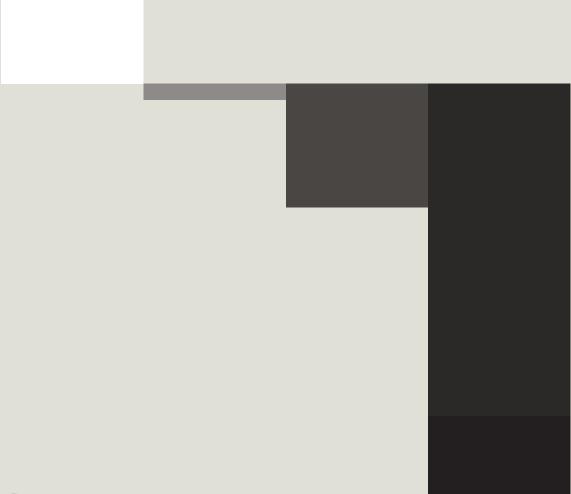
# A perfect storm: an impossible climate for NHS providers' finances?

An analysis of NHS finances and factors associated with financial performance

Sarah Lafond, Anita Charlesworth and Adam Roberts





#### Acknowledgements

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Errors or omissions remain the responsibility of the authors alone.

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# Key points

#### **Background**

The NHS in England is currently halfway through the most austere decade in its history. In the 2015 comprehensive spending review, the government committed to additional real terms (adjusted for inflation) funding for health of £4.5bn by 2020/21. This means that NHS funding in England will have risen by an average of 0.9% per year in real terms between 2009/10 and 2020/21. This is well below the average real terms increase of 3.7% per year since its creation in 1948, and a far cry from an average increase of 8.6% per year between 2001/02 and 2004/05. It will be the lowest ever rate of funding growth over a 10-year period.

Pressures on NHS providers grow by around 4% every year, due to a growing and aging population as well as rising costs, expectations and prevalence of long-term conditions. At the levels of funding provided, the NHS is struggling to meet these demands and cost pressures.

Funding for public provision for adult social care fell in real terms by an average of 2.2% per year between 2009/10 and 2014/15, leading to a 25% reduction in the number of people receiving publicly funded social care. It is hard to identify the additional burden this has placed on NHS services, but due to the strong interdependency between health and social care services, it is likely to have had an impact on the demand for, and cost of providing services. Following the comprehensive spending review in 2015, public funding for adult social care is planned to rise by an average of 0.6% per year in real terms between 2015/16 and 2019/20. This increase in funding is welcome, but still below the projected rate of increase for demand pressures of 4% per year. It is therefore likely that the level of unmet need for adult social care will rise in the near future.

#### Financial status

The Department of Health reported an underspend of just 0.001% of their revenue budget in 2014/15, down from 0.2% in 2013/14 and 1.5% in 2012/13. This is despite an extra £250m investment from MH Treasury, and a transfer from the capital to resource budget of £640m. In 2015/16, the Department of Health has already received an additional investment of £205m, with a capital transfer of £945m.

There was a higher underspend for commissioners, with NHS England reporting an underspend of 0.4% (£377m) against their plan for 2014/15. This was made up from underspends by: CCGs (0.3%, £182m), direct commissioning (0.1%, £18m) and administration and central programming (10.7%, £174m). Although there was a surplus across all CCGs, 10% reported a deficit for the year. By the second quarter of 2015/16 this had risen to 17%.

Unless otherwise stated, all financial data in this report have been adjusted to 2015/16 prices using HM Treasury Gross Domestic Product (GDP) deflators – a whole economy measure of inflation.

2014/15 was the second year that NHS England and CCGs were responsible for commissioning NHS services in England. The total commissioner budget rose by 1.8% and allocations to CCGs, worth 70% of the total budget, rose by 1.9%. NHS England's direct commissioning spend rose by 1.6%, due to a large increase in spending on specialised services and the Cancer Drugs Fund.

While commissioners reported a net surplus, NHS providers are currently in severe financial difficulty, with a net deficit of £841m reported in 2014/15. This was the second year that providers have reported a net deficit, and the first time that foundation trusts have done so.

By December 2015 the deficit for all NHS providers had reached £2.3bn, and is projected to rise to £2.8bn for the full financial year. This deficit is not down to a small number of struggling organisations, but rather is a systemic issue with three-quarters of trusts reporting a deficit by quarter three of 2015/16. Although there is no clear regional pattern to the declining finances, the extent of the deficit is concentrated in acute trusts, with 95% currently reporting a deficit.

#### Reasons for provider deficit

The worsening finances of NHS providers are a result of costs for delivering health care rising faster (2.2%) than the income that providers are receiving (2.0%). There are a number of reasons for this, including rising staff costs (particularly for agency staff) and falling average payments from the national payment by results (PbR) tariff.

Staff costs account for three-fifths of total NHS providers' expenditure. The cost of staff has risen in recent years, due to increasing numbers and rising average cost per staff member employed. Between 2011/12 and 2014/15, the number of permanent full time equivalent (FTE) staff employed rose by 0.8%, but the total staff costs rose by 1.3%. A major driver for this increased cost is spending on non-permanent staff, which rose by 6.2% in 2014/15. Of this, agency staff represents a substantial cost pressure for NHS providers, rising by 27% (£0.7bn) in 2014/15.

