Health Foundation evidence to the House of Lords Committee on the long-term sustainability of the NHS

1.0 Executive summary

Overview

1.1 There is overwhelming and consistent support among the British public for the principles of the National Health Service.[1] But the NHS, in common with health systems internationally, faces serious challenges. Population needs are changing profoundly as more people live longer and with a rising number of long-term conditions, expectations and technological advances are expanding health care interventions and, in the wake of the great recession of 2008, funding growth has slowed substantially.

1.2 These challenges are significant. The NHS is seeking to address them over the coming few years through the vision set out in the NHS five year forward view (Forward View), published in October 2014.[2] The Forward View was widely welcomed and it was anticipated that full delivery of that plan would place the NHS in a much better position to face the future. Delivering the vision and funding set out in the Forward View is a necessary step towards a sustainable health care system but not a sufficient one. Beyond the Forward View, action will be needed to secure a high quality, sustainable health and care system for the 2020s.

[1] Gershlick B, Charlesworth A, Taylor E. Public attitudes to the NHS: An analysis of responses to questions in the British Social Attitudes Survey. Health Foundation, 2015.

[2] NHS England. NHS five year forward view. NHS England, 2014.

1.3 A longer-term and more strategic approach is required across several areas to ensure sustainability. These areas include: public health and prevention (as well as action across the wider determinants of health), stable and sufficient funding for health and social care, transformation and improvement of health and social care, and the development of the NHS workforce.

Funding, resources and productivity

1.4 The current financial pressure on the NHS is unprecedented. Funding decisions made in the 2015 Comprehensive Spending Review (CSR) mean that the period from 2010/11 to 2020/21 will be the most austere decade in the NHS's history.[3] Funding for the UK NHS as a share of national income will fall from an historic peak of 7.6% of GDP in 2009/10, to 7.4% in 2015/16, and an estimated 6.9% by 2019/20.[4]

1.5 After accounting for inflation and population growth, spend per head for the English NHS will be similar in 2020/21 to what it was in 2010/11, rising by an average of 0.2% a year in real terms.[5] Pressures on NHS services other than population growth, such as an ageing demographic and rising costs, must be met through improved efficiency. So the English NHS is aiming to achieve efficiency growth of 2-3% a year to unlock £22bn of savings by 2020/21. One-third of these savings are expected to come from pay restraint.[6]

1.6 For the last two decades, the rise in health care spending in every country covered by the Organisation for Economic Co-operation and Development (OECD) has exceeded GDP growth, including the UK. Meeting financial pressures in the long-term will require sustained growth in efficiency, and additional funding at least in line with GDP growth. Neither of these are unrealistic assumptions based on historic trends. However, in the short term, funding for the NHS is likely to fall as a share of GDP up to 2019/20.

1.7 Recent projections by the Office for Budget Responsibility (OBR) estimate that UK NHS funding would need to rise to between 8.3% and 8.9% of GDP by 2030/31 to meet future costs, depending on the rate of growth in productivity as non-demographic pressures rise. Based on current prices this is worth an extra £86bn – £102bn respectively.[7] This is equivalent to an annual increase of 4.4% to 5.1% a year (or 3.8% to 4.5% per head) in real terms after 2020/21 – significantly above current planned spending increases.

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[3] Health Foundation, The King's Fund and the Nuffield Trust. Impact of the 2015 Spending Review on health and social care. Health Foundation, The King's Fund and the Nuffield Trust, 2016.

[4] Licchetta M, Stelmach M. Fiscal sustainability analytical paper: fiscal sustainability and public spending on health. Office of Budget Responsibility, 2016.

[5] Health Foundation. NHS finances outside the EU. Health Foundation, 2016.

[6] NHS England NHS Five Year Forward View: Recap briefing for the Health Select Committee on technical modelling and scenarios. NHS England, 2016.

[7] Licchetta M, Stelmach M. Fiscal sustainability analytical paper: fiscal sustainability and public spending on health. Office of Budget Responsibility, 2016.

1.8 Projections of funding growth are largely affected by assumptions about the scale of wider cost pressures and the rate of productivity growth. If health service productivity grows in line with the trend rate of 2.2% productivity growth across the economy as a whole, and wider cost pressures are avoided, the OBR projects that funding could be as low as 7.4% of GDP in 2030/31.

1.9 The OBR's method, which is consistent with most national long-term projection models, assumes that as the UK national income (GDP) rises, society will prioritise improvements in health care in line with that growing wealth, even if this exceeds changing population needs. However this is not the case for the current decade, in which funding will fall as a share of GDP from 7.6% in 2009/10 to 6.9% in 2020/21.

1.10 An alternative approach, used by the Health Foundation, is to project direct demand pressures for different services separately[8], at the person level where possible, taking into account: demographic change, increasing care for people with long-term conditions and rising costs (predominantly increases in pay). This provides an estimate of the minimum level of spending required to maintain the range and quality of current services, without allowing for increasing expectations as the country gets richer, or major new advancements in technology.

1.11 Our projections are also sensitive to the assumed productivity growth achieved by the NHS. With no growth in productivity, we estimate that UK NHS spending would need to rise to at least 8.1% of GDP in 2030/31[9] to maintain the current range and quality of services. This would be an extra £80bn above 2015/16 spend (2016/17 prices). If productivity rises by 1% a year, close to the long-run trend for the NHS[10] then UK spending would reach 7.4% of GDP by 2030/31, an extra £61bn. Maintaining the higher rate of productivity growth achieved more recently (1.5% a year)[11] would see spending rise to 7.1% of GDP, an extra £53bn on current spend.

1.12 The OBR and our model both show that spending will need to rise as a share of GDP after 2020/21, from 6.9% to between 7.1% and 8.9% by 2030/31. The range depends on assumptions for productivity growth, rising expectations and additional non-demographic pressures, predominantly from increasing relative health care costs and advances in technological innovation.

1.13 The OECD's research shows that all developed nations face similar pressures and, in fact, the UK is in a better position than many other countries. Figure 1 compares likely health spending increases for countries across the OECD on two scenarios. The cost-pressure scenario projects the percentage increases in

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[8] Services include inpatient, outpatient, A&E, GP attendances, mental health care, community care and prescribing.

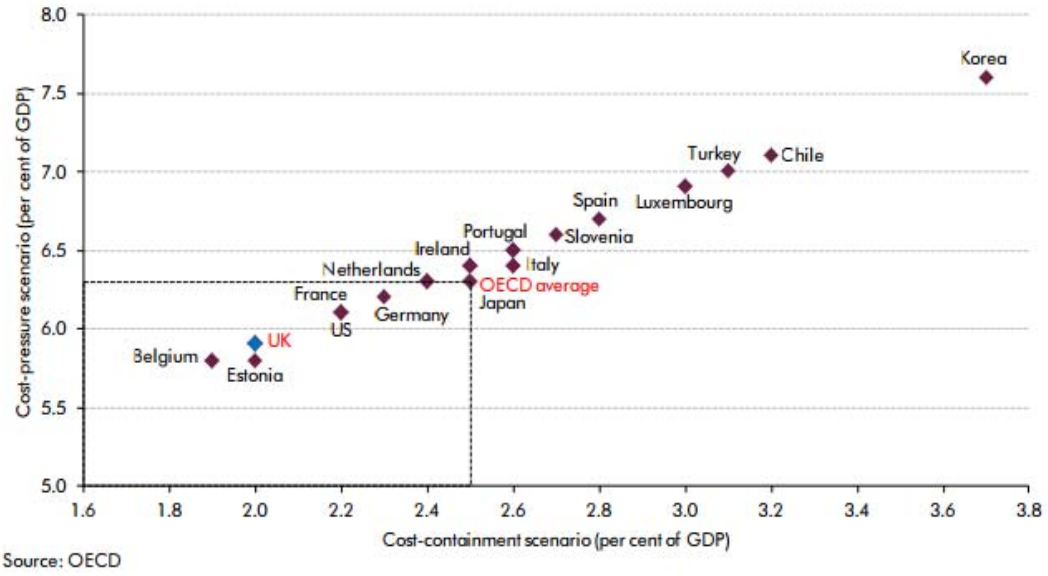
[9] This assumes that pay rises in line with current assumptions – an average of 0.4% a year in real terms to 2020/21, and in line with the trend rate of 2% a year between 2020/21 and 2030/31

[10] Public Service Productivity Estimates: Healthcare 2013 (10 December 2015). Office of National Statistics (ONS)

[11] Bojke C, Castelli A, Grašic K, Howdon D, Street A. Productivity of the English NHS: 2013/14 Update. Centre for Health Economics, University of York, 2016.

GDP that would be required for health if no action is taken to address rising cost pressures in these countries, whereas the cost-containment scenario assumes some policy action to reduce these pressures. According to the OECD, public health spending in the UK and the US is projected to rise at a relatively similar rate, with the cost-pressure (high growth in spending) and cost-containment (low growth) scenarios coming in at below the OECD average for both countries. However, there remain differences between the UK and the US in the current level of spending as well as the funding mix. For example, total health spending in the US was nearly twice as large as a share of GDP in 2015 compared to the UK, whereas private spending was four times larger. This means that of the two systems, the UK is in a better position to increase the percentage of GDP it spends on health as it is starting from a lower base, with less spent on public health services and significantly less spent on private health care.

Figure 1: Change in age-related spending in the OECD (2010-2060)



Source: OECD

1.14 The UK is neither a very low or very high spender on health according to OECD definitions. Using the internationally consistent measure of health spending for the UK as a whole (public and private), the UK devotes 9.9% of GDP to health. This is slightly above the OECD average of 9.0% and in line with the EU14 average of 9.8%. There is no evidence that changing the funding model for the NHS would reduce the cost pressures from health care which we need to address as a society.

1.15 In previous decades health funding has grown rapidly as governments have shifted public spending from areas considered to be lower priority (including defence and housing). As a result health spending is now £1 in every £5 of public spending and it is difficult to see how further increases above GDP growth could be absorbed by cuts to other services. It is therefore important that there is an inclusive and honest debate with the public about the cost of health care and the choice we face as a society. Namely how, within the broad funding model, we pay for our health and care as our population grows and ages, and the changes that need to be made to services to increase productivity and

reduce avoidable demand. However health care is funded, and at whatever level, part of the problem which the NHS has faced for many years is uneven growth in funding – where there have been short-term funding cycles of boom and bust. This makes planning to meet changing needs very difficult and almost certainly undermines the drive to sustain improved efficiency. Delivering a more consistent rate of increase and providing clarity over the path of funding for longer time periods should be priorities.

Social care

1.16 The Committee is focused on the sustainability of the NHS. As the Forward View made clear, a high quality service is one in which patients' needs are addressed holistically. A sustainable health system needs a sustainable social care system. It is clear that the social care system is facing pressures which may require radical reform of its funding model. Reductions in spending since 2010 have led to fewer people receiving the care they need, with the gap increasing by more in deprived areas of society.[12]

1.17 In the CSR, the government announced additional funding for social care through the Better Care Fund, reforms to local government finance and a new social care precept for council tax. Together these measures are likely to mean real-terms increases during this parliament. However, this funding is unlikely to keep up with demand and cost pressures, especially the impact of the new living wage. The Care Act 2014 sought to address one of the key weaknesses in the current system – the failure to protect people from catastrophic costs, but implementation has been delayed to at least 2020 because additional funding required to implement this policy has been difficult to find. As levels of unmet need rise and social care providers withdraw beds and services from the market, the NHS is likely to find it increasingly hard to admit, treat and discharge patients to the standard they've been used to. There is an urgent need to look again at social care funding – the current system no longer fulfils the principles of access, quality and solidarity in funding which the UK signed up to in health care, and which are also relevant to social care.

