

Institute for Public Policy Research



THE LORD DARZI REVIEW OF HEALTH AND CARE

INTERIM REPORT

Lord Darzi

April 2018

FOREWORD

All political parties declare their affection for the NHS and promise to protect it. There is a strong cross-party consensus in favour of retaining a health service that is based on need, not ability to pay. Yet enormous questions remain about how we deliver this in the years to come.

How do we make sure every patient gets high-quality care when they need it? How do we join up care around patients and keep them out of hospitals for as long as possible? How will we keep up with advances in technology, therapies and treatments? And, how will we fund the health and care system sustainably in the future?

The NHS has endured the most austere decade in its history, while funding for social care has declined almost every year since 2010, with fewer people getting the support they so desperately need.

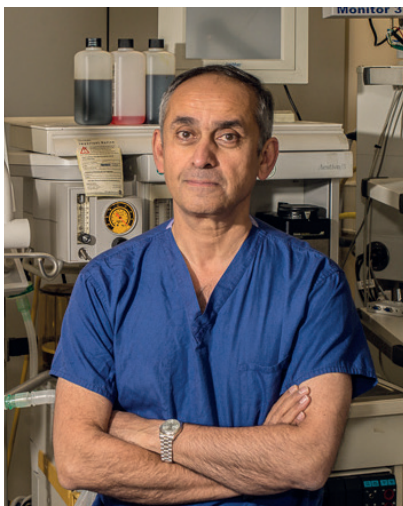
As a result, we are seeing signs of a system under strain all around us: patients left in corridors; operations cancelled; and deficits on the rise. Simply demanding more for less or promising more money without a plan for better care isn't good enough.

It is time for change; not just because politicians say so but because the nature of the disease burden has changed and because scientific breakthroughs and new technology allow us to deliver more efficient and effective care. In short, high-quality care is a constantly moving target: to stand still is to fall back.

This year the NHS turns 70. It is a vital friend to millions: it is there for us in our greatest moments of need. But I want to see it not just survive but thrive. This is why I am leading an independent review, with the Institute for Public Policy Research (IPPR), of our health and care system, to answer the big questions it faces in the years to come.

After all, the NHS deserves a secure future that gives us confidence that it will celebrate its centenary 30 years from now.

Professor the Lord Darzi of Denham PC KBE FRS FMedSci HonFREng



Lord Darzi holds the Paul Hamlyn Chair of Surgery at Imperial College London, the Royal Marsden Hospital and the Institute of Cancer Research. He is Director of the Institute of Global Health Innovation at Imperial College London and Chair of Imperial College Health Partners. He is an Honorary Consultant Surgeon at Imperial College Hospital NHS Trust. Lord Darzi was knighted for his services in medicine and surgery in 2002. In 2007, he was introduced to the House of Lords and appointed Parliamentary Under-Secretary of State at the Department of Health. During his time in government Lord Darzi authored and implemented the groundbreaking review of the NHS, High Quality Care for All.

THE LORD DARZI REVIEW OF HEALTH AND CARE

The Lord Darzi Review was commissioned by - and is housed within - IPPR, the UK's progressive think tank, with analytics provided by the consultancy firm, Carnall Farrar.

The Review will benefit from the experience and expertise of an advisory panel of leaders from the health and care system



Lord David Prior (Deputy Chair of the Lord Darzi Review) – Chair, UCLH & former Parliamentary Under Secretary of State, Department for Business, Energy and Industrial Strategy



Sir John Bell – Regius Professor of Medicine, University of Oxford & former President, Academy of Medical Sciences



Dame Ruth Carnall – Managing Partner, Carnall Farrar & former Director, NHS London



Dr Clare Gerada – Managing Partner, the Hurley Group & former President, Royal College of GPs



Norman Lamb – MP for North Norfolk & Chair, Science and Technology Select Committee



Mark Lloyd – Chief Executive, Local Government Association



Joanne Roney – Chief Executive, Manchester City Council



Professor Geraldine Strathdee – Consultant Psychiatrist, Oxleas NHS Trust & former National Clinical Director for Mental Health



Dr Paul Williams - MP for Stockton South and practising GP



Cllr Izzi Seccombe - Leader of Warwickshire County Council and Chairman of LGA Community Wellbeing Board



Neil Mulcock - Vice President Government Affairs and Policy, Gilead Sciences



Peter Harrison - Managing Director at Siemens Healthineers, GB & Ireland

CONTENTS

Summary.....	5
Part 1: Introduction – Enduring principles, greater ambitions.....	8
Part 2: The quality of health and care 10 years on from <i>High Quality Care for All</i>	10
Part 3: 10 years on – The enablers of high quality care.....	27
Part 4: 10 years forward – Facing the future with confidence	43
Part 5: Five conclusions	49
References	50
Appendix 1: Funding gap methodology	57

Prepared by **Harry Quilter-Pinner** and **Tom Kibasi**.

Analytics by **Sutha Sutkunarajah, Ben Richardson, Toby Lambert, Ellie Davies, Melissa Egle** and **Guy Cochrane**.

ACKNOWLEDGEMENTS

Lord Darzi would like to thank IPPR for commissioning and housing the Review and Carnall Farrar for providing the analytics for it. He would also like to thank his advisory panel for their expertise and guidance and for all those people and organizations who submitted evidence to the Review, in particular Sir Harpal Kumar, Professor Tim Briggs, Professor Tony Rudd and Professor Keith Willett. Finally, he would like to thank Gilead Sciences, the Local Government Association, Siemens Healthineers, MSD and Baxter Healthcare. Without their generous support, this project would not be possible.



Download

This document is available to download as a free PDF and in other formats at:

<http://www.ippr.org/research/publications/darzi-review-interim-report>

Citation

If you are using this document in your own writing, our preferred citation is:

Darzi A (2018) *The Lord Darzi Review of Health and Care: Interim report*, IPPR. <http://www.ippr.org/research/publications/darzi-review-interim-report>

Permission to share

This document is published under a creative commons licence:

Attribution-NonCommercial-NoDerivs 2.0 UK

<http://creativecommons.org/licenses/by-nc-nd/2.0/uk/>

For commercial use, please contact info@ippr.org



SUMMARY

2018 is a year of anniversaries: 70 years since the NHS was created as part of the post-second world war social settlement; 50 years since the Seebohm Report laid the foundations for modern social care; and 10 years since *High Quality Care for All* was published with its sharper focus on quality of health and care. It is therefore the perfect moment to stand back and reflect on the progress that has been made, as well as the challenges that we have faced. We must also look to the future: high quality care is a constantly moving target so to stand still is to fall back. This interim report of the Lord Darzi Review of Health presents this evidence in preparation for the final report which will be published in the lead up to 70th anniversary of the NHS and will set out a long term funding and reform plan for health and care.

WHAT HAS HAPPENED?

The picture on population health over the last decade has been mixed. Important progress has been made on some metrics, notably on smoking and alcohol consumption, which have continued to decline. However, there have also been some substantial challenges. Whilst life expectancy has been growing this has been at a slower rate than the historical norm, quality of life across a number of metrics has faltered. Healthy life expectancy has failed to keep pace with life expectancy; we have seen the continued rise in mental health conditions; and there has been an outbreak of loneliness and isolation which threaten our 'social health'. Inequalities have also started to grow once again with those at the edges of society – excluded groups such as the homeless or severely mentally ill – being hit particularly hard.

Despite a decade of austerity, quality across most areas of the service – from cancer to trauma; stroke to diabetes; mental health to maternity – has been maintained or improved. Patient safety, a significant priority for the health secretary, has also got better according to most metrics. Progress is also apparent in social care with both self-reported outcomes and CQC ratings showing an improvement. Yet we must not be complacent. There remains far too much variation in the quality of care: the distance between the best and the rest remains far too wide. In too many areas – cancer and mental health services, in particular – progress has been from a low base, with other countries performing significantly better. Furthermore, there is increasing evidence that we are reaching a tipping point with the drivers of improvement coming up short given the pressures on the system.

If quality has been maintained or improved, the same is not true for access to services. There has been a serious decline in the number of people receiving state funded social care. This has pushed more and more responsibility onto informal carers and left many without the support they need. In the NHS, timeliness on everything from ambulance responses to access to A&E to getting a GP appointment has deteriorated. The stress on the whole system – primary and community services, acute care and social care – is vividly illustrated by the significant increase in delayed transfers of care over the period (which is even starker when we consider those medically fit for discharge). Finally, there are also signs of rationing in terms of access to new and innovative treatments as NHS patients are denied to care that is at the scientific and technological frontier.

WHY HAS IT HAPPENED?

Austerity has been one of the most significant determinants of performance in health and care over the last decade. Spending on healthcare has risen but it has still been the most austere decade in the NHS's history; meanwhile funding has fallen in real and cash terms for social care. Both the NHS and social care have done well to find ways to deliver 'more for less', with productivity in the NHS well above its historic trend. However, the main sources of increased productivity are running out of road and the system's ability to find other sources of revenue funding – be it switching capital to revenue, disinvesting in primary and community care, prevention and public health or dipping into reserves or growing deficits – is increasingly limited. There is now a clear need for a long term settlement for the NHS and social care – as well as public health – to ensure that we can deliver high quality care now and for future generations. It is good to see that the prime minister agrees with this conclusion having announced her intention to provide the NHS with such a settlement (Campbell 2018).

One factor, above all others, has allowed the health and care system to maintain or improve quality of care during a time of austerity: the commitment and dedication of its workforce. Indeed, probably the largest determinant of increased productivity in the NHS has been the public sector pay cap. However, the gaps are now starting to show: vacancy rates and staff turnover across the service are large and growing, with staff morale – particularly with relation to pay – also getting worse. The ability of the service to fill these gaps – through the use of agency workers or from abroad – is being increasingly curtailed. Brexit, in particular, poses a threat to achieving safe levels of staffing across health and care. This will require the health and care system to invest in workforce development – an area of consistent government failure – as well as reform to our immigration policy going forward.

The reform agenda in health and care – set out in the Five Year Forward View (FYFV) with its focus on a shift towards prevention and integration – has started to bear fruit in terms of delivering higher productivity (and is the right thing to do, in terms of quality and access, regardless). Yet substantial progress is still the exception rather than the norm. One of the biggest barriers to reform in the system is the legacy of the 2012 Health and Social Care Act which fragmented commissioning functions, increased complexity at a national level, and reinforced the role of competition within the system (based on little or no evidence of the benefits of this). This has been compounded by over-burdensome regulation which has stymied innovation and leadership at the local level. It is increasingly clear that if we want our health and care system to be fit for the future, then further reform must be embraced.

WHAT NEXT?

The factors that have exerted such pressure on our health and care system over the last ten years – changing demographics, the rise of chronic disease, growing patient expectations and onward march of science and technology – will continue over the decade to come. We are entering a period of profound disruption – both exciting and challenging – for the NHS and social care system. Some have argued that our 'free at the point of need' system is unsustainable in this context: but it is a fundamental error of logic to say that something is unaffordable, so we should move to something more expensive (e.g social or private insurance). That's why we must reaffirm the founding principles of the NHS, committing to a long term funding settlement and a reform plan, and take time to consider what this means for the future of social care, which for too long has been sidelined in the funding and reform debate.

We must face these questions of financing and reform with honesty and realism. Our modelling shows that by 2030, demand pressures – without changes to the

way the NHS works – will rise to £200bn in today's prices. Pressures on social care are, if anything, even greater. As a minimum adult social care will require an extra £10bn by 2030; and that is just to maintain the existing system provision (which we know is inadequate and needs reform which will likely require even more resources). However, even if we were to put the NHS back on its long-run funding trajectory and fill the social care funding gap as set out above – requiring an extra £50bn on the NHS and £10bn on social care in tax contribution per year by 2030 – we would still need radical reform in the way the system works to drive productivity in the NHS up to 1.1 per cent p.a, around one and a half times its long-run trend of 0.8 per cent. This will not be easy, but is far from impossible. It is with this in mind that we turn our attention to the future, in the form of detailed funding and reform plan which we will publish in the lead up to the 70th anniversary of NHS.

PART 1:

INTRODUCTION

ENDURING PRINCIPLES, GREATER AMBITIONS

Health comes first, for all of us, our family, friends, neighbours and colleagues. Health is the purest form of wealth because it is what allows us to lead the best version of our life possible; it is the wellspring from which all our other experiences are made possible. Each of us will have different hopes and dreams, but we all share a common desire to be in the best *possible* health – even if we don't live up to that aspiration all of the time.

Health is much more than the absence of illness or disease. The World Health Organisation defines it as “a state of complete physical, mental and social wellbeing”. This definition is powerful because it sets a high bar and recognises that health is more than just a medical phenomenon. It also implies that increasingly the task of our health and care systems is not just to treat and cure but to prevent ill health as well as to provide care and support that builds independence and resilience in the face of chronic illness.

Health and care systems – traditionally defined – have a vital role to play in achieving this vision. Whilst the wider social determinants of health are important, even the least-generous estimates find that one-fifth of health outcomes are determined by traditional health policy (see Kuznetsova 2012). Another study suggests that this could increase to around two-fifths of health outcomes if all best practice interventions within health and care were implemented (Buck and Maguire 2015). Today, around a quarter of deaths in the UK are considered avoidable (e.g. treatable in the NHS or amenable to wider public health interventions) (ONS 2015a).

That's why, in 2008, the NHS Next Stage Review set out a clear vision for the health service: that it should aim for “high quality care for all”. That ambition was undoubtedly right, but it now needs to be broadened. We should aim to “enable and support people to lead their best lives, in a healthy and prosperous society”. That will mean being as concerned with social care as the NHS, and investing more in public health and prevention.

As Sir Michael Marmot has demonstrated, health outcomes are the result of a wide range of social determinants. Our health and wellbeing are determined by a range of factors, from employment to housing, the environment and our personal relationships. As we celebrate the 70th anniversary of the NHS we also need governments across the UK to make a reality of the WHO's “health in all policies” ideal. We must recognise that our health as individuals is inexorably entwined with the health of our communities. In the 21st century, we need greater recognition of ‘social health’.

That's why we must have higher expectations of each other: that we should contribute to improving our own health and that of our communities – whether at home, at work or at school. It is precisely because many people are trapped in

unhealthy living habits – not of their own choosing – that this country has so much potential for better health.

Our health is also a determinant of our prosperity. Better health is an investment in ourselves and each other: this means an individual's capabilities and assets, which in turn determine their economic potential (Grossman 1972). If a country's population as a whole sees an increase in health outcomes, this will in turn increase productivity and economic growth. In particular, better health can lead to an increase in productivity in the workplace and less absenteeism; improved educational outcomes for children; an increase in saving – and investment – due to longer life expectancies; and a demographic dividend due to larger working populations.

The health and care sector is crucial to our economic success. Ten years ago, 3.6 million people were employed across health and social care; today, 4.2 million people work across the sector – 13 per cent of all jobs in the UK (ONS 2018). The health and care sector is at the heart of the 'everyday economy' where most people work. Its success makes the difference for working households in all parts of the country.

It's also at the heart of our scientific and technological economy. Healthcare operates at the limits of science, with a constantly shifting frontier of what is possible. We have a world-leading life sciences sector which is vital for our international competitiveness and for growth in our national wealth. The government's ambitions in the life sciences industrial strategy command widespread support and skepticism at the same time. The main barrier to successful implementation is the funding of the NHS and the complexity of systems that exist as a result of the 2012 reforms.

In this interim report, we set out the evidence of what has happened to the quality of health and social care and how readily people can access the care they need. We explore what has happened to health and social care funding and make an assessment of the impact of the reforms to the sector. Finally, we turn to the future – describing the changes we are set to see in the 2020s and the future funding requirements for the health and care system.

Later this year, we will set out a reform plan for the 70th anniversary of the founding of the health service and the 50th anniversary of the Seebohm report which codified social care as we know it today. Our goal is to make health and social care fit for the future, so that we can be sure that in 30 years we will have the joy of celebrating a centenary for a thriving national health service.

PART 2:

THE QUALITY OF HEALTH AND CARE 10 YEARS ON FROM HIGH QUALITY CARE FOR ALL

It has often been said that to understand where you want to go, you must first understand where you have come from. In this section, we look at what has happened over the past decade: the progress that has been made, the setbacks that have occurred, and where we need to focus our attention in the coming years.

We begin by examining the health and wellbeing of the population, encompassing both the length and the quality of life for most people today. We then review the progress made in improving quality of care, before looking at the issues surrounding access to care that feature so prominently in the public discussion about the health and care system.

THE HEALTH AND WELLBEING OF THE POPULATION

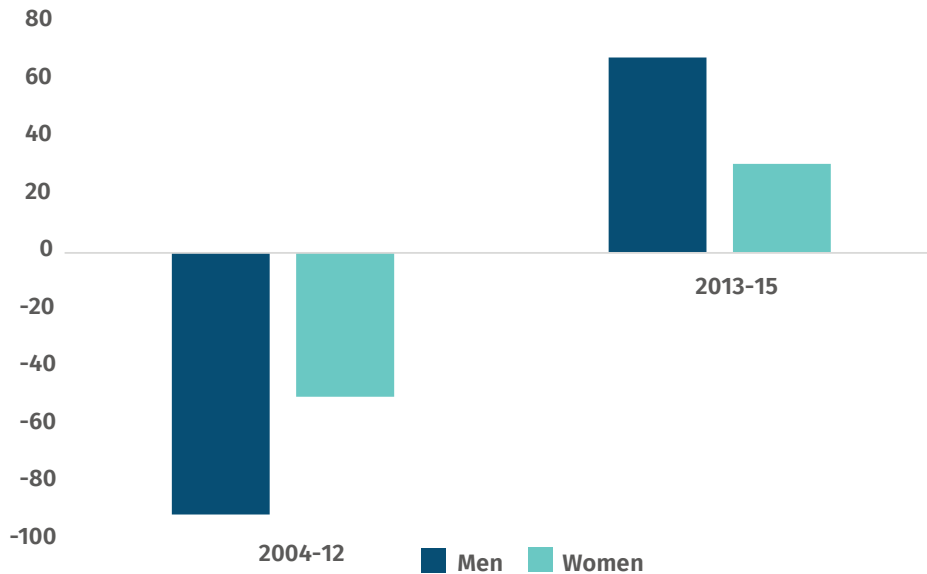
Life expectancy has continued to rise over the past decade but at a much slower rate than in other countries. The long trend of improvements in life expectancy – which doubled from about 40 years of age in 1841 to around 80 years today – has continued during the last ten years, standing at 82.9 for women and 79.2 for men (ONS 2015b). This demographic transformation is set to continue: recent projections published in the Lancet show that life expectancy could soon exceed 85 years (Kontis et al (2017)). Yet this is not inevitable: the rate of growth in life expectancy has slowed down significantly in recent years. Since 2010, it has halved compared to the rest of the post-war period. Moreover, the UK is an outlier in this regard – similar slow-downs in the rate of growth in life expectancy have not been seen in other European countries (Marmot 2017a). This is a cause for serious concern.

Longer lives are not necessarily healthier lives. We want to lead better as well as longer lives: people want to maintain their independence, participate fully in society and enjoy the extra years of life they have gained. As with life expectancy, there is significant evidence that quality of life has increased over recent years. For example, since 2000 healthy life expectancy for men increased from 60.6 to 63.4 years and for women from 62.5 to 64.0 years (PHE 2017a). However, healthy life expectancy has not been increasing at the same pace as life expectancy over the last decade. This means that people are now living longer in ill health.

There has been a large increase in the number of people who are living with two or more long-term conditions. As it stands, one in four of us in the UK are in this position – rising to two-thirds of people aged 65 years and over. This number is likely to increase as our population ages. This transformation – part of the shift from acute to chronic illness – flips our definition of health on its head: aiming to achieve the absence of disease in this cohort of people is completely unachievable, instead we must focus on helping people to manage, adapt and make the most of life in the presence of chronic illness.

FIGURE 2.1

Having improved for a number of years, health inequalities are getting worse again
Annual change (months) in absolute gap in life expectancy between most deprived LAs (20 per cent) and rest of England, 2004-12 and 2013-15



Source: BMJ 'Investigating the impact of the English health inequalities strategy: time trend analysis' (BMJ 2017a).

Inequality in life expectancy is severe – and getting worse. Inequalities in England as it stands are unacceptably large. Women in the most prosperous areas of country live, on average, seven years longer and have 20 additional years of good health. The comparable figures for men are nine and 19 (PHE 2017b). These differences – whilst narrowing for much of the period – have started to grow once again (BMJ 2017a). Between 2004 and 2012 – during a period of considerable action on health inequalities – the gap narrowed; but from 2013 to 2015, this trend started to reverse. Performance on all 15 of the health inequality indicators in the NHS Outcomes Framework have deteriorated (Buck 2017). This is of serious concern and should have attracted more concern from politicians and more public debate. Yet even this does not tell the whole story.

There are particularly acute health inequalities for groups at the margins of society. These include people living in poverty as well as rough sleepers and those engaged in substance misuse. These marginalised groups have especially poor health outcomes. A recent study in *The Lancet* found that socially excluded populations have a mortality rate that is nearly eight times higher than the average for men, and nearly 12 times higher for women (Marmot 2017b). Likewise, research has also shown that people with severe mental health problems such as bipolar disorder or schizophrenia live on average 15 to 20 years less than the general population (Naylor et al 2016). For these groups, the so-called 'inverse care law' applies: they are in the most need but are the least likely to access services. In the past 10 years, marginalised groups have increased in number at an alarming rate. The number of rough sleepers in England increased by 372 per cent between 2010 and 2018 (MHCLG 2017). In 2015, 6.1 per cent of households were living in severe material deprivation, unable to afford essential items for modern life (Eurostat 2017). A new approach is now needed which sees services proactively reach out rather than passively wait for these groups to access care.

