VOLUME FOUR

PROFESSOR STEPHEN K SMITH

RADIX

Patient value, incentives and funding

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THE BEST NHS?

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RADIX

Published in 2022 by Radix UK.
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eBook ISBN 978-1-912880-48-5
Print ISBN 978-1-912880-49-2

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SUMMARY

MORE MONEY AND CLINICIANS ARE REQUIRED – BUT HOW?

An hypothecated tax is not a silver bullet and there are credible alternatives. Of those alternatives, the current system of drawing from general taxation is the least preferable given the need for increased finance on the one hand and a reluctance on the part of politicians and the public to raise general taxation.

If the UK had developed social insurance, particularly for social care, 20 or 30 years ago, as the Germans and Japanese did, then this alternative might serve the purpose. But the UK failed to do that, and the best alternative – but one that needs to be carefully managed – is a hypothecated tax covering both health and social care.

The UK can raise more money to bring its health and care system up to parity with other leading European countries by implementing the following five measures:

- *A hypothecated tax that covers assessment-driven health **and** social care. This would expunge the difference between a means-tested social care that can wipe out a person's life savings, including their home, and a free NHS in which a foreign national billionaire domiciled in London can get hundreds of thousands of pounds worth of free cancer care. The country needs to pay more for care, and the means test should be extended to cover both health and social care with a cap – as recommended in the government-sponsored Dilnot report.*
- *Charges for abuse of the system, such as missed NHS appointments.*
- *Top up fees to pay for extra 'hotel' services in both (private and public) hospitals and care homes can be paid (and encouraged) with explicit cross-subsidisation to poorer people.*
- *Commercialisation of tax-funded innovations, especially in the areas of bio-medical science and technology.*
- *Encouragement, through tax incentives, of private healthcare schemes, as in Australia.*

HOW TO PAY

Fee-for-service remuneration is an inappropriate way of paying and incentivising clinicians because it encourages activity rather than quality interventions.

In the worst cases, it is indifferent to whether or not a procedure is performed well – with improved long-term health for the patient – and it encourages the wasteful application of procedures that may not be necessary and may even be harmful.

Investing more in health and care is usually seen as a zero-sum game – it's a cost that comes from spending less on other things that are damaging people's personal finances by taxing them more. This view is, however, beginning to change. In the first place there is a growing recognition that the 3 million workforce in health and care is an important lever for increasing 'aggregate demand' in the Keynesian sense. This view of the health and care sector as a vibrant part of a nation's infrastructure is taking hold in some parts of the world, most recently in the USA.

Second, in many parts of the country, the health and care workforce is the largest contributor to local economies. We need to increasingly recognise the importance of paying this sector appropriately and looking after them well – both in terms of their mental and physical health (for instance, helping health and care workers avoid obesity).

In short, we should start viewing health and care as an attractive investment opportunity rather than a cost that should be pared to the bone.

More money and clinicians are required

SECTION 1

FORMER NHS CHIEF EXECUTIVE SIMON STEVENS SAID THAT:

> *"We are spending 30 per cent less per person on the health service than the Germans."*[1]

He is right. The UK spends less on health and care than other developed nations.

> *"Our [King's Fund] analysis of healthcare spending in 21 countries shows that the UK has fewer doctors and nurses per head of population than almost all the other countries we looked at. Only Poland has fewer of both.*
>
> *"The UK has fewer magnetic resonance imaging (MRI) and computed tomography (CT) scanners in relation to its population than any of the countries we analysed… The UK lags a long way behind other high-performing health systems in investing in these important technologies.*
>
> *"Of the countries we looked at, only Denmark and Sweden have fewer hospital beds per head of population than the UK, while the UK also has fewer beds in residential care settings than comparator countries. While lower numbers of hospital beds can be a sign of efficiency, the growing shortage of beds in UK hospitals indicates that bed reductions in the NHS may have gone too far.*
>
> *"Although costs are rising, the UK spends less on medicines than most of the countries we analysed… Under the Organisation for Economic Co-operation and Development (OECD)'s new definition of health spending, the UK spends 9.7 per cent of gross domestic product (GDP) on healthcare. This is in line with the average among the countries we looked at, but is significantly less than countries such as Germany, France and Sweden, which spend at least 11 per cent of their GDP on healthcare.*
>
> *"The picture that emerges from this analysis is that the NHS is under-resourced compared to other countries and lags a long way behind other high-performing health systems in many key areas of healthcare resources."* [2]

The UK needs to spend more on health and social care. But it is constrained because it relies more on central taxation than any other European country.[3] This might not be a problem if British politicians were prepared to tax the population at levels that would fund health and social care adequately, but they aren't.

> *"A comparison of personal tax rates across Europe, Australia and the US by The Guardian…. reveals how average earners in Britain on salaries of £25,000, or 'middle-class' individuals on £40,000, enjoy among the lowest personal tax rates of the advanced countries, while high earners on £100,000 see less of their income taken in tax than almost anywhere else in Europe."*[4]

There seems little prospect, even post-Covid, for politicians to campaign for sustainably higher taxes.

> *"At its simplest, we cannot run Sweden's welfare state with US tax levels. Successive governments have resorted to endless efficiency programmes and service reconfigurations in an attempt, somehow, to deliver a big state with small taxes. While the pursuit of an efficient public sector is sensible, pretending we can have a bigger state than we will pay for is not."* [5]

UK governments will always claim that they are spending more on the NHS. The current government (as of April 2021) is particularly keen to position themselves as champions of the NHS – and this was even before the pandemic. And they will continue to make extravagant promises about increasing spending, but it can be fairly confidently predicted that they will remain little more than promises and that hindsight in ten years' time will show that funding struggled to keep pace with demand, especially the demands of the ageing population – unless the system changes.

New thinking is required in order for the country to break out of the vicious circle of reduced relative and absolute funding, respectively, for health and social care – at a time of increasing need and raised public concerns about underfunding and service availability – as citizens and politicians resist rises in central taxation. No system of funding is perfect, but the balance of argument has now shifted to the introduction of a hypothecated tax dedicated to health and social care.

A 'hypothecated' tax for health and care

SECTION 2

The merging of the two systems can start immediately by pooling the two sets of budgets. The creation of a fund to pool all local health and social care would enable commissioners to integrate services and properly direct resources to the real pinch points in the system.

These are often generated and driven by demarcation lines within budgets between the councils, the CCGs (Clinical Commissioning Groups) and the hospital trusts. Further, pooling would make the system more efficient, directing funds to their most optimal location. Funding redeployment like this can get upstream of problems and invest in prevention. The central purpose is to help realise short term savings – across the whole health and care service – the surpluses of which can then remain within the pool and be directly invested in medium term renewal and transformation, including for example restructuring GP practices, or meeting new intermediate public health outcomes with new expenditure.

This pooling of the budgets for the regional NHS, within the territories of the integrated care systems (ICSs) and local authority funded adult social care is a first step to creating a joint health and social care hypothecated tax.

The complexity of this should not be under-estimated as shortages in acute healthcare provision, inability to perform cancer operations, long waits in A&E will always receive attention before chronic demands in the system. There are perennial calls for more money to be spent on prevention, well-intended though they are. This might not be a bad thing though, because it will bring home to the British people and their politicians the simple truth that we do not spend enough on healthcare.

After that, funding for health and care should be combined, and levied as a 'hypothecated' tax. The hypothecation of a tax (also known as the ring-fencing of a tax) is the dedication of the revenue from a specific tax for a particular expenditure purpose - in this case the provision of health and social care services. This approach differs from the classical method whereby all government spending is allocated centrally from a consolidated fund drawn from general taxation.

Health and care is, unlike many other activities, appropriate for an hypothecated tax because it is a distinct activity, and because it is a 'public good', defined as a good that is both non-excludable and non-rivalrous, in that individuals cannot be excluded from use or could benefit from it without paying for it and where use by one individual does not reduce availability to others. Or the good can be used simultaneously by more than one person.[7]

An argument could be made that every area of government expenditure, such as defence, education, welfare, should be based on an hypothecated tax.

Clearly if this were the case, then the taxation and spending decisions would become mired in bureaucracy and dispute, and the system would be in danger of grinding to a halt. Health and social care, however, is uniquely appropriate for a hypothecated tax for five reasons:

- ***TRANSPARENCY*** *- hypothecated taxation makes the link between revenues from taxes and government spending more visible and consumers are better able to decide how much they are willing to pay. It also creates a direct link between what people see that they pay, and the service that they receive. Health and social care, unlike other areas of government spending, is visible to members of the public and uniquely valued by them.*

- ***FAIRNESS*** *– a hypothecated tax being a smaller share of a taxpayer's income (it would be set, as we discuss below, at 2-5 per cent of people's salary) can be made more progressive than general income tax. The highest marginal rate for general taxation is currently 45 per cent, and there would be problems, especially increases in tax avoidance and evasion, in raising that figure. However, the highest tax band for a health and care hypothecated tax could be much steeper, with the top band at 60-70 per cent. This would mean richer people paying a fairer contribution to the wellbeing of the most disadvantaged in our society. The combination of greater transparency and fairness would also allow the tax to be supplemented by other sources of funding, as we will discuss shortly, that both mean the rich paying more and introducing incentives that protect the service from abuse. This greater contribution from rich people is entirely appropriate in the UK in which income and wealth inequality is the highest in Europe, and inequality has risen by over 40 per cent since the 1970s.*[8]

- ***ACCOUNTABILITY AND TRUST*** *– hypothecated taxes may help when the government is not trusted. With hypothecation, it will have to follow a plan made in advance and will have only the degree of flexibility that can be explained and justified. The UK government's record on delivering on its promises on the NHS is chequered. Sometimes elaborate promises are made, and then re-packaged and re-made, and then years later the public discover that actually the money never got spent.*[9]

- ***PUBLIC SUPPORT*** *– the knowledge that the money paid on taxes will go directly, and transparently, into health and care will reduce the dissatisfaction of the population with an increase in general taxation,*

- ***RESOURCES*** *– ringfencing can protect resources for financing services health and care from being spent in other areas.*[10] *Whilst the amount that the country can afford to spend on health and care will depend to a large extent on its GDP, ringfencing a pool for health and care will provide some protection from the 'stop-go' cycles of a general tax pool, allowing staged rises commensurate with need that we can already anticipate. Clearly, in periods of low GDP growth, spending elsewhere will need to be curtailed or national debt increased. The introduction of a hypothecated tax will trigger difficult – but necessary – questions about the management of public finances, especially at this time of massive increases in the national debt partly as a result of the pandemic, but also partly as a result of unrelated Government spending.*

The arguments against hypothecated taxes come mostly from the traditional way of viewing the taxes where they were confined to compulsory, unrequited payments to the general government as defined by the OECD in 1988. There are a number of arguments against hypothecation, and they all have some merit and need to be taken seriously.

First, it is argued, public spending should be determined by policies and not by the amount of the revenue raised. With ringfencing, inappropriate funding levels may occur as the 'strong' hypothecated tax implies the dependence of spending on the tax revenues and thus on the macroeconomic performance of the country. This, however, is also true of general taxation, and especially true for governments on the right of the political spectrum who want to minimise taxes for the wealthy and want to make taxes more regressive, emphasising, for instance, VAT which falls more heavily on poorer people. The problem of fluctuating macroeconomic performance can be handled by varying the rate of the hypothecated tax or by securing other sources of funds, as we will discuss shortly. The objective is to sustain a certain amount of spending per capita as decided by the British people.

The second, and related, argument against hypothecation is that the flexibility of fiscal policy and thus the ability to influence the economic situation is reduced when hypothecation is used.[11] This is true but, as health and care would be the only hypothecated tax, then fiscal flexibility can be retained.

In 2012, the American Mercatus Centre think-tank pointed out the negative effects that dedicating tax revenues to specific expenditures can have on the policymakers.[12] Their report said that hypothecation can be used to mask the increases in total government spending. Again this is indeed a danger, but there is sufficient scrutiny of taxation in the UK that the risk can be handled.

There is also a danger that hypothecation will be fudged, and that has been the case with national insurance contributions in the United Kingdom. Money that is raised goes directly to the national insurance fund, from which the benefits are paid. Yet, in practice, national insurance today funds general government expenditures as, after accounting for health spending, there is a large surplus which is loaned to the Consolidated Fund. Another problem with the national insurance tax is that it is a regressive tax.[13] It also falls more heavily on the poorest in society.[14] Clearly this type of fudging should be avoided.

The alternative to an integrated health and care hypothecated tax - in addition to taking the money out of general taxation - is a dedicated social care tax and social insurance. There are advantages to these approaches. Both Japan and Germany have gone the route of implementing social care (or long-term care) taxes.