Workforce

1.18 Problems with the NHS workforce have been repeatedly highlighted in recent years. The UK NHS has staffing shortages and high vacancy rates in key professions. In addition, mounting agency costs are a large contributor to unprecedented budget deficits in the NHS provider sector. NHS workforce policy is fragmented[13] and driven by short-termism. Mismatches between funding, staffing levels and policy aspirations – including repeated reorganisations –have led to inadequate planning and a 'boom and bust' approach to NHS front-line staffing.[14] A long-term vision for the NHS workforce is needed, backed up by

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[12] Burchardt,T.,Obolenskaya, P. and Vizard, P. (2015) The Coalition's Record on Adult Social Care: Policy, Spending and Outcomes 2010-2015.

[13] Health Foundation *Fit for purpose: workforce policy in the English NHS*. Health Foundation, 2016

[14] Buchan J, Seccombe I, Charlesworth A. Staffing matters; funding counts. Health Foundation, 2016.

realistic and coherent planning of staff numbers. The vision should include not only the numbers of staff needed (training and recruitment) but also retention and development issues such as: working conditions, workplace culture, pay as well as role development and further training. Continued pay restraint, ongoing workforce shortages and the marked overreliance on temporary staff and international recruitment is not sustainable and is largely avoidable. Given the time it takes to train NHS professional staff, the health system needs to have a far more effective approach: an overarching workforce strategy which aligns all the key elements of workforce policy (flow of new staff, pay, retention, skill mix) with the needs of the service. The Health Service Journal recently reported that the Department of Health has begun work on such a strategy.[15]

Models of service delivery and integration

1.19 A sustainable NHS is one that continually learns, improves and adapts to ensure the delivery of high-quality health care for the population as a whole. Many changes needed to improve quality and productivity can only be seen at the front line, and must be discovered and addressed at this level. Policymakers and system leaders can help achieve this sustainability by not only securing the necessary resources, but supporting providers to develop the capacity, capability and culture needed to improve quality themselves, as well as giving them the time and headspace to do it. Again an effective workforce strategy would help develop staff to 'discover' improvement and innovations faster and design and implement changes better.

Digitisation of services, Big Data and informatics

1.20 Big data and digital technologies have the potential to significantly improve health and health care, but they are not a silver bullet to achieve an increasingly productive and higher quality NHS. Staff and patient engagement is fundamental to the success of new technologies and innovations, irrespective of how well these have worked in their original context. This takes time but is important if these innovations are to be successful.

Prevention

1.21 Health should be treated as a long-term social and economic asset that drives prosperity. The government should protect traditional public health spending and explore further ways to raise revenue for prevention, as well as safeguard the nation's health through legislation. More widely, the government should acknowledge that health is determined by much more than health care. It should take a long-term approach, ensuring a focus on health in all policy areas to protect and improve the population's health.

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[15] Restell J. Exactly what we need in a workforce strategy. *Health Service Journal*, 14 September 2016. www.hsj.co.uk/topics/workforce/exactly-what-we-need-in-a-workforce-strategy/7010589.article

2.0 About the Health Foundation

2.1 The Health Foundation is an independent charity committed to bringing about better health and health care for people in the UK.

3.0 Defining sustainability

3.1 Health care is very complex, and the most challenging area in the public sector to contain expenditure. Over the last 20 years, health spending in countries across the OECD, has grown at a faster rate than GDP and most health care spending is publicly funded.[16] The OECD average spending on health has grown from 7.0% to 9.0% of GDP over that period, and has doubled from 4.6% of GDP in 1970.

3.2 Over the next 15 years, the rising demand for, and cost of, health care is likely to see it take an increasing proportion of GDP and government spending in many countries worldwide. Therefore, to be sustainable, health systems need to continue to achieve the best value and adapt to meet the future needs of their populations – without compromising wider public spending.

3.3 In 2006 the Council of the European Union issued a statement on common values and principles for health systems in the European Union (EU). These were: universal coverage, solidarity in financing, equity of access and the provision of high-quality care.[17] Following the great recession in 2008, the challenge facing all health systems in the EU is to ensure financial stability without undermining these core values.

3.4 The challenge for governments and system leaders is to ensure that health and care systems deliver the best value for money, and that any increases in health spending do not undermine the long-term sustainability of public spending. The OECD recommends that countries adopt and strengthen governance frameworks and policies that enable them to define their fiscal sustainability challenges, identify the risks to fiscal sustainability of their health and care system and innovate to ensure greater sustainability.[18] The redistribution of resources is a fundamental aspect of all publicly funded health and care systems – for example from higher to lower rate taxpayers, from the healthiest to those with particular health needs, from those in employment to those not. Where health spending is concerned, the key question for any society is what level of redistribution the public considers to be appropriate.[19]

3.5 The International Monetary Fund has concluded that stabilising public spending in relation to GDP is an important aspect of any plans to reduce high levels of public debt; this includes containing growth in health spending. However, the

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[16] OECD. Fiscal sustainability of health systems: bridging health and finance perspectives. OECD 2015.

[17] Council of the European Union. Council Conclusions on Common values and principles in European Union Health Systems. Official Journal of the European Union, 2006.

[18] OECD. Fiscal sustainability of health systems: bridging health and finance perspectives. OECD 2015.

[19] OECD. Fiscal sustainability of health systems: bridging health and finance perspectives. OECD 2015.

decision to meet rising demand for health and care by reducing other areas of public spending is a political choice, although reforms to improve efficiency can help.[20]

4.0 Resource issues, including funding, productivity, demand management and resource use

What funding model(s) would best ensure financial stability and sustainability without compromising the quality of care?

4.1 There is overwhelming support among the British public for a national health system that is tax-funded, free at the point of use and provides comprehensive care to all citizens.[21] While other models for funding services exist, there is no clear evidence to suggest that changing the model for the NHS would lead to better value. For example, it has been suggested that adopting social health insurance models may lead to higher spending and lower employment without significant improvements in quality.[22] OECD analysis found that,

> *'there is room in all countries surveyed to improve the effectiveness of health care spending; there is no health care system that performs systematically better in delivering cost-effective health care. Big bang reforms are therefore not warranted; increasing the coherence of policy settings, by adopting best policy practices within a similar system and borrowing the most appropriate elements from other systems will likely be more practical and effective to raise health care spending efficiency.'*[23]

4.2 With pressures on health spending rising each year from a growing and ageing population, increasing costs and rising prevalence of certain long-term conditions, the NHS will need more money to meet future demand without reducing quality.[24] But how much money will depend on the efficiency of the system and the value generated in terms of health outcomes – the effectiveness of the system. Ensuring that health policy and practice is well aligned to the goals of improving system efficiency and effectiveness is key to sustainability.

4.3 The OBR is responsible for producing regular projections of the UK's overall fiscal sustainability, including projections of health spending pressures. In the standard projection of their recent update[25] the OBR suggests that NHS spending for the UK would need to grow as a share of GDP from 6.9% of GDP in 2019/20, based on current spending plans, to a minimum of 7.6% of GDP by

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[20] International Monetary Fund. Macro-fiscal implications of health care reform in advanced and emerging economies. International Monetary Fund, 2010.

[21] Gershlick B, Charlesworth A, Taylor E. Public attitudes to the NHS: An analysis of responses to questions in the British Social Attitudes Survey. Health Foundation, 2015.

[22] Wagstaff A. Social health insurance vs tax-financed health systems: evidence from the OECD. World Bank, 2009.

[23] Journard I, Andre C, Nicq C. Health care systems: efficiency and institutions. OECD 2010

[24] Roberts A, Thompson S, Charlesworth A, Gershlick B, Stirling A. Filling the gap: Tax and fiscal options for a sustainable UK health and social care system. Health Foundation, 2015.

[25] Office for Budget Responsibility. Fiscal sustainability analytical paper. September update. Office for Budget Responsibility, 2016

2030/31 to keep pace with demand and cost. This would be an extra £67bn for the UK NHS compared to 2015/16 (2016/17 prices). However, the OBR acknowledges that it is optimistic to expect the NHS's productivity growth to match the 2.2% of growth forecast for the economy as a whole, given recent trends.

4.4 If, instead of assuming NHS productivity rises in line with whole economy productivity, they assume it rises in line with health sector productivity of 1.2% a year, then health spending would need to rise to 8.3% of GDP by 2030/31. This is an extra £86bn compared to 2015/16.

4.5 In another scenario, the OBR models additional non-demographic cost pressures, predominantly from increasing relative health care costs and advances in technological innovation. NHS England estimates that non-demographic pressures rise by around 2.7% a year for primary care and 1.2% for secondary care (cash terms).[26] Adopting these scenarios, the OBR estimates that health spending would need to rise to 8.9% of GDP in 2030/31, £102bn more than 2015/16. However, if there is a form of cost containment over this period[27] the OBR estimates that health spending would rise to 8.8% of GDP in 2030/31, £99bn more than in 2015/16 (Table 1).

4.6 The OBR method, consistent with most national long-term projection models, assumes an income elasticity of 1 for health care. This means that as a country's wealth rises, it will continue to prioritise health care proportionately. Therefore, the assumption is that as national income (GDP) rises, society will prioritise improvements in health care in line with that growing wealth, even if this exceeds changing population needs. However this is not the case for this decade, where funding will fall as a share of GDP from 7.6% in 2009/10 to 6.9% in 2020/21, discussed later.

[26] NHS England. NHS Five Year Forward View: Recap briefing for the Health Select Committee on technical modelling and scenarios. NHS England, 2016

[27] To do this the OBR assume that the additional non-demographic cost pressures converge to 1% a year by 2060/61. This is in line with the approach taken by the US Congressional Budget Office (CBO).

Table 1: Range of projections in UK NHS spending from Health Foundation and OBR.

Source	Assumption	% GDP in 2030/31	Average annual increase, 2020/21 to 2030/31	Average annual increase per head, 2020/21 to 2030/31	Estimated increase funding from 2015/16 (2016/17 prices)
Health Foundation[28]	No productivity	8.1%	4.2%	3.6%	£80bn
	Productivity of 1.0% a year	7.4%	3.3%	2.7%	£61bn
	Productivity of 1.5% a year	7.1%	2.8%	2.2%	£53bn
OBR[29]	OBR Central	7.6%	3.5%	2.9%	£67bn
	OBR Low productivity	8.3%	4.4%	3.8%	£86bn
	OBR Constant other pressures	8.9%	5.1%	4.5%	£102bn
	OBR Declining other pressures	8.8%	5.0%	4.4%	£99bn

4.7 Another option is directly to project demand pressures facing the NHS, using a 'bottom-up' approach. The Health Foundation model separately projects demand pressures for different services,[30] at the person level where possible, due to demography, increasing care for people with long-term conditions and rising costs (predominantly increases in pay). The model provides an estimate of the minimum level of spending required to maintain the range and quality of current services, without allowing for increasing expectations as the country grows richer, or major new advancements in technology.

4.8 With no growth in productivity, we estimate that UK NHS spending would need to rise from 6.9% of GDP in 2015/16, to at least 8.1% in 2030/31[31] to maintain the current range and quality of services. This would be an extra £80bn above 2015/16 spend (2016/17 prices). If productivity rises by 1.0% a year, close to the long-run trend for the NHS,[32] then UK spending would reach 7.4% of GDP by 2030/31, an extra £61bn. Maintaining the higher rate of productivity growth achieved more recently (1.5% a year)[33] would see spending rise to 7.1% of GDP, an extra £53bn on current spend.

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[28] Health Foundation. NHS finances outside the EU. Health Foundation, 2016.

[29] Licchetta M, Stelmach M. Fiscal sustainability analytical paper: fiscal sustainability and public spending on health. Office of Budget Responsibility, 2016.