Lifestyles are, on the whole, getting healthier. There is good news on both tobacco use and alcohol consumption. Smoking has continued to decline, falling by 2 per cent a year on average between 2008 and 2015 (Carnall Farrar Analysis). This is good news and suggests that public health measures such as tobacco control measures have succeeded and should continue to be strengthened. Alcohol consumption rose steadily from 1960 to peak in 2004; since then, it has consistently fallen so that it is now back to its mid-1990s level. This largely reflects increases in alcohol duties that have successfully reigned in consumption. More now needs to be done to maintain this trajectory.

Things are bleaker in terms of obesity and substance misuse. Obesity rates for adults have plateaued, showing barely any increase in the past 10 years. Similarly, obesity rates for children in reception have remained flat. However, obesity rates for children in year six have increased at a significant pace – around 5 per cent a year for the past decade. Likewise, whilst overall rates of illegal substance consumption – at around one in 12 people – are significantly down on a decade ago, the associated costs of drug use have continued to rise. For example, drug related hospital admissions are significantly higher than a decade ago and overdose deaths are at the highest rate since records began (NHS 2017a).

Wellbeing has been steadily rising. There is not a single measure of wellbeing, but a composite of various different metrics. The three most important measures – each of which are necessarily subjective – are happiness, life satisfaction, and feeling that ‘what you do is worthwhile’. Across each of these self-scored metrics, measurable progress has been made since they were first collected by the ONS in 2011 (ONS 2018b; ONS 2018c). This overall improvement in wellbeing runs counter to the national narrative that is more negative. The question is whether wellbeing is evenly distributed; or whether some lives are getting better while others becoming bleaker. The evidence is starting to suggest that society is pulling apart: that while for many, lives are good and improving, life for far too many is hard and getting tougher.

There has been an explosion in rates of mental illness over the past decade, especially for children. There has been an increase in the prevalence of all mental illnesses, with more significant increases in common mental health problems such as anxiety and depression. This increase is particularly pronounced for children and young people, where there has been a 3 per cent increase in the number of young people reporting symptoms since 2010. This equates to nearly one in five young people (considerably more than official diagnoses) (ONS 2017). The number of people with an eating disorder has also grown rapidly: admissions to hospital for people with life-threatening eating disorders have almost doubled over the past six years (Marsh 2018). This is not all bad news: these trends are partly the result of significant efforts to reduce the stigma associated with mental illness and thus to increase reporting. But, there is also evidence that changes in the economy and society – the rise in insecure work, the reductions in public expenditure and the rapid growth in social media – are factors that have contributed to the rise.

There is a new epidemic of loneliness. There have never been more ways for us to connect with each other – we live in a hyper-connected world – and yet rates of social isolation and loneliness have never been higher. Virtual friendships are no substitution for friendships in the real world. The rise in loneliness and isolation is a problem that is found across society. Almost seven million adults – more than one in eight of us (13 per cent) – report having no close friends. This is up from one in 10 in 2014 (Relate 2017). But, the problem is particularly acute in older people: a recent poll conducted for the Jo Cox Commission on loneliness found that up to three-quarters of older people in the UK are lonely (Siddique 2017). Social isolation reduces wellbeing and leads to poorer health. Indeed, feeling lonely has the same

impact on health as smoking 15 cigarettes a day, and is worse for us than well-known risk factors such as obesity and physical inactivity (Holt-Lunstad et al 2015).

QUALITY OF HEALTH AND SOCIAL CARE

We now turn to our assessment of what has happened to the quality of health and care over the last decade. In 2008, the ambition was set to provide high quality care for all. *High Quality Care for All* emphasised the importance of taking patients' perspectives – rather than a systemic perspective – by providing a new, single definition of quality of care that started with individuals and their experiences.

The 2008 review made an important distinction between quality of care, access to care, and cost of care. This definition has support from across the NHS and is embedded into core regulatory processes. Some have suggested that the definition of quality should be expanded to include equity and efficiency. That suggestion should be rejected: equity of outcome and efficiency are both essential and important. But they are fundamentally different from the quality of care that an individual receives.

For the first 60 years of its existence, the health and care service put greater emphasis on access to care and cost of care. In the past 10 years, there has been an unprecedented focus on quality – in this section, we review the evidence, and discover that the approach has paid off. Despite all the challenges facing the service over the last decade the evidence is clear that the quality of care has improved. Here's how.

BOX 1: WHAT IS QUALITY OF CARE?

High Quality Care for All made the argument that quality of care was best understood from the perspective of the patient or service user. It made a clear distinction between access to care – receiving the care required in a timely and convenient fashion – and quality of care. The report brought clarity to quality by defining three distinct dimensions:

- **Safety.** The first dimension of quality must be that we do no harm. This means ensuring the environment is safe and clean and as harm and error-free as possible. It is particularly true for those that are most vulnerable, especially for older people at home, in care or nursing homes, or healthcare facilities.
- **Effectiveness.** This means providing care that works as effectively as possible. This can range from maintaining mobility and independent living to providing the evidence-based therapies and treatments or to survival rates for complex surgery.
- **Experience.** This means care that is caring: providing services with compassion, dignity, and respect. It also means an experience of interacting with services that is convenient and similar to the standards of service we would expect in other areas of life.

We begin by examining the quality of social care. We then explore what has happened to quality of health care, organised using a number of the 'pathways' of care as described in *High Quality Care for All*. More analytical detail is set out in the chart book that is published alongside this report. Quality of care is an area of significant academic study. We do not pretend that this report can review all of the available evidence for every aspect of healthcare. We have selected a range of measures that give an overview – not every success will be celebrated nor every setback recognized. The goal is to be able to make a broad and holistic

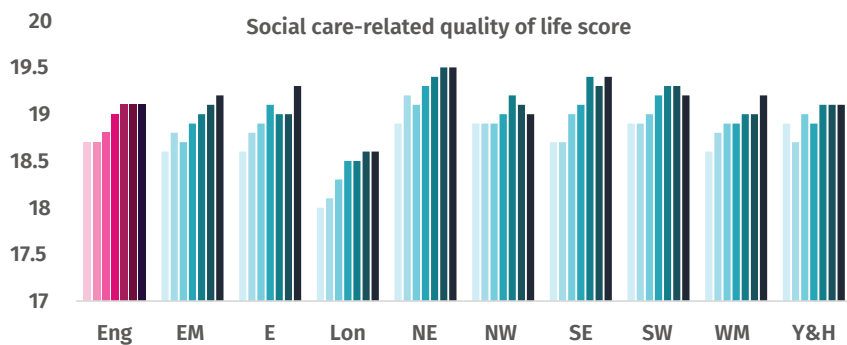
assessment for the public and for policymakers, not to give the definitive account of quality of care in every possible specialty or service.

Social care

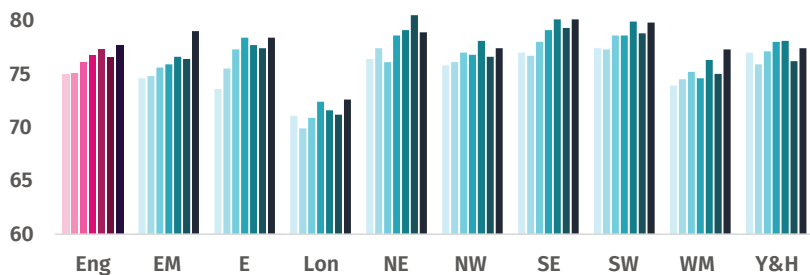
Local government has done well to maintain – or improve – the quality of care over recent years. Given the vulnerability of people using adult social care and the important job providers do, it is right they are subject to rigorous assessment by the Care Quality Commission (CQC). Evidence from the CQC finds that four-fifths of social care provision is either good or excellent (CQC 2017a). Moreover, there are signs of improvement: 82 per cent of adult social care services that CQC originally rated as inadequate improved their rating upon re-inspection (ibid). These results are corroborated by national survey data of recipients of adult social care, which finds that the proportion of people registering an improvement in quality; safety independence and control over their life has increased; however, the proportion of people who have as much social contact as they would like has remained stubbornly low, below 50 per cent across every region of England (see figures 2.2, 2.3, 2.4 and 2.5).

FIGURES 2.2, 2.3, 2.4 AND 2.5

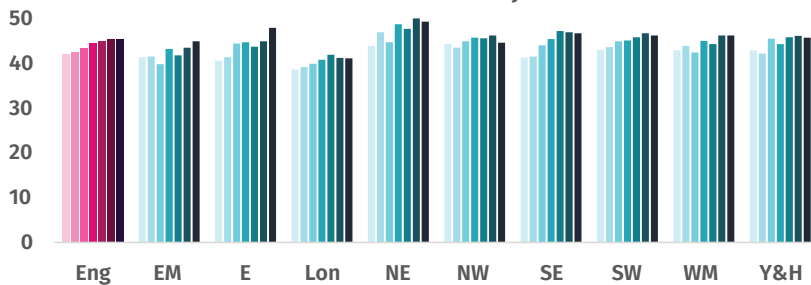
Quality in social care has been improving despite the cuts
Self-reported quality metrics in adult social care, 2011-2017



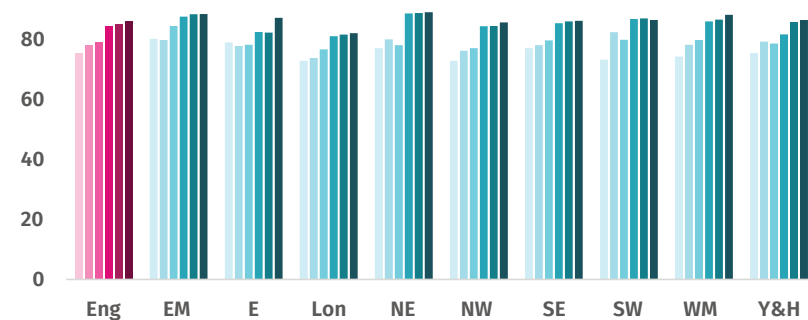
85 The proportion of people who use services who have control over their daily life



60 The proportion of people who use services who reported that they had as much social contact as they would like



100 The proportion of people who use services who say that those services have made them feel safe and secure



Source: NHS digital; Measures from the Adult Social Care Outcomes Framework (ASCOF), England, Carnall Farrar Analysis

Mental health

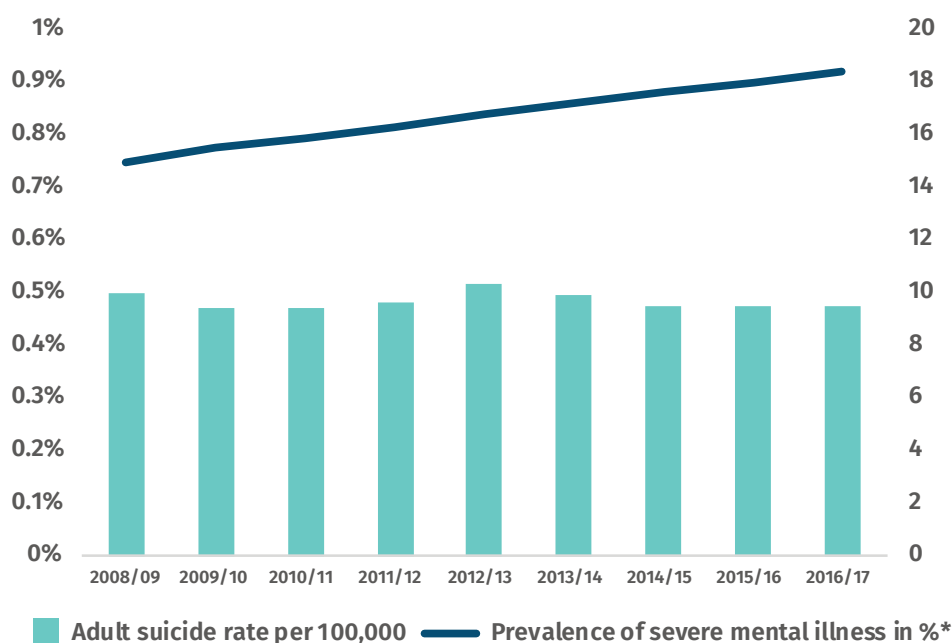
There are clear signs of progress in the quality of mental health care but we remain some way off ‘parity of esteem’. Recovery rates for adults with anxiety and depression have been improving over recent years (with IAPT recovery targets met since 2016-17) (Carnall Farrar Analysis). Furthermore, there has been a decline in deaths by suicide in England from 10 to 9.5 deaths per 100,000 people between 2008 and 2016 (see figure 2.6). This is corroborated by CQC ratings which show that by 2017, 68 per cent of NHS provided mental health services were rated as good (72 per cent of privately provided services). A further 6 per cent of NHS services (and 3 per cent of privately provided services) were rated as outstanding. Nearly 90 per cent of NHS services were found to be caring and compassionate towards their patients (CQC 2017b).

However, these improvements are from a very low base: mental health has long been the poor relation to acute physical health, reflected in the differential in access, quality and funding levels across the different sectors. The CQC has noted that “too much poor care, and far too much variation in both quality and access across different services”. The CQC’s State of Care in Mental Health Services found that a quarter of NHS core services required improvement and that 1 per cent were inadequate. Nearly 40 per cent of NHS core services were rated as either “requires improvement” or “inadequate” for safety (ibid). For mental health services, the NHS still fails to get the basics right too much of the time: poor quality inpatient environments; unsafe staffing levels; and poor medicines management in the community all feature.

FIGURE 2.6

Prevalence of severe mental illness has been going up. Deaths from suicide have dropped from 10.3 to 9.5 per 100,000 between 2012/2013 and 2016/2017

Prevalence of severe mental illness and suicides, 2008/09-2016/17



*Schizophrenia, bipolar disorder, or other psychoses

Source: QOF, NHS Digital, ONS, Carnall Farrar Analysis

There is no doubt that this is partly due to money: whilst the government has promised to put more money into mental health services, many mental health

trusts report a decrease in income since 2012 (Gilbert 2018). Yet there has also been the persistence of restrictive practices – these are about commissioning choices, culture and practices in providers, rather than funding. These include long-term locked facilities for rehabilitation – some 3,500 beds, two-thirds of which are in the private sector – and the continuing use of avoidable prone restraint. These must change.

Staying healthy

We are starting to see a reversal in the progress made on vaccinations and immunisations. Both are an essential feature of a civilised society: by collectively achieving ‘herd immunity’ we protect one another as well as ourselves from diseases that once claimed many lives. The UK is internationally recognized for the quality of its evidence-based screening programmes. Yet the last decade has not been one of universal progress. For example, there have been small declines in immunisation rates for diphtheria, tetanus, polio, pertussis and influenza b (hib) since 2012/13 (NHS 2017b). Likewise there has also been a fall in flu vaccination uptake since 2010 (Carnall Farrar Analysis). These trends are significant not because of the absolute fall in immunisation rates – which is small – but the reversal of an improving trajectory.

Overall STI’s are down, but there are a number of notable exceptions. Sexual health services have undergone dramatic change since commissioning was transferred from the NHS to local authorities. There has been significant innovation in provision with more people accessing services despite less funding (PHE 2016) with STI infections down since 2008. Nonetheless, there are reasons for concern. Investment in sexual health has fallen significantly (BMJ 2017b). This is putting pressure on both quality and access which is contributing to a rise in some STIs since 2008 – including chlamydia, gonorrhoea and syphilis (PHE 2016b). There is better news on HIV with the rate of new diagnosis still falling and 96 per cent of those diagnosed in treatment (PHE 2016c). However, there is also evidence that funding cuts combined with the fragmentation of sexual health services – a result of the 2012 Health and Social Care Act – is leading to challenges in accessing the best new treatments (APPG on HIV and AIDS 2016).

Maternity and newborn care

We have seen significant improvements in maternity and newborn care, but unwarranted variation remains significant. More mothers and babies are surviving the process of childbirth than ever before. The maternal mortality rate has fallen at an impressive 5.2 per cent average annual rate, and infant mortality has also dropped by around 2 per cent annually (Carnall Farrar Analysis). These improvements should be celebrated.

However, there is too much unwarranted variation. Studies have shown that – after controlling for clinical risk factors and socio-demographic factors – there remains wide variation in care (RCOG 2017). Overall, 55 per cent of all first-time mothers had some form of intervention during labour and delivery. There was an almost two-fold difference between NHS trusts with the lowest and highest rates of emergency caesarean sections (8 per cent and 15 per cent) (NHS 2015). This level of variation cannot be readily explained and should not be accepted.

Similar trends are found in neonatal mortality, which has improved since 2008, falling from 3.2 per 1,000 live births to 2.6 per 1,000 in 2016. Nonetheless, the neonatal mortality rate remains the second highest in western Europe (World Bank 2016). This shows that there is still room for further improvement – though achieving an improvement will require a better start to life for newborns at home as well as in the hospital.

Acute care

There have been significant improvements in the quality of major trauma care. Events like the terrorist attacks in Manchester and London in 2017 highlight the importance of excellent quality trauma care. There has long been a recognition that major trauma care in the UK was subject to significant variation and was below the standard of other developed countries (Gabbe 2011). This has resulted, over the last decade, in a change programme with trauma care consolidated into a network of 27 Major Trauma Centres (MTCs). These facilities, unlike most general hospitals, operate at scale and have access to the latest equipment and expertise leading to better outcomes. More people are now accessing this expertise (from 13,358 in 2011 to 26,486 in 2016) as a result of improvements in pre-hospital triage which mean that people are bypassing general hospitals altogether to receive specialist treatment. This has resulted in an impressive 20 per cent increase in the probability of surviving trauma across the UK population since 2012¹. This equates to about 500 additional survivors per year or 3,000 people since the changes were implemented.

There has also been an upward trend in the quality of stroke care since *High Quality Care for All*. Since 2008, there have been major quality improvements in stroke care. The 30-day mortality rate has dropped from 21 per cent to 16 per cent as a result of higher quality care (Carnall Farrar Analysis). Likewise, there has been a staggering 47 per cent increase in the number of hospitals scoring highly (an A or B) on the Sentinel Stroke National Audit Programme (SSNAP), which measures quality for stroke services. This has been driven by a number of factors: some areas such as London and Manchester have restructured stroke services into a smaller number of specialist sites which has significantly improved outcomes (increased survival rate and reduced cost). The number of patients receiving a scan within one hour of arrival at hospital has increased with a median time of 55 minutes and 13 per cent of patients with ischaemic stroke receive intravenous thrombolysis compared to 1.8 per cent 10 years ago. However, these improvements largely took place from 2008 to 2014; in the past four years, the rate of treatment has not changed. Moreover, variation in access to a scan within an hour and thrombolysis remains significant (Bouverie 2017).

Planned care

Cancer survival rates have steadily improved, but we still lag behind our neighbours. Since 2008, 1 year survival rate for all Cancers has risen from 67 per cent to 72 per cent in 2015 (with similar increases in five year survival rates as well (Molloy et al 2017))(Carnall Farrar Analysis). This has partly been driven by efforts to catch cancer earlier, something facilitated by increased use of cancer screening and check-ups (ibid). However, whilst the trajectory is largely positive it is worth recognizing that on most metrics we are still one of the poorest performers on cancer treatment and outcomes in the OECD (ibid). Moreover, there is significant variation in quality across the NHS: for example, the proportion of patients diagnosed at stage 1 and 2 varies from 46.3 per cent to 60.8 per cent by CCG and patients receiving modern intensity-modulated radiotherapy ranges from 23 per cent to 69 per cent (Cancer Research UK 2018). Cancer treatment is undoubtedly an area where there still room for improvement in the years to come.

Primary medical care

Quality in primary care has improved; but patients haven't felt it. As the BMJ recently put it: "if general practice fails, the whole NHS fails" (Roland 2016). For most people, their GP is their first point of call and the only person in the NHS with which they have an ongoing relationship. Primary care is widely regarded as one of main strengths of our system in the UK. The evidence suggests it has

¹ Submission of evidence from Professor Keith Willett, data from <https://www.tarn.ac.uk>

been improving as well: median total Quality Outcome Framework (QOF) scores – a composite measure of quality in primary care – increased by 2.7 percentage points between 2010/11 and 2016/17 (Carnall Farrar Analysis). This is a significant achievement in light of the increasing pressures on the frontline (though it is worth noting that there has been some fluctuation over the period). Likewise, CQC finds that nine in ten practices are providing good or outstanding care to their patients – with an improvement in performance over the period (CQC 2017c). However, this improvement in quality has seemingly not been felt by the beneficiaries of primary medical care: the proportion of patients scoring their GP experience as ‘very good’ or ‘fairly good’ has decreased by 3.7 percentage points since 2012 (Carnall Farrar Analysis) with public satisfaction in GPs down as well (Robertson 2018).

Long-term conditions

There has been steady progress in improving the quality of care for diabetes.

