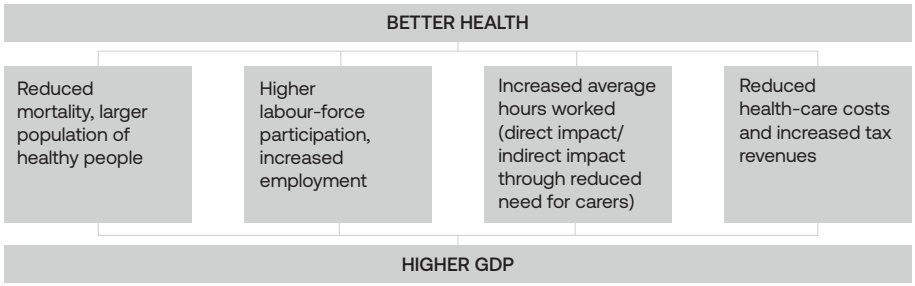
Fiscal Benefits from a Healthier Workforce

Improving the health of the nation also has significant benefits beyond the health system. Up until now, there have been few comprehensive estimates of how changes in disease incidence could affect the economy by reducing mortality and morbidity and hence increasing the number of people in work.

However, new modelling by Schindler and Scott (2024) helps plug this gap by exploring a range of channels through which a healthier population could impact GDP (Figure 4).

FIGURE 4

How better health outcomes generate economic benefits

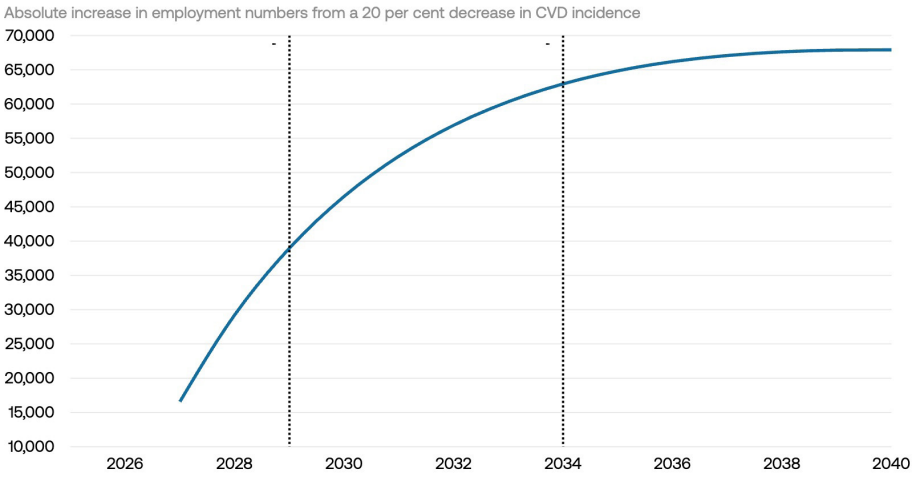


Source: Schindler and Scott (2024)

Schindler and Scott (2024) model the impact of a 20 per cent reduction in CVD incidence and find that it boosts the employment rate among those of working age by 0.1 per cent over time. When we map this rate onto the Office for National Statistics (ONS) population projections this equates to an additional 60,000 to 70,000 people in work (Figure 5).

FIGURE 5

Estimated impact on employment of reducing cardiovascular disease incidence by 20 per cent