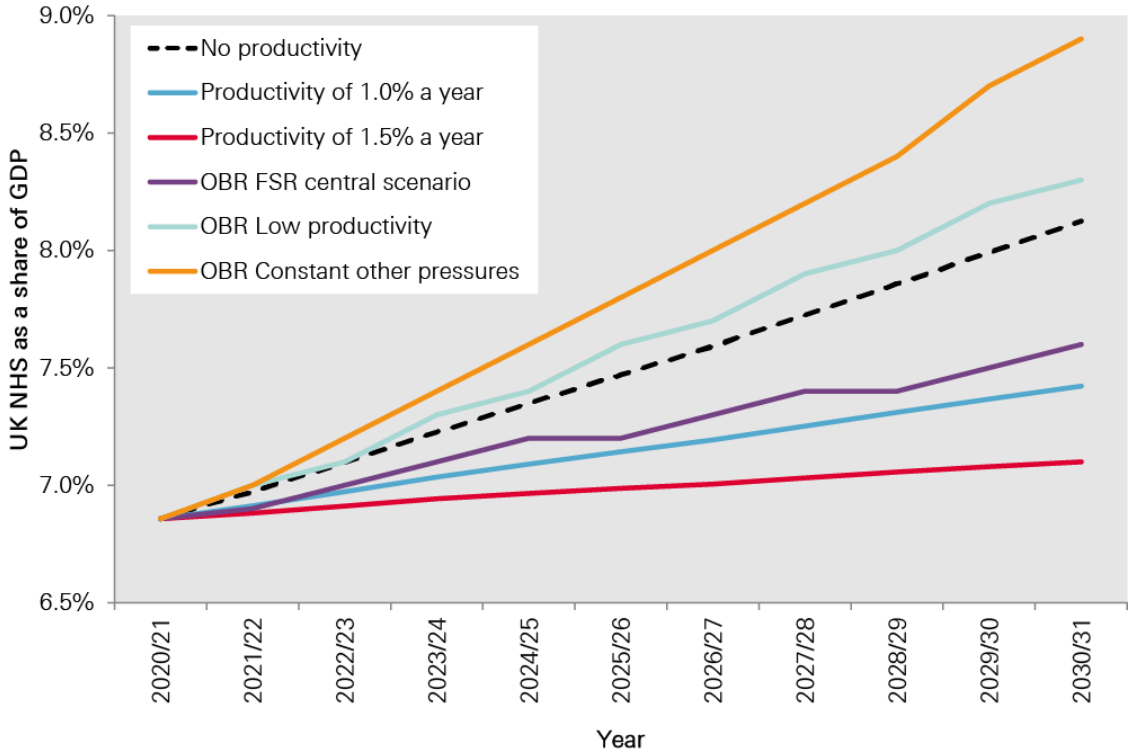
[30] Services include inpatient, outpatient, A&E, GP attendances, mental health care, community care and prescribing.

[31] This assumes that pay rises in line with current assumptions an average of 0.4% a year in real terms to 2020/21, and in line with trend rate of 2% a year between 2020/21 and 2030/31

[32] Public Service Productivity Estimates: Healthcare 2013 (10 December 2015). Office of National Statistics (ONS)

[33] Bojke C, Castelli A, Grašic K, Howdon D, Street A. Productivity of the English NHS: 2013/14 Update. Centre for Health Economics, University of York, 2016.

Figure 2: Health spending scenarios for 2020/21 to 2030/31



Note: OBR FSR refers to the standard scenario of 2.2% productivity growth.

4.9 Both models show that spending will need to rise as a share of GDP after 2020/21, from 6.9% to between 7.1% and 8.9% by 2030/31. The range depends on assumptions for productivity growth, rising expectations and additional non-demographic pressures, predominantly from increasing relative health care costs and advances in technological innovation. If funding for the UK NHS rises to 8.9% of GDP by 2030/31 – as described in the OBR's rising non-demographic cost scenario – this would mean an extra £100bn above 2015/16 spend. Around £60bn would be required to maintain the current range and quality of services (using HF model), the remaining £40bn would be to meet the costs of rising expectations and technological improvements (accounting for income elasticity and non-demographic costs).

4.10 The NHS is not expensive when compared to other countries in Europe, but nor is it obviously a low spender. The UK has recently started contributing data on spending, which reflects the definition of health spending used by the new OECD System of Health Accounts 2011. This is a more comprehensive measure of health spending which is consistent with definitions in other countries. It is a UK- wide measure of public and private spending and includes long-term care services, focused on meeting health needs. Using this more comprehensive measure, the UK spent around 9.9% of GDP on total health care in 2014, lower than eight other countries in the EU-15 but slightly higher than average for the EU-14 (the EU-15 minus the UK). Even though the NHS accounts for the majority of the country's total health spend (with 80% of UK

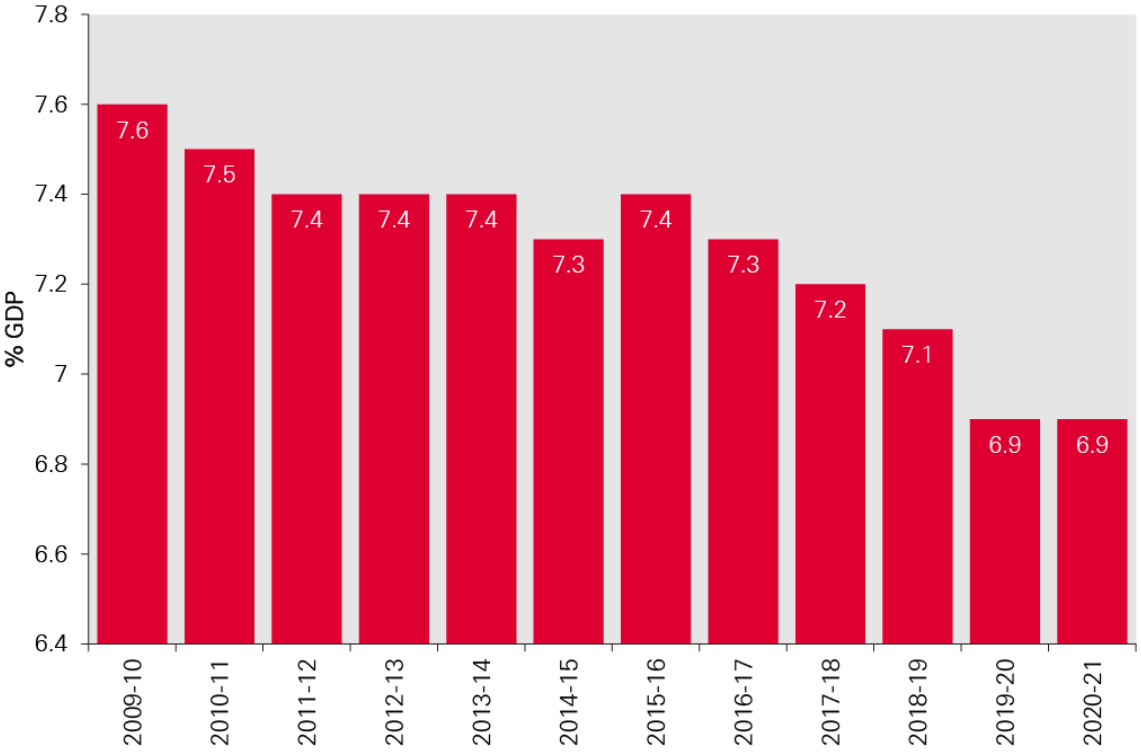
spending being government spending), the UK still spends less on public and compulsory[34] health care as a percentage of GDP than six of the EU-15.

4.11 The new definition includes some (but not all) of social care spending. This, along with the addition of long-term care, explains most of why the 9.9% of GDP figure is higher than it has been in previous years. Under the old definition the figure would be 8.7% of GDP.

To what extent is the current funding envelope for the NHS realistic?

4.12 OBR and Health Foundation modelling both show that long-term fiscal sustainability of the NHS is likely to require additional funding above expected growth in GDP, as well as improvements in efficiency.[35] However, as part of the government's priority to close the national fiscal deficit, funding for the UK NHS is currently growing at a slower rate than GDP (Figure 3). The share of GDP spend on the NHS has fallen from the historic peak of 7.6% in 2009/10 to 7.4% in 2015/16, and is expected to fall to 6.9% by 2019/20.[36]

Figure 3: Estimated public spending on health in the UK as a percentage of GDP, 2009/10 to 2020/21



Note: Planned spending for NHS England with resulting Barnett consequentials for Scotland Wales and Northern Ireland. Source: OBR.

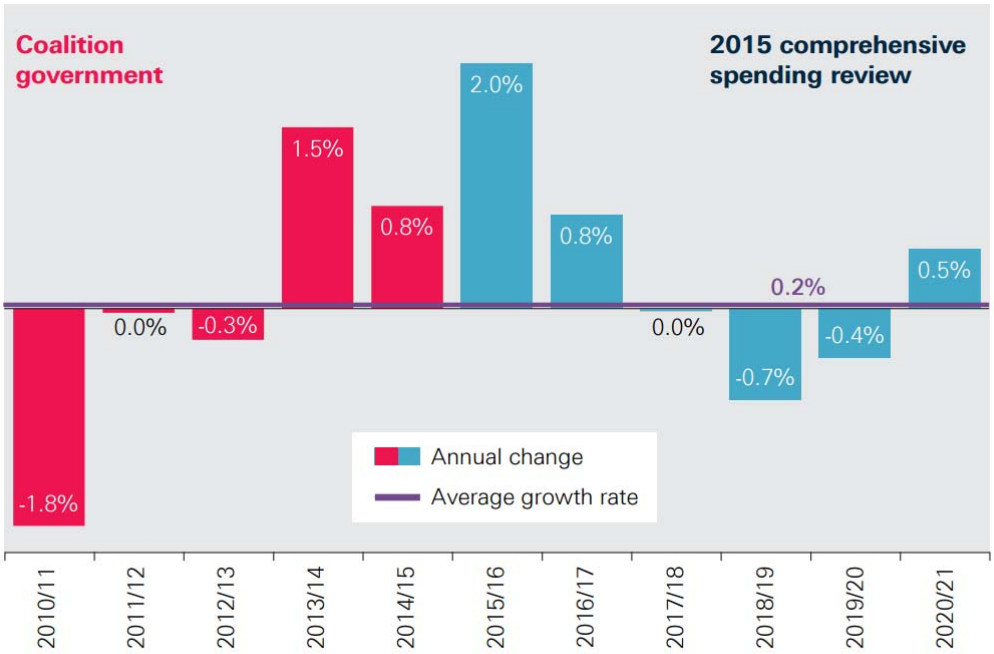
[34] Defined as government and compulsory health insurance schemes.

[35] Health Foundation. NHS finances outside the EU. Health Foundation, 2016.

[36] Licchetta M, Stelmach M. Fiscal sustainability analytical paper: fiscal sustainability and public spending on health. Office of Budget Responsibility, 2016.

4.13 The 2015 Comprehensive Spending Review confirmed that 2010/11 to 2020/21 will be the most austere decade for the NHS in its history. After accounting for inflation and population growth, spend per head for the English NHS will be similar in 2020/21 to what it was in 2010/11 (Figure 4), rising by an average of 0.2% a year in real-terms. Pressures on NHS services other than population growth, such as an ageing population and rising costs, must be met through improved efficiency. So the English NHS is aiming to achieve efficiency growth of 2–3% a year to deliver £22bn savings by 2020/21. One-third of these savings are expected to come from national pay restraint.[37]

Figure 4: Annual change NHS spend per head in England, 2009/10 to 2020/21



Sources: Public Expenditure Statistical Analyses 2015; Comprehensive Spending Review 2015.