NICE recommends eight care processes for people living with diabetes, including tests for blood pressure, cholesterol, blood sugar and kidney function. In 2007 36.7 per cent of patients received all of the recommended care processes; this has increased to 52.6 per cent in 2016 (though it is down from its peak of around 60 per cent in 2010) (Molloy et al 2017). There has also been an increase in the number of people achieving all three NICE-recommended treatment goals for people with diabetes: controlling blood sugar levels, and reducing blood pressure and cholesterol (18.1 per cent of people with type 1 diabetes in 2016 up from 16.5 per cent in 2011; and 40.2 per cent of people with type 2 diabetes up from 35.1 per cent over the same time period) (ibid). Moreover, in a recent study comparing quality in 30 European countries, the UK was ranked fourth behind only Sweden, the Netherlands and Denmark (ibid).

Safety of healthcare

There has been significant progress over the last decade on patient safety in the NHS.

The percentage of patients receiving harm-free care has increased by approximately 2 percentage points since 2012, stabilising at just over 94 per cent of patients (Carnall Farrar Analysis). There has also been a reduction in the number of pressure ulcers (6 per cent to 4 per cent) (ibid). Likewise, MRSA and Clostridium Difficile Infection (CDI) rates are down, though other forms of healthcare associated infections such as MSSA have been increasing (ibid). Meanwhile, whilst there has been a slight increase in ‘Never Events’,² which were introduced as part of *High Quality Care For All*, – up to 451 in 2016/17 from 338 in 2013/14 (the earliest year with directly comparable data) (NHS 2018) – this is largely explained by increases in the number of patients using the service over the period and the increase in the number of events included on the list.

All of this implies that the health secretary’s focus on patient safety is paying off; however, that is not to say that gaps do not remain.

In the wake of a number of high profile patient safety controversies in recent years – from Mid-Staffs to Winterbourne View to Morecambe Bay – the health secretary has rightly made patient safety a significant priority. This push has included the introduction of a ‘duty of candour’ in all hospital trusts to ensure incidents are reported; the inclusion of patient safety in the CQC inspection regime and the creation of a fully independent investigations body. As the evidence presented in this paper shows, this would appear to be paying off. However, as recent events at Liverpool Community Trust demonstrate, failures in safety and patient experience are not entirely a thing of the past (Kircup 2018), with ongoing funding and workforce pressures undoubtedly risking the progress made so far (Booth 2018).

2 Defined as serious, preventable patient safety incidents that should not occur if healthcare providers have implemented existing national guidance or safety recommendations.

The UK has been a leading voice in the campaign to prevent antimicrobial resistance (AMR) but much more is needed in the coming years. Many existing antimicrobials are becoming less effective. Bacteria, viruses and fungi are adapting and becoming increasingly resistant to the medicines used to treat the infections they cause (DHSC 2013). Inappropriate use of these valuable medicines has helped create this problem. There is an urgent need to reduce antimicrobial usage across the world. The UK has been a leading voice in the international movement to control the use of antimicrobials (UN 2016). Domestically it has put together a robust strategy to achieve these objectives (DoH 2013). There has been some progress to-date with consumption of antibiotics in England declining by 5.1 per cent between 2012 and 2016, however, significant variation remains (PHE 2017c).

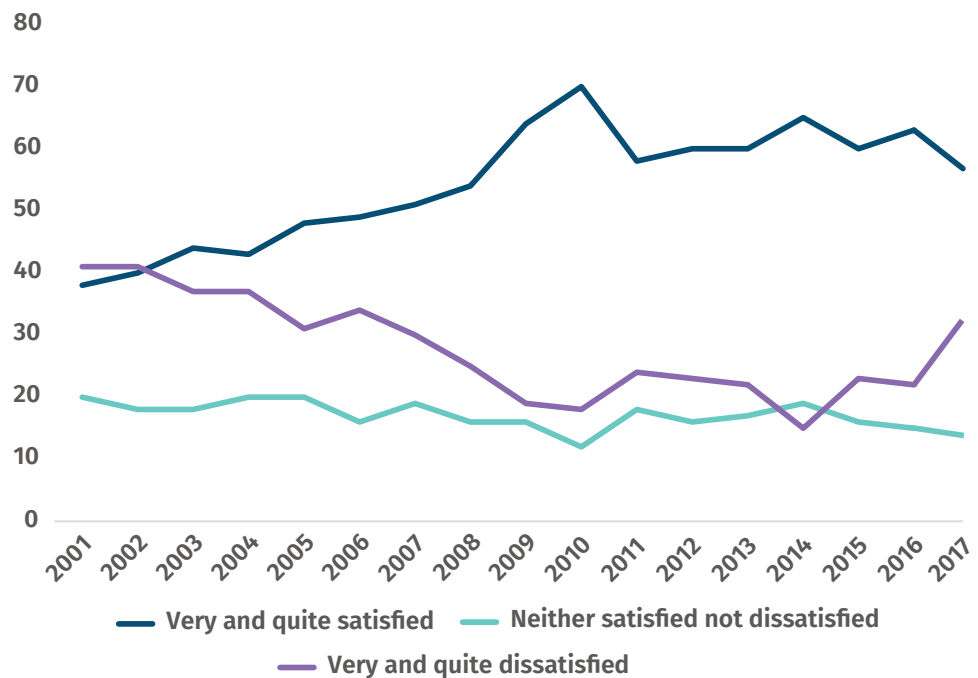
Patient experience and public satisfaction in the NHS

Experience metrics paint a more mixed picture. Patient reported outcome measures (PROMs) show neither a significant improvement or worsening in patient experience of healthcare. For example, the percentage of patients who would recommend their hospital to friends and family (widely considered the best survey metric for quality) has remained relatively stable over the period (Carnall Farrar Analysis). However, these results contrast significantly with the evidence from the British Social Attitudes Survey which show that public satisfaction as a whole for the NHS sits at just 57 per cent of the population – down 6 per cent since 2016 – and at just 23 per cent for social care (Robertson et al 2018) (see figure 2.7). This is likely to be largely down to the wider public conversation about both the health and social care services – particularly in the media – being one of crisis and system failure.

FIGURE 2.7.

Public satisfaction with the NHS has reached a tipping point

Public satisfaction with the NHS, 2001-2017



Source: King's Fund analysis of NatCen's British Social Attitudes survey data

BOX 2: THE SEVEN STEPS OF QUALITY IN HEALTH AND CARE

High Quality Care for All in 2008 was a conscious effort to put the quality of care – rather than just access and cost – at the centre of policymaking. It provided the NHS – but not social care, which at the time sat outside of the review’s remit – a national definition of quality, announced the formation of the National Quality Board (NQB) to provide system leadership for quality and described an NHS Quality Framework for the system as a whole.

Since then a lot has changed – most obviously the funding available to the NHS and the 2012 Health and Social Care Act – but the objective of *High Quality Care For All* has remained, as demonstrated by the *Five Year Forward Views* commitment to ‘closing the care and quality gap’ as one of the system’s strategic objectives. However, as highlighted by recent work undertaken by the Health Foundation there is a need to refresh and revitalise the quality agenda a decade on from *High Quality Care For All* (Molloy et al 2016).

TABLE 2.1: REVISED QUALITY FRAMEWORK

	2008 Framework	Modified Framework
1	Bring clarity to quality. This means being clear about what high quality care looks like in all specialties and reflecting this in a coherent approach to the setting of standards.	Set direction and priorities. Setting clear quality priorities and an agenda for the system based on policy initiatives from the Mandate other national reports (eg State of Care) and desired outcomes and performance data.
2	Measure quality. In order to work out how to improve we need to measure and understand exactly what we do. The NHS needs a structured quality measurement framework at every level.	Bring clarity to quality. This means being clear about what high quality care looks like in all specialties and reflecting this in a coherent approach to the setting of standards.
3	Publish quality performance. Making data on how well we are doing widely available to staff, patients and the public will help us understand variation and best practice and focus on improvement.	Measure and publish quality. Harnessing information to improve quality of care through performance and quality reporting systems that provide feedback to providers of care at systemic, institutional or individual levels; and information to users and commissioners of services for accountability and choice.
4	Recognise and reward quality. The system should recognise and reward improvement in the quality of care and service. This means ensuring that the right incentives are in place to support quality improvement.	Recognise and reward quality. Recognising and rewarding improvement in the quality of care and service through financial and non-financial recognition (eg enhanced reputation or prestige).
5	Raise standards. Quality is improved by empowered patients and empowered professionals. There must be a stronger role for clinical leadership and management throughout the NHS.	Build capability. Improving leadership, management, professional and institutional culture, skills and behaviours to provide quality assurance and improvement.
6	Safeguard quality. Patients and the public need to be reassured that the NHS everywhere is providing high quality care. Regulation – of professions and of services – has a key role to play in ensuring this is the case.	Safeguard quality. Using regulation to improve health and care, to guarantee minimum acceptable standards and to reassure the public about quality of care.
7	Stay ahead. New treatments are constantly redefining what high quality care looks like. We must support innovation to foster a pioneering NHS.	Stay ahead. Developing research, innovation and planning to provide progressive, high quality care. This should also specifically aim to harness the benefits of big data and artificial intelligence.

For the progress of the last decade to be sustained and accelerated we need a new 'National Quality Strategy' that addresses both health and social care. It should be refreshed yearly with a comprehensive update every five years. It should set out the priorities for progress and the steps necessary to achieve them. It should include quality goals and reaffirm the definition of quality of care from *High Quality Care for All*. The new 'National Quality Strategy' should be developed through a process of engagement with frontline staff and should be facilitated nationally but led locally. Crucially, it will require the buy-in from patients, users of services, carers, and the public as well as resources for implementation from national government.

Conclusions

Over the past decade, quality has improved across many parts of the health and care system. There is an enormous amount for NHS and social care staff to be proud of – with major improvements in effectiveness and safety. These successes deserve to be celebrated, especially given the financial context in which they have been achieved. Relentlessly raising the quality of care has been firmly embedded as the narrative purpose of the health service. In the midst of the arguments about waiting times and funding, we should not lose sight of the fact that quality of care in the NHS has never been higher. It is a health service worth investing in.

Nonetheless, there also remains far too much variation in the quality of care: the distance between the best and the rest remains far too wide. In too many areas – particularly cancer and mental health services – improvement has been from a low base, with other countries performing significantly better. Furthermore, there is increasing evidence that we are reaching a tipping point with the drivers of improvement coming up short given the pressures on the system. As we celebrate improvements, we must also frankly acknowledge that there is a lot more to do.

ACCESS TO CARE

As we have demonstrated, the past decade has seen the quality of health and social care either improved or at least maintained. The same cannot be said for access to services. Across virtually every aspect of health and social care services there have been either denial of publicly-funded care or lengthening waiting times.

The past decade has seen demand for care continuing to rise – as it has done for at least the past 70 years. With huge cuts in central government funding to local authorities and the slowest decade of funding growth for the NHS since it was founded, both health and social care have experienced a return to rationing.

Access to social care

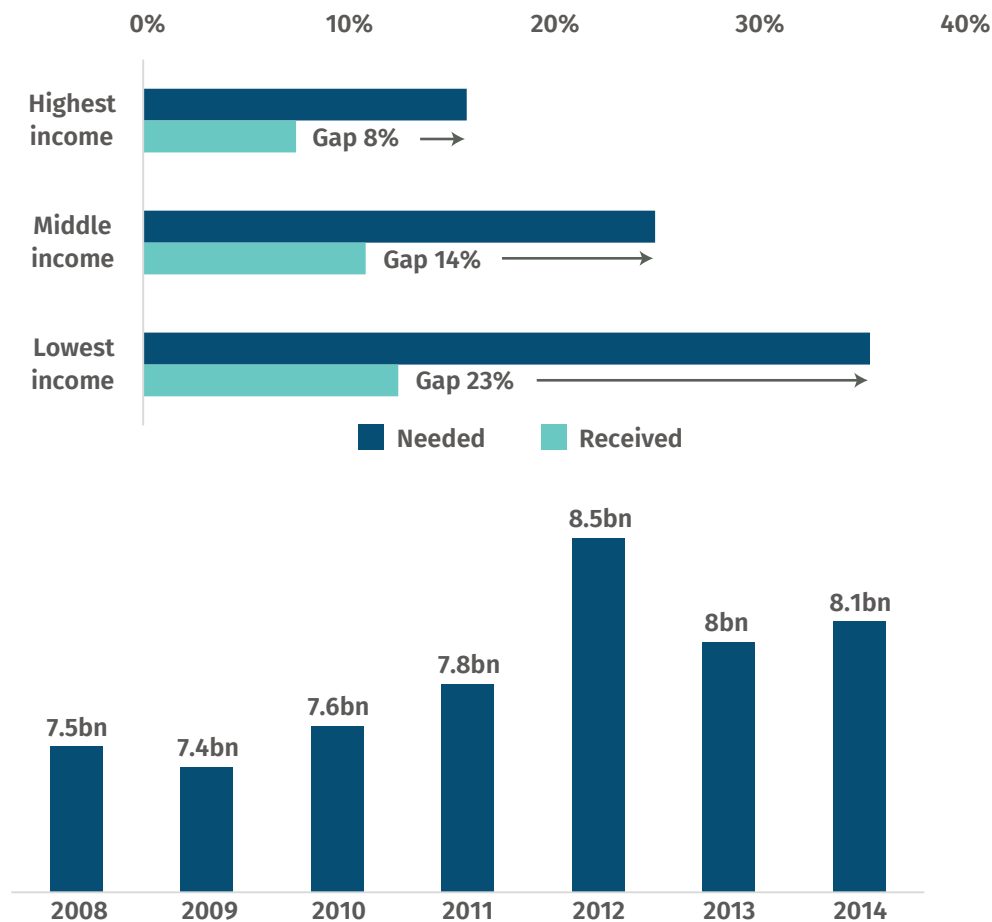
The most severe deterioration in access has been to social care. Publicly funded social care in England has always been rationed according to need and financial means. However, as a result of the financial pressures on local government – and despite national thresholds for access in the sector – fewer and fewer people have been able to access the care they need. Notably, since 2008/09 there has been a staggering 5 per cent drop in the number of people receiving publicly funded social care per year despite a significant increase in the number of elderly people in need of care (Carnall Farrar Analysis).

This reduction in state funded support for social care needs is pushing more responsibility onto people to self-fund care, rely on informal care or go without (see figure 2.10) (Age UK 2017). For example, Age UK has found that the proportion

of people who provide unpaid care for family and friends has risen from 16.6 per cent of the population in 2011 to 17.8 per cent in 2015. Moreover, there is evidence that the intensity of care that they are required to provide has also increased.

FIGURES 2.9 AND 2.10

Deteriorating access in social care is putting more pressure on families and individuals
Gap between help needed and help received in social care and total hours of informal care



Source: Health Survey for England, ONS

Meanwhile, there are now nearly 1.2 million people aged 65-plus who do not receive the help they need with essential tasks of daily living (ADLs) such as eating, bathing and dressing (up 50 per cent since 2010) either in the form of formal or informal care (Age UK 2017). Unsurprisingly, this gap between needs and provision is greatest amongst those on the lowest incomes (see figure 2.9).

Access to mental health services

Progress on access for mental health provision – as set out in the Mental Health FYFV – has been made but we are still way off parity of esteem. The service has consistently delivered on its target to treat more than 75 per cent of adults with anxiety and depression within six weeks as part of its Improving Access to Psychological Therapies (IAPT) programme (Carnall Farrar Analysis).³ Likewise, both the two week referral to treatment target and the acute hospitals ‘core 24’ service

³ IAPT services are characterised by: evidenced based psychological therapies; routine outcome monitoring; and regular supervisions.

standard is being achieved (ibid). However, in other areas areas – for example, treatment for young people with eating disorders – we are still falling short of the 2020/21 targets (ibid). More importantly, across the board the targets set – both in terms of their level and in terms of their breadth and depth – are some way off real ‘parity of esteem’.

Access to urgent and emergency care

There has been a deterioration in access to urgent and emergency care over the past decade. Over the period the number of people using urgent and emergency care - in particular A&E - has risen significantly. Even so, there has been a failure to consistently meet targets for ambulance response times for 999 calls where there is an immediate threat to life since 2013/14 (Molloy et al 2017). From 2008 to 2010, the NHS consistently met the target of 98 per cent of people admitted, transferred or discharged from A&E within four hours. In 2010, the target was loosened to 95 per cent. Since then, the number of people waiting for more than four hours has steadily risen so that there has been a five-fold increase in the numbers waiting longer than the standard (see figure 2.11) (Carnall Farrar Analysis). Moreover, there has been a staggering eight-fold increase in the number of trolley waits of more than four hours (ibid).

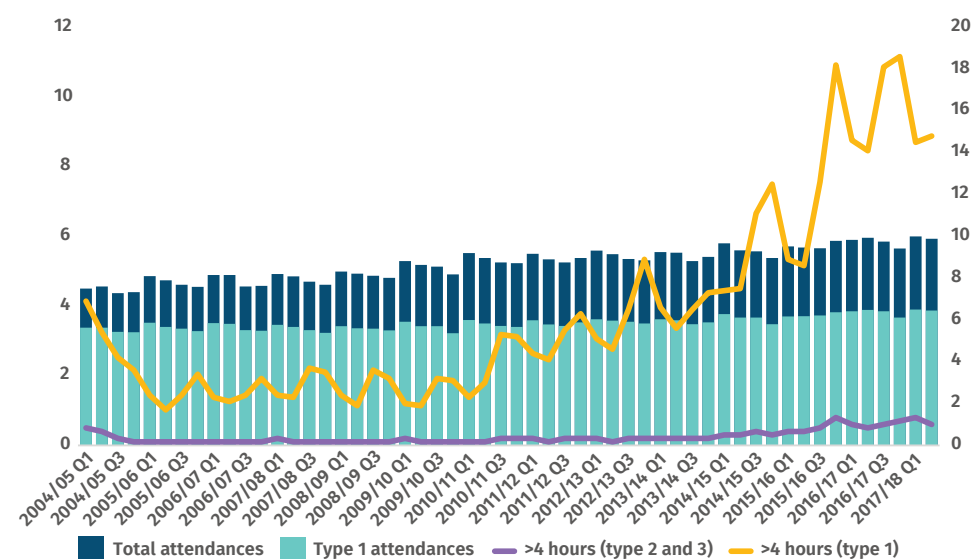
Access to planned care

There have also been significant delays in non-urgent and planned care. Patients needing consultant-led treatment are expected to start treatment within 18 weeks of referral by their GP. However, this target has not been achieved since the start of 2016/17 (ibid). Likewise the acute hospitals' 'core 24' service referrals for treatment by consultants are on average taking 1.5 weeks longer than in 2008 and the percentage completed within 18 weeks has dropped from 88 to 76 per cent (ibid). Some areas have experienced an improvement – for example, the two week wait from urgent GP referral for cancer to seeing a consultant has been consistently met – but overall performance has deteriorated.

FIGURE 2.11

Waiting times in A&E have risen significantly

Number of people using A&E and waiting for more than four hours in A&E, 2004-2018



Source: NHS Digital, Carnall Farrar Analysis

Access to primary and community care

The evidence suggests access and timeliness in primary and community care has also been deteriorating. In primary medical care there have been some improvements in access. Notably, 17 million people are now able to access GP appointments at evenings and weekends (NHS 2014) where they could not before. However, this does mean that everything has been getting better. The number of patients seen by a nurse or GP the same or following working day after contacting the surgery has fallen by 3 per cent in the last six years (Carnall Farrar Analysis). Moreover, patient surveys find that one in three people now wait more than a week for an appointment, with one in 10 failing to get one at all (Donnelly 2017).

As well as delays in admitting people into hospitals, there have also been problems with discharging patients back to their home or the community. Between 2010 and Q4 2016 delayed transfers of care (DToC) have grown three-fold but has since improved (Carnall Farrar Analysis). Nearly 2.3 million hospital bed days were lost to delays in 2016/17 (up from 1.4 million just five years before) (Andrews et al 2017). This is costly to the NHS – and is contributing to delays in the admission of patients at A&E – but it is also damaging to the people who are left in hospital too long (ibid).

Moreover, this understates the scale of the problem. Recent bed audits have found that 30 per cent of acute beds and 36 per cent of community beds are occupied by patients who are medically fit to leave. This is four times the official DToC figures (ibid). On an annualised basis this is costing the NHS around £3 billion (not to mention the cost in terms of human health and wellbeing). The continuing failure to invest in primary and community care and the cuts to social care are counterproductive. The end result is more people spending more time in hospital than is necessary. This is a poor result for patients and taxpayers alike.

Access to innovation

There is evidence that access to new and innovative treatments in the UK is poor compared to other countries and continuing to get worse. Healthcare operates at the limits of science, constantly pushing the boundaries of what is possible through new discoveries and breakthroughs in treatments. As a result, what is regarded as high quality care is a continuously moving target. To stand still is to fall back. NHS patients rightly expect that the health service should be able to provide the highest quality treatments, and clinicians want to provide the very best for their patients.

Yet while the UK has world-leading scientific research, NHS patients are often slow to receive the latest treatments when compared with other advanced economies (see figure 2.12). These concerns have increased of late with growing evidence that the funding crisis is resulting in a larger gap between what we know and what we do.

Notably, NHS England and NICE have recently agreed to introduce a new ‘affordability test’ for new treatments. This will mean that even when a drug has been assessed to be cost effective by NICE it will not be provided if it is deemed too expensive in terms of the whole NHS budget. NICE estimates that this could impact on up to 20 per cent of new drugs going forward (NICE 2016). Recent high profile examples of the rationing of medicines include breakthrough treatments in HIV and Hepatitis C (Gornall et al 2016).