Long-term care insurance (LTCI) in Germany is a social insurance-based system that was introduced in 1995 and offers all members of society access to a minimum level of care, should they need it. Based on the principle of social solidarity, the system can be accessed by anyone with care needs, whether they are an older adult, working-age adult, or child.

Benefit levels are based solely on need and not means. They are also not affected by personal circumstances (such as living with a carer) or by diagnosis (whether physical or cognitive). In its design, the system seeks to balance universal entitlement with public, market, individual and family responsibilities.[15] The pooling of risk at a national level is at the heart of the system, based on the premise that no individual should have to bear catastrophic care costs. Instead, costs are shared across society. Even so, the system was intended only to provide a basic minimum level of benefits for all, so there is a built-in expectation that individuals will contribute to their costs at the point of access.

Variations on this theme have been proposed in the UK. For instance, a group of academics at the London-based Bayes Business School have devised an insurance product specifically to protect against the costs of care in old age.[16] The products would attempt to address a *'dramatic increase'* in people expected to require care as a result of a quickly-ageing population – for whom no care insurance products currently exist. The *'disability-linked annuity product'* would help pay for care by providing contributions towards future home or residential nursing care costs.

This approach has the advantage of establishing a commercial insurance market. But it is quite complex, involving different levels of eventual disability, and there is no evidence that the insurance industry will develop such products. Indeed, the government hoped that such an industry would develop as a result of the Health and Social Care Act of 2014 – but they were disappointed by an insurance industry that felt it was too risky for them to offer such products. Also, the boundary between social care and healthcare is becoming increasingly blurred as frailty, co-morbidities, chronic disease and dementia are on the rise. As a result of advancing bio-medical science, fewer diseases are 'cured' by the NHS, and more of them are turned into diseases, such as cancer, that are not as deadly but which are increasingly debilitating to live with. They require, then, not only medication but also support in daily activities such as dressing, going to the toilet and so on.

The easiest route for the UK, especially given the irrational fear that social insurance somehow implies privatisation (which it doesn't – the German system of social insurance described above is, effectively, an hypothecated tax), would be to go directly to an integrated hypothecated tax pool.

In conclusion, a hypothecated tax is not a silver bullet and there are credible alternatives. Of those alternatives, the current system of drawing from general taxation is the least preferable given the need for increased finance on the one hand and a reluctance on the part of politicians and the public to raise general taxation. If the UK had developed social insurance, particularly for social care, 20 or 30 years ago, as the Germans and Japanese did, then this alternative might serve the purpose. But the UK failed to do that, and the best alternative – but one that needs to be carefully managed – is an hypothecated tax covering both health and social care.

Other sources of funding for health and care.

SECTION 3

As specified earlier, since 2010, £7.7bn has been cut from adult social care budgets in England.[17] This has been at a time when there are increasing numbers of aged and disabled people. These cuts need to be reversed giving increasing demand in social care. The increased spending on the NHS announced in late 2019 is still not adequate (even pre-Covid).

> *"Health Foundation analysis shows maintaining current standards of care requires overall funding to increase by at least 3.4 per cent a year – an extra £2bn of funding above current spending pledges. To improve standards and transform services it said the health service needed 4.1 per cent of extra spending – equivalent to £6bn more spending than promised by ministers. This spending also does not address the social care crisis where restoring budgets to 2010 levels would require £12bn of extra spending."*[19]

More money is needed than can be raised in taxes, even with the trailblazing hypothecated tax and with richer people paying more given its progressive design.

There is an inbuilt lack of fairness in means-tested social care and free NHS care. It is distressing and unfair that a poor, frail, elderly woman living in, say, a poor area like Birkenhead, with co-morbidities and dementia (care for which is not a free NHS service), loses her home and life savings, whereas a billionaire with cancer (which is treated for free) living in Mayfair has access to care worth tens, perhaps hundreds, of thousands of pounds.

'Free' NHS entitlement should be extended to conditions that are serious but currently outside of the arbitrary definition that excludes, especially, the frail elderly who are living with chronic co-morbidities and, often, dementia. This is the approach taken in, for instance, France and extends not only to health conditions excluded by the NHS but also to many aspects of social care.[20]

This approach will save money by making the patient journey both safer and less costly by keeping more people out of hospital, where their stays are both debilitating and very expensive. Yet total costs are still likely to increase.

As part of the merger of the two systems, more conditions that are currently classified as social care should be given free to poorer people, and those people rich enough to afford it and who contract chronic disease should pay up to a cap.

Yet emergency services should remain free for all. The cap in social care was placed at £35,000 in the most recent (of the many) government reviews and white and green papers.[21] This is an appropriate cut-off point for the merged health and social care systems, and should be applied to healthcare treatments as well as social care.

The coffers should be supplemented by charges for abuse of the system, such as repeatedly missed appointments, and drunken assaults on staff. Missed GP appointments cost the NHS £216m a year, with around one in 20 wasted annually because patients fail to attend without informing the surgery.[22]

Whilst this might not raise much cash, especially given the cost of collection, it will signal that we should all value the NHS and its staff. Again, for those people who can afford it, they should pay prescription charges, and cross-subsidise those who can't afford to pay. The current basic NHS prescription charge in England is £9.35. Many people are exempt from paying this fee, but even those who aren't exempt often get away without paying because of poor administration of the system by the NHS. Indeed, while 40 per cent of the population are liable to pay the prescription charge, in practice 90.6 per cent of prescriptions are dispensed free of charge.[23]

All people over the age of 60 are exempt from prescription charges. In general, UK society needs to reverse the policy of giving tax and pension advantages to the over 60s, starting with prescription charges, at the expense of an increasing burden on the younger generation.

Further cash can be raised from the private sector and internationally by commercialising innovation. A sometimes 'blimpish' NHS mentality often constrains this supplement to taxpayers' money. At a world-class tertiary centre like King's College Hospital, two or three opportunities come up every year to bring in valuable earnings from advanced medical practice and technological innovation. The more enterprising doctors and scientists find money in the private sector and develop their initiatives, but many just wither on the vine. A sovereign NHS venture capital fund, modelled on those operating in the more advanced universities, would give an attractive return on taxpayers' money.

Universities like Imperial College, with its Imperial White City Incubator[24] and Imperial Innovations,[25] would be good partners for the NHS to give taxpayers a better return on their investment. In Cambridge the Biomedical Campus and in Oxford its commercialisation arm, University Innovation and most recently Northern Gritstone all point to the strength of British innovation. At King's College Hospital NHS Foundation Trust, the executive

team has in the past successfully worked with two groups of clinicians intensively to commercialise their discoveries – in haematology (relating to the life-giving, and remunerative, advances in CAR-T cell therapy) and metabolic surgery (a rather miraculous, but little known, cure for Type 2 diabetes), both of which would give significant returns to UK taxpayers and citizens, in terms of developing more advanced treatments.

More recently, however, the schemes were terminated as it was felt inappropriate to partner with the private sector, the only sector of the economy that brings drugs and medical devices to the people! - of course, there are always risks in doing anything new such as commercialising NHS innovation. And there will be failures, splashed across the media by the feral British press. But senior managers and politicians need to consistently make the case that the overall benefit to the UK population, in terms of extra sources of funding, and clinical innovation that improves health and wellbeing, outweighs the occasional costs. If these opportunities are not developed in the UK, then they will eventually be developed elsewhere, notably in the USA and China, to the benefit of their citizens not ours.

Private medical insurance (PMI) in the UK represents about 10 per cent of spending on healthcare. It is mostly delivered by NHS doctors and nurses who spend, perhaps, a day a week working in a private hospital or in the private wing of an NHS hospital. There are three main reasons for buying PMI in the UK: to 'jump the queue' for surgery; to receive surgery in smaller, less frenetic and more comfortable hospitals; and to have the choice of consultant doctor.

The first of these reasons is a bit pernicious. The answer is not to stop private provision but to make the NHS more efficient in delivering timely treatment. There are two routes to achieving this. The first is to have better managed hospitals delivering better productivity. Current levels of efficiency are often 30 per cent poorer than they should be, and than they are in the private hospitals. Book 11 describes how efficiency can be improved within NHS hospitals.

The second route is to outsource surgical activity to the private sector. This is currently done on an *ad-hoc* basis and inefficiently partly due to poor management in the NHS and partly because of a sometimes prejudicial attitude to 'doing business with the private sector' – often called the 'dark side' by NHS managers and some clinicians with an ideological bias. The price paid to private providers is at the NHS tariff, so there is no extra costs to taxpayers and little profit for the private providers (who make their money – to repay capital costs and make a usually modest profit – from treating private patients).

PMI has traditionally been viewed as a competitor to the NHS rather than a complement. Used properly, and regulated well – in terms of financial regulation as private providers are already regulated on quality standards exactly the same as the NHS – the private sector can make an important contribution to UK health and care provision. Tax breaks can also encourage more people to put more money in the UK healthcare system to supplement tax revenues. This is done sensibly in Australia, for instance, as will be described below.

In summary, then, the UK can raise more money to bring its health and care system up to parity with other leading European countries by implementing the following five measures:

- *A hypothecated tax that covers assessment-driven health and social care. This would expunge the difference between a means-tested social care that can wipe out a person's life savings, including their home, and a free NHS in which a foreign national billionaire domiciled in London can get hundreds of thousands of pounds worth of free cancer care. The country needs to pay more for care, and the means test should be extended to cover both health and social care with a cap at £35,000 as recommended in the government-sponsored Dilnot report.*

- *Charges for abuse of the system, such as missed NHS appointments.*

- *Top up fees to pay for extra 'hotel' services in (both private and public) hospitals and care homes can be paid (and encouraged) with explicit cross-subsidisation to poorer people.*

- *Commercialisation of tax-funded innovations, especially in the areas of bio-medical science and technology.*

- *Encouragement, as in Australia, through tax incentives, of private healthcare schemes.*

Funding systems in other countries

SECTION 4

An authoritative analysis of the various forms of funding systems, and their advantages and disadvantages, is contained in a paper by economists from Boston University.[26] They studied five systems, with the following characteristics.

Overview of health insurance systems in five countries

	Canada	Germany	Japan	Singapore	USA
Simple characterization	Single payer	Universal multi-payer	Employer sponsored insurance	Subsidized self-insurance	Employer sponsored insurance
Primary sponsor	Gov.	Gov.	Employers	Self	Employers
Numbers of health plans	1	200	>3000	0	>1200 companies
Mandatory	Yes	Yes	Yes	Yes	No

BOSTON UNIVERSITY STUDY OF HEALTHCARE FUNDING SYSTEMS

Of course, no system is perfect and, as explained above, the hypothecated health and social care tax approach advocated in these pages is not perfect either. We will briefly review the systems in these other five countries to assess advantages and disadvantages.

CANADA

Canada has a universal single-payer, sponsored health insurance system called Medicare which is administered independently by the thirteen provinces and territories. Every citizen and permanent resident is automatically covered. Despite the system being public and universal, the consumer does have a choice of provider (hospitals and GPs). Providers (hospitals and GPs) have the choice of whether to be in the dominant public system, or be an independent private provider, which is rare for most specialities. As of 2018, Canada spent about 10.7 per cent of GDP on healthcare.[27]

Medicare provides medically necessary hospital and physician services that are free at the point of service for residents, as well as some prescription drug and long-term care subsidies. As well as Medicare coverage, most employers offer private supplemental insurance, similar to the UK's PMI, as a benefit to attract quality employees, and a few Canadians buy replacement insurance which allows continuity for someone moving between different employer schemes.

Each province or territory is responsible for raising revenue, planning, regulating, and ensuring the delivery of healthcare services, although the federal government regulates certain aspects of prescription drugs and subsidises the provinces' coverage of services to vulnerable populations. In terms of management, the Canadian system is devolved in the way advocated in this book. In terms of sources of funding, it is similar to the UK although Canada spends considerably more than the UK, both from public and private purses.

Because all services covered by universal insurance are free at the point of care, medical expenditure - in this system - is financed primarily through general tax revenue, or in some provinces with small income-based premiums, which together cover 70 per cent of healthcare expenditure. Private supplementary and replacement insurance make up the remaining 30 per cent of medical expenditure. This compares, as above, to about 10 per cent PMI in the UK.

In most provinces, there are no selective contracts, so consumers are not limited to any particular network of providers. Yet GP gatekeepers are often used so that consumers must obtain referrals from their family physicians to see specialists as is the case in the UK. Surgery-based providers are paid fees for services. Each province or territory sets its own fee schedule. Bundled Diagnostic Resource Group (DRG, broadly similar to payment by results tariffs in the UK, described in more detail in section 5.6. below) payments are used to allocate funds to hospitals in a few provinces, such as Ontario, but this system of payments is largely invisible to patients, as in the UK.