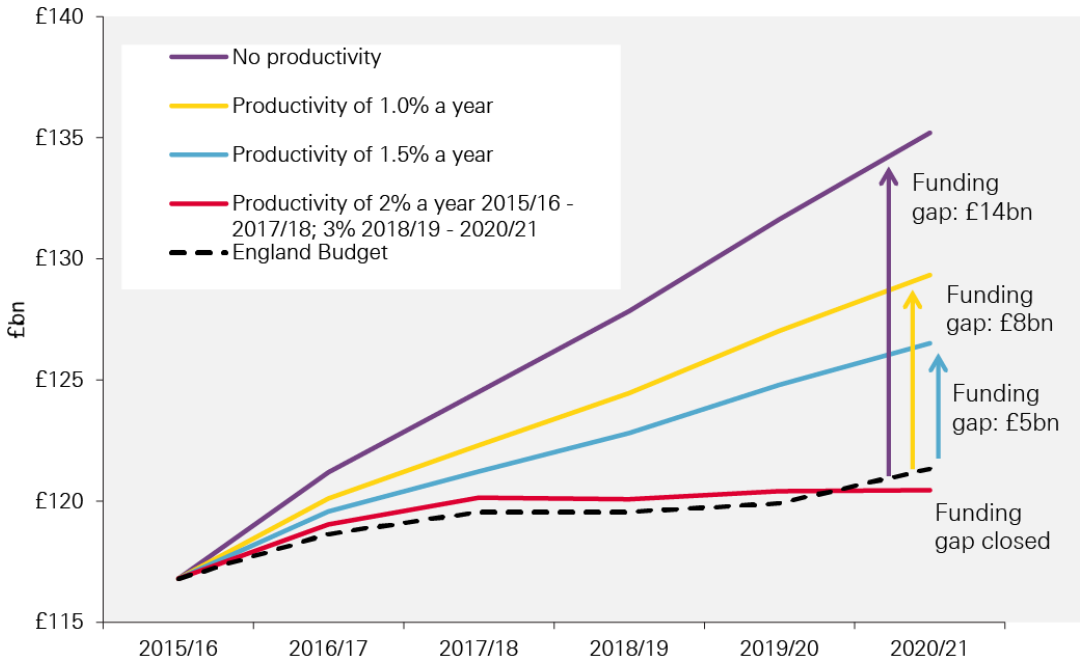
4.14 The lower funding has led to a focus on improving efficiency growth to protect the quality of services. However there are concerning signs that the NHS is struggling to meet these challenges. The financial position of NHS providers has rapidly declined from a surplus of £0.5bn in 2012/13 to a record net deficit of £2.5bn by the end of 2015/16. All parts of the NHS are struggling with system-wide pressures, resulting in 65% of NHS trusts and foundation trusts reporting a deficit by the end of 2015/16.

4.15 The pressures of an ageing population, rising chronic conditions and increasing costs mean there is an increasing gap between demand for NHS services and the funding available. The funding gap for the NHS in England by 2020/21 will depend on the level of efficiency growth that can be achieved. Based on the current planned budget and the Health Foundation's projection model, with no

[37] NHS England NHS Five Year Forward View: Recap briefing for the Health Select Committee on technical modelling and scenarios. NHS England, 2016.

improvement in NHS efficiency there would be a funding gap in 2020/21 of £14bn (Figure 5).[38] However, if the NHS achieves the ambitious target of 2–3% efficiency growth set out in the Forward View, this funding gap would be almost closed by 2019/20 within the current budget. However, this would be well above the long-term trend for efficiency growth in the NHS – 1.2% since 1979/80. It would also mean reversing the trend of the past three years when productivity has declined.[39]

Figure 5: Funding gap scenarios, 2015/16 to 2020/21



4.16 Estimates of improvements in productivity across the NHS as a whole vary from an average of 0.9-1.4% per year (Table 2). However, our analysis shows that the productivity of acute hospitals has risen at just 0.1% per year from 2009/10 to 2014/15. Some of the differences between our estimates of productivity growth and those found by Monitor and Deloitte are due to the use of different inflation factors.[40]

[38] This assumes that the current national pay policy of average pay awards of 1% in cash terms between 2016/17 and 2020/21, with allowance for incremental drift and skill mix effects, with uplifts of 1.75% in 2016/17 to account for pension reform, and 0.4% in 2017/18 for the apprenticeship levy. See www.gov.uk/government/publications/economic-assumptions-201617-to-202021/economic-assumptions-201617-to-202021

[39] Health Foundation. NHS finances outside the EU. Health Foundation, 2016.

[40] Lafond S, Charlesworth A, Roberts A. A perfect storm: an impossible climate for NHS providers' finances. Health Foundation, 2016.

Table 2: Estimates of annual average change in NHS productivity

	Scope	Annual average change
University of York, 2016[41]	England, NHS wide Total Factor Productivity (TFP) with quality adjusted output, 2004/05 -2013/14	1.4%
ONS, 2015[42]	UK NHS Wide TFP with quality adjusted output, 1997-2013	0.9%
OBR, 2016[43]	Combined projection of Oliver 2005 and ONS, 1979-2013	1.2%
Deloitte, 2014[44]	English NHS acute hospitals efficiency frontier shift, 2008/09 -2012/13 1.2%	1.2%
The Health Foundation, 2016[45]	Acute Care in English NHS hospitals, 2009/10-2013/14	0.1%
Monitor, 2016[46]	English NHS acute hospitals 2008/09-2013/14	1.4%

4.17 There is significant scope for the NHS to improve productivity, as there are significant variations in performance across the provider and commissioning sector in both the care provided and the cost of delivery.[47] The NHS Right Care programme has identified major variations in the care provided which is not based on need. Equally, the review of operational productivity led by Lord Carter of Coles has identified major variations in the cost of care. NHS Improvement's analysis of hospital efficiency also found significant variations in performance. Narrowing the gap between the efficiency of the best and the average would make a substantial contribution to the efficiency challenge in the Forward view. However, people working in the NHS need the capacity, capability and head space to identify and achieve recurrent or year-on-year efficiencies.

4.18 The UK's decision to leave the EU means future funding is uncertain. The vast majority of economic forecasts expect economic growth to be lower following the UK's departure from the EU. Other things being equal, this would mean less money for public spending, and potentially the NHS. Based on optimistic and pessimistic scenarios of economic growth following EU departure, we project that the funding gap by 2030/31 could increase to between £19bn and £28bn.

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[41] Bojke C, Castelli A, Grašic K, Howdon D, Street A. Productivity of the English NHS: 2013/14 Update. Centre for Health Economics, University of York, 2016.

[42] Public Service Productivity Estimates: Healthcare 2013 (10 December 2015). Office of National Statistics (ONS)

[43] Licchetta M, Stelmach M. Fiscal sustainability analytical paper: fiscal sustainability and public spending on health. Office of Budget Responsibility, 2016.

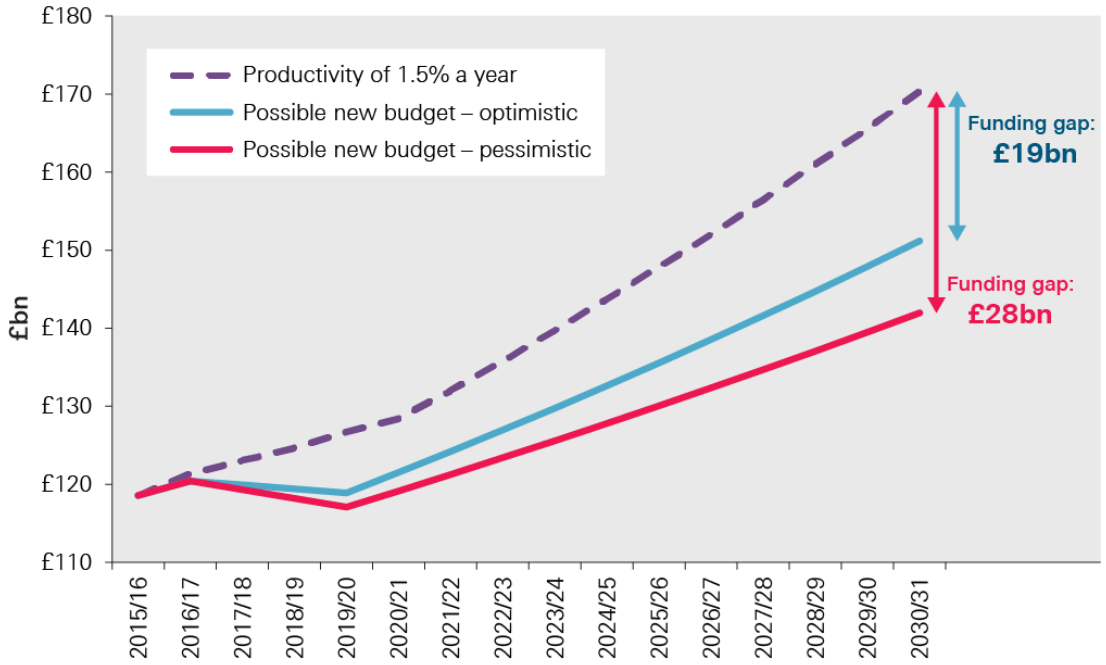
[44] Deloitte. Evidence for the 2015/16 national tariff efficiency factor. Final Report. Deloitte, 8 July 2014.

[45] Lafond S, Charlesworth A, Roberts A. A perfect storm: an impossible climate for NHS providers' finances. Health Foundation, 2016.

[46] Monitor. 2016/17 National Tariff Payment system: A consultation notice. Annex B5: Evidence on efficiency for the 2016/17 national tariff. Monitor, 2016.

[47] Lafond S, Charlesworth A, Roberts A. A perfect storm: an impossible climate for NHS providers' finances. Health Foundation, 2016.

Figure 6: Funding gap scenarios for 2015/16 to 2030/31



4.19 To protect current funding plans for the health service, the government would need to extend the period of fiscal deficit, increase taxation and/or add further reductions to other areas of public spending. The need to bring public spending back into balance is understandable, but the impact of this choice on the NHS and wider health and social care system, and therefore the public who depend on these services, should not be underestimated.

What is the scope for changes to current funding streams such as a hypothecated health tax, sin taxes, inheritance and property taxes, new voluntary local taxes, and expansion on co-payments (with agreed exceptions)?

4.20 One option for filling the funding gap over the longer term is to pursue additional forms of revenue. Analysis from economists at the Health Foundation and IPPR examined the potential revenue raised from a one percentage point increase in a number of different tax rates.[48] The estimated revenue raised by 2030/31 range considerably. Annex 1 examines the important issues to bear in mind with different tax options as a source of revenue to fund health care.

[48] Roberts A, Thompson S, Charlesworth A, Gershlick B, Stirling A. Filling the gap: Tax and fiscal options for a sustainable UK health and social care system. Health Foundation, 2015.

Table 3: Estimates of revenue raised from a one percentage point increase in key tax rates

	1 percentage point increase	£bn (16/17 prices)
Income Tax rates	Change basic rate	4.3
	Change higher rate	1.0
National insurance contributions rates	Change Class 1 employee main rate	3.8
	Change Class 1 employer rate	4.8
Sin taxes	Alcohol duties	0.1

Source: HMRC. Direct effects of illustrative changes (in 2018/19)

4.21 There are a number of different models for funding health care. Most developed countries opt for a system which is predominantly funded through taxation or social insurance.[49] Each system has benefits and drawbacks. With tax-funded systems such as the NHS, long-term planning can be difficult as resources and priorities can change with successive governments and political preferences. Additionally the funding available can depend on the total fiscal budget which in turn depends on tax revenue raised, and so can be volatile in times of large scale economic shocks. While hypothecated taxes may increase funds when they are first introduced, they can limit the flexibility to protect health budgets in the future. An alternative approach might be to set a minimum level to the share of GDP spent on the NHS, similar to the levels set for national defence and foreign aid.