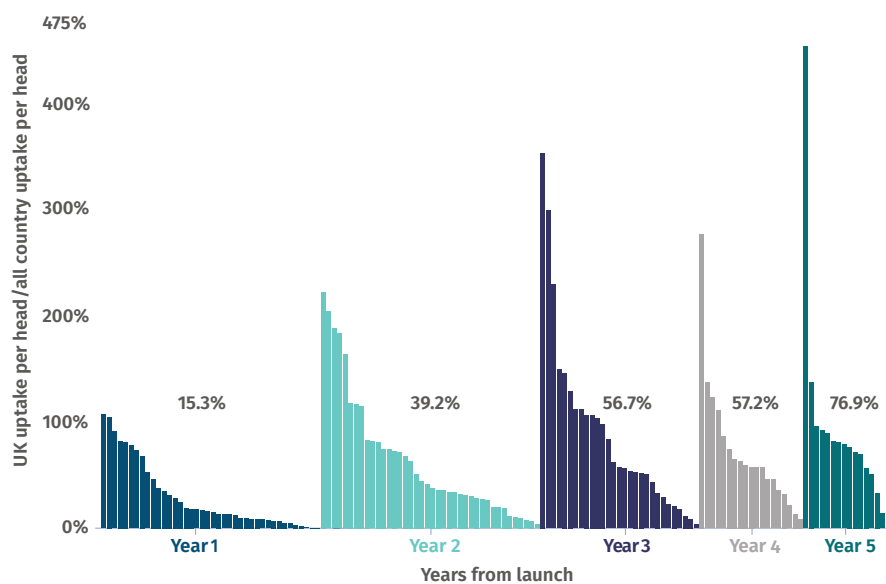
This is a further exacerbation of an existing uptake and access problem within the NHS. Recent analysis by the Office for Life Sciences (OLS) found that three years after approval by the National Institute for Health and Care Excellence (NICE), a basket of medicines launched between 2009 and 2014 were at 56.7 per cent of average usage in the comparator countries (see figure 2.1) (OLS 2017). This figure declines further (55.5 per cent) when considering non-NICE reviewed medicines (ibid).

High quality care is not possible without access to the most advanced therapies and treatments. It cannot be right that NHS patients should receive second class care. Moreover, with decision-making devolved to local commissioners, the 'postcode lottery' is beginning to reemerge in the NHS. The availability of the latest treatments is increasing determined by arbitrary decisions made without regard for the evidence from NICE. This is a retrograde step for the NHS.

FIGURE 2.12

The UK is slow to deliver full uptake of new treatments compared to other advanced countries

Uptake of new medicines – NICE approved



Source: OLS Life Science Competitiveness Indicators (OLS 2017).

PART 3:

10 YEARS ON

THE ENABLERS OF HIGH QUALITY CARE

FUNDING OF HEALTH AND CARE

The great chill in health and care funding

In the 70 years since the NHS was created, spending on health in the UK has grown by an average of 3.7 per cent per annum, faster than economic growth over the same period. In common with other advanced countries, we are dedicating more of our national wealth to health and care: over the past 50 years, total health and care expenditures in OECD countries have risen faster than GDP, at an average rate of 2 per cent above GDP growth (WEF 2012).

This trend is consistent across the OECD: no country has seen spending grow in line with GDP growth for more than five consecutive years. As a result, healthcare expenditures, which averaged 3.8 per cent of GDP across the OECD in 1960, consumed 9 per cent of these countries' GDP in 2016 (OECD 2017). This is not particularly surprising. Health systems face similar pressures including a growing and ageing population; an increase in the scale and scope of treatments; and rising expectations.

The global financial crisis in 2007/8 resulted in successive governments adopting a policy of fiscal consolidation, primarily achieved through reductions in government spending rather than increases in taxation (Emmerson 2017). As a whole, the NHS budget has not been cut in real terms – but annual growth has been just 1.3 per cent between 2009/10 and 2015/16, compared with 4.1 per cent annual growth from the mid-1950s to 2016 (The King's Fund 2017). Indeed, with a growing population, health spending has increased just 0.6 per cent in real terms between 2008 and 2016 (Stoye 2017) compared to 3.7 per cent on average since the 1950s. This has been the most austere decade in NHS history (The King's Fund 2017). Even with the enormous public goodwill that exists for the NHS, you cannot have first class health and social care with second rate funding.

Meanwhile, local government has experienced significant real-terms cuts in their funding from central government since 2010 which has only partially been offset by increases in locally raised revenue. Despite efforts by local government to shield adult social care from these pressures – by dipping into reserves and redirecting funding from other budgets – there have been real terms cuts in adult social care spending every year except 2016/17 (see figure 3.2). During this same period, the number of people in England aged 65 and over is estimated to have increased by 18 per cent (around 1.5 million people) and the number of adults aged over 85 increased by 17 per cent or nearly 200,000 people (ibid). When this is taken into account, spending per adult fell by 13.5 per cent from £439 in 2009/10 to £379 in 2016/17 (Simpson 2017). This dramatic drop in social care funding is why access has deteriorated so dramatically with catastrophic consequences for individuals, carers and families.

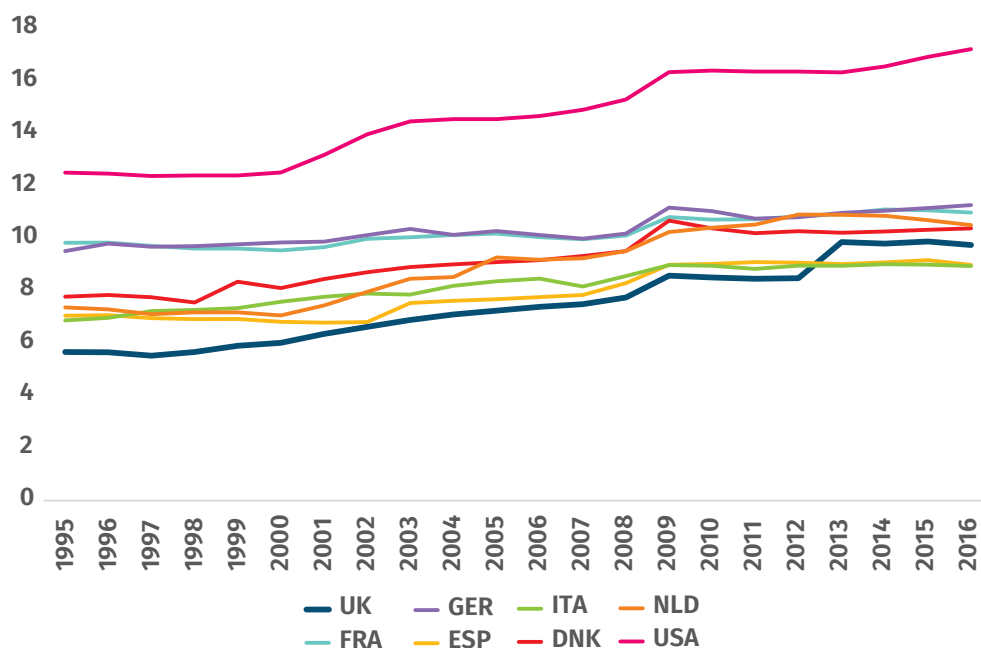
The pressure on local authority budgets, as well as central government cuts to the public health grant, has also had a significant impact on public health budgets (following the devolution of public health to local government as part of the 2012

Health and Social Care Act). Spending – excluding recent increases in funding that are matched by new obligations⁴ – is down 5 per cent in real terms since 2013/14 (the first year of the new commissioning arrangements) (Buck 2017b). In most areas the impact of these cuts will not be felt in the short term but there is little doubt that they are storing up problems for the future.

FIGURE 3.1

The UK spends less than comparable developed countries on healthcare

Healthcare spend as a percentage of GDP, 1995-2016



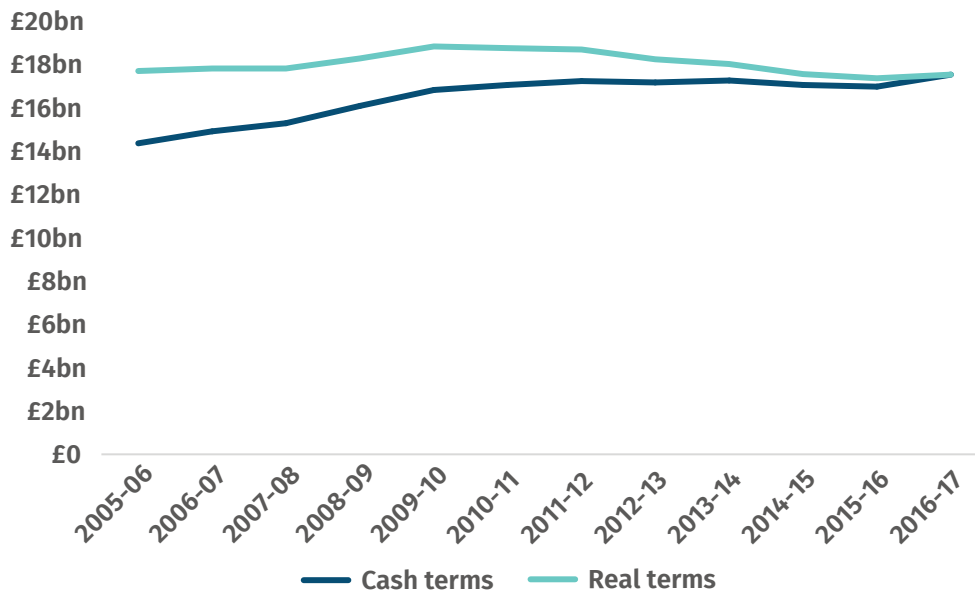
Note: This indicator is presented as a total and by type of financing ('government/compulsory', 'voluntary', 'out-of-pocket') and is measured as a share of GDP, as a share of total health spending and in USD per capita.

Source: OECD, Carnall Farrar Analysis

⁴ In 2015/16 local authorities took on responsibility for young children's (0-5 year olds) public health (and some other smaller responsibilities), receiving a transfer from the NHS of around £800 million a year. Although this has the appearance of boosting the public health budget, it is not growth but a transfer for the new responsibilities local authorities had taken on.

FIGURE 3.2

Adult social care has faced significant cuts over the last decade
Gross current expenditure in cash and real terms on adult social care (England), 2005-2017



Source: NHS Digital, Carnall Farrar Analysis

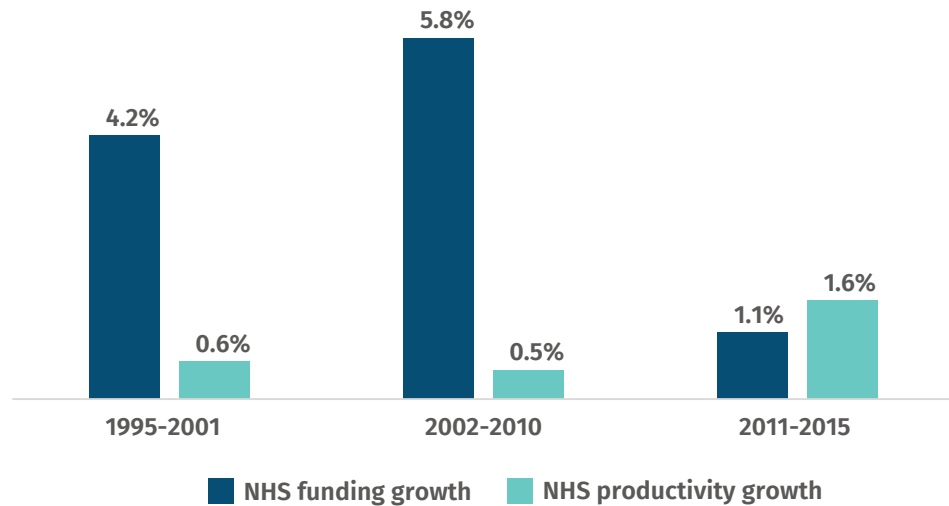
Bucking the trend in productivity

The government has attempted to fill the gap between available resources and demand in the health and care system by delivering increases in productivity. In 2008/09, the search for productivity improvement opportunities valued at £20 billion was termed the “Nicholson Challenge” after the then-NHS chief executive Sir David Nicholson. This subsequently became the ‘QIPP programme’ – quality, innovation, productivity and prevention.

The NHS Five Year Forward View refreshed this approach by aiming to find £22 billion in efficiency savings between 2015 and 21. This would mean year-on-year productivity increases of 2 to 3 per cent compared to its long run trend rate of 0.8 per cent. Similarly, there have also been local government-led initiatives in social care to deliver ‘more for less’ with some successes such as the LGA’s Social Care Efficiency Programme (LGA 2014).

FIGURE 3.3

The NHS suffers from cycles of 'feast and famine' which damages productivity growth
Productivity and spending growth in the NHS by spending review, 1995-2015



Source: ONS, IFS, Carnall Farrar Analysis

During this period, productivity growth accelerated. As the chart shows, productivity growth was 0.6 per cent from 1995 to 2001, 0.5 per cent from 2002 to 2010, and rose to 1.6 per cent from 2011 to 2015 (see figure 3.3). During the latter period, whole economy productivity growth was close to static, making the NHS improvement all the more exceptional. Productivity growth has been achieved by increasing outputs – improving technical efficiency to see and treat an ever-rising number of people – while holding the growth in inputs, principally through wage restraint. This growth in productivity has taken extraordinary effort from health and care staff across the country. Their achievements should be acknowledged and celebrated.

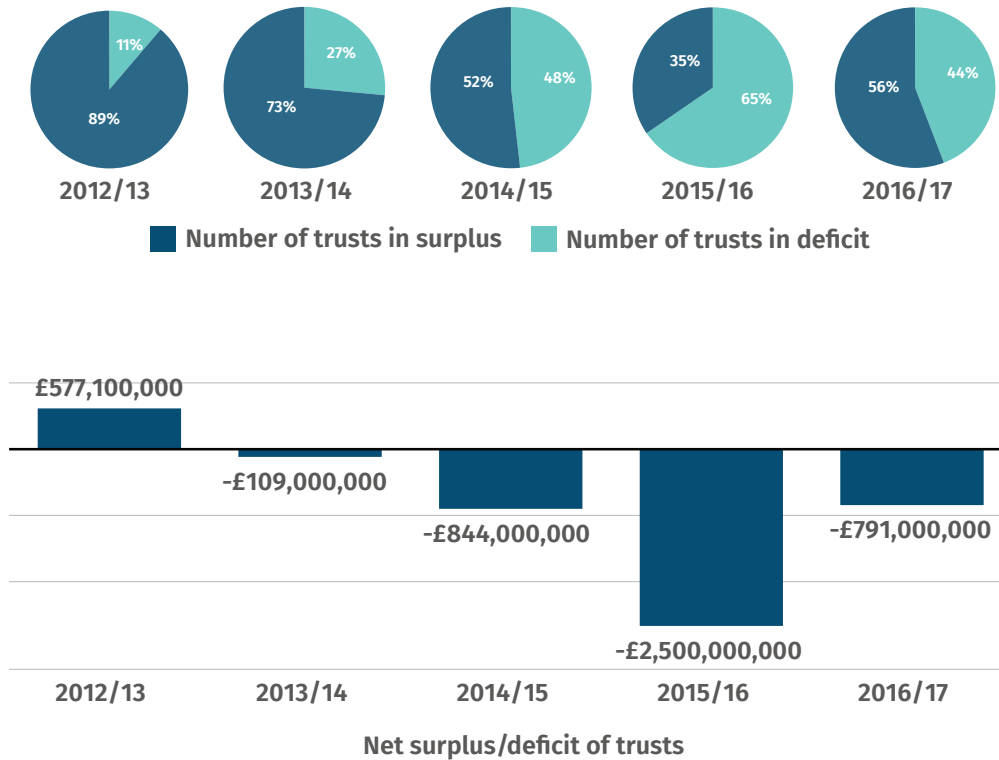
However, there is also little doubt that the NHS's 'feast and famine' approach to funding has also had an impact. During times of 'famine' - as we have seen over the last decade - productivity does increase (as inputs are held constant - in particular through wage restraint - but outputs continue to grow) but so too does rationing. By contrast, during periods of 'feast' spending rises faster than outputs and productivity declines. Neither extreme is beneficial for the NHS: instead it requires planned growth in funding based on needs which allows it to plan for the future."

Running out of road

There is now growing evidence that the sources of productivity growth relied on so far - the inputs we have held constant during the famine years - are beginning to run out of road. For example, the government's public sector pay cap has become untenable and has recently been scrapped (Triggle 2018). Likewise, reductions in the tariff paid to hospitals for treating patients (e.g. operations) are increasingly showing up in the form of rising provider deficits (rather than driving improvements in the technical efficiency of care) (see figure 3.4). There are also growing commissioner deficits, particularly at the local level (NHS England at a national level has consistently had a surplus in its commissioning function) (Lafond et al 2017).

FIGURE 3.4

NHS Trusts have increasingly failed to balance the books despite numerous bailouts
NHS trusts in deficit, 2012-2017



Source: NHS Improvement

In reality these deficit figures are likely to be a conservative estimate of the provider deficit as the NHS has consistently made opaque transfers from its capital budget to support revenue overspends (in 2016/17 this totaled £1.2 billion) (Edwards 2017). Given this, it is unsurprising that the NHS estate is creaking, with a ‘maintenance backlog’ of £5.5 billion in 2017, £1 billion of which is considered ‘high risk’ (more than double the amount just two years ago) (NHS 2017c). This crunch is also driving a similar lack of investment in other forms of capital, notably investment in technology and IT infrastructure where the government is some way off its target of going paperless by 2020 (Wachter 2016).

Provider deficits in recent years (in particular 2016/17 and 2017/18) have also been reduced by using additional funding from the ‘Sustainability and Transformation Fund’ (now more appropriately called the Provider Sustainability Fund). One of the original aims of this fund was to enable the changes set out in the FYFV, for example, investing in capacity in primary and community care to shift activity out of hospitals (Charlesworth et al 2015). Instead the evidence suggests that the majority of this funding has been put into (largely) acute providers to reduce deficits (NAO 2018)⁵. As a result, funding for primary and community care has consistently grown more slowly than the acute sector and (in all likelihood) less than originally proposed under FYFV proposals (Baird 2017).

Unlike the NHS, local government cannot overspend or go into deficit: it must balance its books at the end of the year. This does not mean local government

⁵ Of the initial £2.1 billion allocated for 2016/17, the vast majority (£1.8 billion) was put into (largely) acute providers to reduce deficits, with only £0.3 billion available for transformation.

has not attempted to soften the blow on people in need of social care. There is increasing evidence that local authorities both cross-subsidise social care from other internal budgets (leading to cuts elsewhere including roads, libraries and children centres) and dip into reserves to ensure that as many people as possible can access the care they need (ADASS 2017). However, the reality is that these sources of funding are neither significant enough to fill the gap or sustainable in the long term (Lafond et al 2017).

Likewise, in social care it is not possible for providers to go into deficit in the same way as it is in the NHS. The reduction in the fees paid to social care providers by local government (the equivalent to the NHS tariff) – 5 per cent in real terms over the period 2010/11 to 2015/16 – has instead resulted in higher debt levels in the sector and increased risk of closure. For example, in the first six months of 2017, at least 69 per cent of local authorities experienced a provider closure (ADASS 2017).

The financial sustainability of an NHS free at the point of need – and what it means for social care

Given the funding pressures, some critics - though, as yet, not the mainstream of the major political parties - have claimed that a ‘free at the point of need’ health service is inherently unsustainable, arguing that: “nothing will ever be enough when it comes to the NHS: it will always need more resources than any government can ever afford” (Heath 2015). Instead, these commentators would have us move to a private or social insurance model of health and care provision.

The problem with this assessment is that it is not supported by the evidence. A number of reviews have concluded that no one funding model or particular mix of funding mechanisms is systematically superior to others across all domains of quality (HoL 2017)⁶. Specifically on efficiency, the evidence is clear that Beveridge systems are less expensive than both private insurance systems and social insurance models (see figure 3.5) (OECD 2010). It is a fundamental error of logic to say that something is unaffordable, so we should move to something more expensive.

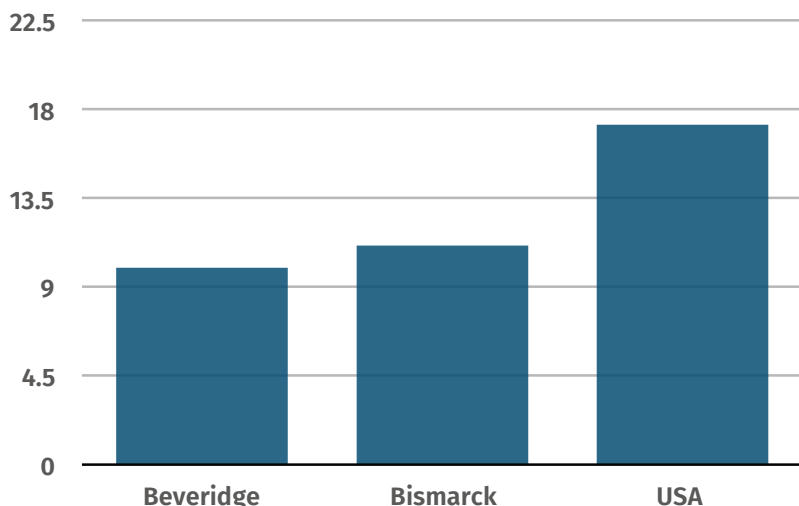
That’s why we must reaffirm the founding principles of the NHS. Rather than “is the NHS sustainable?” we must ask “how can we afford not to sustain it?” After all, what better investment is there in life, than the investment in health? What goods or services do we value above the wellbeing and independence of our friends, families and loved ones? The health and care system is as sustainable as we choose for it to be. If we fund it adequately and care for its people, its principles and its institutions, then it is the best way to provide high quality care for the whole nation.