While providers are able to charge alternative fees, the provincial insurance programmes will not pay for any services not charged at the regulated rates. This means a provider who doesn't accept the government's rates must bill the patient, or the patient's secondary insurance, for the full amount of the fee. The patient is not reimbursed by the government's insurance programme for any out-of-pocket expenses which is, therefore, either paid for by patients or by their insurers. Under most provincial and territorial laws, private insurers are restricted from offering coverage for the services provided by the government's programme.

Since provider shortages and long wait times to receive services push costs down, Canada, like the UK, is also struggling to control rising healthcare costs. The elderly population is increasing in size and it is difficult to maintain the level of benefits Canadian citizens have become accustomed to. Cuts are being made, and these are causing friction in the country.

Canada, then, has a similar system to the UK's, but centrally raised funds are placed into a ring-fenced fund (Medicare), and private insurance represents a significant top up. This combination contributes to the Canadians spending more on healthcare. The more sources of revenue there are – in Canada's case both taxes (70 per cent) and private insurance (30 per cent) results in more generous funding. And although the 70 per cent is raised from general taxation, the Canadians ring-fence that amount, making it a quasi-hypothecated fund.

GERMANY

The German government sponsors mandatory universal insurance coverage for everyone, including temporary workers living in Germany. Germany's universal insurance is a social health insurance system that covers about 90 per cent of the population in approximately 200 competing health plans (called Sickness Funds), with the remainder of the population, about 10 per cent (primarily high-income consumers), buying private replacement health insurance.

Although employers play a role in tracking plan enrolment, collecting revenue from employees and passing it along to a quasi-government agency, they are not sponsors: insurance is not employment-based in that all plans are available without regard to where a consumer works (hence the term 'replacement'). Germany spent about 11.2 per cent of GDP on healthcare in 2018.[28] Germany's health spending, excluding private insurers, is mostly funded by an income tax. This tax is a fixed portion of income, usually 10-15 per cent, depending on age, that is the same no matter which health plan an individual is enrolled in, and is shared equally by the employee and employer.

Health plans are required to accept all applicants and pay all valid claims. Health plans are also free to set premiums but, due to strong competition, there is almost no variation in price. Germans stop having to pay any payroll tax for healthcare at age 65 even while continuing to receive healthcare benefits.

Patients are also expected to pay a quarterly co-payment to their primary care doctor. Such a co-payment, whilst not burdensome to the payee, is an important supplementary form of funding, and given that it is a co-payment to what the state is paying it is more directly associated in people's minds with payment for a vital health service. There is a co-payment of around £8 per in-patient day for hospital and rehabilitation stays (for the first 28 days per year), and £4 to £8 for prescribed medical aids.

There is also a co-payment of £4 to £8 per out-patient prescription, unless the price is at least 30 per cent less than the reference price – in practice more than 5,000 drugs are effectively free of charge.[29] The German system of co-payments is an alternative to the approach, advocated above, of extending the proposed spending cap of £86,000 on social care to the NHS.

The income tax is topped up through mandatory payments by employees/pensioners (8.2 per cent of gross wages), and employers/pension funds (7.3 per cent) up to a combined monthly ceiling of around £500 per month.[30] The government contributes this top-up to universal coverage on behalf of the long-term unemployed. People who are unemployed in the short term contribute in proportion to their unemployment entitlements.

Collection of payroll taxes and premiums is managed by employers, although employers play no role in defining choice options and merely pass along taxes and premiums to an independent government agency. Government subsidies are provided for the unemployed or those with low income. Risk adjustment is used to reallocate funds among the competing health plans, based on age, gender and diagnoses. This system makes sure that public money goes to the people most in need. It is in contrast to the UK where much of the logic for the allocation of money is opaque and, in the case of social care, actively favours richer areas of the country.

As with all health and care systems, cost pressures are inexorable. In response to rising healthcare costs, Germany has implemented various cost-cutting measures, such as accelerating the transition to electronic medical records.

Non-price rationing (methods other than price controls) are also used. For example, in order to see a specialist, patients must first be diagnosed and receive a referral from a physician who acts as a gatekeeper (as in the UK). Selective contracting by health plans is allowed, but rare. The German system uses a unique points-based global budgeting system to control annual healthcare expenditure, whereby the targeted expenditure is achieved by making sure that total payments to all providers of a given speciality are equal to the total budget for that speciality in a year.

The Federal Ministry of Health sets the fee schedule that determines the relative points for every procedure in the country. Each year, the total spending on a speciality in a geographic area is divided by the number of procedure 'points' from specialists in that area to calculate the price per point, and each physician in that speciality is paid according to the number of accumulated points, up to quarterly and annual salary caps. The primary

insurance coverage offered through the funds is among the most extensive in Europe, and includes doctors, dentists, chiropractors, physical therapy, prescriptions, end-of-life care, health clubs, and even spa treatment if prescribed.

There are also separate mandatory accident and long-term care insurance programmes. The long-term care plan for the elderly, covering social care, is much more advanced compared to the UK system, and takes pressure off the acute care system, instead of piling pressure onto it, as in the UK and as described in these books.

> *"Germany is one of many countries to have implemented a new system of social (or 'long-term') care in the last 30 years. It is frequently pointed to as an example of a system that England could emulate. In many ways, the German system can be seen as a success: it was implemented with high levels of public and political support and, since its introduction, has provided a minimum level of care benefit to increasing numbers of people where England's provision has fallen. It has also established clear and consistent benefits, a buoyant provider market, and – importantly – it has adapted and responded to changing circumstances…. The fragility of the English provider market is a central concern for people in the social care system. By contrast, Germany has created a buoyant and competitive market. Price negotiation processes, while allowing for some flexibility at state, local and provider level, are governed by highly structured frameworks that ensure stability and certainty for providers."*[31]

The mandatory system of long-term care insurance (LTCI) covers both the old, and disabled people of working age. It is not intended to cover all costs (as health insurance is), but to cover basic needs; individuals are expected to contribute private funds, or to apply for means-tested welfare payments.[32] LTCI is administered by health insurers, but the care funds are independent self-governing bodies. All working people must have some form of long-term care insurance, but individuals with higher incomes can choose to take out private insurance rather than participate in the government programme, and around nine million people do so.[33] The private LTCI market is highly regulated, premiums must match those in the public programme and insurers cannot charge higher premiums to those with pre-existing conditions. Individuals are usually insured for LTCI with the same insurer as for universal healthcare.

A majority of consumers also purchase supplemental coverage from private insurers, and the supplemental coverage typically provides patients with dental insurance and access to private hospitals.

The German system is not without its challenges, but it is one of the best in the world. It is a universal system, unlike the USA, with very significant safeguards for the poorer people in society. The insurance companies are regulated (much more so than in the USA) and competition ensures that consumers get a good deal. Again, unlike the USA, the government has introduced mechanisms to ensure that profiteering and run-away costs do not result in consumer abuse. As a regulated social insurance system, it has characteristics similar to that of a hypothecated tax.

Germany has a population of 83 million and average life expectancy is 81 years. As above, Germany spends about 11 per cent of its GDP on healthcare and public spending on long-term care was one per cent of GDP.

German citizens can choose to buy a private health insurance plan that often covers a wider range of services than does the universal insurance plan. The universal scheme covers preventative services, in-patient and out-patient hospital care, physician services, mental healthcare, dental care, optometry, physical therapy, medical aids, rehabilitation, hospice and palliative care, sick leave compensation and all prescription drugs. Universal preventive services include regular dental check-ups, well-child check-ups, basic immunisations, check-ups for chronic diseases, and cancer screening at certain ages.

Individual health services out of the range of universal coverage are offered to patients on an out-of-pocket basis. Cost sharing is capped at the equivalent of two per cent of household income. The cap is set at one per cent for chronically ill people, but to qualify for this reduction, people have to prove that they attended recommended counselling or screening tests before becoming ill. Children under 18 are exempt from cost sharing.

The advantages of this approach are that it supplements taxation by taking some consumer spending, but caps the amount paid (as advocated above), and it is directive in ensuring that people take up programmes that can alleviate their condition, unlike the uncontrolled free-for-all in the UK.

Physicians tend to work in their own private practices – around 60 per cent in solo practices and 25 per cent in dual practices.[34] About half of all hospital beds are provided by public hospitals and 30 per cent are provided by private not-for-profit hospitals. Private for-profit hospitals provide about 20 per cent of beds. Hospitals are staffed mainly by salaried doctors. In-patient care is paid for per admission through a system of diagnosis related groups (DRGs). Hospital doctors do not usually treat out-patients. Regional associations of GPs and specialists in ambulatory care negotiate contracts with the sickness funds on behalf of their members. The regional associations co-ordinate care requirements within their region and organise out-of-hours care. Physicians are generally reimbursed on a fee-for-service basis, negotiated by the regional association with the SHI. GPs receive a financial bonus for patients enrolled in a disease management programme.

This combination of public, not-for-profit and for-profit (50/30/20) means that Germany avoids the 'public versus private' ideologies that disfigure the UK system. The multiplicity of providers also creates a degree of healthy competition in that citizens can choose which service they use.

JAPAN

Japan has a mandatory insurance system which is comprised of an employment-based insurance for salaried employees, and a national health insurance for the uninsured, self-insured and low income, as well as a separate insurance programme for the elderly. The employment-based insurance system is the primary insurance programme in which employers play a significant role as sponsors and health plans have considerable flexibility in designing their benefit features.

Employment-based insurance differs between small and large firms. Health insurers offer employer-based health insurance which provides coverage for employees of companies with more than five but fewer than 300 workers, and cover almost 30 per cent of the population. Large employers (an additional 30 per cent of the population) sponsor employee coverage through a set of society managed plans organised by industry and occupation.

Employer-based health insurance coverage must include the spouse and dependents. Premiums vary by income and ability to pay. Employers have little freedom to alter premium levels, which range from 5.8 to 9.5 percent of the wage base. Premium contributions are evenly split between employees and employers. Cost-sharing includes a 20 per cent co-insurance for hospital costs and 30 per cent co-insurance for out-patient care. Employer-based insurance is further subdivided into society-managed plans, government-managed plans and mutual aid associations. Patients may choose their own GPs and specialists and have the freedom to visit the doctor whenever they feel they need care. There is no gatekeeper system.

A public national health insurance programme covers those not eligible for employer-based insurance, including farmers, self-employed individuals, the unemployed, retirees, and expectant mothers, who together comprise about 34 per cent of the population. Health insurance for the elderly provides additional benefits to the elderly and disabled individuals.

Finally, any household below the poverty line determined by the government is eligible for welfare support.

Altogether Japan spends about 11 per cent of GDP on healthcare (2018).[35]

All hospitals and physician's offices are not-for-profit, although 80 per cent of hospitals and 94 per cent of physician's offices are privately operated. Japan has a relatively low rate of hospital admissions, but once hospitalised, patients tend to spend comparatively long periods of time in the hospital, notwithstanding low hospital staffing ratios. In Japan, the average hospital stay is 36 nights compared to just six nights in the United States. This high average is likely to reflect the inclusion of long-term care stays along with normal hospital stays in the average. Health insurance benefits designed to provide basic medical care to everyone are similar. They include ambulatory and hospital care, extended care, most dental care and prescription drugs. Not covered are such items as abortion, cosmetic surgery, most traditional medicine (including acupuncture), certain hospital amenities, some high-tech procedures, and childbirth. There is a specialised insurance programme for childbirth expenses. Expenses that fall outside the normal boundaries of medical care are either not covered, dealt with on a case-by-case basis, or covered by a separate insurance system.

Like Germany, Japan introduced (in 2000) a long-term social care insurance system, with a 10 per cent co-payment required from recipients of care, separate from the healthcare insurance system. This separation, as described earlier, makes less sense as ageing conditions and co-morbidities merge with health conditions. In terms of healthcare, Japan, again like Germany, has a good balance of funding sources and appropriate national platforms to promote consistency and cost control.

UNITED STATES

The US system is an employment-based health insurance system in which employers play a key role as sponsors of their employees. There are over 1,200 private insurance companies offering health insurance in the USA, which are regulated primarily by the 50 states and not at the federal level.

These companies offer tens of thousands of distinct health insurance plans, each with their own premiums, lists of covered services, and cost sharing features. As well as this private system, there are also many overlapping public specialised insurance programmes designed to cover consumers who are elderly, disabled, or suffering from conditions such as end stage renal disease (Medicare programme), the poor or medically needy (Medicaid), children, veterans, and the self-employed.

Because the US relies on both private and public insurance, it is sometimes called a mixed insurance system. Although the right wing in the USA often rail against 'socialised medicine', such as the UK's NHS, Medicaid and Medicare funds about the same amount of spend per capita as the NHS in the UK – and then the same again is spent by the insurance companies, resulting in about twice the spending per capita compared to the UK.