4.22 Ultimately, the funding available to health care depends how government adjusts its budget as a consequence of the context.[50] Social insurance is a model of funding commonly used across Europe to fund health and social care. However, the challenge of this model is that payments are linked to employment. Demographic changes which lead to an ageing population place pressures on this model. Changes in the structure of labour markets with more self-employment and casual employment also make it harder to raise revenues from employment. More generally the concern with charges on employment is that they create a barrier to high employment. It is worth noting that many of the issues identified with social insurance would also apply to a hypothecated national insurance system.

4.23 There is no clear evidence that fundamentally changing the revenue raising model for the NHS would lead to better value. One study for the OECD showed that adopting social health insurance models may lead to higher spending and lower employment without significant improvements in quality.[51] How resources are effectively deployed appears to be a much more pertinent issue for long-term sustainability than how the resources are raised.

[49] OECD. Financing of health care. In: Health at a glance 2011: OECD Indicators. OECD, 2011.

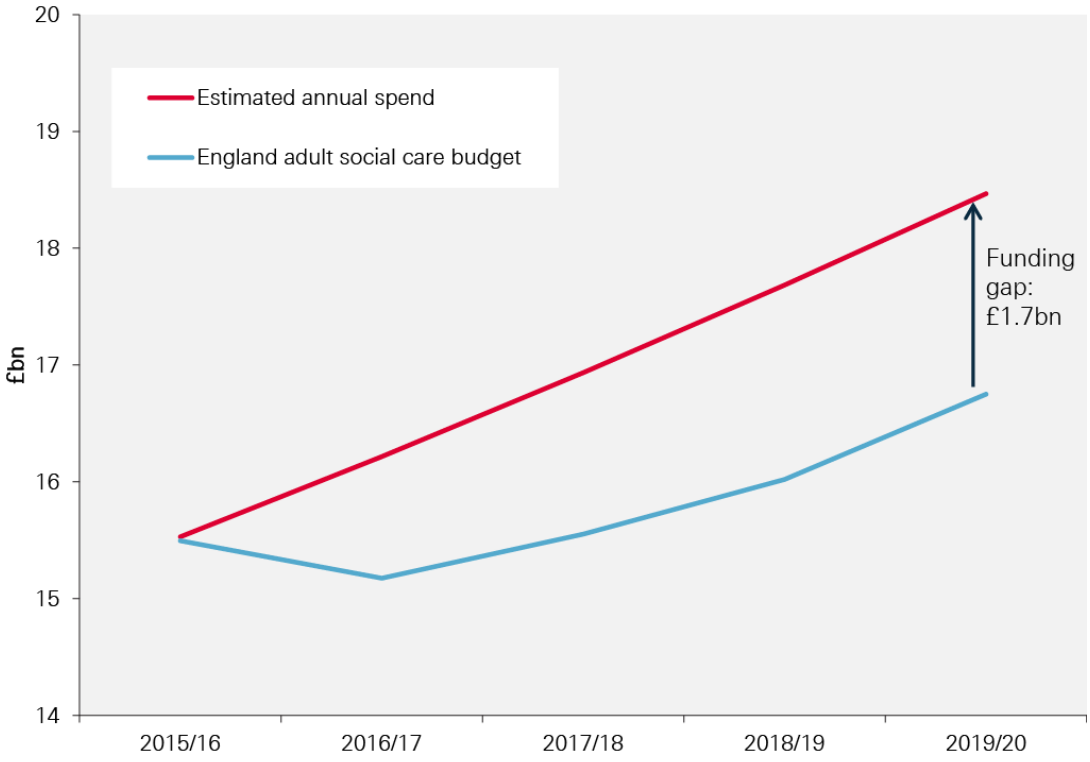
[50] Doetinchem O. Hypothecation of tax revenue for health. World Health Organization, 2010.

[51] Wagstaff A. Social health insurance vs tax-financed health systems: evidence from the OECD. World Bank, 2009.

Social care spending pressures

4.24 Achieving fiscal sustainability for social care looks more challenging. Demand pressures are expected to rise by around 4% a year from an ageing population and the rising prevalence of long-term conditions. The new council tax precept is expected to raise up to £2bn by 2019/20, and new investment through the Better Care Fund has been announced, reaching an extra £1.5bn by 2019/20. But even with this there is likely to be a social care funding gap in 2019/20 of around £1.7bn. On top of this, many social care workers will be eligible for the new living wage, which is expected to increase total spending pressure by an extra £800m. This is before allowing for the economic impact of the UK's decision to leave the EU.

Figure 7: Social care funding gap scenarios for 2015/16 to 2019/20



4.25 While NHS funding has remained relatively flat over the last parliament, overall spending on social care is estimated to have fallen by 2.2% a year between 2009/10 and 2014/15.[52] For example, by 2013/14, 17.4% less was being spent on services for people aged over 65. This is despite the number of people aged 65 and over increasing by 10.1% over the same period, and an 8.6% increase in the population aged 85 or over. Reductions in publicly-funded social care over the last five years have resulted in fewer people being able to access care and support, with older people on lower incomes experiencing the greatest levels of

[52] Health Foundation, The King's Fund and the Nuffield Trust. Impact of the 2015 Spending Review on health and social care. Health Foundation, The King's Fund and the Nuffield Trust, 2016.

unmet need.[53] There is a gap in the number of people needing help in Activities of Daily Living (ADLs) (eg eating, bathing, dressing) and the number of people receiving help with these activities. While the gap between needing and receiving help has halved for men with the highest incomes (from a 10 percentage point difference to just a 5 point difference), it has grown for both men and women with the lowest incomes (Figure 8). For women in the lowest third, the percentage of people needing help (36%) is three times that of people receiving help (12%).

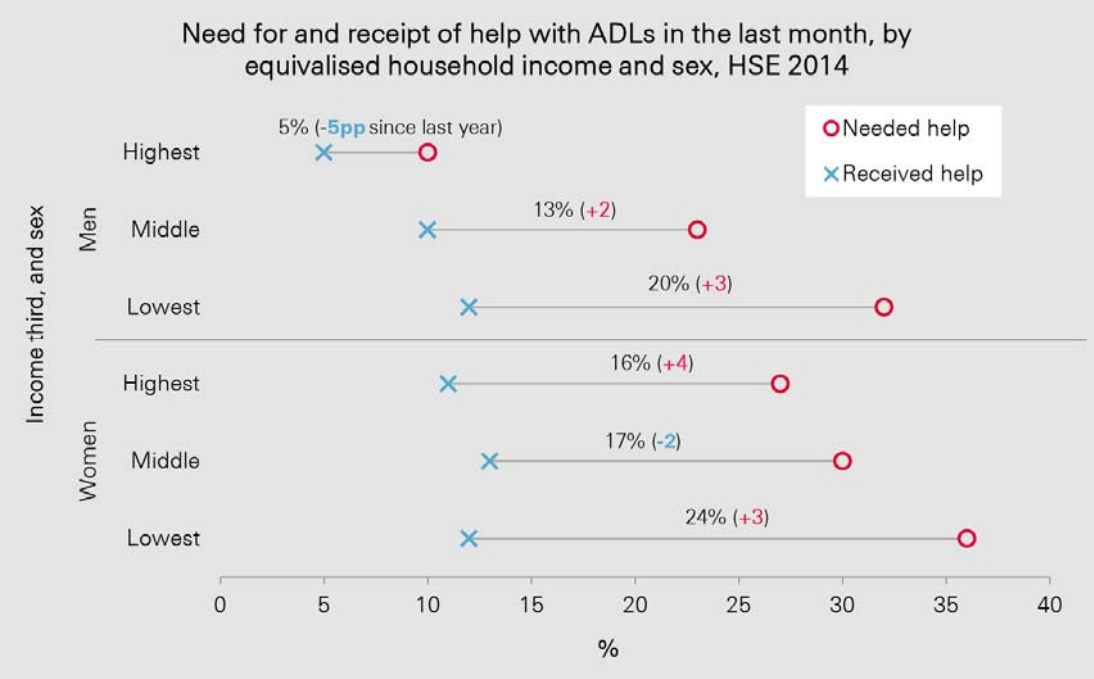
4.26 Plans to change funding arrangements for social care were announced in 2013, following recommendations by the Commission on Funding of Care and Support (the Dilnot Commission). Initially planned to be implemented in 2016, the changes were delayed until 2020 following concerns, including cost of the reforms (expected to be £6bn over five years, and just over £1bn in 2019/20).[54,55] Without these, or similar reforms to the social care system in England, it is hard to see how social care could be fiscally sustainable in the future.

[53] Burchardt,T.,Obolenskaya, P. and Vizard, P. (2015) The Coalition's Record on Adult Social Care: Policy, Spending and Outcomes 2010-2015.

[54] Jarrett T. Social care: Announcement delaying introduction of funding reform (including the cap) and other changes until April 2020 (England). Briefing paper, no 7265. House of Commons Library, 2015.

[55] Department of Health. Social care funding reform impact assessment. Department of Health, 2015.

Figure 8: Need for and receipt of health with Activities of Daily Living in the last month by equalised household income and sex



Source: Health Survey England 2014

Public health spending pressures

4.27 Despite the importance of public health and prevention in the Forward View, public health spending is set to fall by at least £600m in real terms by 2020/21, on top of £200m already cut from this year's budget.[56] This will affect a wide range of services including health visiting, sexual health and vaccinations. Funding for public health services is vital, but the impact of wider austerity measures on the population's health is as yet unknown.

4.28 During the March 2016 budget, the government announced the introduction of a sugar tax. This is expected to raise £520m in its first year (2018/19), which will be ring-fenced for doubling school sports funding and providing breakfast clubs.[57]

4.29 More broadly, there needs to be much greater recognition of the impact of policy outside of health and social care on the health of the population, and a focus on a more holistic strategy to improve health for the long term. This should include action across the wider determinants of health including education, the environment, employment, housing and communities.

[56] Health Foundation, The King's Fund and the Nuffield Trust. Impact of the 2015 Spending Review on health and social care. Health Foundation, The King's Fund and the Nuffield Trust, 2016.

[57] HM Treasury. Budget 2016. HM Treasury, 2016.

5.0 Models of service delivery and integration

What are the practical changes required to provide the population with an integrated National Health and Care Service?

5.1 We support a vision of the future in which care is organised around the needs of people not services, giving patients more control of their own health and care, alongside a greater focus on preventing illness and maintaining good health so that people can contribute to social and economic prosperity. This has the potential both to improve patient experience and to increase the value for the taxpayer.

5.2 This vision is partly dependent on better integration of health and social care services – a view that is widely recognised. The government's mandate to NHS England for 2016-17 sets out that there should be 'better integration of health and social care in every area of the country' by 2020. Similar aspirations are reflected in the multi-organisation care models envisaged in the Forward View and in the requirement for NHS commissioners and providers to develop longer-term system-wide plans across newly established 'sustainability and transformation plan' (STP) footprints.

5.3 Transformational change of the scale and complexity required to achieve this vision takes time and careful detailed management. It can only be achieved with the sustained support of, and commitment from, the NHS workforce, the public and political leaders.

5.4 The health and care system is intended to serve the population for the long term, but so much of what shapes it is short term – as highlighted by our recent work on quality in the English NHS.[58] Transformational changes in the NHS – including the realisation of an integrated health and social care system – should move away from policy and operational planning that typically looks five years ahead at the very most – principally in line with the parliamentary cycle.