The increase in spending on agency staff is in part a reflection of the policy response to the public inquiry led by Robert Francis QC into the failings at Mid-Staffordshire NHS Foundation Trust. The inquiry highlighted concerns about the link between quality and ward staffing. Following this there was a big increase in the demand for nursing staff, which was largely met through greater spending on temporary staff. Between 2011/12 and 2014/15 spending on non-permanent staff rose by an average of 15.3% per year, while spending on permanent staff rose by an average of just 0.03% per year.

The increase in demand for nurses is not unprecedented – in fact, the ratio of the number of nurses to beds in hospitals at the start of 2015 returned the same level observed at the end of 2011. However, the National Audit Office (NAO) found that local workforce plans have underestimated workforce need as they are often driven more by financial constraints than true staffing needs. There is also a tendency to focus on existing staffing models and roles rather than the changes that will be needed to respond to the changing way services

are being delivered. Overall, the NAO found that the gap between the supply of, and need for, staff was greatest for nursing, midwifery and health visiting, with a shortfall of 7.2% of the workforce in 2014. This follows a 20% fall in nurse training places over the last decade, so just over 13,000 nurses were trained in 2014/15 - 3,000 fewer than in 2004/05. It is estimated that the shortfall will not be closed until 2019/20.

At the same time, many organisations are struggling to retain members of their senior executive teams: in September 2015, three in 10 acute and specialist trusts had a chief executive who was either interim or had been in post less than a year. Strong, long-term leadership is considered a vital component of successful organisations. However, this is not available for a number of struggling organisations.

Costs are also rising due to increasing demand for services, for which income has not kept pace. The national PbR tariff predominantly covers acute sector activity, and so acute and specialist providers receive the majority (60%) of their income through tariff payments. However the average price paid through tariff has fallen in real terms in recent years due to a high efficiency factor of 4%. As a result, the income received for providing services covered by the PbR tariff has fallen relative to the cost of delivering these services.

#### **Productivity**

The NHS five year forward view (Forward View) committed to achieving efficiency growth of 2-3% each year to 2020/21 to maintain the quality of services within the planned budget.

Recent work by the Centre for Health Economics (CHE) at York University found that NHS-wide productivity, including commissioning functions and primary care services, increased by 2.0% in 2013/14. In large part this was accounted for by the very low input growth resulting from the switch from relatively expensive primary care trusts (PCTs) and strategic health authorities (SHAs) to the less resource-intensive NHS England and clinical commissioning groups (CCGs). This is a one-off change which cannot be repeated.

CHE's work also found that productivity across all NHS providers fell by 0.5% in 2013/14, after accounting for quality across all sectors, including mental health and community trusts. We also found this to be the case using our crude measure of productivity for acute trusts, and further found that productivity also fell in 2014/15. This was the third year in a row, and means that crude productivity for the acute sector has risen by an average of just 0.1% per year between 2009/10 and 2014/15.

The further deterioration in productivity in 2014/15 is mirrored in savings delivered through the Quality, Innovation, Productivity and Prevention (QIPP) programme, which aimed to deliver £20bn of efficiency savings between 2012/13 and 2014/15. Savings through QIPP were £1.8bn in 2014/15, less than half the savings in each of the preceding three years.

#### Characteristics of acute and specialist trusts in deficit

We ran an econometric analysis of a number of indicators to identify those factors that had a statistically significant association\* with poor financial performance for acute and specialist trusts in 2014/15. We found that an acute or specialist trust is statistically more likely to have a higher deficit if the following factors apply:

- A higher proportion of its staff costs are spent on agency staff.
- It is providing a lower quality of service, as measured by:
  - more staff disagreeing with the statement in the 2014 staff survey, 'If a friend or relative needed treatment I would be happy with the standard of care provided by this organisation'
  - receiving a rating of 'Inadequate' following a Care Quality Commission (CQC) inspection.
- It receives a higher share of its income from the PbR tariff.
- It is an acute rather than a specialist trust.
- It provides services from fewer sites.

We found no statistical association between the financial position of an acute or specialist trust and the following factors:

- The length of service of the chief executive.
- Whether the trust has an e-rostering system.
- The existence or size of a PFI deal.

Our results show a strong link between the financial performance of an acute or specialist trust and the quality of services it provides to patients. It is important to note this link is an association not causation. For example, we cannot infer that having an inadequate CQC rating 'causes' the financial deficit, or that a financial deficit directly leads to poor quality of care. They may both be associated with other factors that we have not measured here. However, our findings do highlight a clear association between a trust's financial status and the quality of services it provides. From this we can conclude that, as the financial status of trusts declines, the quality of services provided to patients is also likely to be getting worse.

#### Conclusion

2014/15 saw an acceleration of the worrying trend of rising deficits for NHS providers. According to the Forward View the NHS will need to make efficiency savings of £22bn by 2020/21 to live within the planned budget. The Forward View was predicated on the NHS starting from a balanced budget, but the provider-side deficit is expected to reach £2.8bn in 2015/16. Much of the planned savings from pay restraint for permanent staff may be lost due to a combination of higher pension contributions and rising agency staff costs.