As of 2018, about 8.5 per cent of the US population was without primary insurance (down from 17 per cent in 2011, a result of 'Obamacare').[36] Though many of these consumers are in fact eligible for Medicaid coverage, but do not realise it. Altogether, the US spends nearly 17 per cent of GDP on healthcare, the highest of any developed country.[37] Although the government acts as the sponsor to all of the public specialised insurance programmes, employers are the key sponsor for most Americans.

Choice is available to almost every agent in the US system: consumers choose providers, health plans, and sponsors; and employers, health plans and providers can generally turn down consumers who they prefer not to insure or employ, enrol or provide services to. Employers generally sign contracts with health plans while trying to control costs, but find little competition to hold down prices.

Many health plans negotiate fee reductions with provider groups, who tend to have substantial market power, but fees for medical care services in the USA are, with few exceptions, the highest in the world.

Although the US Medicare programme sets provider fees for all regions without negotiation, all health plans must negotiate prices to be paid to providers, and the resulting fees reflect bilateral bargaining with market power. The 2010 Affordable Care Act (ACA), or 'Obamacare', dramatically changed many features of the US healthcare system. Starting in 2014, consumers who were without insurance had to pay a tax penalty, and employers above a certain size had to offer insurance to their full-time employees or pay a penalty.

This US system also entails setting up insurance exchanges to cover the self-employed and small employers, who have the hardest time getting insurance in the USA. The ACA does relatively little to address cost containment issues, but does work towards expanding the number covered by insurance. It is unclear whether the national reform will work as well as it has in Massachusetts, where it has reduced the percentage that is uninsured to less than two per cent of the population.

Cost containment is a huge issue in the USA, with such high spending in relation to its income. Demand side cost sharing is used widely, with co-payments, co-insurance, deductibles, coverage ceilings and tiered payments all being used to deter demand. Many health plans use supply-side cost sharing, such as DRG (Diagnosis Related Group)- bundled payments, and some are beginning to bundle primary care payment. Tiered provider payment, a form of 'Value-based Insurance', is also beginning to be used.

Recent innovations include capitated provider networks, known as Accountable Care Organisations (ACOs) and reorganising primary care providers to work and be paid as a Patient Centred Medical Home (PCMH).

Pay for performance systems and electronic medical records are other innovations being tested. It is too early to know which of these systems will be most successful in controlling costs. A positive feature of the US system is the exploration of diverse payment, non-price, and informational programmes to try to control costs (described in more detail in the next section). Individual level healthcare data is more available from the USA than from any other country. Also, consumer information about doctors, hospitals and health plans are all available and can potentially play a role in consumer choice.

With the exception of Singapore, the US healthcare system is arguably the most unfair healthcare system, with consumers who are poor or ill with chronic illnesses paying a high share of their income for medical care. Healthcare spending is a common source of individual bankruptcy.

Although the USA has some of the best healthcare in the world, the inequalities are even worse than in the UK and, whilst there are aspects of the system that the UK can learn from (the Patient Centred Medical Home as it might be applied in the UK is described later), the high cost, unequal coverage and fragmented dynamics make the US system one to be wary of rather than one to aspire to.

SINGAPORE

Singapore has a unique healthcare system where the dominant form of insurance is mandatory self-insurance supported by sponsored saving, although complementary and special insurance programmes are also central to their system. Remarkably, despite having a per capita GDP of approximately US$ 64,600 in 2018, Singapore reports spending a mere 4.5 per cent of GDP on healthcare (2016).[38]

The centrepiece of its system is a mandatory income-based individual savings programme, known as Medisave, that requires consumers to contribute 6 to 9 per cent (based on age and up to a maximum of $ 41,000 per year) of their income to a health savings account (HSA). This HSA can be spent on any healthcare services a consumer wants, including plan premiums. Funds not spent in a consumer's HSA can be carried forward to pay for future healthcare, used to pay for healthcare received by other relatives or friends, or if over age 65, cashed out to use as additional income, though there are some restrictions.

A complementary insurance plan, known as Medishield Life, is available to cover a percentage of expenses arising from prolonged hospitalisation or extended out-patient treatments for specified chronic illnesses, though it excludes consumers with congenital illnesses, severe pre-existing conditions and those over 85 years old.[39]

The government also supports a second complementary catastrophic spending insurance programme, known as Medifund, which exists to help consumers whose Medisave and Medishield Life schemes are inadequate. The amount consumers can claim from this catastrophic insurance fund depends on their financial and social status. Singapore's system also includes a privately available, optional insurance programme covering long term care services (called Eldershield), with fixed age-of-entry based payments. Consumers are automatically signed up for Eldershield once they reach 40, but they may opt out if they want to.

Subsidies are available for most services, but even after the subsidies, consumers must pay something out of pocket for practically all services. Some, but not all, subsidies depend on the consumer's income, and consumers often have a choice over different levels of coverage. Funding for all three of the secondary insurance programmes (Medishield Life, Medifund and Eldershield) comes from general tax revenue. There are also five private insurance companies offering comparable plans, some of which are complementary to Medishield Life. Singapore has both public and private providers with the public sector providers serving the majority of in-patient, out-patient and emergency care visits and the private sector serving the majority of primary and preventative care visits.

Singapore's system receives positive publicity for its low percentage of GDP spending on healthcare but has been criticised as not replicable elsewhere. The relatively small population and high GDP per capita allows Singaporeans to avoid some of the costs associated with regulating health insurance in larger, more populous countries. Perhaps Singapore's most substantial criticism is insufficient coverage for post-retirement healthcare

expenses. Between potentially diminished savings and being cut off from Medishield Life at age 84, there is little support for financing catastrophic illnesses.

Other criticisms of the country centre on fairness concerns. The system favours high income over low income households, since they will have much greater funds contributed to their HSA. Also, consumers with high-cost chronic conditions, such as diabetes and mental illness, will repeatedly deplete their HSA and need to fall back upon the various secondary insurance programmes. Stigma is also an important cost containment mechanism.

AUSTRALIA

Australia offers an example of the benefits of a hypothecated system. It should be noted that social insurance and a hypothecated tax are not exactly the same as the former falls more heavily on employers and employees. However, both create an identifiable pool that can be seen by taxpayers and citizens and is less prone to the game playing that occurs in the UK's health and social care budgets currently.

Australia's publicly funded universal healthcare system – Medicare – is structured so that higher earners pay more than poorer people. This has the following advantages:

- *It continues to protect the most vulnerable in society and eradicates, even for the relatively well-off, the anxiety that healthcare costs might lead to bankruptcy;*
- *But it creates disincentives for abusive use because the consumption of services is visible over time.*
- *It is more progressive – the rich pay more – than income tax.*

Instituted in 1984, Medicare co-exists with a private health system. It is funded partly by a two per cent hypothecated Medicare levy, with exceptions for low-income earners), with the balance provided by government from general revenue.[40] An additional levy of one per cent is imposed on high-income earners without private health insurance. This provides an incentive for people to buy private health insurance through both 'sticks' such as the one per cent (of income) levy in addition to the standard two per cent Medicare levy paid by all except those who cannot afford it, and 'carrots' such as tax rebates.[41]

As well as Medicare, there is a separate Pharmaceutical Benefits Scheme that considerably subsidises a range of prescription medications. Again, this is means-tested such that higher earners pay more, and abuse, such as non-consumption of medicines and drugs, can be tracked.[42]

The federal government pays a large percentage of the cost of services in public hospitals. This percentage is calculated on:

- *Whether the government subsidises this service (based on the Medicare Benefits Schedule) – typically, 100 per cent of in-hospital costs, 75 per cent of GP and 85 per cent of specialist services are covered.*
- *Whether the patient is entitled to a concession or receives other benefits.*
- *Whether the patient has crossed the threshold for further subsidised service, based on total health expenditure for the year.*

Where the government pays the large subsidy, the patient pays the remainder out-of-pocket, unless the provider of the service chooses to use bulk-billing, charging only the scheduled fee, leaving the patient with no extra costs. This is, effectively, a co-payment. Where a particular service is not covered, such as dentistry, optometry and ambulance transport, the patient must pay the full amount (unless they hold a Low-Income Earner card, which may entitle them to subsidised access).

Individuals can take out private health insurance to cover out-of-pocket costs, through plans that cover just selected services up to full coverage. In practice, a person with private insurance may still be left with out-of-pocket payments, as services in private hospitals often cost more than the insurance payment.

Whilst Australia, like all countries, has some good and some bad in the way that it arranges and manages its health and care system, its social insurance system, and the plurality of suppliers within it, is a definite strength and one from which the British can learn.

> *"One of the key characteristics of Australia's health system is its plurality — public and private sectors play a major role in both the funding and provision of care, under a common national framework. The publicly funded system, Medicare, was established in 1984 with the aim of providing 'the most equitable and efficient means of providing health insurance coverage for all Australians'."*[43]

At heart, Medicare has always been a funding system rather than a provider, and has three main components: the Medicare Benefits Schedule (offering subsidised non-hospital care), the Pharmaceutical Benefits Scheme (subsidising drug costs) and free access to most hospital care for those who elect to be public patients.

Over the decades, there has been a great deal of policy experimentation exploring the right balance between public and private funding. Recent governments have encouraged people to take out private health insurance in an attempt to contain Medicare costs. On one level, this has been successful: around 55 per cent of Australians now have some form of private health cover (up from 30 per cent in the 1990s). Overall, the government now accounts for around 67 per cent of healthcare spending, markedly lower than the OECD average of 72 per cent.

> *"Australia's provider sector is similarly mixed. Private hospitals now account for about one-third of beds (half for-profit, half not-for-profit) and are responsible for two-thirds of elective care. This approach has produced a good elective care system, with acceptable waiting times and decent choice between public and private hospitals. However, weak integration between emergency, community and primary care services is causing problems in emergency departments. Some states, such as New South Wales, are exploring the benefits of greater collaboration between hospitals and primary care: New South Wales' Integrated Care Programme is incentivising various collaborative models between local health districts, primary care organisations and GPs."*[44]

But there are also lessons to be learnt from the Australian system, because it is not perfect. As the UK moves towards a hypothecated tax system, as we hope it will, these international lessons should be absorbed in order to make the journey smoother.

The mixed system of funding and provision pursued by Australia has added much-needed capacity and kept quality high. Yet a fragmented distribution of power and control has created one of the system's most enduring barriers to change. Australia suffers from three disjunctures: separate financing streams (federal and state), separate funding streams (primary and secondary), and separate employment relationships (some doctors and the rest of hospital staff). This makes large-scale reform difficult.

As the burden of disease shifts towards chronic diseases, pressure points have exposed the need for a more co-ordinated approach across these various funding and service provision streams.

Care integration is becoming more and more urgent in terms of both care quality and system sustainability but the status quo is proving hard to shift. A case in point is payment systems, which are prevented from moving away from episodic (and, for most primary care physicians, fee-for-service) reimbursement to value-based contracting by powerful defences of the status quo, especially by the medical establishment.

One of the most serious attempts to reform the health system came under the Rudd/Gillard administrations in 2007-13. In 2008, the National Health and Hospitals Reform Commission was established to address many deep-seated issues. With an ambitious 123 recommendations, the commission sought to reform both funding and delivery. The supreme decision-making body representing all states and territories, the Council of Australian Governments (COAG), agreed that the federal government would assume responsibility for primary care and take majority funding responsibility for public hospitals, paying a 60 per cent share of the cost using an activity-based funding approach.

Governance was to be strengthened through greater devolution to aggregated hospital boards, improved efficiency through a new Independent Pricing Hospital Pricing Authority, and transparency through a National Health Performance Authority. Medicare Locals were established to support preventative action in local communities and better coordinate care for chronic diseases, these have now been superseded by primary health networks.

At the time, these recommendations were broadly endorsed but, as the new right-leaning coalition assumed power in 2014, the chairman of the COAG Reform Council reported on the healthcare system after five years of reform.[45] Progress had been made in life expectancy and infant mortality and access to primary care, alongside a small improvement in emergency services, but waiting times for elective surgery had increased slightly and older people had to wait longer to get residential care. So the report showed progress but it was patchy and limited. Australia still has problems co-ordinating between federal and state levels or between hospitals, primary care and community services.

In the 2014 general election, the most important issues were the economy and debt. The new government acted swiftly and reversed many of the reforms, arguing that the cost had not produced sufficient benefits for patients or taxpayers. The Budget for Health published in May 2014 prioritised action to kickstart the economy and reduce debt 'to build a strong, prosperous economy and safe, secure Australia'.[46] Citizens were expected to make a greater contribution to the cost of their own care.

Billions of dollars were to be taken from budgets, including the termination of a state-level preventative health programme. A $7 co-payment for GP consultations was proposed, along with cuts to the Medicare safety net, but both were defeated by the Senate following a public backlash.