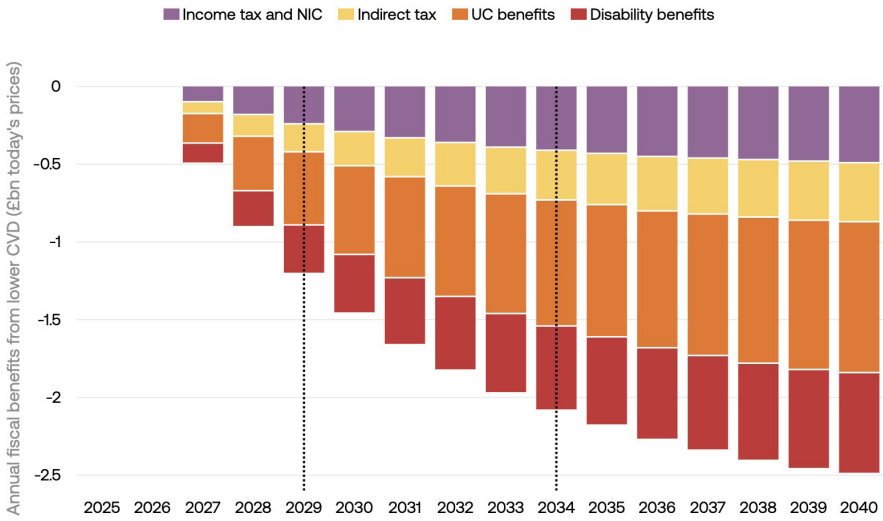


Source: Schindler and Scott (2024), ONS and TBI calculations

A higher level of employment has a number of direct fiscal benefits on the economy. It increases tax revenues directly from higher income tax and national insurance contributions (NIC). It also increases tax revenues indirectly via higher demand and consumption (such as boosting VAT receipts). In addition, higher employment means fewer people are economically inactive, which reduces benefit spending both on disability benefits and universal credit (UC). Figure 6 shows the estimated fiscal benefits from Protect Britain, based on the employment results from Schindler and Scott (2024) and the Office for Budget Responsibility's (OBR) ready reckoners (that is, the OBR's estimates for additional fiscal revenues from increases in employment and decreases in inactivity). Overall, these imply fiscal benefits of £1.2 billion a year by the end of this parliamentary term and £2.1 billion a year by the end of the next term.

FIGURE 6

Fiscal savings from higher employment via higher tax revenues and lower benefit payments



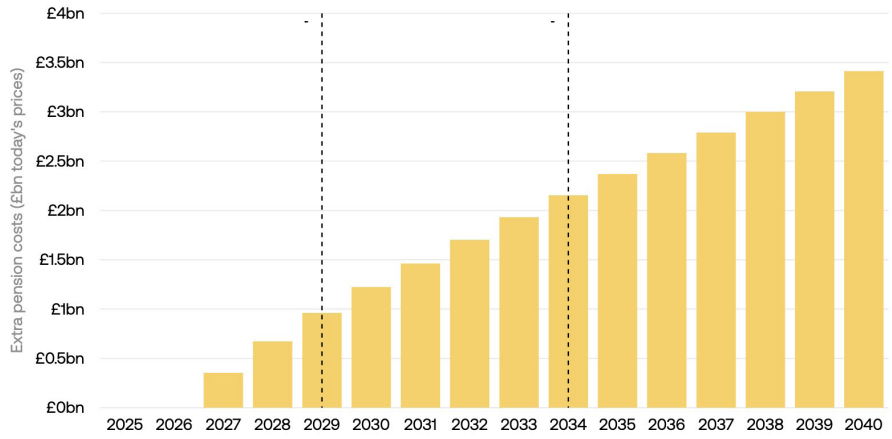
Source: Schindler and Scott (2024), OBR and TBI calculations

Indirect Fiscal Costs from People Living Longer

Protect Britain's better health outcomes mean that people live longer and therefore draw on their state pension for a longer period. Higher pension payments impose a growing cost on the Exchequer over time, worth £1 billion by 2029 and £2.2 billion by 2034 (see Figure 7).

FIGURE 7

Higher pension payments from increased longevity



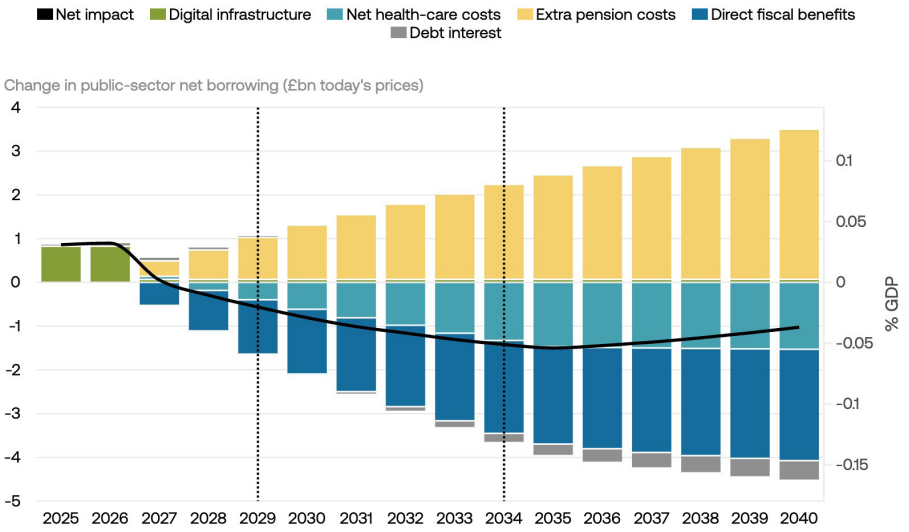
Source: Schindler and Scott (2024), ONS and TBI calculations

Net Impact

Summing up across all four elements described above we find that the foundational version of Protect Britain could create around £0.6 billion per year in net fiscal savings by the end of this parliamentary term and £1.2 billion per year by the end of the next (Figure 8). The latter figure would rise to £1.4 billion if the savings from the programme were used to pay down the national debt and reduce debt-interest payments (grey bars, Figure 8). Put another way, Protect Britain provides a viable use case that delivers a triple benefit of a healthier population, a healthier economy – with more people in work – and healthier public finances.