6 Here domains of quality refer to safe, effective, patient-centred, timely, efficient, equitable.

FIGURE 3.5

Beveridge systems are consistently cheaper than their competitors

Beveridge and Bismarck Systems,⁷ health spend percentage of GDP, 2016



Source: Author's calculations

However, this leaves us with an obvious question: what do the principles and values of the NHS – in particular, to provide services free at the point of need – mean for social care, which remains means tested? When *High Quality Care For All* was published the case for more integration between health and social care was strong, but today the argument in favour of a joined up system is overwhelming. An eminent historian of the welfare state, Nick Timmins, has said “If Beveridge were reporting today, he would be almost totally bemused...no one is well served by having two separate systems run on two decidedly different sets of principles... he’d decide it was time for action” (Timmins 2016).

What action needs to be taken? This is one of the most crucial questions we face as a society today. The government has seemingly recognised the need for an answer with the promise of a Green Paper on the subject later this year. But we have been here before: many have promised to reform social care but few – if any – have delivered. This review will not fall into the mistake of sidelining the social care system. Our starting point is simple: we need a joined up and integrated health and care system which delivers high quality care for all and this will require more funding – and more integrated funding – for both systems.

WORKFORCE, LEADERSHIP AND STAFF ENGAGEMENT

Across the UK, some 4.2 million people are now employed in the health and social care sector – accounting for 13 per cent of all jobs. We know that investing in the workforce is crucial in achieving high quality care. The health and care system depends on the commitment and dedication of the wider care team, whether social workers or nurses, doctors, porters or cleaners. The evidence that understaffing leads to poorer quality care – and puts patient safety at risk – is now well established. Likewise, poor leadership and demotivated staff are a pre-cursor to system failure. This makes the workforce trends experienced over the last

⁷ Bismarck systems include Germany, Japan, France, Switzerland, Netherlands, Belgium. Beveridge systems include UK, Sweden, Norway, New Zealand, Spain and Denmark.

decade all the more concerning; across a whole host of metrics it is increasingly clear the NHS and social care staff are under severe pressure.

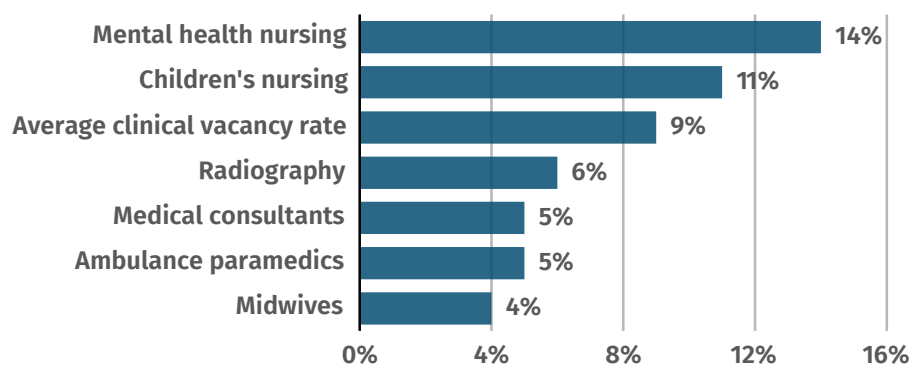
Staffing gaps

The clearest example of the stress the NHS workforce is under is the number and breadth of staffing gaps across the system. One in nine nursing posts are unfilled (double the rate just four years ago) (Molloy et al 2017). Unfilled vacancies for GPs have soared from 2.1 per cent in 2011 to 12.2 per cent in 2017 (Guardian 2017). And, these are not isolated examples; these trends are replicated in most professions across the system (see figure 3.6). It is therefore unsurprising that NHS leaders have highlighted recruitment and retention as the biggest challenge they face (NHS Providers), and almost half of NHS staff feel that staffing levels are too low for them to do their job properly (NHS 2017f).

FIGURE 3.6

Staffing gaps in the NHS are large and growing

Selected vacancy rates in the NHS, 2017



Source: Health Education England Strategy (NHS 2017d)

The problem is no less severe in social care where the vacancy rate has increased from 5.5 per cent in 2012 to 6.6 per cent today (SfC 2017). This is driven in part by high turnover rates which have leapt from 23.1 per cent to 27.8 per cent over the same period. Such staffing problems are more acute amongst those on lower salaries and zero-hour contracts (ibid). There is significant evidence that these staffing problems are impacting on the quality and safety of care provided. For example, the CQC finds that one in five nursing homes do not have enough staff on duty to ensure residents received high quality and safe care (CQC 2014).

Staff morale

The workforce problem is not just one of numbers but also of morale. Recent surveys show that almost half of GPs report low morale (Forster 2017) with two-fifths considering leaving the service whilst a similar poll of Unison members including cleaners, radiographers, nurses and senior managers found that two-fifths of staff have considered quitting. This problem has been exacerbated by the governments workforce agenda, with the junior doctors' contract debacle particularly damaging (NHS no date). This is one of the root causes of the staffing gaps within the service: some 92 per cent of staff think low morale is a cause of high staff turnover and vacancies (Wilmington Healthcare 2017). We also know that poor morale among staff is a risk in terms of providing high quality and safe care (Pinder 2008).

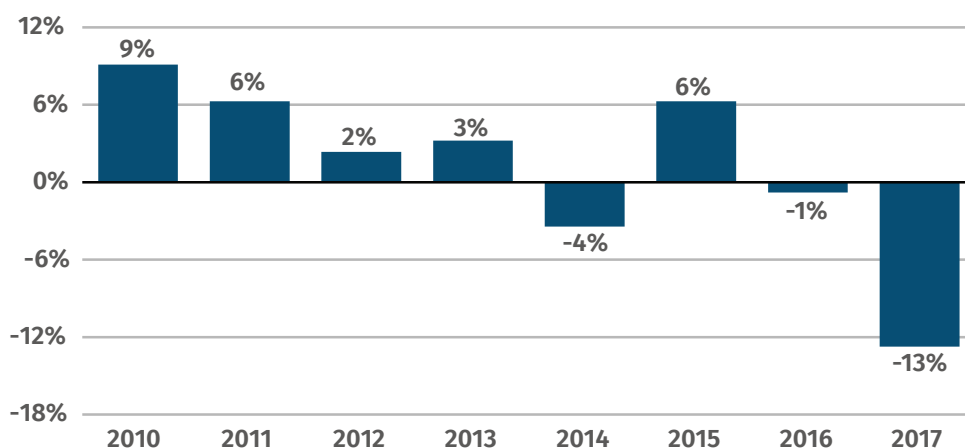
Another of the main factors contributing to both recruitment and retention problems (as well as poor staff morale) is pay. Workers in the NHS have experienced a seven-year pay squeeze. Between 2010 and 2017 the real value of health and social care staff pay fell by 5.8 per cent (CPI) compared to 1.9 per cent (CPI) in the wider economy (Gershlik et al 2017). In the NHS this has led to a decline of 20 per cent in net satisfaction with pay since 2015 (see figure 3.7) and is likely to be contributing to the services' recruitment problems.

The challenge is perhaps even greater in social care where wages are considerably lower. Some 90 per cent of the social care workforce are in the bottom quartile of workers in the economy in terms of pay. At least 30 per cent of care workers are paid at, or below, the National Living Wage (NAO 2018b). When additional work related costs are factored in (on-call hours, travel costs) some studies suggest up to one in 10 social care workers earn less than the minimum wage (NAO 2018c). There is a strong consensus that this issue of low pay – and insecurity due to the use of zero-hours contracts – is one of the main causes of staff vacancies and low retention in the sector.

FIGURE 3.7

Net satisfaction with pay has fallen significantly over recent years

Net satisfaction with pay 2010–2017, all NHS Trusts in England



Source: NHS Staff Survey 2017 (NHS 2017f)

Filling the gaps

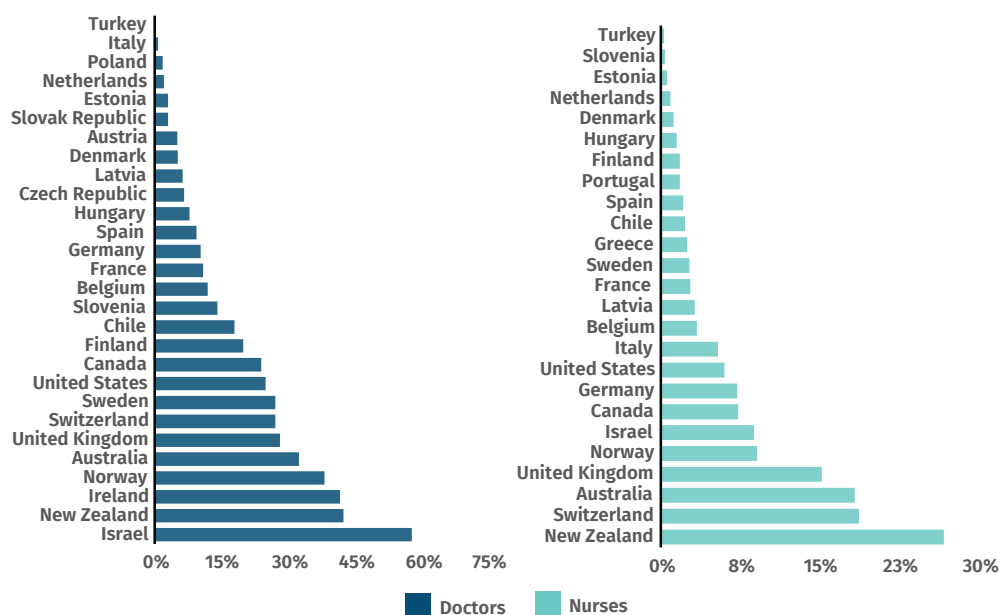
One of the ways in which the health and care system has managed the shortage of staff is the use of bank and agency staff. However, it is not particularly clear that this strategy has paid off in terms delivering efficiency savings. In the NHS, the bill for agency staff rose from just over 4 per cent (£1.8 billion) of total pay in 2011/12 to 7.5 per cent (£3.6 billion) of total pay in 2015/16 (dropping back down in 2016/17 as a result of the decision to cap agency spend) (Dromey and Stirling 2017). In social care the reliance on agency staff has been lessened by the use of zero-hours contracts but Skills for Care still find that 11 per cent of nurses and 7 per cent of social workers are temporary (SfC 2017). Not only has this been damaging in terms of financial health, there is also a strong correlation between use of agency staff, deficits and CQC ratings on quality and safety (CQC 2016).

Another approach adopted by governments is the use of immigration to bolster the workforce. The UK has long been more dependent on doctors and nurses trained internationally than other countries (see figures 3.8 and 3.9) but this dependency has grown of late. For example, since 2009/10 our dependence on

internationally trained nurses has trebled (Molloy et al 2017). However, even this has not been able to completely address the workforce shortages partly because of the scale of the staffing gaps in the service but also because of the government's self-defeating artificial cap on immigration.

FIGURES 3.8 AND 3.9

The UK is dependent on immigration to staff the NHS
Percentage of foreign trained nurses and doctors, 2016



Source: OECD

Brexit is likely to make this state of affairs even worse. The EU has become an increasingly important source of human capital for the health and care sector in recent years, making up 5.6 per cent and 7 per cent of NHS and social care workforce respectively (McKenna 2017). An end to the freedom of movement as a result of Brexit – without a corresponding increase in immigration from outside the EU – could significantly exacerbate staffing shortages. Indeed, there is some evidence that the vote is already having an impact on recruitment: for example, the number of EU nationals registering as nurses in the UK has fallen by 96 per cent since the referendum according to the Nursery and Midwifery Council (NMC 2017).

At the heart of the problem of staff shortages however is a failure to train and recruit enough home-grown talent. There have been some attempts to address this with the creation of new roles such as physician associates and nurse associates as well as policy pledges to increase the number of nurses and GPs in training. However, these policies – whilst welcome – will not help with the short-term crisis and are a patch to cover up the long-term solutions. The NHS has over 40 organisations with a direct role in workforce planning but no one organisation coordinates these efforts into a coherent workforce strategy. The closest we have to a system leader is Health Education England (HEE) but there is a growing consensus that it does not have the ability or the firepower to coordinate what is a very strong set of representative organisations into a joined-up approach bold enough to address the scale of the challenge (HoL 2017). The task in social care – which is overseen by Skills for Care – is even more challenging as the sector is even more fragmented and most provision is

private rather than public. This must be addressed if the health and care workforce is to be fit for the future.

Leadership

Across the service one of the most damaging gaps in staffing numbers – and skill set – is at the leadership level. A recent poll conducted by the HSJ and the Kings Fund (2015) found that around one-sixth of NHS trusts have no chief executive whilst one-third have at least one vacancy (or are relying on interims) at board level. Churn at leadership level is also scarily high: the median time in post for a trust's CEO is a mere two and a half years, with one in five in post for less than a year (ibid). Meanwhile, the leadership that does exist is inequitably distributed across the system: we must look beyond the acute sector and build more leadership capacity in general practice; community and social care; as well as the private and voluntary sectors. This does not mean that there are not excellent examples of leadership in health and care; just that these are the exception rather than the norm.

This gap in leadership is the result of a number of factors. At its core it has been driven by a policy agenda which has emphasised bureaucracy, targets, regulation and incentives over people as the drivers of quality resulting in leaders in health (and to a lesser extent care) feeling disempowered. This has been compounded of late by the complexity of the government reform agenda (see next chapter) and underfunding which have combined to make delivering change difficult and targets impossible to meet. That's not to say there haven't been attempts to address this gap in leadership: since *High Quality Care For All* both the NHS Leadership Academy and the Faculty for Medical Leadership and Management have been established to foster a generation of new leaders in the NHS (with similar initiatives in social care as well) but in the current context these organisations are constantly swimming against the tide.

REVIVING REFORM

Facing the future

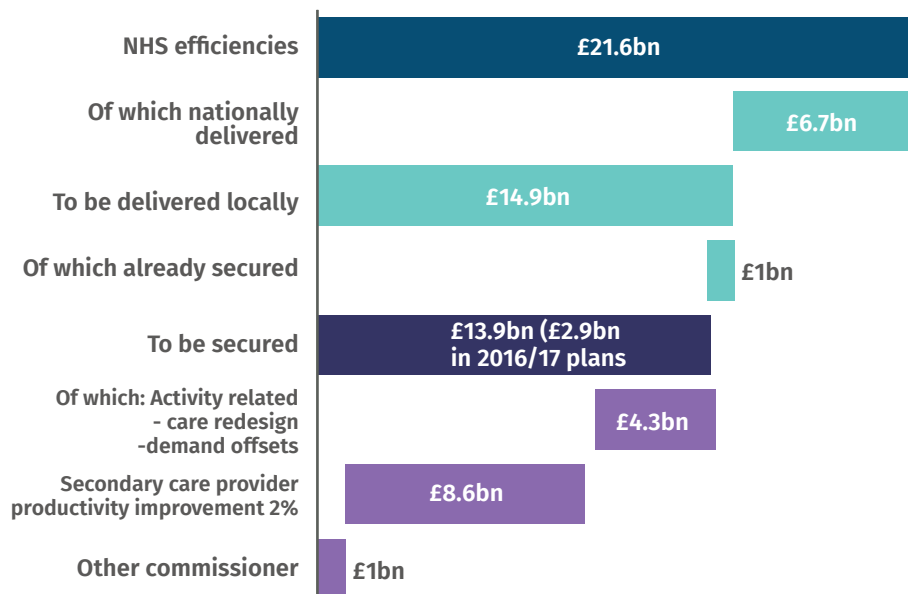
In the context of the financial challenge set out in the previous chapters, one area of reform has been delivering 'more for less' – NHS Five Year Forward View (FYFV) aims to increase productivity by 2 to 3 per cent per annum, saving a total of £22 billion by 2020/21. Prior to this, the so-called 'Nicholson Challenge' aimed to achieve productivity improvements valued at £20 billion between 2010 and 2015.

The FYFV sets a bold and welcome agenda for reform of the NHS (and to some extent social care). This includes greater integration within health and between health and social care; the movement of care from the acute sector into the community; and better prevention of ill health to reduce health and care usage. This – alongside more technocratic changes to procurement and financial management – is supposed to drive the required efficiencies in the NHS (see figure 3.10) (NHS 2016). The most important feature of the FYFV is its focus on provision rather than an endless restructuring of the commissioning, administrative and regulatory framework of the NHS.

FIGURE 3.10

The NHS needs to deliver significant productivity savings over the coming years

Sources of the proposed £22 billion in efficiency savings as at the beginning of 2016/17



Source: NHS England (2016) Recap briefing for the Health Select Committee on technical modelling and scenarios, Five Year Forward View.

There has been some success in advancing this agenda. Sustainability and Transformation Plans (STPs) have been published for 44 health and care economies, authored by partnerships of local health and care commissioners and providers. The most advanced of these are in the process of delivering New Models of Care (NMC) (Collins 2016) – sometimes known as the ‘vanguards’ – and becoming Integrated Care Systems (ICSs) (Charles 2018). These arrangements will more formally bind together local providers to deliver integrated care to the whole local patient population.

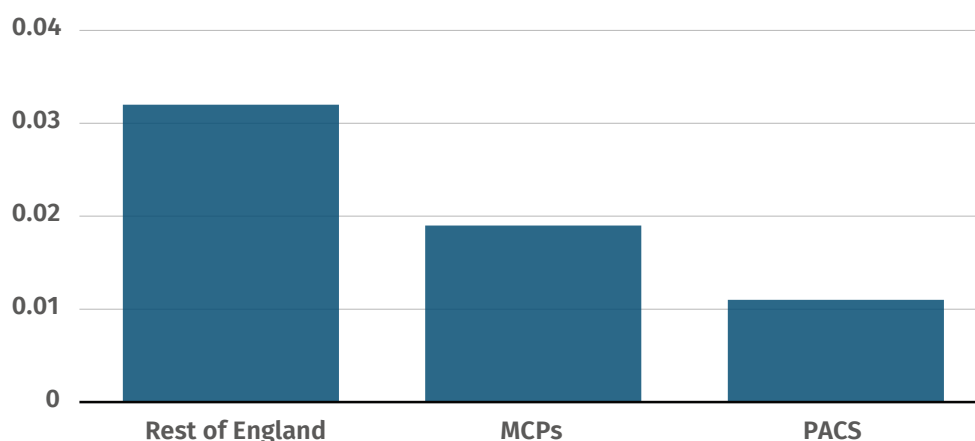
In those areas whose plans are most advanced,⁸ these changes have – and will continue to – deliver improvements both in terms of quality and efficiency. This can be seen in the NHS-wide productivity rates which are higher than long run trend but also in local performance data. For example, compared to their 2014/15 baseline both Primary and Acute Care Systems (PACS) and Multispecialty Community Providers (MPC) vanguards have seen lower per capita emergency admissions growth rates than the rest of England (see figure 3.11) (NHS 2017e).

8 Many of whom began to pursue integration prior to the FYFV.

FIGURE 3.11

NHS reforms have delivered some improvement in productivity

Reduction in per capita emergency admissions rate due to New Models Of Care (one year after implementation)



Source: NHS England (2017e) Next steps on the NHS Five Year Forward View.

Yet progress on integrated care and secondary prevention is still the exception rather than the norm. Even a generous summation of the scale of the change programme find that the number of people served by NMCs is less than half (c. 48 per cent) of the population⁹. Significantly fewer areas are in line to become an ICS, with just 10 localities set to proceed. Even the most advanced schemes are yet to deliver significant improvements in quality and efficiency at scale.

The setback of 2012

If the agenda for higher quality, more integrated care is the right one, then why has progress been slow? It is partly, of course, because transformation of the scale we are talking about within a system as complex as health and social care is challenging and takes time (Charlesworth et al 2015). However, it is also because there are number of barriers to reform which are slowing down progress. These include the financial and workforce challenges set out in previous chapters but the other significant factor is the legislative framework in the NHS, and in particular the legacy of the 2012 Health and Social Care Act..

During the NHS Next Stage Review in 2007/08, the case for a top-down reorganisation of the NHS was considered and dismissed. The conclusion was that the system needed to focus less on structural change and more on quality of care – *High Quality Care for All* set out a new framework for quality improvement without proposing major structural reforms. Two years later, the White Paper *Liberating the NHS* reversed this position.

The high-level goal of the Health and Social Care Act – to increase the involvement of GPs in commissioning services – was a reasonable objective. Some of the changes, such as transferring responsibility for health promotion to local authorities, have been successful. Yet for the most part, the 2012 reforms hindered high quality care rather than enabled it.

⁹ Authors analysis using data from <https://www.england.nhs.uk/new-care-models/vanguards/care-models/>.