<sup>\*</sup> Statistical significance is an indication of the probability to a hypothesis to be true.

Potential savings worth up to £5bn for the acute sector were identified in a recent report by Lord Carter of Coles. However, these still represent less than a quarter of the total savings required. There is no clear guidance about how the NHS will achieve the full savings amount required.

There is much good practice in the NHS, but it does not spread consistently or quickly. Lord Carter's review highlights many opportunities to improve. The failure to spread good practice is not a result of those in the NHS wilfully ignoring the opportunities to improve. Rather it reflects the inherent challenges of transforming a service as complex as health care.

With demand and cost pressures expected to continue rising faster than investment, the financial situation of the NHS in England is likely to get worse. If these financial pressures are not to overwhelm the health service, urgent and concerted action is needed on two key fronts. First, the NHS needs national action to tackle the gap between the need for skilled staff and the supply of suitably trained workers. Second, as we have previously argued, providers need financial and practical support to realise the undoubted productivity savings which exist across the system.

# 1. Introduction

The NHS in England is currently halfway through the most austere decade in its history. Although funding for the English NHS has increased by an average of 0.9% per year in real terms between 2009/10 and 2015/16, this is well below the average of 3.7% per year since its creation in 1948. It is also a far cry from the period between 2001/02 and 2004/05 when funding grew by an average of 8.6% per year. The 2015 comprehensive spending review confirmed that the budget for the Department of Health will rise by just over £4.5bn by 2020/21 (2015/16 prices). This means that the funding for the English NHS will rise by an average of 0.9% per year in during the decade from 2009/10 to 2020/21, lower than any other 10-year period.

In addition, funding for public provision of adult social care fell by an average of 2.2% per year between 2009/10 and 2014/15.<sup>2</sup> This led to a 25% reduction in the number of people receiving publicly funded social care. It is hard to quantify the additional burden this has placed on NHS services, but due to the strong interdependency between health and social care services, it is likely to have had an impact on the demand for, and cost of providing, services.

The recent lower rate of growth in NHS funding reflects the policies to reduce the fiscal deficit of the last coalition government and current Conservative government. While spending on the NHS rose between 2009/10 and 2015/16, total government expenditure fell by an average of 0.7% per year.\* So, while the rate of growth for the NHS is low compared to historical rates, it faired favourably compared to other areas of public spending during this period.

However, the rate of funding increase was much lower than the estimated growth in demand pressures for the period.<sup>3</sup> Pressures on NHS providers (NHS trusts and foundation trusts) grow by around 4% every year, due to a growing and aging population as well as rising costs, expectations and prevalence of long-term conditions.

More specifically, there have also been cost pressures in recent years arising from NHS providers' increasing reliance on agency staff and rising costs of employer pension contributions. The NHS is struggling to meet these demand pressures within the levels of funding provided. In 2014/15 the Department of Health reported an underspend of just 0.001% of their revenue budget, down from 0.2% in 2013/14 and 1.5% in 2012/13. This is despite an extra £250m investment from HM Treasury, and a transfer from the capital to resource budget of £640m. In 2015/16, the Department of Health has already received an additional investment of £205m, with a capital transfer of £945m.

NHS providers in England are therefore facing unprecedented financial challenges. The number of NHS providers posting a financial deficit has been rising in recent years, a trend that continued in 2014/15. It is clear this is not a problem of a few organisations, but rather

<sup>\*</sup> For total government expenditure we have used Total Managed Expenditure (TME) from PESA 2015.

a systemic issue across all providers. Before the problem can be fully addressed, it will be necessary to have a clear understanding of exactly why trusts are going into deficit. We have therefore identified the key pressures that are associated with larger net deficit in providers, to help understand what factors are associated with greater financial difficulty.

This report examines the financial performance of the NHS in England. Our main focus has been the finances of NHS providers, drawing on their financial accounts from 2012/13 to 2014/15. We have also included data on the financial position of the commissioners of care (NHS England and clinical commissioning groups (CCGs)).

We have examined commissioners' budgets and how spending has changed by type of provider (chapter 2), as well as the specific issues facing NHS providers (chapter 3). We have also run a statistical analysis to identify factors that are most strongly associated with an acute or specialist provider's deficit, to help provide focus on the most substantive issues (chapter 4).