Defending its decisions, the coalition pointed to the dramatic and unaffordable increase in healthcare costs, highlighting that over the previous 11 years, health expenditure increases were greater than the combined growth of all other major areas of government spending. Structural problems and fragmented care remain prominent features, and demand and supply pressures continue apace.[147]

The last part of this story, political interference and sudden changes of course, is familiar to the UK. It's probably the single biggest obstacle to reform in the UK and, it would appear, in systems with close similarities to the UK's. More generally, it represents a crisis of democracy, as politicians shape competing electoral platforms, rather than getting around a table to agree a sensible and sustained path of reform.

Australia is a bit more fortunate than the UK, in that the states can ignore the soap opera antics of Canberra, and try to serve the people they are there to serve. Plurality of providers, and competition, is a key part of the efforts that the states are making in this regard.

Future funding settlements between the federal and state level are now part of a major review by COAG – the Reform of the Federation – that will recommend policy on the roles, responsibilities and contributions of the states and territories and the federal government.

What is the right level of funding for health and social care?

SECTION 5

It is impossible to say definitively what a country should spend on maintaining and improving its population's health, even knowing the specific challenges it faces. The appropriate amount of spending in a country with a malnourished population facing endemic malaria and an epidemic of HIV/AIDS is likely to be different from one with limited infectious disease and a high incidence of cancer and chronic conditions. So, the more appropriate question is: *how much should England spend on health, given its current epidemiological profile relative to its desired level of health status, considering the effectiveness of health inputs that would be purchased at existing prices?*

Clearly the Covid-19 pandemic has changed the epidemiology of the country, and, at least in the short term, infectious disease has become hugely more important and expensive. Time will tell if this is a one-off or if recurrent infectious diseases reappear in western economies.

The view propounded earlier in these books is that they will become more common, and this will require sustained increases in funding targeted at this particular threat.

The broader question of how much spending is right, takes no account of other social demands on resources—whether for housing, education, public infrastructure, policing, or the arts. So, no matter how important health is, society needs to consider the best alternative uses of its limited resources. In many cases, such a comparison will support allocation toward health services or public health initiatives. But there is some point—and this is critical to the question of 'how much?'—at which applying additional funds to health and care will not be as useful to society as spending on other activities and services.

Hence, the full question becomes: how much should England spend on health, given its current epidemiological profile relative to the desired level of health status, considering the effectiveness of health inputs that would be purchased at existing prices, and taking account of the relative value and cost of other demands on social resources?

At least four different approaches have been identified for answering the question of how much a country should spend on health. These approaches range from rough comparisons with other countries to a full budgeting framework.

PEER APPROACH

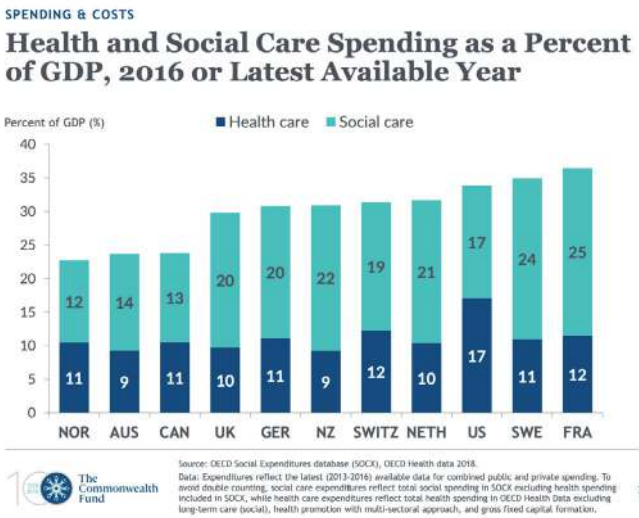
One approach is to ask what other countries with similar characteristics - such as income levels, cultures, or epidemiological profiles – are spending. This approach accepts that the underlying relationship between health spending and health outcomes is difficult to specify and aims instead at observing and learning from comparable experiences.

It is conceptually most similar to the process of 'benchmarking', in which firms set targets relative to what other similar entities are achieving. This approach can be quite satisfying for policy debate purposes because it easily generates a single target amount. This is the approach implied when opposition British politicians claim that their country is spending too little on health (ten per cent of GDP) by comparison with their peers in the European Union (for example, public health spending in Germany is 11 percent of GDP; in France it is 13 percent).[49]

International comparisons are not very helpful in determining how much should be spent on health and social care, but they are illuminating about the priorities that different countries take in spending on health and social care. Many headline figures only compare health spending excluding spending on social care, but the Commonwealth Fund has tried to aggregate both types of spending. Data is still not exactly comparable, and figures often take some years to validate. As a result, the most recent data refers mostly to 2017 figures, but it is unlikely that these have changed significantly by today (2021), other than the exceptional (in both senses of the word) amount spent on the Covid pandemic.

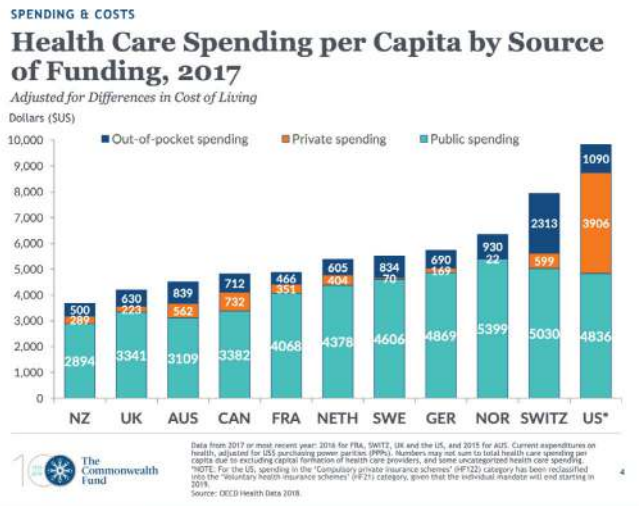
The most reliable measure of social spending combines spending on social care (care homes and domiciliary care) and on social benefits (which includes pension spending). The data comes from The OECD Social Expenditure Database (SOCX).[50,51] The UK's relatively high spending on this measure, as a percentage of GDP, is because social benefits, especially public pensions, in the UK are quite high but social care spending is typically low. In total, however, the UK's social spending is at about 20 per cent of GDP, that is at the OECD average, but far lower than some other European countries such as Sweden and France.

SPENDING COMPARISONS[52]



Just looking at healthcare spending, the UK is towards the bottom of the European league table. And in terms of 'value for money', that is how many doctors, nurses, hospital beds etc, that the UK gets for that money, the country is at the very bottom of the league table, as quantified earlier.

SOURCES OF FUNDS[53]



POLITICAL ECONOMY APPROACH

A second approach alters the question slightly. Instead of asking 'What should England spend on healthcare?' it asks: 'Why is England spending more (or less) on health than it should?' The implicit assumption by those advocating a change in health spending is that they believe that the current allocation of national income or public budgets to health is too low, presumably as a result of a variety of political and economic forces that set budgets and public policy.

In a country where health spending is artificially high or low because of the actions of particular lobby groups (such as military contractors, teachers' unions, medical associations, and pharmaceutical companies – especially in the USA), this approach would try to determine the magnitude of the alleged distortion.

Such an approach can be quantified with a model of health spending that explicitly incorporates the preferences and resources of competing social actors. This would require defining a social welfare function to identify the 'correct' level of health spending that would occur in the absence of political 'distortions'.

A political economy model for Brazil—which assumed that public-sector health spending benefits poor voters more than rich voters (who have access to private health insurance)—demonstrated that health spending was higher in municipalities where the poor had greater political influence.[55]

The political economy approach is probably the best from a social science perspective because it addresses the actual political mechanisms that determine health spending and the behaviour of the social actors who influence public spending decisions. But getting hold of reliable quantitative estimates is difficult because of the large number of factors involved and the complexity of modelling such political processes.

This political economy perspective is an important one. The problem in the UK is that there is little or no explicit rationale for what is spent. The amount, in effect, comes out of the Treasury 'black box'. One of the recommendations of this book is that the decisions on health and care spending are made more systematic and transparent, and therefore the political economy perspective should become an important part of the rationale.

PRODUCTION FUNCTION APPROACH[56]

A third way to address the question is to estimate a health production function. This approach uses aggregate data to estimate the impact of health spending, socio-economic characteristics, demographics, and other factors on a population's health conditions. The resulting equation incorporates three of the issues raised earlier: the current epidemiological profile, prices of inputs, and the effectiveness with which inputs can be transformed into improved health status.[57]

Once a particular level or change in health status is specified, the equation can be used to predict the change in health spending that would be necessary to reach that goal.

The production function approach is more grounded than the peer approach because it emphasises the relationship between spending and the desired goal— that is, better health. It is more feasible than the political economy approach in terms of data requirements and less demanding than the budgeting approach since it focuses on a relatively small set of aggregate variables rather than requiring a full specification of all the inputs or activities of the health sector.

Even so, the production function approach has several drawbacks as well. First, it is extremely difficult to attribute changes in health status to healthcare spending, independent of other factors, although researchers have made noteworthy efforts.[58] Based on estimates in many of these studies, countries would have to increase healthcare spending by factors of ten or more to raise life expectancy. In other cases, estimates suggest that reasonable changes in health spending, on the order of five to ten percent— particularly on primary healthcare— could have substantial effects on reducing child and infant mortality rates.[59] Even if information was reliably available, the production function approach still fails to address trade-offs between spending on health services and on other priorities, in particular on reducing the wealth inequalities that Marmot has identified as being so important.

There is, however, some momentum building to define 'wellbeing' more generally as an explicit goal of public policy and spending. Ex-civil service head Sir Gus O'Donnell has led this argument:

> *"The Covid-19 crisis has shown us there is more to life than money. What really matters is the wellbeing of the people, particularly those who are least satisfied with their lives. This should be the basis for the government to reset its vision for a post-Covid world….At the macro level, the Treasury should redirect resources to enhance social capital and, more generally, to spend a much greater proportion of taxpayers' money on prevention rather than cure… At the micro level, the Treasury's bible on investment appraisal, the Green Book, now allows for more sophisticated analyses that measure costs and benefits in terms of their impact on social wellbeing. This suggests a need to focus on left-behind areas where average wellbeing is low. Such an approach is long overdue."*[60]

BUDGET APPROACH

The most complete approach is to identify the desired health status changes and decide what needs to be bought - whether health services or health service inputs - to achieve those goals. Next, these items need to be priced and summed, generating an estimate of the funds necessary to buy that level of service. This approach is common at the level of specific programmes and is regularly carried out by most governments during their budget processes. The World Bank and the Commission on Macroeconomics and Health both published studies in which they designed packages of healthcare services and then estimated how much it would cost to make that package available to a given population.[61]

A similar exercise, undertaken with much greater precision in Ethiopia, estimated that addressing bottlenecks in the delivery of a package of cost-effective health interventions would cost an additional $1 per capita, representing a little less than one percent of GDP, and would reduce child mortality rates and the lifetime risk of mothers dying by 30 percent.[62]

This approach is conceptually accessible to most people. But it is less than satisfying for public budget debates because the final estimate depends so obviously on how many services or inputs are to be bought and on their prices. Also, the approach is frequently conducted without explicit attention to measures of the effectiveness with which service inputs actually influence health outcomes. In fact, there are no fundamental or obvious criteria for selecting these quantities (whether services or inputs) without an empirical understanding of how health services improve health.

So this approach answers the global spending question only by generating new questions about the amounts and kinds of services that should be used. One of the biggest strengths of this approach is that, when it is combined with a full public budget review, it forces attention to all of the various elements in the complete version of the question identified above. A full budget review needs to set goals within the epidemiological context, estimate input requirements, survey prices and wages, and make arguments for health spending relative to other demands on the public purse.

CONCLUSION

The first thing to consider when approaching the question of how much to spend on health is to distinguish those cases where the concern is over the public budget (generally the case in OECD questions) or total health spending (which includes out-of-pocket spending and may be less amenable to policy influence). This focuses attention on the right set of policy instruments, whether public budget decisions or regulatory and oversight mechanisms.

Second, each of the approaches above asks a slightly different question. The peer approach asks how a country fares relative to similar countries: it is the easiest to quantify but probably the least informative. The political economy approach focuses attention on the process of political decision making but is least likely to produce a quantitative estimate of requirements. The production function approach asks how much a country should spend to attain a particular level of health, but it will probably be years before a satisfactory and robust health production function can be estimated with the precision required for policy analysis. But the UK does need to start taking steps on this journey.

Only the budget approach appears to be both feasible and readily quantifiable, although it requires directly confronting the issues of current and desired health status, prices, effectiveness, and trade-offs. But choosing the amount a country will spend on health really is a consequence of all of these factors. Fundamentally, there is no shortcut, especially in the short term when the data and analysis are so poor. Even so, this situation should not be allowed to persist at a time when there are considerable competing demands for funding, both within health and social care, and with other areas of public spending.