5.5 A more sustainable approach would be to develop a clear strategy for the next 10-15 years, which can accommodate inevitable and justifiable political priorities as well as aligning plans, actions and resources with longer-term goals. If leaders could be held to it, this could help break the cycle of constant change and the ensuing levels of change fatigue.

What role should national policy play in supporting the improvement and transformation of service delivery?

5.6 The focus of national policy should be to enable change towards sustainability, rather than unwittingly erecting barriers to it. Historically, there has been a greater emphasis on policy levers focused on 'short-term payback' rather than 'longer term sustainability and progress' – in particular developing the capacity,

[58] Molloy A, Martin S, Gardner T, Leatherman S, A clear road ahead: creating a coherent quality strategy for the English NHS. Health Foundation, 2016

skills and resilience of NHS providers to improve and transform service delivery themselves over the medium-to-long term.[59] For example, according to a recent evaluation, participants in the Integrated Care Pioneers programme described a focus on short-term financially driven goals as all-consuming and a barrier to engaging in wider transformation efforts.[60] More detail is set out in Section 8 on learning health systems.

How can local organisations be incentivised to work together?

5.7 A more integrated system will require people across health and social care to work closely together, and any reforms should be considered a means to this end. Incentives can take a number of forms: regulatory; financial; performance management; and accountability for performance to the public and to professional peers through the publication of information on performance levers. It is important these are all closely aligned with nationally-driven programmes aimed at promoting greater integration.

How could truly integrated budgets for the NHS and social care work and what changes would be required at national and local levels to make this work smoothly?

5.8 If separate budgets act as a barrier to people working more closely together, then a single integrated budget – that aligns policies and levers to support closer ways of working -should be explored.

5.9 In order to prevent budget protectionism, an integrated budget for health and social care may need to be managed by a single integrated commissioner. Recent reforms, for example the Better Care Fund in England[61] and in the NHS in Scotland,[62] may shed light on whether an integrated budget can be administered jointly by NHS and local authority commissioners.

5.10 Three key questions arise when looking at how the integration of health and social care budgets should proceed:

- Should the extent of redistribution of resources between health and care vary from area to area or should there be a national framework for this? Current practice in England is unclear, not least in areas which have secured some kind of 'devolution' deal with NHS England[63].

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[59] Allcock C, Dormon F, Taunt R, Dixon J. Constructive comfort: accelerating change in the NHS. Health Foundation, 2015.

[60] Erens, B, Wistow, G, Mounier-Jack, S, Douglas, N Jones, L, Manacorda, T and Mays, Early evaluation of the Integrated Care and Support Pioneers Programme, Policy Innovation and Research Unit, Policy Innovation Research Unit, 2016

[61] NHS England. Better Care Fund Plan.

[62] Scottish Government. Health and Social Care Integration Narrative. June 2015

[63] Dormon F, Butcher H, Taunt R. Catalyst or distraction? The evolution of devolution in the English NHS. Health Foundation, 2016.

- What form of democracy and accountability is required to ensure a fair and transparent redistribution of resources? Should this be determined locally or nationally?

- Can the fundamental difference between how people access health and care services (universality versus means-tested) be reconciled within an integrated budget?

5.11 For an integrated budget to work well, these kinds of questions would need to be worked through at a national level, in collaboration with local leaders and communities – for example, local authority representatives and those leading STPs and other major transformation programmes.

6.0 Workforce

6.1 Health care is a people business. The sustainability of the NHS is dependent on training, retaining and motivating sufficient numbers of appropriately skilled staff to deliver the service. Questions over levels of NHS funding, productivity and quality are inextricably linked to workforce policy – how the health service plans, trains, regulates, pays and supports its people. Yet workforce issues are typically an afterthought in policymaking when they should be front of mind.[64]

6.2 The approach to workforce policy in the NHS is fragmented and in need of a coherent on-going national strategy, in which funding, workforce planning and policy are aligned. Achieving this will require government and national leaders across health and social care to develop a long-term vision for the NHS and social care workforce.

6.3 A long-term vision for the NHS workforce needs to be broader than just numbers of staff, training and recruitment. It should also address the development of staff, working conditions and workplace culture, as well as pay. A coherent and effective set of policies are essential to reward staff and incentivise the improvements in quality and productivity the NHS desperately needs.

What are the requirements of the future workforce going to be, and how can the supply of key groups of health care workers such as doctors, nurses, and other health care professionals and staff, be optimised for the long-term needs of the NHS?

6.4 Staff shortages present a major risk to the sustainability of the NHS. The Health and Social Care Information Centre's (now NHS Digital) latest workforce census reveals significant ongoing problems in the supply of NHS nurses – the largest professional group in the NHS workforce. There is an estimated shortfall of 7% in nursing numbers overall across England, with an increase of less than 1% in nursing staff over the last year. However, data on applications to university show that demand for student nurse places exceeds the supply of funded

[64] Health Foundation. Fit for purpose? Workforce policy in the English NHS. Health Foundation, 2016.

places. Recent reforms to student funding – the scrapping of bursaries covering the cost of training - have the potential to help reduce workforce shortages in key areas, particularly nursing. It will be important to ensure there is a sufficient supply of high-quality clinical placements and then to monitor the impact closely to ensure that the decision to pass the financial burden onto prospective trainees does not reduce demand for training.[65]

6.5 General practice is vital for the continuing care of the ageing population and people with long-term conditions, the fastest-growing areas of need. In contrast, primary care is facing major issues of GP recruitment and retention, as well as an ageing workforce, with one in five GPs aged 55 or older.[66]

6.6 Staff costs are the biggest area of spending for NHS providers, accounting for 63% of total expenditure in 2014/15. Any change to staff costs will therefore have a substantive impact on the financial viability of NHS providers. The impact of staff shortages on the NHS's finances is illustrated by the increase in real terms spending on agency staff, which increased by 27% in 2014/15 alone – rising to £3.4bn from £2.7bn in 2013/14. Our analysis showed that a trust is more likely to have a worse financial position if a higher proportion of its staff spending is accounted for by agency staff.[67] Problems in staff shortages are not purely financial; in addition, the lack of a stable team may undermine efforts to improve the quality and productivity of care.

6.7 The use of temporary staff and international recruitment are vital components of a comprehensive approach to workforce supply, as they give local providers flexibility to respond to local variations in capacity and demand. However, they are not a sustainable or effective approach for addressing systemic workforce shortages of key staff groups.

6.8 About one in eight nurses working in the UK was trained in another country. The rate of internationally trained nurses has risen since 2009, with migration from EU countries accounting for most of the increase. The recent decision to leave the EU has implications for how the service will attract and retain European staff in the future.

6.9 At present, recruiting staff from overseas has been used as a quick, relatively cheap, fix for employers faced with the immediate pressure to fill vacancies. However, in the long term, there is a role for government in monitoring and moderating international recruitment, so it becomes a more integral part of a sustainable, long-term approach to the effective supply of health professionals for the NHS. Sustainable plans for the recruitment of foreign staff to fill shortages will require more effective coordination of different central government departments, including the Department of Health, the Home Office and the Treasury, as well as professional regulatory bodies.

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[65] Health Foundation. Staffing matters; funding counts – pressure point: Student nurses. Health Foundation, 2016.

[66] Buchan J, Seccombe I, Charlesworth A. Staffing matters; funding counts. Health Foundation, 2016.

[67] Lafond S, Charlesworth A, Roberts A. A perfect storm: an impossible climate for NHS providers' finances. Health Foundation, 2016.

6.10 Continued pay restraint with no action to address work pressures is not sustainable and unlikely to deliver the improvements in productivity that the NHS needs in the future. NHS England's plan to deliver the Forward View rests in part on implementing the government's 1% cap on public sector pay up until 2019/20. If this continues then pay would have been centrally restrained for 10 years.

6.11 In addition, while flat pay between 2010 and 2015 was low compared to a long-run average of 2% a year, it was comparatively better than private sector pay, which fell during this period in the fallout from the 2008 global economic crisis. Public sector pay is now expected to fall relative to private sector pay, which may result in difficulties training, recruiting and retaining staff in the NHS as the relative benefits of working elsewhere increase[68].

6.12 There is a high risk that continuing pay restraint will undermine the ability to use pay as a way to recognise, reward and motivate members of NHS staff and encourage them to work productively.

How can the UK ensure its health and social care workforce is sufficiently and appropriately trained?

6.13 The NHS of 2030/31 and beyond is likely to require a different mix of skills and professions from today. As set out in the 'Shape of Training' review,[69] the future challenges of care provision are more likely to be met through broad-based specialty training that enables transferable skills to be built up, rather than creating ever more specialist roles. This type of training needs to encompass the use of new technology, quality improvement and skills that support self-care and the self-management of long-term conditions.

6.14 A priority for a long-term workforce strategy is a review of medical education to ensure that we are training doctors with the skills and attitudes needed for the future NHS. Training doctors for broad areas of care, following patient pathways, rather than by location of services (hospital/community) could be important to creating career opportunities that are more attractive than certain specialities are currently perceived by many doctors in training, such as general practice.

6.15 The NHS has a mixed record in the effective development and sustainable implementation of new roles to support high value care. Roles such as 'physician associate' are being trialled but at suggested rates of trainee intake (650 physician associates per year) this will be slow to show any impact on staffing and skill mix. It may be more practical to rapidly increase the scale of investment and opportunities for nurse practitioners to close skill gaps and improve productivity.

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[68] Crib, J. Emmerson, C. and Sibieta, L. (2014) Public sector pay in the UK. Institute for Fiscal Studies.

[69] Greenaway D. Securing the future of excellent patient care. Shape of training review, 2013.

How can workforce policy support the retention and motivation of people working in the NHS?

6.16 In our report, *Constructive comfort: accelerating change in the NHS*, we argued that people-focused approaches to drive improvement are relatively under-used.[70] This is despite evidence that staff engagement is closely linked to safety, effectiveness and patient experience. The inherent psychological burdens of care combined with a poor organisational culture and stressful working conditions can create compassion fatigue and emotional burnout. A focus on rediscovering health care professionals' 'joy in work' is gaining traction as an important factor in ensuring that care is safe, compassionate and effective. Furthermore, experiments such as the Buurtzorg approach to community nursing in the Netherlands – where staff are given greater control over patient care – have shown that people-focused approaches have the potential to not only improve care, but also reduce costs and boost morale.

6.17 NHS workforce policy has tended to focus on contractual and financial incentives to encourage NHS staff to improve performance or productivity. While these are important, there is a glaring lack of attention on equally important factors – staff engagement, work-life balance, stress, morale and supportive management. This is not only important to make progress on productivity, but also to achieve safer care: a key factor found by the CQC to be associated with lower quality care in a hospital provider is a poor result on the NHS staff survey. The NHS has yet fully to realise the potential benefit people-focused approaches to policymaking can bring.[71]

7.0 What does a learning health system look like and how do we get there?

7.1 Supporting health care services to improve and innovate, and then rapidly to spread what works best, should be at the heart of a sustainable NHS. Much greater emphasis is needed on supporting providers to develop the capacity and capability they need to improve quality, rather than on external levers such as regulation and inspection. There is a wealth of evidence – from health care and other industries – which shows top performance often comes not from regulation but from creating a culture of continuous improvement within organisations, one where there is a commitment to learning and that staff are fully engaged in.[72]

7.2 A shift is needed in the approach to improving quality, towards supporting and empowering providers and communities to drive up quality themselves. Achieving this will require helping them to develop into learning health systems.

7.3 In health care, improvement usually follows an evolutionary path of development – with 'transformation' being a process resulting from numerous complementary

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[70] Allcock C, Dormon F, Taunt R, Dixon J. Constructive comfort: accelerating change in the NHS. Health Foundation, 2015.