The 2012 Act significantly increased complexity in the health and care system (Timmins 2012). In particular, it led to the dissolution of primary care trusts (PCTs), which commissioned the majority of health services, including primary care, secondary care and community care. Commissioning was even further fragmented, with a change from 152 PCTs to 212 Clinical Commissioning Groups (CCG), and the move of primary and specialised commissioning to NHS England at a national level.

This runs counter to all international evidence; no other health system in the world has chosen to fragment rather than consolidate. Commissioning health services is a complex task – for that reason, other health systems have pursued consolidation rather than fragmentation. In 1990, Germany had around 2,000 healthcare payers; by the turn of the millennium, this was close to 200; and today it is nearer to 50. Denmark consolidated from 13 counties to five larger regions (Denmark Ministry of Health 2017); Norway from 18 counties in 2002 to a single ‘board of health supervision’ with four health regions by 2007 (Norwegian Directorate of Health 2009).

At the same time, the 2012 Act further fragmented the leadership functions at a national level, with functions often performed by one organisation in other countries split between the Department of Health, NHS England, NHS Improvement, Health Education England and Public Health England (DHSC 2010). The World Health Organization describes the first task of health systems strengthening to “reconcile multiple objectives and competing demands” (WHO 2007). The NHS’s current institutional configuration makes this task extremely difficult, if not impossible. The result is a huge increase in complexity for clinical commissioning groups and the boards of NHS trusts and foundation trusts. Work is currently underway to resolve some of these tensions at the top of the system.

Making the necessary changes would be more straightforward had the institutional architecture not been fixed in primary legislation. The result is that – in looking to undo the damage and drive greater integration in health and care – policy makers are having to resort to the use of inadequate ‘work arounds’ to the legislative framework, often mimicking more rational structures but without legal underpinning. The 44 “strategy and transformation plans” are the most visible example of this work around. They have no legal basis, unclear governance, and no authority for decision making. This is slowing down the process of service change and improvement (Quilter-Pinner 2017).

The increase in complexity in institutions has been mirrored by an increase in the complexity of processes (Holder and Buckingham 2017). The regulatory and assurance processes that have been introduced have disempowered local NHS leaders from making quality-enhancing changes. These processes are fundamentally deceitful: they claim to provide ‘assurance’ but instead serve to frustrate change. Many local leaders feel that this is a barrier to driving forward with the reform that they feel is needed (Quilter-Pinner 2017). There is also much evidence that the current regulatory framework reinforces existing silos rather than facilitating integration and place-based care and create a strong disconnect between financial and quality regulation (Quilter-Pinner and Antink 2017).

The combination of the funding squeeze and the fiendishly complicated reforms has been an increase in the subjectivity of decision-making. Local commissioners have been given discretion to ignore the evidence-based guidelines from NICE and have used these powers to deny the right standards of care to people who need it (Diabetes UK 2017). Paradoxically, these decisions are not subject to the same process of scrutiny and assurance as service changes. The gap between the system that the legislation describes and the one that exists on the ground is significant. This makes it nearly impossible for people on the outside to work out who is

accountable and where decisions are taking place. There is a profound democratic deficit in the NHS.

In some respects, the 2012 Act is merely the culmination of a 30-year experiment with quasi-markets that began with the 1991 introduction of the internal market. The 2012 Act both muddled and deepened the division between providers and commissioners. There is growing evidence that the impact of competition on health outcomes is limited (Cooper 2011) or non-existent (Pollock et al 2012). Meanwhile, we have significant evidence that the transaction costs of the market are high (Paton 2014) and greater than any value created. Putting services out to tender usually results in NHS providers continuing to provide services; however, the procurement process creates uncertainty that means staff morale and retention suffer, and where services switch to independent sector providers, it increases fragmentation and complexity while adding little value.

The commissioning arrangements in the NHS appear to subtract value rather than to add value. Rather than offering a useful and dispassionate performance challenge to providers, most commissioning activity generates high frictional costs with few demonstrable benefits. In aggregate, commissioning has delivered the inverse of its stated strategy. The goal of the past decade has been to increase investment in primary, community and mental health services to keep people well and thereby lessen demand for acute care. The reality has been rising expenditure in the acute sector and real terms reductions in spend outside of hospital. Mental health has been hit particularly hard (Gilbert 2018). Even if the bar for success is set as low as merely acting deliberately, the 2012 reforms have failed to clear it.

Privatisation: Neither the problem – nor the solution

One of the central charges levelled at the 2012 Act was that its hidden agenda was to ‘privatise the NHS’. In a striking failure of democratic scrutiny, this became the near-exclusive focus of the parliamentary process, rather than the fragmentation and complexity it was creating, culminating in the then government’s decision to “pause” the passage of the bill. Since then, health campaigners have focused obsessively on the privatisation dimension. By doing so, they have distracted from the unprecedented reductions in the rate of growth of health expenditure and the harm done by an incoherent and unnecessary set of structural reforms.

There is scant evidence to support the charge of widespread privatisation. The rate of growth in expenditure of NHS resources on independent sector providers slowed significantly in the period 2011/12 to 2016/17 when compared with the period 2006/07 to 2011/12. In 2011/12 expenditure on independent sector stood at around 5.2 per cent of NHS current spending (Arora et al 2013); by 2016/17 it had risen to 7.7 per cent of NHS current spending (BMA 2018). The largest component of NHS expenditure on the private sector remains on medicines, accounting for around £17 billion and on primary medical care where spending is £9.3 billion (most GPs are independent contractors to the NHS, not salaried employees) (Health Foundation no date).

So, the rate of growth in expenditure on the private sector has slowed and the vast majority of healthcare provision remains in the public sector. That is why privatisation is neither the problem – it pales in comparison to the funding and workforce crises – nor can it be the solution to the NHS’ problems when more than 90 per cent of provision is public. Focusing the debate on privatisation is damaging precisely because it distracts from the more pressing questions of funding, workforce retention, education and training, and the changes to both provision and commissioning that are needed to deliver consistently high quality care. Moreover, by placing questions of ownership above those of quality, it undermines the most important principle established in *High Quality Care for*

All – that quality of care should be the organising principle of an NHS that must always remain free at the point of need.

Social care reform

If the NHS has suffered from ill-conceived reforms, social care has been challenged by an unwillingness on the part of politicians to follow through with the funding reforms it so desperately needs. The political economy of social care mitigates against reform: it is a sector whose voice is rarely heard. Its workforce is low-paid with little job security and scant union membership – and often drawn from migrant workers. Providers are far more diverse than the NHS and almost exclusively in the private sector. By definition, the users of social care are typically those who are more vulnerable and less politically vocal. As a result, social care has been marginalised in public policy.

In the 2017 general election, it was striking that the Conservatives' proposals were received so badly not because they represented a worsening of the status quo – the opposite, in fact – but because the current arrangements for social care were so poorly understood. Where social care receives national attention, it is usually framed around the consequences for the NHS, rather than as a vital component of social protection in its own right. In 2008, *High Quality Care for All* should have given greater recognition to the inherent value of social care, even though it was outside of the terms of reference of the review.

Nevertheless, social care reform has risen in prominence. In the 2010 to 2015 parliament, the government commissioned the Dilnot Review and the Labour party proposed a 'National Care Service'. The 2017 general election put social care on the political map, even if for all the wrong reasons. The government are now consulting on a solution for social care as part of the ongoing Green Paper process. The time for reform is now, as it has been for at least 20 years now.

PART 4:

10 YEARS FORWARD

FACING THE FUTURE WITH CONFIDENCE

A DECADE OF DISRUPTION

In light of austerity, the health and care service has done well to maintain or improve the quality of care in most areas of the system. However, we have also seen that variations in outcome have remained stubbornly large and that progress in quality has often been made at the expense of access to health and care (where performance has deteriorated across virtually every metric). Meanwhile, rising workforce pressures, large financial deficits and falling public satisfaction are signs that the government's strategy of demanding 'more for less' is running out of road. The evidence is increasingly clear: we are approaching a tipping point where pressures on quality and access will overwhelm the drivers of progress – largely the dedication and commitment of staff – within the system.

This conclusion is concerning because the factors that have exerted such pressure on our health and care system over the last decade will continue – and potentially even increase – over the coming decade. Equally, the 2020's will be a decade of opportunity in health and care, with technology and science in particular opening up exciting new possibilities for human health. But, the health and care system can only run if it is able to walk: in its current state we risk the opportunities of the 2020s passing us by. There are four 'super-trends' coming down the track in the 2020s – both challenges and opportunities – that have the potential to transform health and care for better or for worse

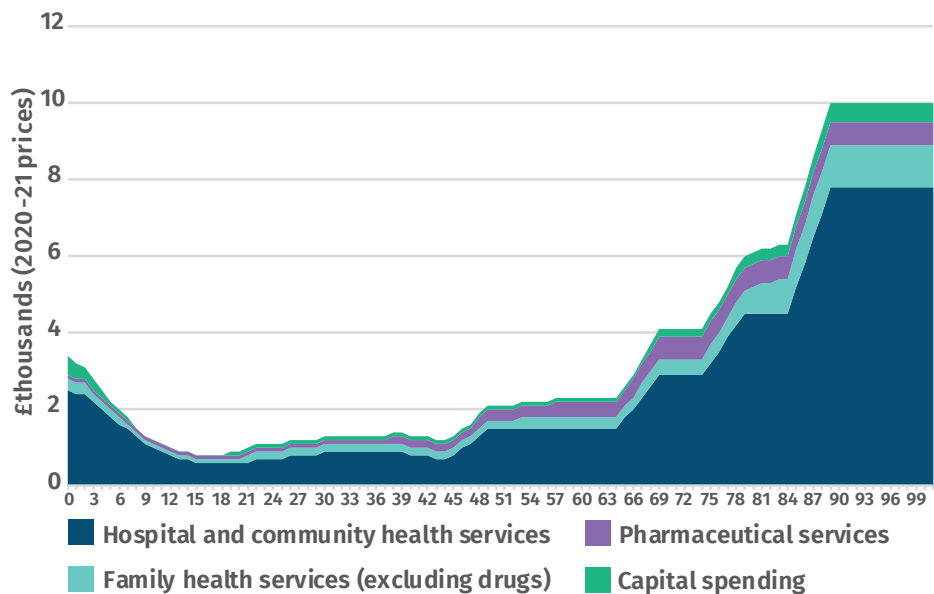
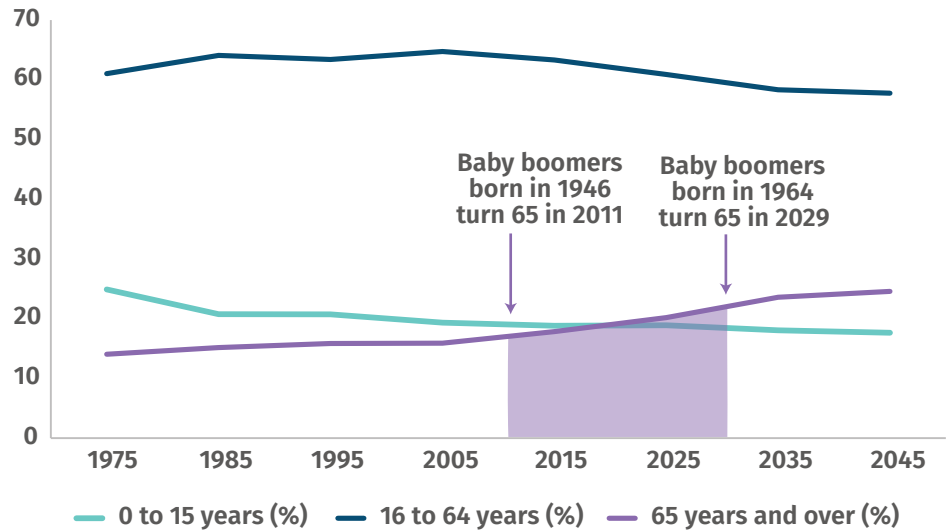
A DEMOGRAPHIC TIPPING POINT

By 2030, the UK will be on course to become the largest – and most diverse – country in Europe. This growth will be skewed towards older people with the 65-plus population growing by 33 per cent – from 11.6 million to 15.4 million – compared to a mere 2 per cent increase in the number of working age adults. The growth in over 85s will be even steeper, with the number nearly doubling by 2030 (see figure 4.1).

FIGURES 4.1 AND 4.2

An ageing population will put cost pressures on health and care

Increase in the share of people over the age of 65 and total NHS spend on different age groups



Source: ONS, OBR, Carnall Farrar Analysis

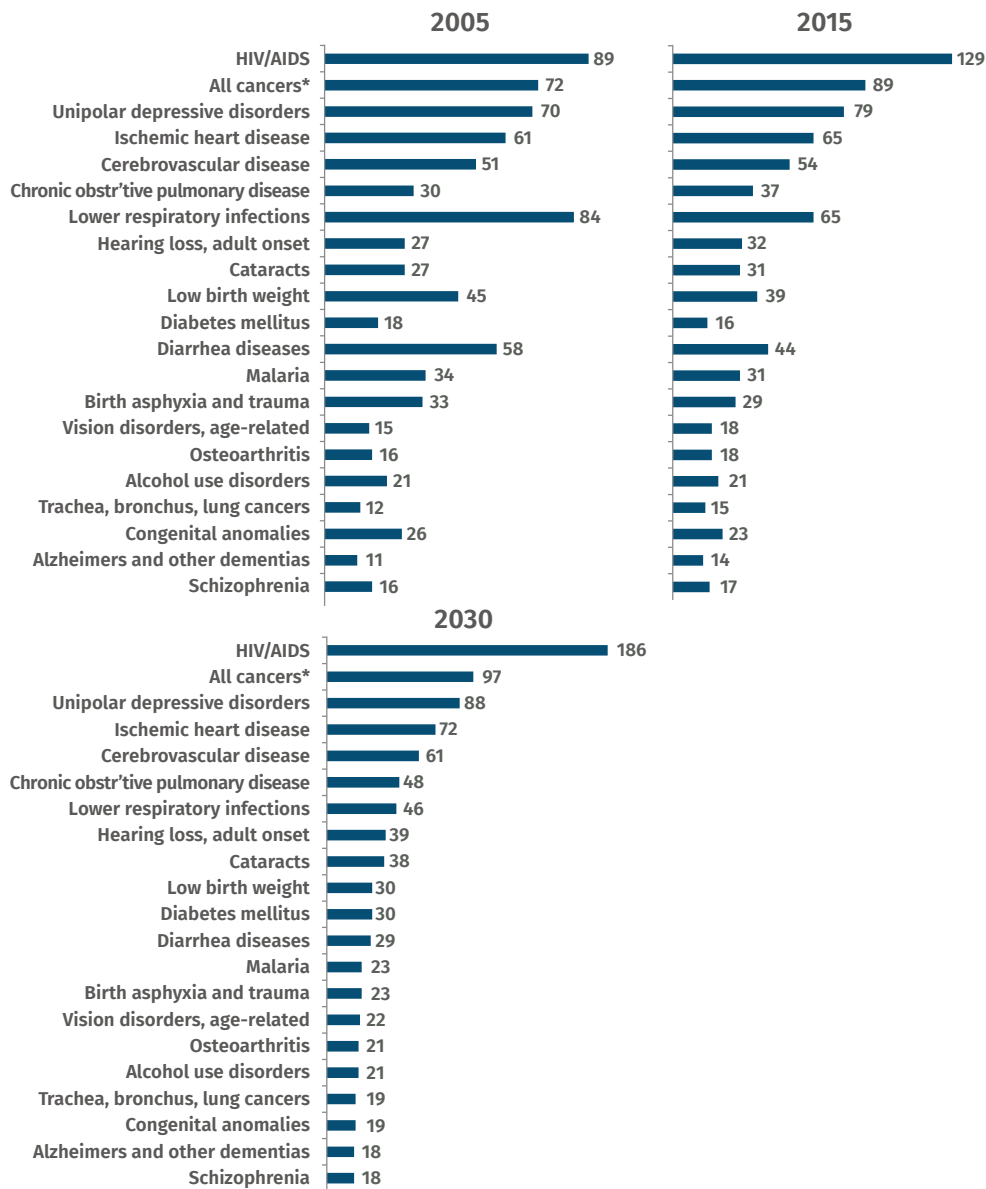
These demographic trends pose a number of challenges for the health and care system. Clearly, more people will mean more expenditure on health and care. But the real challenge is the age demographic of this population. People use more health and care resource as they age (see figure 24). The last year of life – proximity to death – is particularly costly (Hazra et al 2017). As the baby boomer ‘bump’ grows, so will pressure on our health and care system.

A RISING TIDE OF CHRONIC ILLNESS

The ageing of the population will drive a continued shift in the disease burden faced by people in the UK from acute to chronic conditions. In particular, there will be a significant increase in the prevalence of cancers, mental illness and

dementia. This is not a new trend nor is it one confined to the UK (see figure 4.3) but it will fundamentally reshape the type of care that the NHS and social care system needs to provide.

FIGURE 4.3
Chronic disease is growing as the cause of illness in the UK and abroad
Global disease burden ranked by DALYS, 2005, 2015, 2030



*Includes: Trachea, bronchus, lung cancers, stomach cancer, liver cancer, breast cancer, colon and rectum cancers, oesophagus cancer, lymphomas, multiple myeloma, mouth and oropharynx cancers, cervix uteri cancer, leukaemia, prostate cancer, pancreas cancer, other neoplasms, bladder cancer, ovary cancer, corpus uteri cancer, melanoma and other skin cancers.

Source: WHO (2016) Disease burden and mortality estimates

This shift will require us to get better at preventing these chronic conditions, shifting their onset as late as possible into life. Once people have them we will need to make sure care is community based and led by the patient rather than clinician led in the acute setting. It will also mean valuing care – not just formal social care but also the huge army of informal carers – more highly.

NEW SCIENTIFIC AND TECHNOLOGICAL POSSIBILITIES

We are on the cusp of another great leap forwards in terms of what is scientifically and technologically possible in terms of health and care. Robotics and artificial intelligence (AI), the internet of things (IOT) and big data, and new treatments such as cell and gene therapies, all present possibilities to transform health and care. Collectively termed the ‘the convergence revolution’¹⁰ these developments will drive increases in the quality and quantity of life as well as transforming care delivery.

However, as well as driving new possibilities in terms of health and care, new treatments and technology will also increase cost to the system. Most studies attribute between 27 and 75 per cent of growth in health spending in advanced economies to technological change (Licchetta and Stelmach 2016). This is because they often represent an expansion of the menu of interventions delivered in health and care rather than replacing existing treatments. They also often lead to increases in life expectancy which in turn drive more health and care usage.

MEETING THE EXPECTATIONS OF THE NEXT GENERATION

The patients and care users of the future will not be the same as those of the past. Each generation expects more from their health and care system than their predecessors. Indeed, there is significant evidence that rising expectations has been one of the biggest drivers of health and care costs in the last century (Licchetta and Stelmach 2016). The next generation will be no different: putting a higher premium on convenience and personalisation but no less expectation on quality, safety or experience.

In particular, having grown up in the age of the internet, artificial intelligence and big data they will not stand for an analogue health and care service. Already, the way in which people interact with their businesses, entertainment, work and friends has changed beyond all recognition. This transformation in health and care is still in its infancy. But in the years to come people will expect the NHS and social care system to embrace digital health records; remote consultations; and automated diagnostics at scale.

Investing in the future

As we celebrate this year of milestones, it is important to begin a national conversation about the funding requirements that the health and care system need between now and 2030. We must face the questions of financing with honesty and realism. That’s why we have undertaken the first serious economic modelling of the future funding requirements.

The model has been peer-reviewed by experts. The full methodology and assumptions can be found in annex 1. It is as robust a model as it is possible to create for a future that is highly uncertain. We have analysed the following cost pressures on the health and care system:

- demographic pressures (more and older people as set out above);
- non-demographic pressures (including technology and rising expectations assuming continuity with previous periods); and
- provider cost inflation¹¹ (based on OBR forecasts and extrapolation past trends).

10 Meaning the ‘sharing of methods and ideas by chemists, physicists, computer scientists, engineers, mathematicians, and life scientists across multiple fields and industries’ to create integrated insights and approaches to tackle disease and ill health.

11 According to the so-called ‘Baumol cost disease’ theory, real wages in the health care sector have to keep pace with the rest of the economy in order to attract and retain staff, but slower productivity growth means that additional input would be needed to achieve the required improvement in care per person. As a result, the cost of health services will rise relative to other sectors of the economy.