The general public would probably be quite surprised to discover how unscientific and haphazard decisions on health and social care spending in the UK are. There really is little structured decision-making, and money is allocated based on an amalgam of short-term political expediency, who shouts loudest and, regrettably, even political pork barrel politics at times.[63]

Partly this dilettantism is a result of low-quality management in government, in the civil service (Department for Health and Social Care) and the NHS. Partly it is a result of an over-emphasis on policy prescriptions and targets (such as GP opening hours, target waiting list times, target A&E waits or, at a 'higher' policy level, the oft-repeated but never implemented promises to 'fix' social care or increase the number of doctors or tighten quality regulation and so on).

'Policy' is what British politicians, civil servants and senior NHS managers **do.** They are much less competent, or even interested in, making analytically sound decisions about resource allocation and effective management of operations. This blind spot is compounded by the many think-tanks and foundations that cluster around Whitehall and Westminster. The Nuffield Trust, the King's Fund, the Health Foundation, and many more, are prodigious and eloquent in producing policy papers that recommend the same old prescriptions, but fail to answer why they never get implemented, and, if they did get implemented, how can they be professionally managed.

A typical sample of King's Fund reports for 2019 are:

- *Creating healthy new towns.*
- *Integrated care.*
- *What have the political parties pledged on health and social care?*
- *GP appointments.*
- *Health and Wellbeing Boards.*
- *Social care policy.*
- *The NHS 10 year plan.*

The problem in the UK is that we have too much policy and not enough analytical and managerial capability. The DHSC needs to co-opt the think-tanks (retaining their independence, of course) to start producing the 'production function' and 'budget approach' described above. Such work is essential if services are to be commissioned appropriately – that is, that the British taxpayer gets 'the best bang for the buck' possible. This new professional approach also needs to come up with a system of measuring performance – and aligning incentives – that support the objective of getting the most from the UK's health and social care system.

In this latter endeavour, the UK can draw on research and dialogue that has been conducted in the United States over the last few decades, and which will be described in the next section.

Commissioning to align incentives: patient-value and remuneration for outcomes

SECTION 6

Once the money has been raised for health and social care, through an hypothecated tax, and having learnt lessons from the experience of other countries, the issue then becomes how to spend it, and how to spend it efficiently.

In order to decide how to spend it, then the system needs an 'objective function', that is the function that needs to be maximised or optimised. That function is patient value, which will be described in this section. Work on defining patient value will, over time, result in the production function described above that will provide a more systematic and scientific approach to the question of how much a society should spend on health and social care to get the 'biggest bang for it's buck'.

The next question is how to make sure, in a health and care sector with over 3 million employees, that the money is spent efficiently. In order to achieve this, service providers need to be 'paid', or commissioned, in ways that encourage them to maximise patient-value. There are three payment or commissioning instruments that will be described in the next three sections. They are:

- *Bundled payments that maximise patient value over full cycles of care. In order to be effective in rewarding best practice, patients need to have the power of choice to switch to the best providers.*
- *Capitated payments for population level coverage in 'transactional' (as opposed to care management programmes) services in primary care, and in public health.*
- *Traditional fee-for-service payment for routine procedures such as routine dentistry.*

But, first, patient value. Although he is writing about the US system, Professor Michael Porter of the Harvard Business School, expresses the need for a relentless focus on patient value and it is just as relevant to the United Kingdom:

> *"In healthcare, the overarching goal for providers, as well as for every other stakeholder, must be improving value for patients, where value is defined as the health outcomes achieved that matter to patients relative to the cost of achieving those outcomes. Improving value requires either improving one or more outcomes without raising costs or lowering costs without compromising outcomes, or both. Failure to improve value means, well, failure.*
>
> *"Embracing the goal of value at the senior management and board levels is essential, because the value agenda requires a fundamental departure from the past… Despite noble mission statements, the real work of improving value is left undone. Legacy delivery approaches and payment structures, which have remained largely unchanged for decades, have reinforced the problem and produced a system with erratic quality and unsustainable costs."*[64]

Porter stresses the needs for outcomes to be defined broadly, both to cover all of the possible complications of a particular condition and to apply over a full 'cycle of care'.

> *"Healthcare delivery involves numerous organisational units, ranging from hospitals to physicians' practices to units providing single services, but none of these reflect the boundaries within which value is truly created.*
>
> *"The proper unit for measuring value should encompass all services or activities that jointly determine success in meeting a set of patient needs. These needs are determined by the patient's medical condition, defined as an interrelated set of medical circumstances that are best addressed in an integrated way. The definition of a medical condition includes the most common associated conditions — meaning that care for diabetes, for example, must integrate care for conditions such as hypertension, renal disease, retinal disease, and vascular disease and that value should be measured for everything included in that care.*[65]
>
> *"For primary and preventive care, value should be measured for defined patient groups with similar needs. Patient populations requiring different bundles of primary and preventive care services might include, for example, healthy children, healthy adults, patients with a single chronic disease, frail elderly people, and patients with multiple chronic conditions. Care for a medical condition (or a patient population) usually involves multiple specialties and numerous interventions. Value for the patient is created by providers' combined efforts over the full cycle of care. The benefits of any one intervention for ultimate outcomes will depend on the effectiveness of other interventions throughout the care cycle."*[66]

A focus on outcomes is a major trigger to driving productive change in the care system. It has a powerful role as it is unarguably the most important purpose of any care system. Michael Porter points to the need for such a firm initial push, and it requires senior people in the system to 'take charge' to move it forward. In the following quote, Michael Porter is again referring to the US system, but its applicability to the UK is easy to understand – eerily so. He makes, also, a very important point about how patient-value should also be the core principle of regulation rather than, as the CQC practices currently, the inspection of inputs (rather than patient outcomes) and compliance with centrally mandated processes:

> *"The current structure of healthcare delivery has been sustained for decades because it has rested on its own set of mutually reinforcing elements: organisation by specialty with independent private-practice physicians; measurement of 'quality' defined as process compliance; cost accounting driven not by costs but by charges; fee-for-service payments by specialty with rampant cross-subsidies; delivery systems with duplicative service lines and little integration; fragmentation of patient populations such that most providers do not have critical masses of patients with a given medical condition; siloed IT systems around medical specialties; and others. This interlocking structure explains why the current system has been so resistant to change, why incremental steps have had little impact, and why simultaneous progress on multiple components of the strategic agenda is so beneficial. No Magic Bullets*
>
> *"The history of healthcare reform has featured a succession of narrow 'solutions', many imposed on provider organisations by external stakeholders and introduced with great fanfare. For the most part, the solutions have focused on the levers that particular stakeholders can push and have been designed to preserve existing roles. None of them tackle the underlying strategic and structural problems that work against value for patients.*
>
> *"Individually and collectively, these 'magic bullets' have inspired false hope and distracted attention from the real work at hand.*

Disappointment with their limited impact has created scepticism that value improvement in healthcare is possible and has led many to conclude that the only solution to our financial challenges in healthcare is to ration services and shift costs to patients or taxpayers."[67]

Defining desirable and achieved patient outcomes is barely practiced in the UK. It will take time to build a library of best practice outcomes, but the work needs to start now. It is a core function of the new corporate NHS that is advocated in this book.

On the back of Michael Porter's work in the USA, and some nascent work in the UK, such as at King's Health Partners in London, there is an emerging data – and experience – base to build on. Porter gives an example of the 'nesting' of outcome measurements that can be built up over time.

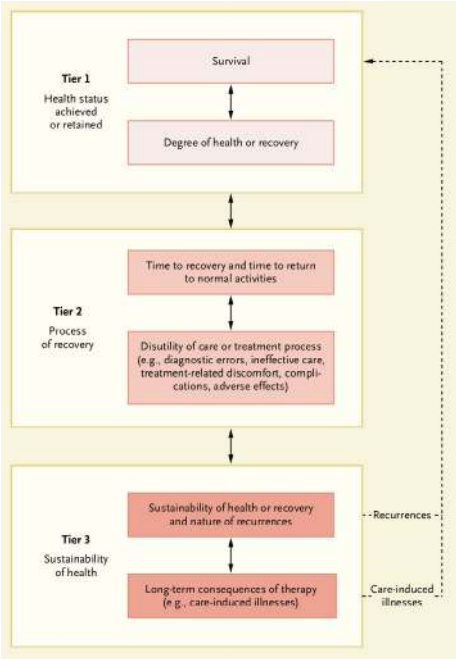
"Determining the group of relevant outcomes to measure for any medical condition (or patient population in the context of primary care) should follow several principles. Outcomes should include the health circumstances most relevant to patients. They should cover both near-term and longer-term health, addressing a period long enough to encompass the ultimate results of care.

"And outcome measurement should include sufficient measurement of risk factors or initial conditions to allow for risk adjustment. For any condition or population, multiple outcomes collectively define success. The complexity of medicine means that competing outcomes (e.g., near term safety versus long-term functionality) must often be weighed against each other.

"The outcomes for any medical condition can be arrayed in a three-tiered hierarchy, in which the top tier is generally the most important and lower-tier outcomes involve a progression of results contingent on success at the higher tiers. [See diagram on the next page]

"Each tier of the framework contains two levels, each involving one or more distinct outcome dimensions. For each dimension, success is measured with the use of one or more specific metrics.

PATIENT OUTCOME TIERS

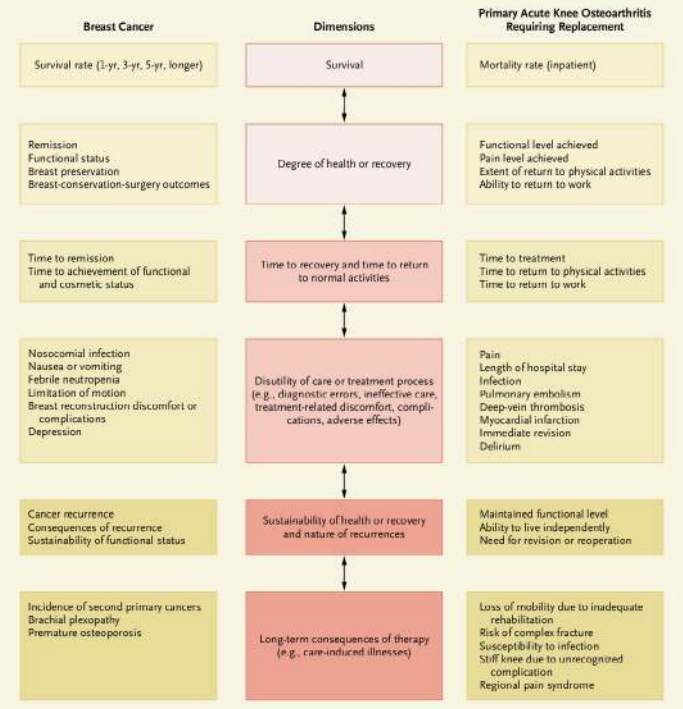


"Tier 1 is the health status that is achieved or, for patients with some degenerative conditions, retained. The first level, survival, is of overriding importance to most patients and can be measured over various periods appropriate to the medical condition; for cancer, one-year and five-year survival are common metrics. Maximising the duration of survival may not be the most important outcome, however, especially for older patients who may weight other outcomes more heavily. The second level in Tier 1 is the degree of health or recovery achieved or retained at the peak or steady state, which normally includes dimensions such as freedom from disease and relevant aspects of functional status.

"Tier 2 outcomes are related to the recovery process. The first level is the time required to achieve recovery and return to normal or best attainable function, which can be divided into the time needed to complete various phases of care. Cycle time is a critical outcome for patients — not a secondary process measure, as some believe. Delays in diagnosis or formulation of treatment plans can cause unnecessary anxiety. Reducing the cycle time (e.g., time to reperfusion after myocardial infarction) can improve functionality and reduce complications. "The second level in Tier 2 is the disutility of the care or treatment process in terms of discomfort, retreatment, short-term complications, and errors and their consequences. Tier 3 is the sustainability of health. The first level is recurrences of the original disease or longer-term complications.

"The second level captures new health problems created as a consequence of treatment. When recurrences or new illnesses occur, all outcomes must be remeasured. With some conditions, such as metastatic cancers, providers may have a limited effect on survival or other Tier 1 outcomes, but they can differentiate themselves in Tiers 2 and 3 by making care more timely, reducing discomfort, and minimising recurrence.

"Each medical condition (or population of primary care patients) will have its own outcome measures. Measurement efforts should begin with at least one outcome dimension at each tier, and ideally one at each level. As experience and available data infrastructure grow, the number of dimensions (and measures) can be expanded. Improving one outcome dimension can benefit others. For example, more timely treatment can improve recovery.