All financial data in this report have been adjusted to 2015/16 prices using HM Treasury Gross Domestic Product (GDP) deflators – a whole economy measure of inflation.<sup>5</sup>

## Funding of the English NHS in context

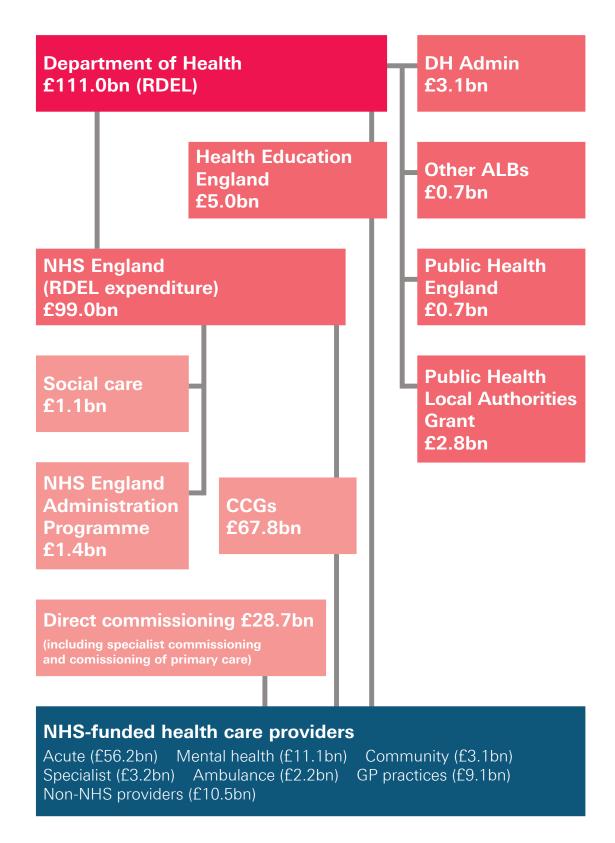
Before looking in detail at the financial issues facing NHS organisations, it is helpful to understand the broad picture of how the total budget for the NHS in England is allocated (Figure 1.1). In 2014/15, the Department of Health (DH) was allocated £115bn for the NHS in England (2015/16 prices). £111bn was allocated for day-to-day running costs of the NHS – the resource departmental expenditure limit (RDEL). The remaining £4bn was allocated for investment in capital – the capital departmental expenditure limit (CDEL). The DH was responsible for allocating the full £115bn as effectively as possible to ensure that the English population receives a high standard of health care.

The Health and Social Care Act 2012 established the NHS commissioning board (now NHS England) as an independent organisation responsible for the commissioning of NHS-funded care in England from 1 April 2013. In 2014/15, the majority of the DH RDEL was allocated to NHS England (£99bn) for this purpose.

The act also established local clinical commissioning groups (CCGs), who are responsible for the purchase of non-specialist hospital, community and mental health services for their local population. In 2014/15 NHS England allocated £68bn to CCGs for this purpose. NHS England remained responsible for directly commissioning a specified list of specialised services and some primary care services such as the contracts for GPs, pharmacists and dentists, at a total cost of £29bn. $^6$ 

Local authorities received a grant of £3bn from Public Health England on behalf of DH to commission public health services, such as vaccinations and sexual health clinics. Health Education England is responsible for the education, training and development of NHS staff and received £5bn from DH. $^7$ 

Figure 1.1: Resource spending in real terms in England, 2014/15 (2015/16 prices, £bn)<sup>8</sup>



Sources: Department of Health, Annual report and accounts 2014/15; NHS England, Our 2014/15 annual report: health and high quality care for all now and for future generations; Financial accounts, HSCIC Investment in General Practice, 2010/11 to 201/15, England, Wales, Northern Ireland and Scotland, September 17, 2015.

Please note: Numbers in the flowchart may not sum up due to rounding and different data sources.

The population of England grew by an average of 0.8% per year between 2009/10 and 2014/15, from 52m to 54m people. So while the total NHS budget rose by an average of 0.9% per year, NHS spending per head has remained relatively flat, rising by an average of 0.1% per year (Table 1.1).

Table 1.1: Health spending in England from 2009/10 to 2015/16 (2015/16 prices)

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16 (planned)
Department of Health budget (£bn)	£110.2	£109.1	£110.1	£110.6	£113.0	£114.9	£116.4
Annual change, real terms		-0.9%	0.9%	0.5%	2.2%	1.7%	1.3%
Public spending on health per head of population	£2,111	£2,073	£2,072	£2,067	£2,098	£2,116	£2,138
Annual change, real terms		-1.8%	0.0%	-0.3%	1.5%	0.9%	1.0%
Source: PESA 2015 <sup>9</sup> , ONS (2015) <sup>10,11</sup>							

# 2. Commissioners' costs and income

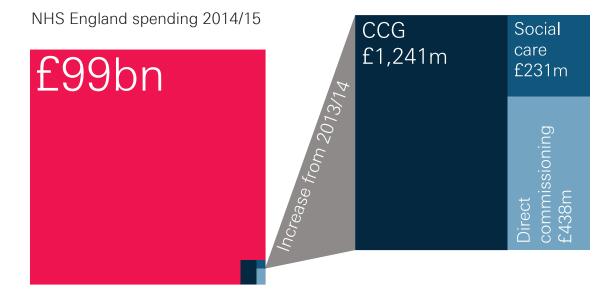
## Commissioners' spending by service type

The commissioning of services by NHS England and CCGs for the English population is crucial to how NHS providers receive their income. In total, commissioning accounted for 86% of the Department of Health budget in 2014/15. Decisions made by commissioners will clearly have a substantive impact on the finances on NHS providers. Therefore in this section we give an overview of the key themes for commissioner spending to help set the scene for providers.