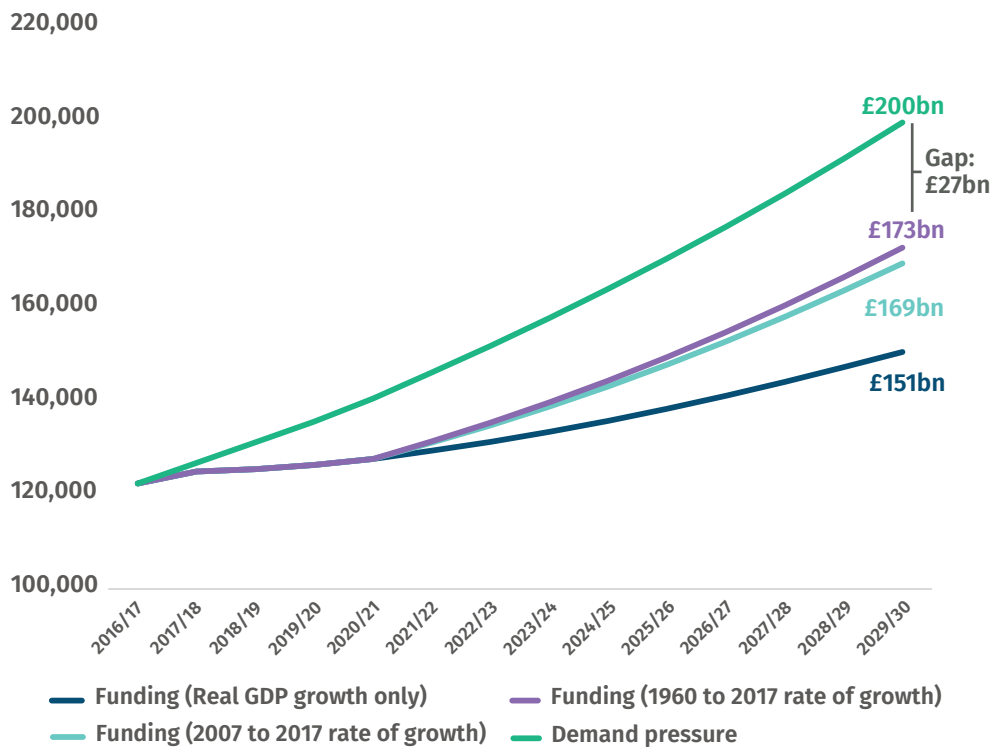
We have then modelled four possible scenarios for the amount of additional tax revenue contribution to the NHS over same period:

- real GDP growth only
- real GDP growth +1.3 per cent (2007-2017 rate of growth)
- real GDP growth +1.5 per cent (1960-2015 rate of growth)

This modelling shows that over the coming decade or so demand pressures – without changes to the way the NHS works – will rise to £200bn by 2030 in today’s prices (see figure 4.4). Even if we put the NHS back on its long-run funding trajectory – the most generous settlement set out above, requiring an extra £50bn in funding (from real GDP growth, extra taxation and/or reallocation) – the NHS would still have to deliver productivity of one and a half times its long run trend (1.1 per cent p.a vs 0.8 per cent p.a) (see figures 4.6 and 4.7).

FIGURE 4.4

The projected funding gap is £27 billion by 2029/30 under the most optimistic funding scenario
Demand pressure and funding, 2017-2030 (£bn) real (2017/2018 prices)



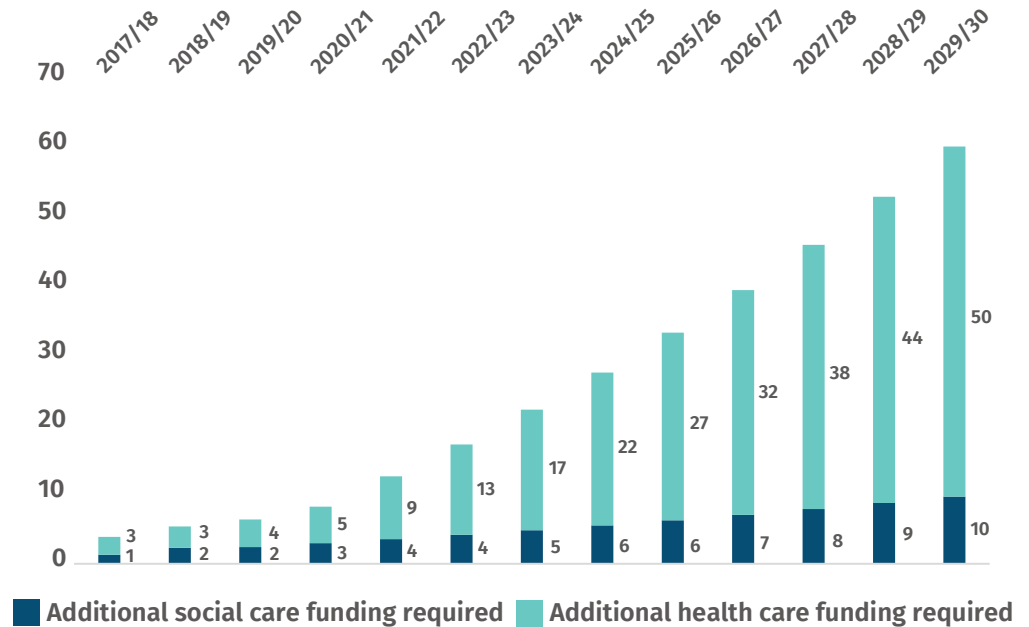
Source: Carnall Farrar Analysis

This is before we get to social care which, if anything, is facing an even larger funding gap. As a bare minimum the system will require an extra £10bn; and that is just to maintain the existing level of provision. In reality, the evidence is clear that the existing system is inadequate with too many people left without adequate care or left facing catastrophic care costs (Lloyd 2016). We will be considering options for reforming the funding system over the coming months and will present the full costs of these in the final report but going into this exercise our view is clear: social care is an equal partner to health and must be part of any future long term funding settlement. There is no logic in properly funding health while social care falls over.

FIGURE 4.5

In the most generous health funding scenario an additional £60 billion of funding must be allocated to health and social care by 2029/30

Additional funding requirements relative to today in most generous scenario (£bn) real (2017/18 prices), without productivity gains

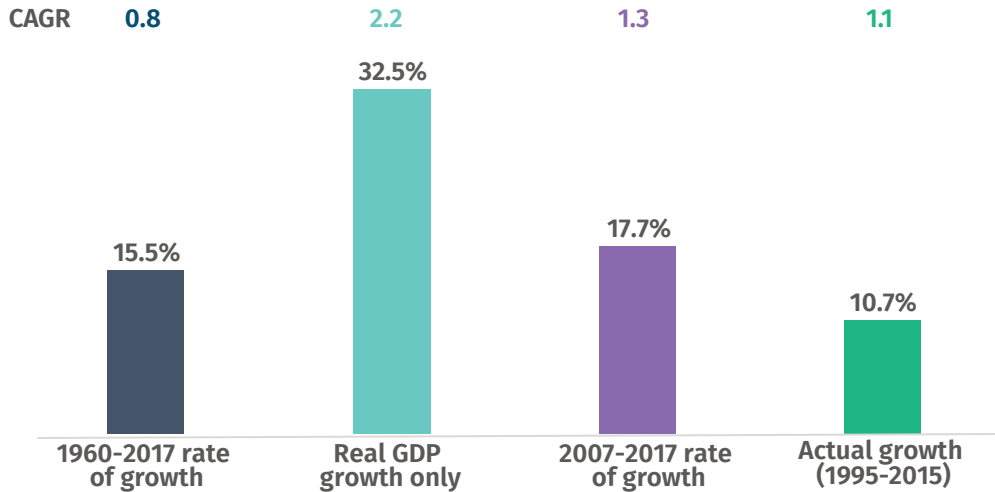


Source: Carnall Farrar Analysis

The scale of the financial gap set out above – £60 billion of additional funding needed per year by 2030 to ensure NHS spending growth is returned to its long run trend and the social care gap is filled – has huge implications for policy makers looking to deliver high quality care for all. It implies that we will have to have some hard conversations with the public about raising additional revenue for the health and care system. Voters may want northern European public services at American tax rates, but this is simply not possible. But, it also shows that simply pouring more money into the health and care will not be enough: the health and care system will need bold reform – and significant productivity increases – to be fit for the future. This also means that any settlement will have to be long term to give the health and social care certainty to plan for the future: a return to 'feast and famine' funding would ensure meeting productivity is impossible from the outset."

FIGURE 4.6

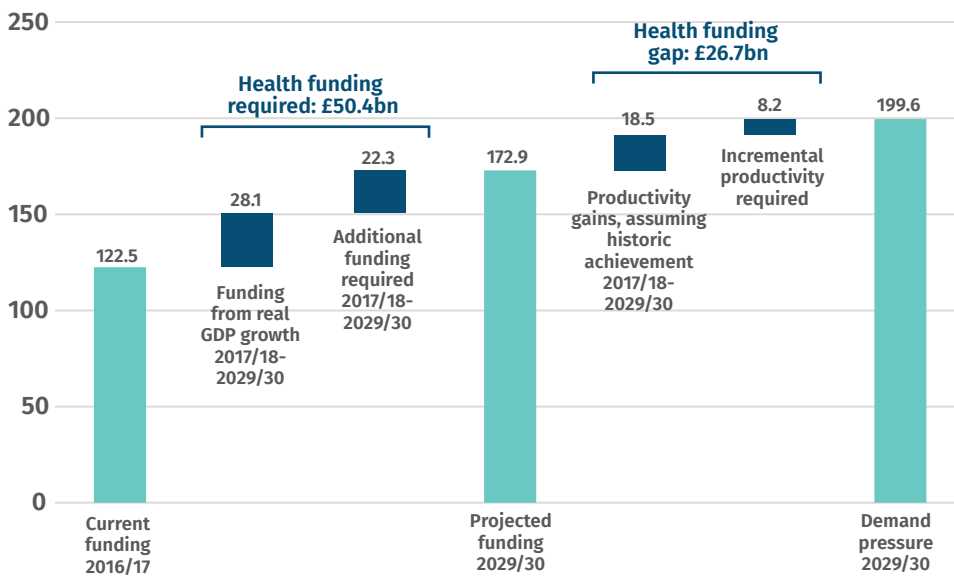
To close the projected health funding gap by 2029/30, cumulative productivity gains of 16% (or 1.1% p.a) are required. This is 1.4 times the level of historic growth
 Cumulative required productivity gains in different funding scenarios (%)



Source: Carnall Farrar Analysis

FIGURE 4.7

In an optimistic funding scenario, a health demand and funding gap of £27bn is projected by 2029/30. Of this gap, £18bn can be addressed by productivity gains based on historic achievement, leaving an additional requirement of £8bn
 Health funding, demand and productivity overview (£bn)



Source: Carnall Farrar Analysis

PART 5:

FIVE CONCLUSIONS

1. The health and care system has done exceedingly well to maintain or increase quality in the context of austerity. This is a testament to what can be achieved when quality is put at the heart of what we do. We must now build on this success by reinvesting in quality as the organising principle of the NHS and social care system. ‘High quality care for all’ is undoubtedly the right ambition, but it must now be broadened to social care, public health and the wider social determinants. We should be aiming “to enable and support people to lead their best lives, in a healthy and prosperous society”.
2. We have now reached a tipping point in the health and care system. The main sources of increased productivity are running out of road and the system’s ability to find other sources of revenue funding – be it switching capital to revenue, dipping into reserves or growing deficits – is increasingly limited. The time has come for the government to abandon austerity in health and care and put forward a long term funding settlement for health and care. It is good to see that the prime minister agrees with this conclusion (Campbell 2018).
3. We have demonstrated that the health and care system will need up to an additional £60bn p.a. by 2030. More money may seem unachievable but it is far from impossible. Governments must stop approaching the NHS and social care as a liability to be managed and instead look at it as investment that delivers a return. Good health is an asset. It is the wellspring from which all other human experience originates. It is a key source of employment in the UK, something only likely to increase as automation transforms our economy. The UK has a world leading life science sector – with the right approach we can grow our national wealth and improve our health. The decade to come offers a range of opportunities – the health service must be fit to seize them.
4. Money alone will not be enough. We will need a bold reform plan if our health and a care system is to be fit for the 21st Century. The traumatic nature of the 2012 healthcare reforms – both in their conception and execution – has induced a collective state of post-traumatic stress disorder. The term ‘reform’ has become a trigger-word for the NHS that understandably provokes alarm and distress, yet the current situation is simply not sustainable. And so it is time to say what must be said: reform needs to be back on the table. The gift the NHS needs on its 70th birthday is a pragmatic plan to secure it for future generations.
5. It is with this in mind that we turn our attention to the future, in the form of detailed funding and reform plan, which we will publish in the lead up to the 70th anniversary of NHS. This must recognise the need for more money in both health and care but also that there is no ‘magic money tree’. If the NHS needs more money we must be clear about where it is coming from. It must re-commit the health and care service to the vision set out in the Five Year Forward View – of a more integrated, preventative, personalised service – but set out exactly how we go about delivering this both in the short and long term. And, most important of all, it must build on the progress we have seen over the last decade in terms of the quality of care in health and care. This is after all, what people care about most.

REFERENCES

- Age UK (2017) *Briefing: Health and Care of Older People in England 2017*. https://www.ageuk.org.uk/Documents/EN-GB/For-professionals/Research/The_Health_and_Care_of_Older_People_in_England_2016.pdf?dtrk=true
- Andrews J et al (2017) *Inspiring Change: It's time to stop talking about 'Delayed Transfers of Care'*, Carnall Farrar. <https://carnallfarrar.com/media/1239/it-s-time-to-stop-talking-about-delayed-transfers-of-care.pdf>
- APPG on HIV and AIDS (2016) *The HIV Puzzle: Piecing together HIV care since the Health and Social Care Act*. <https://www.appghiv aids.org.uk/sites/default/files/pdf/2016/hiv-puzzle-report-2016.pdf>
- Arora S et al (2013) *Public payment and private provision: The changing landscape of health care in the 2000s*, Nuffield Trust and Institute for Fiscal Studies. <https://www.nuffieldtrust.org.uk/files/2017-01/public-payment-and-private-provision-web-final.pdf>
- Association of Directors of Adults Social Services [ADASS] (2017) *ADASS Budget Survey*. <https://www.adass.org.uk/media/5994/adass-budget-survey-report-2017.pdf>
- Baird B (2017) 'Is investment in GP services increasing?', The King's Fund. <https://www.kingsfund.org.uk/blog/2017/09/investment-gp-services-increasing>
- Booth R (2018) 'Patient safety getting worse, say two-thirds of NHS doctors', *Guardian*, 12 March 2018. <https://www.theguardian.com/society/2018/mar/12/patient-safety-getting-worse-say-two-thirds-of-nhs-doctors>
- Bouverie J (2017) 'Major changes in stroke care can save lives', NHS England. <https://www.england.nhs.uk/blog/major-changes-in-stroke-care-can-save-lives/>
- British Medical Association [BMA] (2018) *Privatisation and independent sector provision*. <https://www.bma.org.uk/collective-voice/influence/key-negotiations/nhs-funding/privatisation-and-independent-sector-providers-in-nhs-care>
- BMJ (2017a) 'Investigating the impact of the English health inequalities strategy: time trend analysis', *BMJ* 2017;358:j3310. <https://www.bmj.com/content/358/bmj.j3310>
- BMJ (2017b) 'Sexual health services on the brink', *BMJ* 2017;359:j5395. <https://www.bmj.com/content/359/bmj.j5395>
- Buck D and Maguire D (2015) *Inequalities in life expectancy: Changes over time and implications for policy*, The King's Fund. https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/inequalities-in-life-expectancy-kings-fund-aug15.pdf
- Buck D (2017) 'Reducing inequalities in health: towards a brave old world?', The King's Fund. <https://www.kingsfund.org.uk/blog/2017/08/reducing-inequalities-health-towards-brave-old-world>
- Buck D (2017b) 'Chickens coming home to roost: local government public health budgets for 2017/18', The King's Fund. <https://www.kingsfund.org.uk/blog/2017/07/local-government-public-health-budgets-2017-18>
- Campbell D (2018) 'Theresa May pledges to accelerate NHS long-term funding plan', *Guardian*, 27 March, 2018. <https://www.theguardian.com/society/2018/mar/27/theresa-may-pledges-to-accelerate-nhs-long-term-funding-plan>
- Canadian Institute for Advanced Research, Health Canada, Population and Public Health Branch AB/NWT 2002 quoted in Kuznetsova D (2012) *Healthy places: Councils leading on public health*, New Local Government Network. http://www.nlgn.org.uk/public/wp-content/uploads/Healthy-Places_FINAL.pdf
- Cancer Research UK (2018) *Assessment of cancer strategy progress halfway through*, February 2018. http://www.cancerresearchuk.org/sites/default/files/delivering_the_cancer_strategy_feb18_.pdf

- Care Quality Commission [CQC] (2014) 'Care Quality Commission publishes its fifth annual report on the state of health and care services in England'. <https://www.cqc.org.uk/news/releases/care-quality-commission-publishes-its-fifth-annual-report-state-health-care-services>
- Care Quality Commission [CQC] (2016) *The state of health care and adult social care in England 2015/16*. http://www.cqc.org.uk/sites/default/files/20161019_stateofcare1516_web.pdf
- Care Quality Commission [CQC] (2017a) *The state of health care and adult social care in England 2016/17*. http://www.cqc.org.uk/sites/default/files/20171123_stateofcare1617_report.pdf
- Care Quality Commission [CQC] (2017b) *The state of care in mental health services 2014 to 2017: Findings from CQC's programme of comprehensive inspections of specialist mental health services*. https://www.cqc.org.uk/sites/default/files/20170720_stateofmh_report.pdf
- CQC (2017c) *The state of care in general practice 2014 to 2017: Findings from CQC's programme of comprehensive inspections of GP practices*. http://www.cqc.org.uk/sites/default/files/20170921_state_of_care_in_general_practice2014-17.pdf
- Carnall Farrar (2018) *The Lord Darzi Review of Health and Care: 10 Years On, 10 Years Forward - Analysis Pack*.
- Charles A (2018) 'Accountable care explained', The King's Fund. <https://www.kingsfund.org.uk/publications/accountable-care-explained>
- Charlesworth A et al (2015) *Making change possible: a Transformation Fund for the NHS*, The Health Foundation and The King's Fund. https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/making-change-possible-a-transformation-fund-for-the-nhs-kingsfund-healthfdn-jul15.pdf
- Collins B (2016) *New care models: Emerging innovations in governance and organisational form*, The King's Fund. https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/New_care_models_Kings_Fund_Oct_2016.pdf
- Cooper Z (2011) *Does Hospital Competition Save Lives? Evidence from the English NHS Patient Choice Reforms*, London School of Economics. <http://www.lse.ac.uk/lsehealthandsocialcare/pdf/cooper.pdf>
- Department of Health [DoH] (2008) *Our NHS Our Future: NHS Next Stage Review - Leading Local Change*. http://webarchive.nationalarchives.gov.uk/20130104172911/http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_084644
- Department of Health [DoH] (2013) *UK Five Year Antimicrobial Resistance Strategy 2013 to 2018*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/244058/20130902_UK_5_year_AMR_strategy.pdf
- Department of Health and Social Care [DHSC] (2013) *Chief Medical Officer annual report 2011: antimicrobial resistance*. <https://www.gov.uk/government/publications/chief-medical-officer-annual-report-volume-2>
- Department of Health and Social Care [DHSC] (2010) *Liberating the NHS white paper*. <https://www.gov.uk/government/publications/liberating-the-nhs-white-paper>
- Denmark Ministry of Health (2017) *Healthcare in Denmark: An Overview*, https://www.sum.dk/~media/Filer%20-%20Publikationer_i_pdf/2016/Healthcare-in-dk-16-dec/Healthcare-english-V16-dec.pdf
- Diabetes UK (2016) 'Access to test strips – a postcode lottery?' <https://www.diabetes.org.uk/professionals/position-statements-reports/diagnosis-ongoing-management-monitoring/access-to-test-strips-a-postcode-lottery>
- Donnelly L (2017) 'One in three patients waits a week to see GP - or can't get slot at all', *Telegraph*, 6 July 2017. <https://www.telegraph.co.uk/news/2017/07/06/one-three-patients-waits-week-see-gp-cant-get-slot/>
- Dromey J and Stirling A (2017) *Lifting the cap: The fiscal and economic impact of lifting the NHS pay cap*, IPPR. <http://www.ippr.org/research/publications/lifting-the-cap>
- Edwards N (2017) 'Capital planning and property in the NHS: lost opportunities', Nuffield Trust. <https://www.nuffieldtrust.org.uk/news-item/capital-planning-and-property-in-the-nhs-lost-opportunities>