FIGURE 8

Net impact of a foundational Protect Britain Programme on the public finances



Source: Schindler and Scott (2024), Public Health England and University of Sheffield CVD Prevention Return on Investment Tool and ONS and TBI calculations

05

Looking to the Future: Further Potential Gains From Advances in Medical Technology

The above results provide an estimate of the potential for Protect Britain based on the current state of medical innovation. But medical technology is advancing quickly and a wide range of innovations are on the horizon that could significantly expand the scope of Protect Britain (see Annex for a detailed list). For example:

- **Screening advances:** AI-enabled health-screening tools are rapidly improving detection rates of preventable disease. New AI-enabled software has shown to be 100 per cent accurate in detecting melanoma, while new AI-enhanced blood tests are able to detect Parkinson's seven years before any symptoms present themselves.

- **Treatment advances:** New drugs are becoming available that offer the kind of game-changing intervention that statins already perform for CVD. For example, novel GLP-1 treatments – originally designed to help obese individuals with weight loss – now appear to be having significant other benefits in reducing incidences of diabetes and CVD regardless of their effect on a person's weight.

- **Personalised medication:** Gene-modification technology is also advancing quickly, which will enable treatments to become more personalised in the future. For example, the gene-editing CRISPR tools have been shown to help treat sickle-cell disease by using molecular scissors to make precise cuts in the DNA of the cells that are faulty and replace them with healthy ones.

On the back of this, we provide an estimate of what the future of Protect Britain could look like beyond the foundational model highlighted above. By its very nature, these results are more speculative but aim to give a sense of additional potential of the programme. We use the Schindler and Scott (2024) model to explore how a 20 per cent reduction in disease incidence

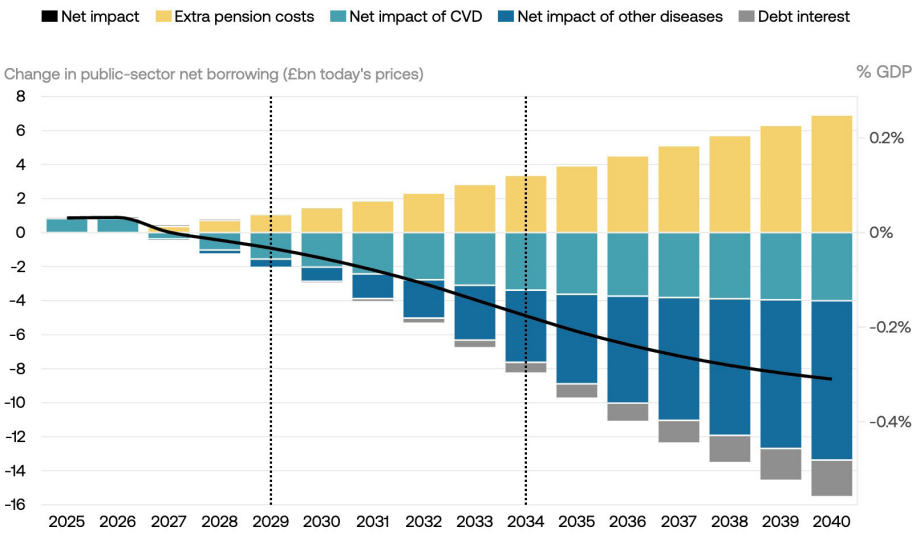
across musculoskeletal disease, cancer, mental health, diabetes and respiratory illness could affect the economy. Given that treatments for some of these conditions are still being developed, we do not yet know when they will become commercially available or how much they will cost when they do. For this scenario we assume:

- **Timing:** We model an ambitious scenario where novel treatments become widely available and are rolled out over the course of the next decade – enabled through a decade of medical innovation. This timing assumption has a key bearing on the results in the short term; the faster (or slower) the rollout of such treatments, the faster (or slower) the fiscal benefits will accrue.

- **Cost of treatments:** Typically new treatments are expensive to begin with but then fall sharply in price over time as patents expire, competition rises and economies of scale kick in. Unlike for CVD, where low-cost statins create net health-care savings, we assume that the net cost of these novel treatments is zero – in line with academic evidence[11] that suggests the majority of preventative health-care treatments tend to net out in terms of their impact on the health-care system (that is, higher up-front treatment costs are broadly offset by lower costs of treating disease conditions later in life). If treatment costs were higher (or lower) this would shrink (or grow) the size of the ultimate fiscal savings.

FIGURE 9

Potential future fiscal benefits of Protect Britain



Source: Schindler and Scott (2024) and TBI calculations
Note: "Net impact of CVD" includes both net health-care cost and direct fiscal benefits, whereas "net impact of other diseases" only includes the direct fiscal benefits.