In 2014/15 NHS England spent a total of £99.0bn, a real terms increase of £2.0bn from 2013/14 (2.1%). Of this, the amount spent on commissioning (CCG and direct) rose by 1.8%, to £96.5bn. CCGs received an extra £1.2bn to commission health care services for their local populations, seeing their total spend rise by 1.9% to £67.8bn. NHS England spent an extra £0.4bn on direct commissioning, an increase of 1.6% to £28.7bn. £1.1bn was allocated to the Better Care Fund to improve the integration of health and social care, an increase of £0.2bn, and spending on administration and central programmes fell by £21m, to £1.5bn (Figure 2.1).

NHS England reported an underspend of 0.4% (£372m) against their plan for 2014/15. This was made up from underspends by CCGs (0.3%, £182m), direct commissioning (0.1%, £172m) and administration and central programme (10.7%, £173m). Although there was a surplus across all CCGs, 10% (22) $^{12}$  reported a deficit for the year. By the second quarter of 2015/16 this had risen to 17% (35). $^{13}$ 

Figure 2.1: Breakdown of NHS England increase spending, 2013/14 to 2014/15 (2015/16 prices)



Non-specialised acute care was the single biggest area of spending for commissioners, accounting for nearly two-fifths of the total commissioner budget, and over half of CCGs' spending. Spending on specialised services accounted for nearly half of NHS England's direct commissioning spend (Figure 2.2). The majority of specialised services are carried out by specialist or acute providers. Acute providers therefore receive a substantial portion of the total commissioning budget. As such, the financial difficulty of acute providers has a major impact on the total financial position of the NHS.

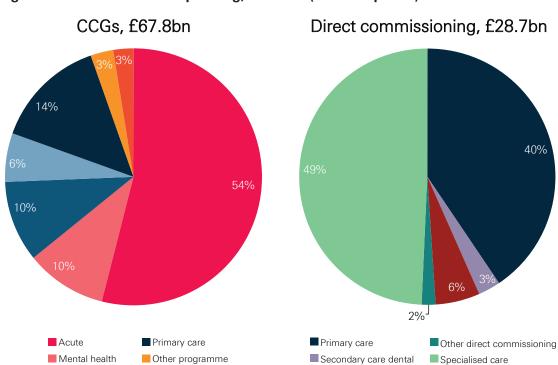
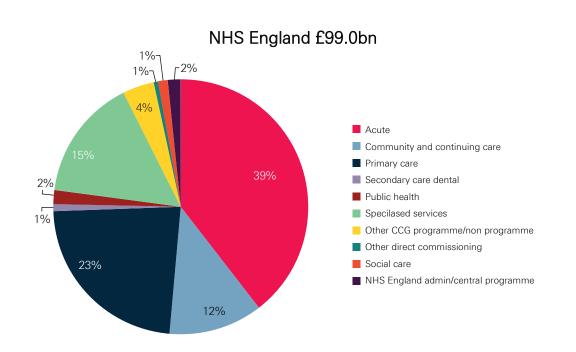


Figure 2.2: Commissioner spending, 2014/15 (2015/16 prices)

■ Non programme



Public health

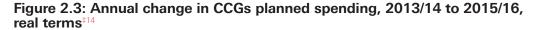
Community

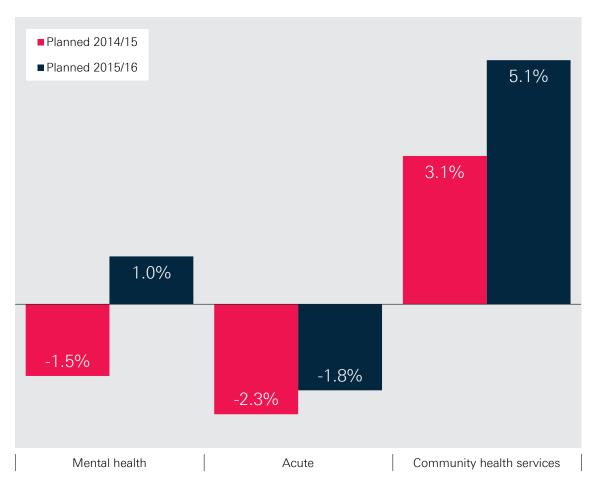
Continuing care

# CCG plans

Looking at 2015/16, CCGs are planning to spend 1.0% more on mental health services in the current year than their 2014/15 plan. Spending on community care is also planned to rise again, by 5.1%. However, CCGs are planning to reduce their spending on acute care for a second year in succession; by 1.8% (Figure 2.3).