[71] Health Foundation. Fit for purpose? Workforce policy in the English NHS. Health Foundation, 2016.

[72] Allcock C, Dormon F, Taunt R, Dixon J. Constructive comfort: accelerating change in the NHS. Health Foundation, 2015.

changes achieved through iterative testing, learning and course-correction from within teams over time (as opposed to an event to be commanded from the outside). This requires the tools for adaptive thinking and learning[73] – and 'learning health systems' are ones that have this adaptive capability and focus.

7.4 There are several ingredients to a learning health system:

- Improvement skills – technical skills (eg Lean methodology and PDSA techniques), relational skills (eg communication and negotiation) and learning skills (eg reflection and questioning).
- Improvement leadership.
- A culture of learning and challenging assumptions.
- Appropriate freedom for staff to experiment and innovate.
- Senior management who create conditions where front-line teams are supported to undertake improvement work, and who can resolve issues and demands beyond the role of these teams.
- Data collection, analysis and feedback to identify priorities for improvement, monitor the impact of ongoing improvement work and feedback appropriate metrics to guide action.[74]

7.5 These capabilities and approaches are evidenced in some of the best health care systems in the world, such as Intermountain Healthcare in the US or Jönköping in Sweden. Similarly, UK providers that have built improvement capability at scale are increasingly being recognised as leaders on quality, such as East London NHS Foundation Trust, recently rated outstanding by the CQC, and Salford Royal NHS Foundation Trust, one of just four trusts recently judged to be in a position to lead hospital chains.

7.6 While conventional wisdom is to attribute differences in operational performance to differences in tools, technologies and techniques, studies suggest that the sources of competitive advantage are in fact behavioural, not technological: great performance is achieved by repeatedly accumulating insights, improvements and innovations, and putting them to good use.[75] This insight is not only relevant for making progress within a provider, but also across providers, for example in the development of integrated care and new models of care as referred to earlier.

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[73] Gharajedaghi, J (2011) *Systems Thinking: Managing Chaos and Complexity: A Platform for Designing Business Architecture.* Third Edition, Elsevier.

[74] Deeny S, Steventon A. Making sense of the shadows: priorities for creating a learning healthcare system based on routinely collected data. *BMJ quality and safety*, 2015.

[75] Spear, S. (2012) *Reinventing healthcare delivery*. Though paper. The Health Foundation, May 2012.

7.7 Policymakers and system leaders can play a major role in creating an environment conducive to provider-led improvement:

- **Ensure the NHS has the right skills and capability for improvement.** This includes ensuring sufficient leadership and management capability for improvement, ensuring that staff are equipped with the quality improvement skills and knowledge they need and ensuring capability in data analytics for a learning health care system, including a sufficient supply of skilled data analysts through adequate training, networking and professional development.

- **Ensure providers have the resources, time and headspace to pursue change**. What the Health Foundation sees time and again from our work with front-line teams is just how much planning is needed to implement change successfully – getting the right people on board and ensuring you have the right skills and infrastructure in place. Yet we also see system leaders commonly underestimating the time and space required for change; whether driven by financial troubles, the political timetable or the need to be seen to act in response to local performance problems, many of the expectations placed on the system don't reflect the realities of managing service change. What is needed is a supportive environment where national leaders give organisations and communities the space they need to plan and pursue change.

- **Recognise the limitations of regulation and inspection for driving improvement and foster a culture of openness and support**. System leaders must recognise that the best people to drive up provider quality are usually providers themselves. Recent years have seen an over-emphasis on regulation and inspection in the hope that policing the system to identify poor performance will somehow drive improvement. But this approach doesn't simply miss the opportunity to support provider-driven improvement; if it creates a culture of fear and blame it can actually harm the prospects for doing so by destroying the trust and space required. So there needs to be a major shift in the approach to improving quality in the NHS. This should recognise the limitations of trying to drive improvement through regulation and inspection and instead see the impetus for improvement as coming from within providers themselves – and giving them the tools and resources to do so.

8.0 Digitisation of services, Big Data and informatics

What are the barriers to industrial roll out of new technologies and the use of 'Big Data'?

8.1 Big data and digital technologies have the potential to significantly improve people's health and health care. However, for these to be implemented successfully, staff and patient engagement is essential.

8.2 The use of new and multiple apps within the NHS provides the opportunity for patients to collect data on their own health, share this with their doctor and the

wider health service and allow the use of these data to improve services, making them more efficient and sustainable.

8.3 Over the last five years the Health Foundation has supported the development of a number of apps that are designed to help people to manage their health better and improve the way in which they communicate with care providers (see Annex 2). Where these new technologies have been successful, patients and front-line staff were closely and actively involved in their inception, design and delivery.

8.4 Getting the innovations off the ground requires good project management, and people with the right clinical, technical and operational management skills in place at the start, along with executive level support for the changes. Relationship building and stakeholder management are as important in technology focused projects as they are in any process-related improvement or transformation project.

8.5 The same issues apply when it comes to spreading technology-related innovations into new organisations. For example the expansion of telehealth within the NHS has not always resulted in the desired reduction in hospital admissions or efficient use of services.[76] However effective it has been in its original context, teams seeking to adopt an innovation need to work with staff and patients to assess its potential value in their setting, and the cultural and infrastructural challenges that would need to be addressed should they choose to go ahead. It is crucial therefore not to underestimate the time and resource required in scaling up successful technology related innovations.

8.6 The NHS currently has challenges in making the best use of existing datasets to improve patient care. As patients with complex health care needs are increasingly cared for by a network of providers outside the traditional acute hospital setting. Therefore, we need to ensure that information about patient health and outcomes can be accessed and analysed across the system, while ensuring data security, to assist patient care, monitor the quality of care and evaluate changes to NHS services and interventions.

8.7 As has been acknowledged elsewhere in our submission, the health of patients and the sustainability of the health service depends upon social care services, and wider determinants of health. Links between the health, social care and other government service datasets would allow the NHS to better understand and respond to patient needs and plan for the future.

8.8 Patients are increasingly using apps developed and owned by companies outside the NHS. The question of who owns, has access to and use of data generated by these apps and how they are best incorporated into the health record of patients, and the shared with clinicians providing care (and others), is

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[76] Steventon, S. Bardsley, M. Billings, J. Dixon, J. Doll, H. Hirani, S. Cartwright, M. Rixon, L. Knapp, M. Henderson, C. Rogers, A. Fitzpatrick, R. Hendy, J and Newman S. (2012) Effect of telehealth on use of secondary care and mortality: findings from the Whole System Demonstrator cluster randomised trial *British Medical Journal: 344.* (Published 21 June 2012)

a significant issue over the long-term. Experience from other countries has shown the benefits of such data collection and integration to both patients and the wider health care system – for example, the Swedish rheumatology quality registry uses patient reported data as a decision support tool to optimise treatment during routine clinic visits and for comparative effectiveness studies. These data have also been used to examine the impact of multiple genetic, lifestyle and other factors on the health of patient.

8.9 Building capability in informatics requires a supply of skilled data analysts. A good starting point would be to improve the training, networking and professional development opportunities available for the analytical capability that already exists within the NHS. The Health Foundation is supporting this in part through the improvement analytics unit.[77] It also requires building better links between the experts and the front line of improvement in the service. There is also a need to provide a supportive environment for analytics; raising awareness of senior decision makers, and setting a standard for good quality analysis to support innovation and improvement.

9.0 Prevention and public engagement

9.1 Health is primarily an emergent property of our life chances and environment, rather than an output of the NHS. While securing the sustainability of the NHS is essential, it is not sufficient if the aim is providing everyone with the chance of a healthy life. This requires a focus on the wider determinants of health including improvements in access to education, good work and decent homes, a healthy food system and strong communities. It requires the government to take a long-term view in protecting and promoting health, as the major causes of ill-health are largely preventable.

9.2 The current and future health crises in avoidable chronic diseases – such as diabetes, respiratory diseases, cardio vascular disease and cancers – present complex challenges which the present public health system wasn't designed for.

Is there a mismatch between the funding and delivery of public health and prevention, compared with the amount of money spent on treatment?

9.3 The economic and social cost of poor health is clear. While life expectancy has increased in recent decades, healthy life expectancy has reduced, meaning that more people are living longer, but with chronic conditions that lead to long-term sickness, early retirement and greater formal and informal care needs.

9.4 The government should recognise that health and wellbeing is an essential social and economic asset to be protected and promoted, not simply something we can 'afford' when the economy is thriving. The current mismatch between funding for prevention and the amount spent on treatment is a false economy.

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[77] www.health.org.uk/programmes/projects/improvement-analytics-unit

9.5 It is estimated that 40% of the burden on health services in England may be preventable through action on the determinants of such conditions. However, the total costs of preventable ill health are far greater than the costs to health and care services alone, including the cost to the economy of days lost from work, lost years of working life and informal care. For example, according to the National Obesity Observatory the direct costs to the NHS in England of treating obesity, and related morbidity, is estimated to have increased from £479.3m in 1998 to £4.2bn in 2007, while the indirect costs of obesity on the economy is estimated to be between £2.6bn and £15.8bn[78].

How can public health funding be brought more in line with the anticipated need, for instance a period of protection or ring-fencing?

9.6 Traditional public health expenditure must be protected. This includes traditional public health spending on services and interventions known to be both efficacious and cost-effective – such as stop smoking services and brief interventions for people with alcohol problems.

9.7 Furthermore, with the planned removal of the ring-fence for local authority public health budgets, there will need to be alternative protections and support to ensure that public health is not squeezed by the intense pressures on local government budgets and, in particular, that local authorities maintain core public health expertise and priority services. This will be important to protect services for people with the poorest health, who tend to be in the most deprived areas.

9.8 The government should be very actively exploring alternative means of raising money for public health, such as the levy on soft drinks companies and the proposed levy on the tobacco industry, under the principle that 'the polluter pays'.

Should the UK government legislate for greater industry responsibility to safeguard national health, for example the sugar tax?

9.9 The planned sugary drinks levy not only presents a means to encourage changes in the market to reduce sugar consumption, it also aims to raise badly needed revenues for public health purposes to be delivered outside of the health and care sector – in this case largely within education. Other evidence-based examples where government legislation is needed to protect and promote health are: a minimum unit pricing for alcohol, strengthened licensing powers for local authorities and controls on marketing and promotions of unhealthy food and alcohol.

9.10 The predominant discourse about the major health threats and their determinants still places the emphasis on personal responsibility for so-called 'lifestyle choices'. This, together with a deregulatory agenda, has generally kept the focus of action away from legislative measures or regulation towards public education and voluntary commitments from business. However, there is little

[78] Morgan, L. and Dent, M. (2010) *The economic burden of obesity*. National Obesity Observatory, October 2010.

evidence that these have had meaningful impact. The ability of individuals to access the conditions for a healthy life is constrained by social, economic and environmental factors outside their control. The dramatic rise in obesity in recent decades points to a profound change in the food environment, not a mass collapse of self-control.