This fully-fledged future version of the Protect Britain programme unsurprisingly creates larger fiscal benefits for the Exchequer – resulting in net gains of £4.3 billion by the end of the next parliament (or £4.9 billion if the savings from the programme are used to pay down the national debt). These figures are sensitive to the timing and cost assumptions described above but the trend is clear.

As in the foundational version of Protect Britain, pension costs limit the size of the fiscal gains – without them the programme would deliver £8 billion in fiscal savings by 2034 (or £9 billion when lower debt-interest payments are included). The improvement in life expectancy in this scenario is sufficiently large to spark a wider debate about pension reform, including whether the pension age should rise more quickly as people live longer, healthier lives. We assume that the pension age rises by one year every 18 years – to 67 by the end of 2028 and 68 by 2046. However, if on the back of the potential

improvement in healthy life expectancy the pension age rose by a year every 13 years – reaching 68 by 2042, 69 by 2055 and 70 by 2068 – this would be sufficient to offset all of the cumulative pension costs associated with this scheme in the long term. The programme would then generate a net fiscal benefit of around 1 per cent of GDP by the middle of the century or enough to pay for around a sixth of the current NHS and social-care budget. Preventative health care pays.

06

Annex: Selected Recent Developments in Medical Innovation

Type of breakthrough	Condition	Specific intervention	Stage
Vaccine	Melanoma	Personal mRNA vaccine (individualised neoantigen therapy)	Phase III trial launched
Vaccine	Rheumatoid arthritis	Abatacept vaccine	Initial trials
Personalised medication (CRISPR technology)			
Gene therapy using CRISPR technology	Sickle-cell disease and transfusion-dependent beta thalassaemia	Casgevy: the gene-editing tool CRISPR uses molecular scissors to make precise cuts in the DNA of cells, thus disabling the faulty gene. The modified cells are infused back.	Approved by the NHS
Gene therapy using CRISPR technology	Sickle-cell disease and transfusion-dependent beta thalassaemia	Editas Medicine, a company, uses a CRISPR system with a Cas12a protein rather than the more famous Cas9 protein.	Phase I/II trials
Base-editing therapy	Sickle-cell disease and transfusion-dependent beta thalassaemia	Beam Therapeutics are using base editing, the Cas9 version of CRISPR, to turn on fetal hemoglobin (HbF). That changes a single DNA letter, or nucleotide, without creating double-stranded breaks in DNA, reducing certain safety risks.	Phase I/II trials

Type of breakthrough	Condition	Specific intervention	Stage
Chronic bacterial-infection therapy	Urinary-tract infections (UTI)	Locus Biosciences made a cocktail of three bacteriophages combined with CRISPR-Cas3. It is designed to attack the genome of the three strains of E. coli responsible for about 95% of UTIs.	Phase II/III trials
CRISPR-Cas9 therapy (protein-folding therapy)	Hereditary transthyretin amyloidosis (hATTR)[12]	This is the first clinical trial for a CRISPR-Cas9 therapy delivered in a lipid nanoparticle (LNP).[13]	There is FDA approval for a phase III study
CRISPR-Cas9 for inflammatory disease	Inflammatory disease	The treatment that is currently in clinical trials uses CRISPR-Cas9 tools to reduce the amount of an inflammatory protein the body makes.	Early-stage trials
Screening			
AI screening	Breast cancer	AI-based risk profiling can help screen for common cancers like breast cancer, leading to early diagnosis. AI technology can also be used to analyse X-rays to identify cancer when imaging experts are not available.	Pre-trial
AI detection	Antimicrobial resistance (AMR)	A combination of fluorescence microscopy and AI is used to detect AMR.	Advances on rapid antimicrobial susceptibility test

Type of breakthrough	Condition	Specific intervention	Stage
AI detection	Heart failure	An algorithm, called FIND-HF, is trained to detect early symptoms.	Infancy
AI-powered low-dose computed tomography	Lung cancer	A personalised screening is used for lung-cancer prediction.	One study
Galleri cancer screening	Multiple cancer types	The Galleri test works by detecting a common signal among more than 50 cancer types, meaning that cancer could be detected earlier – even before a patient experiences any symptoms.	The NHS-Galleri trial was designed with three consecutive years of screening and is expected to end in 2026
Treatments			
Cancer-treatment medicine	Acute myeloid leukaemia (AML), breast cancer, colorectal cancer and prostate cancer	Insilico Medicine, a generative-AI-driven drug-discovery company, announced a novel small-molecule CDK8/19 inhibitor designed using Chemistry42, the proprietary generative-chemistry platform.	Clinical stage
Diabetes treatment and weight loss (GLP-1 receptor agonists)	Type-2 diabetes and weight loss	Ozempic contains semaglutide, which mimics the hormone GLP-1 to stimulate insulin production in the pancreas and slow down stomach emptying, but is also good for weight loss.	Clinical trials finished

Endnotes

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