Around 75% of CCGs are planning to spend more on mental health and primary care<sup>†</sup> compared to around 30% of CCGs who are planning to increase their spending on acute services. About 65% of CCGs are planning to increase spending on community services (Figure 2.4, overleaf).<sup>14</sup>



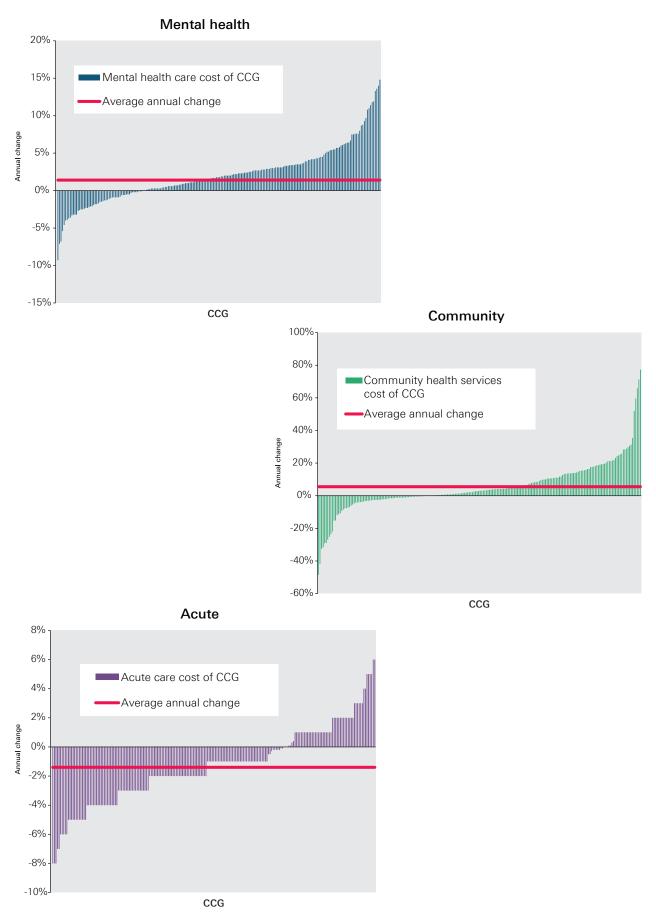


<sup>\*</sup> The breakdown of figures for spending on mental health may not be accurate as some mental health services appear in other categories.

<sup>†</sup> The 2015/16 figure on primary care commissioning include co-commissioning where applicable and isn't comparable to previous years.

Outliers were excluded from this analysis. Comparison between years may not be accurate due to the impact of factors such as non-recurrent adjustments and the Better Care Fund.

Figure 2.4: Annual change in CCG planned spending by service area, 2014/15 to 2015/16, real terms



# Commissioning of non-NHS providers

Although the key focus of this report is NHS providers, it is important to note that commissioners are able to purchase services from any qualified provider. In 2014/15, commissioners (CCGs and NHS England) spent £10.5bn with non-NHS providers $^*$  on NHS-funded care, an increase of 8.1% in real terms (from £9.7bn in 2013/14). $^4$  Of this, £7.0bn (67%) was spent with independent sector providers, £3.0bn (28%) was spent on services provided by local authorities and £0.5bn (5%) was spent on voluntary sector providers (Figure 2.5).

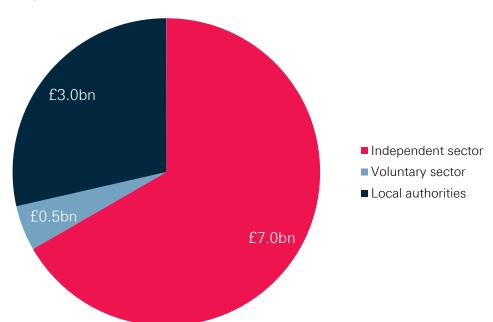


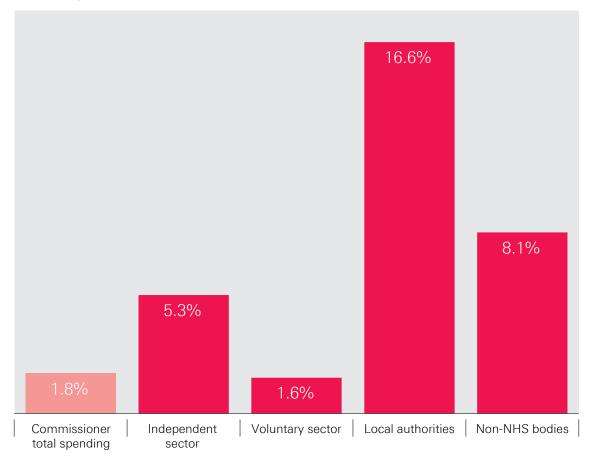
Figure 2.5: Breakdown of commissioner spending of non-NHS providers, 2014/15 (2015/16 prices)

The greatest increase in spending on non-NHS providers was for services provided by local authorities, which rose by 16.6% (£0.4bn) in 2014/15. This sharp annual increase is partly explained by the greater role that local authorities now play in the provision of health care. After the 2012 Health and Social Care Act, parts of the public health budget were transferred over to local authorities for them to provide more services. Spending on health care delivered by independent sector providers rose by 5.3% (£0.4bn) in 2014/15 (Figure 2.6).

Total commissioner spending rose at a slower rate of 1.8% in real terms. Consequently, spending with non-NHS providers for NHS-funded care accounted for a larger share of commissioners' budgets, rising from 10.3% in 2013/14 to 10.9% in 2014/15 (Figure 2.7).