Breast Cancer	Dimensions	Primary Acute Knee Osteoarthritis Requiring Replacement
Survival rate (1-yr, 3-yr, 5-yr, longer)	Survival	Mortality rate (inpatient)
Remission Functional status Breast preservation Breast-conservation-surgery outcomes	Degree of health or recovery	Functional level achieved Pain level achieved Extent of return to physical activities Ability to return to work
Time to remission Time to achievement of functional and cosmetic status	Time to recovery and time to return to normal activities	Time to treatment Time to return to physical activities Time to return to work
Nosocomial infection Nausea or vomiting Febrile neutropenia Limitation of motion Breast reconstruction discomfort or complications Depression	Disutility of care or treatment process (e.g., diagnostic errors, ineffective care, treatment-related discomfort, complications, adverse effects)	Pain Length of hospital stay Infection Pulmonary embolism Deep-vein thrombosis Myocardial infarction Immediate revision Delirium
Cancer recurrence Consequences of recurrence Sustainability of functional status	Sustainability of health or recovery and nature of recurrences	Maintained functional level Ability to live independently Need for revision or reoperation
Incidence of second primary cancers Brachial plexopathy Premature osteoporosis	Long-term consequences of therapy (e.g., care-induced illnesses)	Loss of mobility due to inadequate rehabilitation Risk of complex fracture Susceptibility to infection Stiff knee due to unrecognized complication Regional pain syndrome

"However, measurement can also make explicit the trade-offs among outcome dimensions. For example, achieving more complete recovery may require more arduous treatment or confer a higher risk of complications. Mapping these trade-offs, and seeking ways to reduce them, is an essential part of the care-innovation process.

(See table on previous page) Illustrates possible outcome dimensions for breast cancer and acute knee osteoarthritis requiring knee replacement. Most current measurement efforts fail to capture such comprehensive sets of outcomes, which are needed to fully describe patients' results. No organisation I know of systematically measures the entire outcome hierarchy for the medical conditions for which it provides services, though some are making good progress. (Further details, including risk adjustment, are addressed in a framework paper, 'Measuring Health Outcomes', in Supplementary Appendix 2, available at NEJM.org).

"The most important users of outcome measurement are providers, for whom comprehensive measurement can lead to substantial improvement. Outcomes need not be reported publicly to benefit patients and providers, and public reporting must be phased in carefully enough to win providers' confidence. Progression to public reporting, however, will accelerate innovation by motivating providers to improve relative to their peers and permitting all stakeholders to benefit fully from outcome information. Current cost-measurement approaches have also obscured value in healthcare and led to cost-containment efforts that are incremental, ineffective, and sometimes even counterproductive."[69]

A focus on patient-value, however, will fail unless it is part of a coherent and co-ordinated programme of change. If it becomes the latest fad or gimmick, it will wither on the vine. Specifically, it needs to be an integral part of the engineering that is the integrated care systems and of the 'natural' healthcare economies (described in more detail later).

A key role of corporate NHS, currently NHSE/I and Department of Health and Social Care, is to work with providers to support them in putting patient-value at the core of the system they engineer. It will take time, and would be well supported if the think tanks and foundations turned their attention away from policy prescriptions and towards this key objective. The concept of patient value is fundamental to instituting a commissioning system that, increasingly, makes sure that British patients are receiving quality healthcare, and that British taxpayers are getting value for money.

Aligning incentives: bundled payments

SECTION 7

Payment by results (PbR) is the predominant payment system in the acute sector of the NHS in the UK. It was introduced in 2003/4 and is a case-based payment system with notional and nationally set prices for units of care that apply across providers. It was an important first step in getting more rigour into the NHS costing system, and encouraging efficiency. Yet just as the health and care system is stuck in 1948, so the tariff system is stuck in 2003.

In contrast, the predominant payment systems in community and mental health services are block contracts whereby a single chunk of money is allocated to a system. They are also becoming more common in acute trusts, sometimes replacing PbR. This trend has been accelerated as a result of the Covid pandemic of 2020 when the overriding objective was to keep the NHS running without regard to whether or not the money was well spent.

Block contracts are more straightforward than PbR, resulting in lower transaction costs. They make expenditure predictable and budgets easier to control. But this can be at the expense of the efficiency of the service and mean a lack of transparency. They also incentivise inappropriate care settings, with providers potentially avoiding more complex patients.

At the time of writing (2021) there is a move towards suspending spending systems that reward activity and relying on block contracts. These block contracts are, encouragingly, allocated at the system level which will allow trade-offs to be made between, for instance, lower cost out-of-hospital care and high cost in-hospital care (obviously for lower acuity procedures). Even so, this lack of incentives for rewarding efficiency and effectiveness – in terms of promoting patient value – is worrying. These ICS block contracts also encapsulate the dilemma that the Treasury has in wanting to promote 'good' behaviour by penalising 'bad' behaviour.

> *"New financial allocations have been issued to local leaders as part of a historic shift away from market principles and towards system-level working in the NHS. NHS England issued financial allocations to local systems covering the second half of 2020-21… allocations will be subject to adjustments depending on the extent to which each system is able to restore its elective activity. There will be incentive payments for exceeding expected activity levels and financial penalties for falling short."*[70]

These penalties are counter-productive. At King's, a new team was brought in to turn around the performance of the hospital group in 2018, but the task was made harder by the penalties imposed by its distress, such as higher interest payments on the debt extended to cover the losses and penalties for operational performance such as missed waiting-list targets. A market system, such as bundled payments, would involve penalties also but subventions could be applied to support turnaround efforts like those required at King's.

General practice is based on a capitated payment system, with risk-adjusted per-patient payments based on the GP's 'list'.

These three systems co-exist haphazardly and there is little logic to how they are applied, or even how they are calculated. In the PbR system, for instance, a hospital like King's can have very different remuneration rates for the same procedure compared to St Thomas' Hospital, just a few miles up the road, depending on how well or how badly they negotiated with the local Clinical Commissioning Group (CCG). This is clearly a nonsense. Similarly, there is no transparent logic to the allocation of monies based on supposedly risk-adjusted capitated budgets.

In short, the NHS payments system is another 'dog's dinner' and does not serve the requirements of the modern UK population. Indeed the PbR system is counter-productive in that it incentivises hospitals to 'suck' activity into the hospital so that they can make more money, and this at a time when all endeavours are focused on trying to keep people out of hospital.

> *"The current combination of a case-based system for most acute care and block budgets in out-of-hospital services has provided a balance of incentives that are counter to the national ambition to provide more care out of hospitals and to treat mental and physical health services with parity. Equally they do not incentivise prevention or early intervention.'*[71]

Although Payment by Results implies that providers are remunerated based on 'results', this is not the case – instead it is a pure fee-for-service system. It was better than nothing, 20 years ago, but it has not progressed to a proper incentivisation for producing quality patient outcomes. Michael Porter has made a strong case for 'bundled payments' based on patient value (that is, outcomes per unit of cost).

> *"Today, healthcare organisations measure and accumulate costs around departments, physician specialties, discrete service areas, and line items such as drugs and supplies — a reflection of the organisation and financing of care. Costs, like outcomes, should instead be measured around the patient. Measuring the total costs over a patient's entire care cycle and weighing them against outcomes will enable truly structural cost reduction, through steps such as reallocation of spending among types of services, elimination of non–value-adding services, better use of capacity, shortening of cycle time, provision of services in the appropriate settings, and so on.*
>
> *"Much of the total cost of caring for a patient involves shared resources, such as physicians, staff, facilities, and equipment. To measure true costs, shared resource costs must be attributed to individual patients on the basis of actual resource use for their care, not averages. The large cost differences among medical conditions, and among patients with the same medical condition, reveal additional opportunities for cost reduction. (Further aspects of cost measurement and reduction are discussed in the framework paper 'Value in Healthcare.')*
>
> *"The failure to prioritise value improvement in healthcare delivery and to measure value has slowed innovation, led to ill-advised cost containment, and encouraged micromanagement of physicians' practices, which imposes substantial costs of its own. Measuring value will also permit reform of the reimbursement system so that it rewards value by providing bundled payments covering the full care cycle or, for chronic conditions, covering periods of a year or more. Aligning reimbursement with value in this way rewards providers for efficiency in achieving good outcomes while creating accountability for substandard care."*[72]

PbR (which amounts to payment for activity) in the United Kingdom - or fee-for-service, as it is often called elsewhere - does not take account of many of the systems effects. We have pointed to a number of examples of these systems effects – the most central of which is the cost-effectiveness and life-enhancing benefits of keeping people out-of-hospital as much as possible.

The UK needs to reform the remuneration system along the lines of 'bundled payments' based on patient value:

> *"The payment approach best aligned with value is a bundled payment that covers the full care cycle for acute medical conditions, the overall care for chronic conditions for a defined period (usually a year), or primary and preventive care for a defined patient population (healthy children, for instance). Well-designed bundled payments directly encourage teamwork and high-value care. Payment is tied to overall care for a patient with a particular medical condition, aligning payment with what the team can control. Providers benefit from improving efficiency while maintaining or improving outcomes.*
>
> *"Sound bundled payment models should include: severity adjustments or eligibility only for qualifying patients; care guarantees that hold the provider responsible for avoidable complications, such as infections after surgery; stop-loss provisions that mitigate the risk of unusually high-cost events; and mandatory outcomes reporting.*
>
> *"Governments, insurers, and health systems in multiple countries are moving to adopt bundled payment approaches. For example, the Stockholm County Council initiated such a programme in 2009 for all total hip and knee replacements for relatively healthy patients. The result was lower costs, higher patient satisfaction, and improvement in some outcomes.*
>
> *"In Germany, bundled payments for hospital in-patient care—combining all physician fees and other costs, unlike payment models in the US—have helped keep the average payment for a hospitalisation below $5,000 (compared with more than $19,000 in the US, even though hospital stays are, on average, 50 per cent longer in Germany). Among the features of the German system are care guarantees under which the hospital bears responsibility for the cost of rehospitalisation related to the original care.*
>
> *"In the US, bundled payments have become the norm for organ transplant care. Here, mandatory outcomes reporting has combined with bundles to reinforce team care, speed diffusion of innovation, and rapidly improve outcomes. Providers that adopted bundle approaches early benefitted. UCLA's kidney transplant programme, for example, has grown dramatically since pioneering a bundled price arrangement with Kaiser Permanente, in 1986, and offering the payment approach to all its payers shortly thereafter. Its outcomes are among the best nationally, and UCLA's market share in organ transplantation has expanded substantially."*[73]

In order for the bundled payments system to be effective, it is vital that patients can choose, based on patient outcomes, which provider they want to be treated by. Competition has become a bogey word for the left-wing defenders of the government's monopoly of healthcare. This is a mistake. Competition which allows patients to choose the best provider is the only way that best practice will spread throughout the system. Guided choice is the process whereby UK citizens can choose to go to the 'best provider' of health and social care outcomes rather than the 'only provider'. The combination of well-publicised outcome data and the exercise of choice is a potent driver of change.

To use an international example, there are 139 transplant facilities in the United States. The best of these transplant facilities is excellent – and has a 100 per cent one-year, risk-adjusted survival rate.[74] The worst facility has a one per cent one-year, risk-adjusted survival rate.[75] It is clear what a citizen armed with information and 'a vote' will do in these circumstances, and how that behaviour, guided choice, will take menacingly poor practice out of operation, and animate the spread of best practice.

Personal budgets, whereby people are given the money to which they are entitled and are free to spend it on the best provider, are now widely used, and are widely successful, in social care. In the NHS currently, flows of money are to the same institutions, mostly hospitals and GP practices, as they were in 1948. There will be very limited reorientation of those services, then, until the 'money follows the patient'. There is no incentive for anyone to do anything differently than they currently do and have been doing since 1948. An independent evaluation of a three-year pilot of personal budgets in health showed significant improvements in wellbeing.

> *"The main benefit-related implications of personal health budgets were that the use of personal health budgets was associated with a significant improvement in the care-related quality of life and psychological wellbeing of patients."*[76]

Capitated budgets for 'transactional' primary care and population health

SECTION 8

Fee-for-service remuneration is, then, an inappropriate way of paying and incentivising clinicians because it encourages activity rather than quality interventions. In the worst of cases, it is indifferent to whether or not a procedure is performed well – with improved long-term health for the patient – and it encourages the wasteful application of procedures that may not be necessary and may even be harmful.

Bundled payments are appropriate incentives to move care away from this injudicious emphasis on raw activity and focus clinicians and managers, instead, on quality outcomes and fewer unnecessary procedures. They work best for well-defined conditions, but they don't work in two important domains – ones in which a capitated system is best (that is, where money is allocated based on the number of individuals in a given population).