9.11 Local authorities and community organisations struggling with growing burdens of ill-health and reduced resources for public health interventions cannot meet these challenges without the support of government-led action to help create the conditions which support healthy communities. Recent examples include legislation to create smoke-free public places which has provided environments which not only protect non-smokers but reinforce local interventions to support smokers trying to quit. What is lacking is an equivalent response to the emergent crisis in dietary health such as controls on marketing to protect vulnerable consumers, including children. Blackpool Council is an example of a local authority that is calling on the government for national policy action including restrictions on food marketing to children and the proposed sugary drinks levy to underpin and support their efforts to tackle childhood obesity.[79]

9.12 The government's childhood obesity plan failed to regulate the marketing of unhealthy food. This was in spite of evidence from Public Health England that showed: that all forms of marketing consistently influence food preference, choice and purchasing in adults and children; that higher sugar foods are promoted more than other foods; and that foods on promotion account for 40% of all expenditure on food and drinks consumed at home.[80] Surveys of parents have shown strong support for tougher restrictions to protect children from junk food marketing. For example, 74% of adults supported a ban on junk food advertising before the 9pm watershed in a poll conducted in January 2016 by YouGov and funded by Cancer Research UK.[81]

9.13 Evaluation of the public health Responsibility Deal alcohol pledges indicated that the actions taken by companies (on labelling, education and responsible drinking messages) did not include the most effective evidence-based actions such as reducing marketing or availability.[82] Action by food companies through the Responsibility Deal were found to be not much more than 'business as usual', with little or no action on the most effective strategies such as reducing marketing or reducing sugar in products.[83]

9.14 A related study of voluntary approaches around the world indicated that the most effective voluntary agreements include substantial disincentives for non-participation and sanctions for non-compliance. If the government is not yet

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[79] Blackpool Council signs up to healthy charter. Blackpool Council, March 2016.

[80] Public Health England. Sugar reduction: the evidence for action. Public Health England, 2015.

[81] Obesity Health Alliance. Briefing on marketing to children – policy briefing. Obesity Health Alliance, 2016.

[82] Knai C, Petticrew M, Durand MA, Eastmure E, Mays N. Are the Public Health Responsibility Deal alcohol pledges likely to improve public health? An evidence synthesis. *Addiction*, 2015. 110, 1232–1246.

[83] Knai, C et al. Has a public–private partnership resulted in action on healthier diets in England? An analysis of the Public Health Responsibility Deal food pledges. *Food Policy*. 2015. 54, 1–10.

willing to regulate in these areas, at a minimum, any future voluntary agreements with alcohol and food companies should move towards these more formal approaches.[84]

What are the key elements of a public health policy that would enhance a population's health and wellbeing and increase years of good health?

9.15 Over the next 10-15 years the changing burden of disease will require new responses from a reinvented public health system, which brings together a much broader range of agencies, government departments and organisations to address the socioeconomic and environmental determinants of health. These actions are vital if the NHS is to be sustainable and for a healthy population contributing to economic growth and wider prosperity.

What should be the role of the State, the individual and local and regional bodies in an enhanced prevention and public health strategy; and what are the key changes required to the present arrangements to support this?

9.16 Making this a reality will require changes in the approach to government accounting of expenditure on health promoting measures. This includes:

- a cross-government commitment, which recognises the responsibilities of all departments to protect and promote health and which places meaningful obligations on policymaking to deliver health in all policies
- a long-term commitment to both action and investment over the life course which must not be hampered by short-term mechanisms of evaluation or quick political wins
- the full use of legislative and regulatory powers to support a 'whole of society' approach to better health– to deliver the 'fully-engaged' response described by the Wanless Review in 2004.[85]

9.17 These guiding objectives could be the basis for a new Public Health Act; one that is framed to address the wider determinants of health; to health-proof government policies; to enable national and local government action on complex issues; to prioritise public health and remove barriers to policymaking; and to require action to reduce health inequalities across the wider policy agenda.

[84] Bryden A, et al. Voluntary agreements between government and business—A scoping review of the literature with specific reference to the Public Health Responsibility Deal. *Health Policy*, 2013. Volume 110, Issue 2, 186–197.

[85] Wanless, D. Securing good health for the whole population. HMSO, 2004.

10.0 ANNEX 1: Tax options

10.1 Several considerations need to be taken into account when discussing tax options for financing public spending. These include the following points:

- **Distributional implications**
  The burden of a tax or an increase in tax is that it will fall disproportionately across the population, either in cash terms or as a proportion of individual or household income. It is important to consider the shape of the burden of tax changes in this way. This is because the UK tax and benefit system has, by design, a goal of redistributing income from those higher up the distribution to those towards the bottom, achieved through rising tax rates and means-tested benefits. Changes to tax rates alter the distributional character of the tax–benefit system, and this change should be analysed. When considering using tax rises to fund a particular area of government spending, it is also useful to question who is paying more in tax and who is benefiting from increased spending. In the case of health and social care, a key distinction is how much extra tax is paid by those of working age versus those above the state pension age (although this matters less when considering a lifecycle perspective).

- **Economic efficiency**
  Aside from questions of distribution, it is important to consider the economic impact of tax changes. In the context of taxes on earnings, there are particular distortionary risks to take into account. A tax increase can affect an individual's incentives to work more, or to work at all. This is particularly the case for those on lower incomes, who face high effective tax rates on income due to the withdrawal of in-work benefits, and have been shown to be particularly responsive to incentives to move into work. Another important consideration is that a tax increase on one type of income, such as wage earnings, can increase incentives for individuals to be remunerated through other forms of income that are taxed less or not taxed at all. This is particularly the case for some types of workers, such as the self-employed (who can more readily shift income from earnings to other, lower-tax forms of income) and high earners, who have greater access to financial planning services to reduce their taxable income.

10.2 Among the taxes we've analysed, the following have particularly important distributional and efficiency implications.

- **Basic rate of income tax/main rate of employees' National Insurance**
  The vast majority (87%) of taxpayers only pay tax at the basic rate, and as all taxpayers pay the basic rate, the revenue that can be raised from increasing that rate is far higher than from an increase in either the higher or additional rate. A similar pattern holds for the main rate of employees' National Insurance. That said, those taxpayers on lower incomes often face very high effective marginal tax rates, as a result of

both the basic rate of income tax (20%) and the main rate of employees' National Insurance (12%) and how these interact with the withdrawal of in-work benefits. The Mirrlees Review found, for example, that 15% of workers face effective tax rates above 75%. It has been argued that raising National Insurance does the most damage to work incentives, since it is only levied on earnings (unlike income tax, which includes income from assets already owned). A rise in either the main rate of income tax or employees' National Insurance would weaken work incentives.

- **Higher rate of income tax/employees' National Insurance above the upper earnings limit**
  As noted above, those on higher incomes are, in some ways, better able to reduce their taxable income in response to increases in tax rates. This is particularly true for National Insurance but is partially true for income tax as well, for which individuals can make use of conventional tax-favoured forms of savings and income such as Individual Savings Accounts (ISAs), pensions and owner-occupied housing. For those on the highest incomes, tax planning, avoidance and evasion is also a response that needs to be considered when evaluating the impact of raising tax rates.

- **Extending National Insurance to pensioners**
  The employment of those aged over 65 has increased substantially in recent years. Where pensioners remain in work, they are currently exempt from paying employees' National Insurance. This favourable treatment comes at a cost in terms of lost revenue. However, removing this exemption will decrease the incentive to remain in work post-retirement, and it has been shown that older workers are more responsive to work incentives.

- **Employers' National Insurance**
  An increase in the rate of employers' National Insurance is likely to affect employers' behaviour in relation to setting rates of pay for employees. Employers may choose to pass on the entirety of the extra burden of a rise in National Insurance over time through slower pay growth for employees. Not only would this result in reduced employee earnings and household incomes, with important distributional consequences, it would also reduce the extra revenue raised, as slower earnings growth implies lower tax and National Insurance receipts and reduced in-work benefit withdrawal. Even if not passed on in this way, a rise in employers' National Insurance may reduce employers' profits and therefore corporate tax revenues.

- **The main rate of VAT**
  While VAT is not a tax on earnings, it can have an impact on work incentives. A rise in the main rate of VAT decreases spending power and therefore weakens the value of income at the margin, and may reduce incentives to work more or increase earnings in general.

- **'Sin taxes'**
  Taxes on goods perceived to have harmful effects on individuals have been a feature of the UK tax system for many decades, with alcohol and tobacco the main focus (although others, such as betting and gaming duties, also exist). These range from 31% of the price of a pint of beer to an average of 78% of the price of a pack of 20 cigarettes. More recently, taxes on other products shown to be unhealthy, such as sugary goods, have been introduced in several countries and cities. These are distinct from most other indirect taxes in that they are deliberately designed to change people's behaviour. As such, the high rate of tax reflects both the harm users of these products do to themselves, but also wider societal costs such as increased demand on health services as a result of using these products.

11.0 ANNEX 2: Health Foundation projects, programmes and research

11.1 For many years the Health Foundation has supported providers and communities to improve quality and develop improvement capability. Current initiatives include the following:

- Q, which is helping to develop improvement capability at scale through connecting people skilled in improvement and supporting peer-to-peer learning;

- The Improvement Analytics Unit, which is an innovative new partnership between NHS England and the Health Foundation that will provide rapid feedback on the progress being made by local health care projects in England to improve care and efficiency. The Improvement Analytics Unit aims to help to spread the use of data analytics in the NHS for the purposes of quality improvement and strengthen the robustness of evidence to inform policy development. Specifically, it will provide the NHS with the capability to rapidly test interventions in the health and care system, in as close to real time as possible, so that changes can be implemented to the system as rapidly as possible to improve patient care. The unit will work with up to 10 local initiatives by the end of 2017. By 2019, approximately 20 local initiatives will be involved in the project.[86]

[86] www.health.org.uk/programmes/projects/improvement-analytics-unit

- GenerationQ fellowships, which support the development of improvement leadership capability.

- The Improving Flow Programme, led by the Sheffield Microsystem Coaching Academy, which is looking at how to apply team coaching skills and improvement science at care pathway level in order to improve flow through a health care system.

- Projects we are supporting through professional bodies to improve the development of quality improvement skills, including with the Royal College of General Practitioners and the Academy of Medical Royal Colleges.

- Our recent report, *A clear road ahead*, which identified some practical steps that would help to bring about greater strategic coherence to national activity on quality, including a shared definition of quality, a single set of quality goals and a core set of metrics.[87]

- We will soon be publishing a report on how to improve the flow of people, information and resources across whole health and social care systems.

11.2 Over the last five years the Health Foundation has also supported the development of a number of apps that are designed to help people to manage their health better and improve the way in which they communicate with care providers.[88] Some of these innovations have led to improved patient outcomes and reduced costs and have been disseminated widely. These include the following examples:

- **'Flo'**, a text messaging system that sends people reminders and health tips tailored to their needs. The system was originally developed by a team at NHS Stoke for use with people with hypertension and diabetes. A clinical trial supported by the Health Foundation found that it was effective in managing peoples' blood pressure. Enabling people to measure their own blood pressure at home, rather than in their surgery, also proved less costly. Flo has now been adopted by over 70 health and social care organisations across the UK and is used by people with a wide range of long-term conditions. [89]

- **'MyBirthplace'**, an online app designed to help women decide where to give birth, with support from their partners and midwives. Developed by a team at Portsmouth Hospitals NHS Trust, its use led to a significant increase in the proportion of women who had made a decision about

[87] Molloy A, Martin S, Gardner T, Leatherman S, A clear road ahead: creating a coherent quality strategy for the English NHS. Health Foundation, 2016

[88] Health Foundation, Shine: Improving the Value of Local Healthcare Services, 2014

[89] www.getflorence.co.uk

where to give birth by 36 weeks. The app has now been disseminated across Wessex and Scotland.[90]

- **'Activate Your Heart'**, an online cardiac rehabilitation programme. Developed by a team at University Hospitals of Leicester NHS Trust it provides people with a tailored programme of exercise with access to health care specialists through discussion forums, chat rooms and e-mails. The programme has succeeded in widening the uptake of rehabilitation services: feedback from users suggested that 90% of them would not have used conventional rehabilitation services. A version of the programme has now been adopted in Scotland.[91]

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www.health.org.uk

[90] http://mybirthplace.org/portsmouth

[91] www.activateyourheart.org.uk