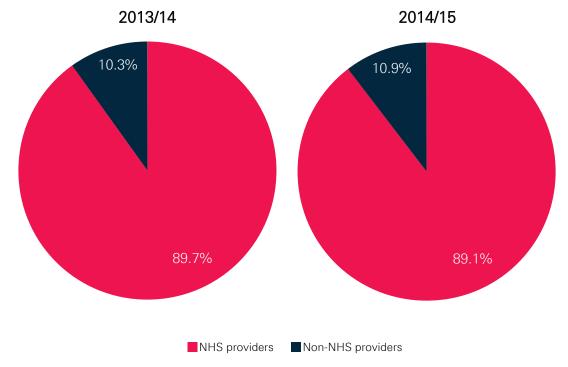
<sup>\*</sup> Non-NHS providers include providers from the independent sector, voluntary sector and local authorities.

Figure 2.6: Annual change in NHS commissioner spending on care provided by non-NHS providers, 2013/14 to 2014/15, real terms



Source: Department of Health, Annual report and accounts 2014/15

Figure 2.7: Change in the proportion of commissioner spending on non-NHS providers, real terms



Source: Department of Health, Annual report and accounts 2014/15; NHS England, Our 2014/15 annual report: health and high quality care for all now and for future generations.

#### Summary

2014/15 was the second year that NHS England and CCGs were responsible for commissioning NHS services in England. The total commissioner budget rose by 1.8%.

Despite an increase in the CCG budget, spending on acute and mental health services was planned to fall in real terms, by 2.3% and 1.5% respectively, while spending on community health services was planned to rise by 3.1%. CCG plans for 2015/16 show that spending on acute services is likely to fall again, by 1.8%, while spending on mental health and community services is planned to rise by 1.0% and 5.1% respectively. This suggests that acute providers are facing continued reduction in their income from CCGs. Spending on direct commissioning by NHS England did rise by 1.6% in 2014/15. This will have provided some benefit to acute providers who offer a large amount of these directly commissioned services.

# 3. NHS provider finances

While commissioners play an important role in ensuring services are available for their population, NHS providers have the crucial role of ensuring that services are provided for patients at the highest quality possible. This is becoming increasingly difficult as demand for, and cost of delivering, services rises each year and income from commissioners is falling in some sectors, especially for non-specialised acute services.

By the end of 2014/15 there were 242 NHS trusts and foundation trusts providing services in England. 153 trusts had achieved foundation trust status by the end of the year, five of which did so during 2014/15. 57% of trusts were acute trusts, providing inpatient, outpatient and A&E services in hospitals (Table 3.1).

Table 3.1: Number of trusts, March 31 2015<sup>†</sup>

Type of trusts	Number of trusts	Percentage
Acute	137	57%
Ambulance	10	4%
Community	20	8%
Mental Health	56	23%
Specialist	19	8%
TOTAL	242	

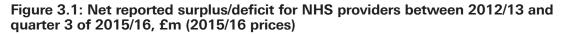
<sup>\*</sup> The following became foundation trusts during 2014/15: Royal United Hospital Bath NHS Trust (RD1), Nottinghamshire Healthcare NHS Trust (RHA), St Georges Healthcare NHS Trust (RJ7), Bridgewater Community Healthcare NHS Trust (RY2) and Derbyshire Community Health Services NHS Trust (RY8)

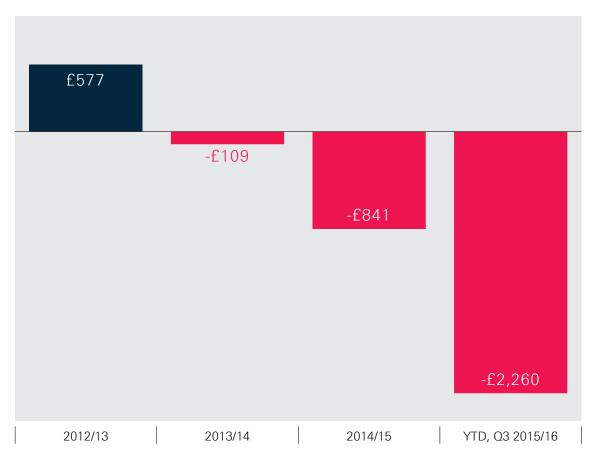
A number of trusts ceased to exit during the year, and are not included in this table: Mid Staffordshire NHS FT (RJD) was dissolved in November 2014 and transferred to University Hospital of North Midlands NHS Trust (RJE) and the Royal Wolverhampton (RL4). Ealing Hospital (RC3) and North West London Hospital (RV8) merged to create North West Healthcare NHS Trust (R1K). Barnet and Chase and Farm Hospital NHS trust (RVL) is part of Royal Free NHS foundation (RAL) as of July 1 2014. Frimley Park Hospital NHS Foundation Trust and Heatherwood and Wexham Park Hospitals NHS Foundation (RD7) merged on October 1 2014 and created a new organisation: Frimley Health NHS Foundation Trust (RDU).