The first of these domains in 'transactional' primary care. Primary care can be divided into two types: continuous management of patients with known chronic health conditions (such as cancer or frailty or mental illness) who should be managed in 'high-risk-care-management' programmes (as described later in the book), and 'transactional' primary care which is where people go to a GP practice with minor illnesses and injuries, and require either immediate treatment or a diagnosis for referral to a specialist.

This latter function is best remunerated by a capitated system. Indeed, in the devolved world of health and social care, money from the hypothecated fund should be allocated on a per-head-of-population basis, adjusted to produce higher payments for a higher incidence of ill health, which mostly correlates with social deprivation.

The second domain is population health, which, in turn, has two subdomains. The first is to promote healthy living – reducing obesity, helping people to stop drinking too much alcohol and smoking too many cigarettes, and so on – and the second is to respond to the increasing incidence of infectious disease, most recently Covid-19. Clearly, the allocation of money based on risk-adjusted capitation is appropriate in these circumstances. Capitation also puts the onus of responsibility on the service providers to find the most efficient way of delivering their services, especially when different regions are benchmarked against each other in order to promote best practice.

> *"Under this approach, providers receive a fixed per person (or 'capitated') payment that covers all healthcare services [excluding defined health conditions that qualify for bundled payments] over a defined time period, adjusted for each patient's expected needs, and are also held accountable for high-quality outcomes.*

It's the only payment system that fully aligns providers' financial incentives with the goal of eliminating all major categories of waste….It also ensures that providers receive enough of the savings that they can afford to fund the changes needed to bring down costs." [77]

The author of this quote, James Poulsen, goes on to identify the major areas of clinical waste, and describes how a capitation approach encourages efficiency.

"Three Kinds of Waste
In healthcare, there are three basic categories of waste: production-level waste, case-level waste, and population-level waste.

(1) *The first category involves inefficiencies in producing "units of care"—drugs, lab tests, x-rays, hours of nursing support, and any other item consumed in patient treatment. It accounts for about 5 per cent of total healthcare waste. Eliminating it requires things like negotiating down prices for supplies, lowering handling and storage costs, streamlining processes for producing lab tests or x-rays, and reducing losses due to damage, misplacement, or expiration.*

"(2) *The second category, which comprises about half of all waste in care delivery, is unnecessary or suboptimal use of care during a hospital stay, an out-patient visit, or some other treatment episode, or 'case'. Examples include redundant x-rays ordered when the original images couldn't be found, duplicate lab tests ordered because a physician didn't know that someone else had already done the tests, and medications prescribed to treat avoidable complications.*

(3) *The third category, which accounts for about 45 per cent of total waste, involves cases within a patient population that are unnecessary or preventable. It includes end-of-life intensive care given to people who've expressly asked not to receive it; elective surgical procedures that, with better information, patients would have forgone, and visits to specialists or hospitalisations that could have been avoided through timely, cheaper out-patient care. Waste here obviously feeds waste at the other two levels, since each unnecessary or avoidable case consumes care…*[78]

"Capitation. *In contrast to fee-for-service and per case payment methods, per person payment methods can encourage waste reduction at all three levels and give patients and physicians the freedom to make the treatment decisions they think are best. But to function well, such systems must adjust payments for risk, which is easier to do at the level of a population than of an individual patient. (A typical population is a business's employees and their dependents.) There have to be quality measures to ensure that providers don't withhold necessary care. And finally, savings from waste reduction must go back to care delivery groups to keep them financially viable."*[79]

James Poulsen acknowledges that a type of capitation introduced in the USA 30 odd years ago gave the method a bad name, but the type he advocates above answers these concerns.

"The last widespread use of capitation in the USA didn't meet the last two criteria. In the late 1980s and into the 1990s, both government and private payers looked for ways to reduce healthcare inflation. The primary mechanism they turned to was health maintenance organisations (HMOs), which were usually owned and managed by insurance companies. While employers generally paid HMOs on a capitated basis, most HMOs continued to pay care delivery groups using fee-for-service and per case methods.

"HMOs employed a series of tools to limit healthcare consumption. For example, many mandated that primary care physicians act as gatekeepers. Care providers had to get permission from nurses and doctors based at insurance companies to make referrals to specialists and order surgical procedures, imaging, and hospitalizations. In some instances, the HMOs passed along a portion of the capitated insurance payment to the provider groups to cover all necessary services, which transferred the financial risk to them.

"HMOs succeeded in curbing expenditures. Healthcare costs as a proportion of GDP remained flat from 1993 through 2000—even though one reason was that the GDP was growing rapidly, hiding the price increases that did occur. However, the insurance companies weren't in the best position to make healthcare decisions, because they were removed from patient-clinician interactions. The HMOs' bureaucratic controls imposed hassles and treatment delays. Some physician groups, unable to manage care costs after accepting capitated payments, failed financially. Patients and physicians rebelled, arguing that the financial incentives built into capitated payments led HMOs to ration care and accusing insurance companies of putting profits before patients' health. The resulting political backlash ended insurance-company based cost control as a national movement.

A better capitation model

"A population-based payment system (PBP) would differ from the capitated method most insurance companies use in significant ways. With PBP, care provider organisations would receive a risk-adjusted monthly payment that covers all necessary health services for each person. Eliminating the gatekeeper and the third-party authorisation for care that made HMOs so unpopular, PBP would put responsibility for considering the cost of treatment options in the hands of physicians as they consult with patients.

"Finally, unlike HMOs of the 1990s, PBP would include quality measures and standards. A care delivery group would pay independent physicians using existing fee-for-service mechanisms, but would adjust payments quarterly according to the levels of clinical quality and patient satisfaction achieved - as well as total cost to care for the covered population. The advantage of this approach is that it would build on a system physicians already understand while rewarding them for improvements in quality and cost, which would compensate them for income lost if total care volumes decline as a result of waste elimination." [80]

Why does the current NHS incentive and payment system need to change?

SECTION 9

So, what is the current UK system, and why does it need to change? It's one that is partly a product of history and partly a product of more recent policy changes. It comprises:

- *A service that is free-at-the point-of-care.*
- *It is tax-funded and is paid out of the 'pot' of money that the government takes from citizens. Typically, healthcare accounts for seven per cent of GDP and social care for another two per cent (data).*
- *The payment system for providers is a combination of fee-for-service (payment by results or PbR) for in-hospital work. Out of hospital, there is a capitation system – GPs are paid by the 'head' which is the number of people in a population that they cover.*
- *Some specialities are paid for by 'central commissioning' which pays funds directly to providers. This occurs, for instance, in the case of acute mental health services.*
- *Local authorities pay for 'elderly care' and lower acuity mental health services, about half of which is funded by central government, through local government.*
- *The system is funded by a 'bucket' – individual costs are not tracked.*

All of these characteristics seem pretty reasonable, but don't actually serve the best interests of the patient. There are a number of flaws. In brief:

- *A service that is 'free' encourages 'bad behaviour', which is wasteful and unfair (wealthier people do better out of the system).*
- *A 'free' service also tends to encourage a less involved stance of people in their self-care.*
- *A tax-funded system produces a 'crowding-out' effect that limits the amount of money that is spent on the service – even whilst individuals would often be prepared to spend more.*
- *The fee-for-service model has a number of problems. In the first place it encourages a disjointed, fragmented service – providers do their job, but it is no-one's job to join it all up and take responsibility for integrated care.*

- *The second problem of a fee-for-service is that system costs cannot be managed. Preventative care is, inevitably, under-invested. The expensive problem of 'bed-blocking' is another consequence of this system, exacerbated in that particular case by the two separate funding systems (NHS and local authorities).*

- *A third problem is that a fee-for-service is a one-off event, and whilst providers try their hardest, they are not encouraged or supported in producing good outcomes over full cycles of care.*

So, if you were starting from scratch today, and taking into account the various objectives, such as encouraging 'good behaviour' in service consumption, what would you design? The answer outlined so far in this book is a new funding system – a hypothecated tax supported by new funding streams to prevent abuse of the system and to make wealthier people pay more – and a new system of payment/incentives comprising a judicious combination of bundled payments and capitated payments. The final part of the design is to define an organisational structure that will both create clear accountability and do that in a way that puts the patient at the centre of the system. This organisational structure is the topic of Book 12.

Investing in health and care is good for everyone

SECTION 10

Investing more in health and care is usually seen as a zero-sum game – it's a cost that comes from spending less on other things or are damaging people's personal finances by taxing them more. This view is, however, beginning to change. In the first place there is a growing recognition that the 3 million workforce in health and care is an important lever for increasing 'aggregate demand' in the Keynesian sense. This view of the health and care sector as a vibrant part of a nation's infrastructure is taking hold in some parts of the world, most recently in the USA.

"Does caring for humans count as infrastructure? It's a big debate in the USA right now, in the wake of President Joe Biden's $2.3tn American Jobs plan, which aims to repair the country's crumbling roads and bridges and bolster its supply chains, but also to improve the health and childcare systems… Under Biden's plan, $400bn would be spent on home healthcare, mostly for the elderly. Another $25bn would go to support childcare…. Over the next decade, home health and personal care is predicted to grow faster than other job categories, according to the labour department… The McKinsey Global Institute estimates that better health outcomes could add $12tn to global GDP in 2040 — much of that from improving the productivity of existing workers who suffer from health issues or have care responsibilities.

"Women in particular have much to gain from greater investment in the 'care economy'. As Jay Powell, the US Federal Reserve chair, said recently, the US 'used to lead the world in female labour force participation, a quarter-century ago, and we no longer do. It may just be that [our childcare] policies have put us behind'. Women also took an extra hit during lockdown. They generally did a disproportionate share of the extra childcare and household… Done properly, investing more in the infrastructure of care could fuel innovation….

"The areas that bounce back better tend to have good universities or healthcare complexes that can function as job engines," says Hanson. It may seem fanciful to imagine that a nursing home or child care centre could ever be an innovation hub in the same way as a big factory or R&D complex. Yet some already are.

"Consider places like the Cleveland Clinic, a non-profit medical centre that integrates clinical and hospital care with research and education. The subject of a Harvard Business School case study, it has become a national and international job creator but also a hub of cutting edge innovation in areas like drug and device development, and medical procedures."

This is in large part by leveraging big data, digital platforms and robotics, but also by working in a cross-disciplinary way inside and outside the clinic. At the very least, investing more in health and education would boost the kind of social capital that characterises successful communities. We need much more of that right now, everywhere. Only 1.5 per cent of the World Bank's concessional grants are for health, and only 1.9 per cent are for education. In rich and poor countries alike, investment still focuses primarily on physical capital. It's time to recognise that, perhaps more than any other form, human capital is the infrastructure of the 21st century."[81]

Secondly, in many parts of the country the health and care workforce is the largest contributor to local economies. We need to increasingly recognise the importance of paying this sector appropriately and looking after them well – both in terms of their mental and physical (for instance, helping health and care workers avoid obesity) health.

"Social determinants are a far larger factor in someone's health *than the quality and amount of healthcare they receive. An individual's employment status, wellbeing, living conditions and income all have a greater impact on their health than the accessibility and quality of care provided by health services. As the biggest employer in England and a significant economic force in local communities, the NHS has a unique opportunity to use its resources to influence the wellbeing of the population it serves and reduce the health inequalities that exist in England."*[82]

We should start viewing health and care as an attractive investment opportunity rather than a cost that should be pared to the bone.

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For modelling the case of many outputs and many inputs, researchers often use the so-called Shephard's distance functions or, alternatively, directional distance functions, which are generalisations of the simple production function in economics.

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Professor Smith was the principal of the Faculty of Medicine at Imperial College London from 2004 and has served as chief executive of Imperial College Healthcare NHS Trust since its inception, the largest such trust in the United Kingdom, with an annual turnover of £1 billion.

A gynaecologist by training, Professor Smith is active in research and has published over 230 papers on reproductive medicine and cancer. He was awarded his Doctor of Science in 2001 at Cambridge for work on the complex gene pathways that regulate the growth of blood vessels in reproductive tissue. In addition to his academic and clinical work, he is a Fellow of the Academy of Medical Sciences, the Royal College of Obstetricians and Gynaecologists, the New York Academy of Sciences, and the Royal Society of Arts.

Professor Smith led the creation of Imperial College Healthcare NHS Trust, the United Kingdom's first Academic Health Science Centre (AHSC). The trust was launched in October 2007 by the merger of Hammersmith Hospitals NHS Trust with St Mary's NHS Trust, and by its integration with Imperial College, London.

His pioneering role in establishing the AHSC was recognised in the NHS Leadership Awards, where he was named Innovator of the Year in 2009. The *Health Service Journal* listed Professor Smith in its 2009 rankings of the top 30 most powerful people in NHS management policy and practice in England, where he was the only NHS chief executive to be included. His contribution to this book-series is solely in a personal capacity.

VOLUME FOUR

PROFESSOR STEPHEN K SMITH

RADIX

THE BEST NHS?