- Eurostat (2017) 'Material deprivation statistics - early results', April 2017. http://ec.europa.eu/eurostat/statistics-explained/index.php/Material_deprivation_statistics_-_early_results
- Emmerson C (2017) 'Two parliaments of pain: the UK public finances 2010 to 2017', Institute for Fiscal Studies. <https://www.ifs.org.uk/publications/9180>
- Forster K (2017) 'Almost half of GPs plan to quit NHS due to 'perilously' low morale, survey suggests', *Independent*, 11 April 2017. <https://www.independent.co.uk/news/health/gps-nhs-two-in-five-plan-to-quit-survey-exeter-south-west-crisis-haemorrhaging-doctors-a7679166.html>
- Gabbe B (2011) *The effect of an organized trauma system on mortality in major trauma involving serious head injury: A comparison of the United Kingdom and Victoria, Australia*. <https://www.ncbi.nlm.nih.gov/pubmed/21233612>
- Gershlik B et al (2017) *Election briefing: A sustainable workforce – the lifeblood of the NHS and social care*, The Health Foundation. <http://www.health.org.uk/sites/health/files/Election%20briefing%20A%20sustainable%20workforce.pdf>
- Gilbert H (2018) 'Funding and staffing of NHS mental health providers: Still waiting for parity', The King's Fund. <https://www.kingsfund.org.uk/publications/funding-staffing-mental-health-providers>
- Gornall J et al (2016) *A pill too hard to swallow: how the NHS is limiting access to high priced drugs*, *BMJ* 2016;354:i4117. <http://opus.bath.ac.uk/51514/1/bmj.i4117.full.pdf>
- Grossman M (1972) 'On the Concept of Health Capital and the Demand for Health', *The Journal of Political Economy*, 80(2). <https://pdfs.semanticscholar.org/e656/466bba4f898ad560498998639eb147f62396.pdf>
- Guardian (2017) 'GP recruitment crisis intensifies as vacancies soar to 12.2%'. <https://www.theguardian.com/society/2017/may/12/gp-recruitment-crisis-intensifies-as-vacancies-soar-to-122>
- Hazra, Nisha C and Rudisill, Caroline and Gulliford, Martin C (2017) *Determinants of health care costs in the senior elderly: age, comorbidity, impairment, or proximity to death?* *The European Journal of Health Economics*.
- Health Foundation (no date) 'Chart: Cost of drugs for the NHS in England by sector, 2010/11–2015/16'. <http://www.health.org.uk/chart-cost-drugs-nhs-england-sector-201011%E2%80%93201516>
- Health Service Journal [HSJ] (2015) *Ending the crisis in NHS leadership: A plan for renewal*, <https://www.hsj.co.uk/Journals/2015/06/12/y/m/e/HSJ-Future-of-NHS-Leadership-inquiry-report-June-2015.pdf>
- Heath A (2015) 'Junior doctors are victims of an NHS that's broken beyond repair', *Telegraph*, 4 November 2015. <https://www.telegraph.co.uk/news/health/11975958/Junior-doctors-are-victims-of-an-NHS-thats-broken-beyond-repair.html>
- Holder H and Buckingham H (2017) *A two-way street: What can CCGs teach us about accountability in STPs?*, Nuffield Trust. <https://www.nuffieldtrust.org.uk/research/a-two-way-street#key-messages>
- Holt-Lunstad et al (2015) Loneliness and social isolation as risk factors for mortality: A meta-analytic review, *Sage Journals*. <http://journals.sagepub.com/doi/abs/10.1177/1745691614568352>
- House of Lords [HoL] (2017) *The Long-term Sustainability of the NHS and Adult Social Care*, Select Committee on the Long-term Sustainability of the NHS. <https://publications.parliament.uk/pa/ld201617/ldselect/ldnhssus/151/151.pdf>
- The King's Fund (2017) 'The NHS budget and how it has changed' in *The NHS in a nutshell*. <https://www.kingsfund.org.uk/projects/nhs-in-a-nutshell/nhs-budget>
- Kircup B (2018) *Report of the Liverpool Community Health Independent Review*. <http://www.liverpoolcommunityhealth.nhs.uk/downloads/LiverpoolCommunityHealthIndependentReviewReportV2.pdf>
- Kontis V et al. (2017) 'Future life expectancy in 35 industrialised countries: projections with a Bayesian model ensemble', *The Lancet*, 21 February 2017. <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2816%2932381-9/fulltext>

- Lafond S, Charlesworth A and Roberts A (2017) *A year of plenty? An analysis of NHS finances and consultant productivity*, The Health Foundation. <http://www.health.org.uk/publication/year-of-plenty>
- Local Government Association [LGA] (2014) *LGA Adult Social Care Efficiency Programme: The final report*. <https://www.local.gov.uk/sites/default/files/documents/lga-adult-social-care-eff-549.pdf>
- Licchetta M and Stelmach M (2016) *Fiscal sustainability analytical paper: Fiscal sustainability and public spending on health*, Office for Budget Responsibility. http://obr.uk/docs/dlm_uploads/Health-FSAP.pdf
- Lloyd J (2016) *Rebooting the Cap: Improving protection from catastrophic care costs*, The Strategic Society Centre. <http://strategicsociety.org.uk/rebooting-cap-improving-protection-catastrophic-care-costs/#.WsXrEi7wbmh>
- Marmot M (2017a) 'The UK's current health problems should be treated with urgency', *thebmjopinion*, 13 September 2017. <http://blogs.bmj.com/bmj/2017/09/13/michael-marmot-the-uks-current-health-problems-should-be-treated-with-urgency/>
- Marmot M (2017b) 'Inclusion health: addressing the causes of the causes', *The Lancet*, 11 November 2017. [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(17\)32848-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(17)32848-9/fulltext)
- Marsh S (2018) 'Eating disorders: NHS reports surge in hospital admissions', *Guardian*, 12 February 2018. <https://www.theguardian.com/society/2018/feb/12/eating-disorders-nhs-reports-surge-in-hospital-admissions>
- McKenna H (2017) 'Brexit: the implications for health and social care', The King's Fund. <https://www.kingsfund.org.uk/publications/articles/brexit-implications-health-social-care>
- Ministry of Housing, Communities and Local Government [MHCLG] (2017), 'Rough Sleeping Statistics Autumn 2017, England (Revised)'. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/682001/Rough_Sleeping_Autumn_2017_Statistical_Release_-_revised.pdf
- Molloy A, Martin S, Gardner T, Leatherman S (2016) *A clear road ahead: Creating a coherent quality strategy for the English NHS*, The Health Foundation. <http://www.health.org.uk/publication/clear-road-ahead>
- Molloy A, Tim Gardner T and Thorlby R (2017) *Election briefing: Quality of care in the English NHS - In the balance*, The Health Foundation. <http://www.health.org.uk/publication/election-briefing-quality-care-english-nhs>
- National Audit Office [NAO] (2018) *Sustainability and transformation in the NHS*. <https://www.nao.org.uk/wp-content/uploads/2018/01/Sustainability-and-transformation-in-the-NHS.pdf>
- National Audit Office [NAO] (2018b) *The adult social care workforce in England*. <https://www.nao.org.uk/wp-content/uploads/2018/02/The-adult-social-care-workforce-in-England.pdf>
- National Audit Office [NAO] (2018c) *Ensuring employers comply with National Minimum Wage regulations*. <https://www.nao.org.uk/wp-content/uploads/2016/05/Ensuring-employers-comply-National-Minimum-Wage-regulations.pdf>
- National Institute for Health and Care Excellence [NICE] (2016) Public board meeting held on 20 January 2016 at City Hall, Salisbury, Wiltshire. <https://www.nice.org.uk/Media/Default/Get-involved/Meetings-In-Public/Public-board-meetings/march-2016-public-board-agenda.pdf>
- Naylor C et al (2016) *Bringing together physical and mental health: A new frontier for integrated care*, The King's Fund. https://www.kingsfund.org.uk/sites/default/files/field/field_publication_file/Bringing-together-Kings-Fund-March-2016_1.pdf
- Norwegian Directorate of Health (2009) *Norway and health: An introduction*. <https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/302/Norway-and-health-an-introduction-IS-1730E.pdf>
- NHS (no date) 'Junior doctor morale: Understanding best practice working environments', Health Education England. https://hee.nhs.uk/sites/default/files/documents/Junior%20Doctors%27%20Morale%20-%20understanding%20best%20practice%20working%20environments_0.pdf

- NHS (2014) 'Primary Care' in *Five Year Forward View*. <https://www.england.nhs.uk/five-year-forward-view/next-steps-on-the-nhs-five-year-forward-view/primary-care/>
- NHS (2015) *National Review of Maternity Services: Assessment of Quality in Maternity Services*. <https://www.england.nhs.uk/wp-content/uploads/2015/07/Assessment-of-Quality-in-Maternity-Services.pdf>
- NHS (2016) *Recap briefing for the Health Select Committee on technical modelling and scenarios*, *Five Year Forward View*. <https://www.england.nhs.uk/wp-content/uploads/2016/05/fyfv-tech-note-090516.pdf>
- NHS (2017a) 'Statistics on Drugs Misuse: England, 2017', 28 February 2017. <http://digital.nhs.uk/catalogue/PUB23442>
- NHS (2017b) 'Childhood Vaccination Coverage Statistics, England, 2016-17', 20 September 2017. <http://www.digital.nhs.uk/catalogue/PUB30085>
- NHS (2017c) 'Estates Return Information Collection 2016/17', 27 September 2017. <https://digital.nhs.uk/catalogue/PUB30096>
- NHS (2017d) *Facing the Facts, Shaping the Future: A draft health and care workforce strategy for England to 2027*. <https://www.hee.nhs.uk/sites/default/files/documents/Facing%20the%20Facts%2C%20Shaping%20the%20Future%20%E2%80%93%20a%20draft%20health%20and%20care%20workforce%20strategy%20for%20England%20to%202027.pdf>
- NHS (2017e) *Next steps on the NHS Five Year Forward View*. <https://www.england.nhs.uk/wp-content/uploads/2017/03/NEXT-STEPS-ON-THE-NHS-FIVE-YEAR-FORWARD-VIEW.pdf>
- NHS (2017f) 'Results for the 2017 NHS Staff Survey' <http://www.nhsstaffsurveys.com/Page/1064/Latest-Results/2017-Results/>
- NHS (2018) 'Never Events data'. <https://improvement.nhs.uk/resources/never-events-data/>
- NHS Providers (no date) 'Investing in success'. <http://nhsproviders.org/resource-library/briefings/investing-in-success>
- Nursing and Midwifery Council [NMC] (2017) 'Increasing number of nurses and midwives leaving profession 'highlights major challenges faced by health and care sectors'', <https://www.nmc.org.uk/news/press-releases/increasing-number-of-nurses-and-midwives-leaving-profession-highlights-major-challenges-faced-by-health-and-care-sectors/>
- Office for Life Sciences [OLS] (2017) *Life Science Competitiveness Indicators*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/606651/life-science-competitiveness-indicators-report-2017.pdf
- ONS (2015a) 'Avoidable mortality in England and Wales: 2015'. <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/causesofdeath/bulletins/avoidablemortalityinenglandandwales/2015>
- ONS (2015b) 'How has life expectancy changed over time?' <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/articles/howhaslifeexpectancychangedovertime/2015-09-09>
- ONS (2017) 'Young people's well-being: 2017' <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/youngpeopleswellbeingandpersonalfinance/2017>
- ONS (2018) 'Dataset: EMP13: Employment by industry (Labour force survey)'. <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/datasets/employmentbyindustryemp13>
- ONS (2018b) 'Personal well-being in the UK: April 2016 to March 2017'. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/april2016tomarch2017>
- ONS (2018c) 'Personal well-being in the UK: October 2016 to September 2017'. <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/october2016toseptember2017>
- Organisation for Economic Co-operation and Development [OECD] (2010) "Health care systems: Getting more value for money", OECD Economics Department Policy Notes, No. 2. <https://www.oecd.org/eco/growth/46508904.pdf>
- Organisation for Economic Co-operation and Development [OECD] (2017) 'OECD Health Statistics 2017' <http://www.oecd.org/els/health-systems/health-data.htm>

- Paton C (2014) *At what cost? Paying the price for the market in the English NHS*, Centre for Health and the Public Interest. <https://chpi.org.uk/wp-content/uploads/2014/02/At-what-cost-paying-the-price-for-the-market-in-the-English-NHS-by-Calum-Paton.pdf>
- Pinder C (2008) *Work motivation in organizational behaviour*, New York, Psychology Press.
- Pollock A et al (2010) 'Bad science concerning NHS competition is being used to support the controversial Health and Social Care Bill', London School of Economics. <http://blogs.lse.ac.uk/politicsandpolicy/bad-science-nhs-competition/>
- Public Health England (2016) 'Table 8: Attendances by gender, sexual risk & age group, 2012-2016'. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/617052/2016_Table_8_Attendances_by_gender_sexual_risk_and_age_group.pdf
- Public Health England (2016b) 'Sexually Transmitted Infections and Chlamydia Screening in England, 2016'. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/617025/Health_Protection_Report_STIs_NCSP_2017.pdf
- Public Health England (2016c) 'HIV in the UK 2016 report' https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/602942/HIV_in_the_UK_report.pdf
- Public Health England (2017a) 'Chapter 1: Life expectancy and healthy life expectancy', *Health profile for England*. <https://www.gov.uk/government/publications/health-profile-for-england/chapter-1-life-expectancy-and-healthy-life-expectancy>
- Public Health England (2017b) 'Chapter 5: Inequality in Health', *Health profile for England*. <https://www.gov.uk/government/publications/health-profile-for-england/chapter-5-inequality-in-health>
- Public Health England (2017c) *English Surveillance Programme for Antimicrobial Utilisation and Resistance (ESPAUR)*. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/656611/ESPAUR_report_2017.pdf
- Quilter-Pinner H (2017) *Sustainability and Transformation Plans (STPs): What, why and where next?*, IPPR. <https://www.ippr.org/publications/stps>
- Quilter-Pinner H and Antink B (2017) *Devo-health: Where next?*, IPPR. <https://www.ippr.org/publications/devo-health-where-next>
- Relate (2017) 'Loneliness is rising: 1 in 8 adults have no close friends', 1 March 2017. <https://www.relate.org.uk/about-us/media-centre/press-releases/2017/2/22/loneliness-rising-1-8-adults-have-no-close-friends>
- Robertson R (2018) 'Public satisfaction with GP services drops to lowest level in 35 years', The King's Fund. <https://www.kingsfund.org.uk/blog/2018/02/public-satisfaction-gp-services>
- Robertson R et al (2018) 'Public satisfaction with the NHS and social care in 2017', The King's Fund. <https://www.kingsfund.org.uk/publications/public-satisfaction-nhs-2017>
- Roland M (2016) 'Tackling the crisis in general practice', *BMJ* 2016;352:i942. <https://www.bmj.com/content/352/bmj.i942>
- Royal College of Obstetricians and Gynaecologists (2016) 'Report highlights variation in maternity care across England', 23 March 2016. <https://www.rcog.org.uk/en/news/rcog-press-release-report-highlights-variation-in-maternity-care-across-england/>
- Siddique H (2017) 'Three-quarters of older people in the UK are lonely, survey finds', *Guardian*, 21 March 2017. <https://www.theguardian.com/society/2017/mar/21/three-quarters-of-older-people-in-the-uk-are-lonely-survey-finds>
- Simpson P (2017) 'Public spending on adult social care in England', Institute for Fiscal Studies. <https://www.ifs.org.uk/publications/9185>
- Skills for Care [SfC] (2017) *The state of the adult social care sector and workforce in England*. <https://www.skillsforcare.org.uk/Documents/NMDS-SC-and-intelligence/NMDS-SC/Analysis-pages/State-of-17/State-of-the-adult-social-care-sector-and-workforce-2017.pdf>
- Stoye G (2017) 'UK health spending', Institute for Fiscal Studies. <https://www.ifs.org.uk/publications/9186>
- Timmins N (2012) *Never again: The story of the Health and Social Care Act 2012*, The King's Fund. <https://www.kingsfund.org.uk/publications/never-again>

- Timmins N (2016) 'What if Beveridge were reporting today?', The King's Fund.
<https://www.kingsfund.org.uk/reports/thenhsif/what-if-beveridge-reporting-today/>
- Triggle N (2018) NHS pay: Unions agree deal for 1.3 million staff, *BBC*, 21 March 2018.
<http://www.bbc.co.uk/news/health-43481341>
- United Nations (2016) 'World Health Leaders Agree on Action to Combat Antimicrobial Resistance, Warning of Nearly 10 Million Deaths Annually If Left Unchecked', 21 September 2016. <https://www.un.org/press/en/2016/ga11825.doc.htm>
- Wachter R (2016) *Making IT Work: Harnessing the Power of Health Information Technology to Improve Care in England*, National Advisory Group on Health Information Technology in England. <https://www.gov.uk/government/publications/using-information-technology-to-improve-the-nhs>
- Wilmington Healthcare (2017) 'NHS shake-ups have caused staff shortages',
<https://wilmingtonhealthcare.com/nhs-shake-ups-have-caused-staff-shortages/>
- The World Bank (2016) 'Mortality rate, neonatal (per 1,000 live births)'
https://data.worldbank.org/indicator/SH.DYN.NMRT?end=2016&locations=EU-DK-GB-NL-FR-DE-IE-BE-AT-PT-IT-ES-SE-FI&start=2016&view=bar&year_high_desc=true
- World Economic Forum [WEF] (2012) *The Financial Sustainability of Health Systems: A Case for Change*. http://www3.weforum.org/docs/WEF_HE_SustainabilityHealthSystems_Report_2012.pdf
- World Health Organisation [WHO] (2007) *Everybody's business: Strengthening health systems to improve health outcomes*. http://www.who.int/healthsystems/strategy/everybodys_business.pdf
- World Health Organisation [WHO] (2016) 'Disease burden and mortality estimates'.
http://www.who.int/healthinfo/global_burden_disease/estimates/en/index2.html

APPENDIX 1: FUNDING GAP METHODOLOGY

We have followed a five step process for estimating the funding gap for health and gap. This is set out below.

1. Projecting health demand pressure:
 - Capture 2016/17 baseline for Total Department of Health Expenditure Limit (TDEL)
 - Project NHS acute spend to 2029/30, using demographic, non-demographic, and provider cost inflation factors
 - Apply forecast acute spend growth rates to rest of spend
2. Projecting health funding scenarios:
 - Assume 2016/17 Department of Health funding income = 2016/17 TDEL
 - Project funding income to 2029/30:
 - GDP real growth only
 - GDP real growth + 1.3 per cent (2007-17)
 - GDP real growth + 1.5 per cent (1960-2017)
3. Calculating the health funding gap:
 - Subtract (2) from (1) for all four scenarios to project health funding gap to 2029/30
4. Calculating the implied productivity gains required
 - Calculate implied productivity gains for each scenario on an annual and cumulative level to balance system by 2029/30
 - Compare implied productivity gains to historic achievement
5. Integrate social care and health funding gaps
 - Integrate social care projected funding gaps– from Health Foundation calculations - to get combined funding gap for health and social care in England to 2029/30

A more detailed exploration of this methodology and data sources can be found below.

	Components	Sources
1. Baseline 2016/17 Department of Health spend	<p>Department of Health Expenditure Limit (TDEL)</p> <p>NHS breakdown:</p> <p>CCG spend by POD: Acute, Primary Care, MH, Community, Continuing Care</p> <p>Specialised commissioning by POD</p> <p>Directly commissioned Primary Care</p> <p>NHSE Running & Programme Costs</p>	<p>'Autumn Budget: Joint Statement on health and social care' – Nuffield Trust, The Health Foundation, The Kings Fund (Nov 17)</p> <p>'CCG Breakdown of Programme Costs' 2015/16 – NHSE</p> <p>'The commissioning of specialised services in the NHS' – National Audit Office (Apr 16)</p> <p>NHSE Business Plan 2016/17</p>
2. Project NHS Acute Spend 2017/18 -2029/30	<p>Demographic growth factors</p> <p>population growth</p> <p>ageing impact</p> <p>Non-demographic growth factors</p> <p>total less demo growth (2012/13-2016/17)</p> <p>Provider cost inflation factors</p> <p>Pay & pensions</p> <p>Drugs</p> <p>Capital costs</p> <p>Clinical negligence</p> <p>Other operating costs</p> <p>4. Compound all growth factors to create overall growth rate for acute spend</p>	<p>ONS Projections (2016-based projections) & HES: activity by age segment for EL, NEL, OP</p> <p>'Economic Assumptions for Providers 2016/17-2020/21 - NHS Improvement</p> <p>NHS Digital: Drugs spend</p> <p>OBR: Economic and fiscal outlook (Mar 18)</p> <p>OBR: Long term economic determinants (Jan 17)</p> <p>OBR: Public service pension payments (Jan 18)</p>
3. Apply NHS acute spend growth across rest Of DOH spend		1. Calculation
4. Project DOH funding	<ul style="list-style-type: none"> • Assume 2016/17 DOH funding income = 2016/17 DOH spend (TDEL) • Project funding income to 29/30 : <p>I. No real growth</p> <p>II. GDP real growth only</p> <p>III. GDP real growth + 1.3 per cent (2007-2017)</p> <p>IV. GDP real growth + 1.5 per cent (1960-2017)</p>	<p>'Forecasts for the UK economy: a comparison of independent forecasts (2017-2021)' – HM Treasury (Nov 17)</p> <p>'The Financial Sustainability of Health Systems A Case for Change' – World Economic Forum (2012)</p> <p>OBR: Economic and fiscal outlook (Mar 18)</p> <p>OBR: Long term economic determinants (Jan 17)</p> <p>'Autumn Budget: Joint Statement on health and social care' – Nuffield Trust, The Health Foundation, The Kings Fund (Nov 17)</p>
5. Calculate health funding gap	1. Subtract (2) from (1) for all four scenarios to project funding gaps to 2029/30	1. Calculation
6. Calculate implied productivity requirements	<p>1. Calculate implied productivity gains for each scenario on annual and cumulative level to 2029/30</p> <p>2. Compare implied productivity gains to historic achievement</p>	<p>1. Calculation</p> <p>2. 'Growth rate and index for public service healthcare productivity, 1995 to 2015', ONS</p>
7. Calculate implied productivity requirements	1. Integrate social care projected funding deficits to get combined funding gap for health and social care in England to 2029/30	<p>1. 'Autumn Budget: Joint Statement on health and social care' – Nuffield Trust, The Health Foundation, The Kings Fund (Nov 17)</p> <p>'Health and Social Care Funding Explained' – Health Foundation (2016)</p>

Institute for Public Policy Research