#### Financial status

The financial performance of NHS providers has been rapidly deteriorating in recent years. At the end of 2014/15 they reported a net adjusted deficit\* of £841m, 1.1% of total operating costs and an increase from £109m in 2013/14. 2014/15 was also the first year that foundation trusts reported a net deficit, worth £350m, having reported a net surplus of £136m in 2013/14. This is particularly concerning as one of the tests for providers to achieve foundation trust status is to demonstrate that they are capable of managing their finances well.

The size of the NHS provider deficit has grown rapidly since a net surplus was last reported, in 2012/13 (Figure 4.1). The most recent in-year financial data suggest that this trend is continuing into 2015/16 where NHS TDA and Monitor reported a combined year to date net deficit of £2.3bn $^{\dagger}$  at quarter three of  $2015/16^{15,16}$  (Figure 3.1). Based on current trends the deficit could exceed £2.8bn by the end of the year.





The net adjusted deficit refers to the a trust's net surplus or deficit excluding impairments, gain or losses from transfers by absorption, and immaterial adjustments made by Monitor on consolidation of £94,000.

<sup>†</sup> NHS trusts reported a net deficit of £1.3bn (68 trusts) and foundation trusts reported a net deficit of £1.0bn (111 trusts).

The rising deficit appears to be due to systemic challenges facing a large number of providers, rather than a small number who are struggling. Nearly half of all trusts posted a deficit in 2014/15, (77 FTs and 43 NHS trusts; 48% of all trusts). This has also increased rapidly from 28 trusts (11%) reporting a deficit at the end of 2012/13, and continued to rise to 179 trusts (75%) in quarter three of 2015/16 (Figure 3.2).

Equally, the deficit is not restricted to certain parts of the country, suggesting that all regions are struggling with similar issues. The only region in England reporting a net surplus in 2014/15 was the North East, although even this surplus had fallen from £106m in 2012/13 to £7m in 2014/15 (Figure 3.3).

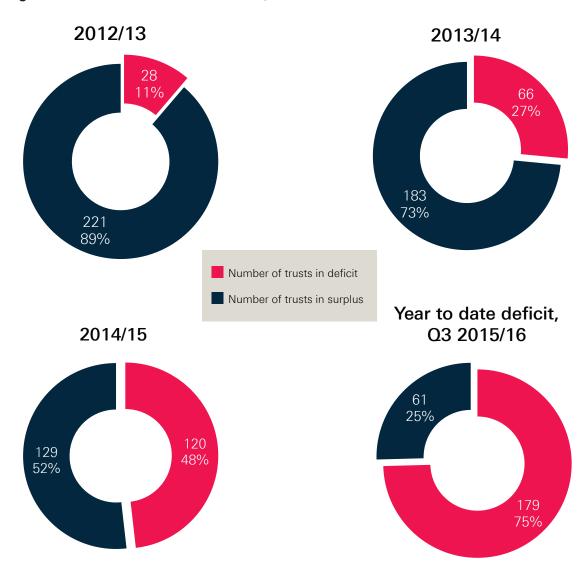
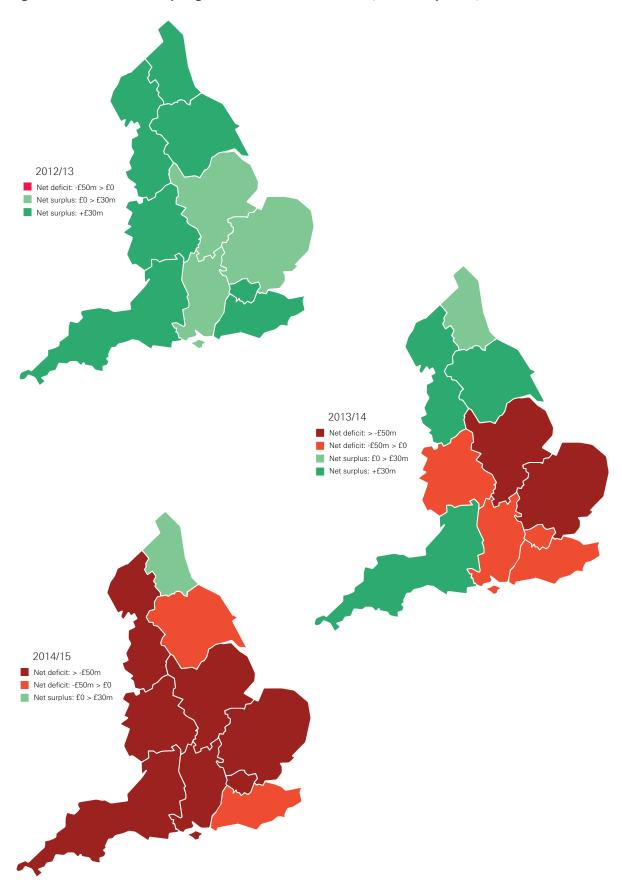


Figure 3.2: Number of trusts in deficit, 2012/13 to Q3 2015/16

Note: number of trusts based on official count from TDA and Monitor, which includes mergers





Although the rising deficit is not restricted to a small number of trusts, or parts of the country, the extent does vary by type of trust. The NHS provider deficit is mainly concentrated in the acute sector, which reported a net deficit of £1bn in 2014/15, with 65% of acute trusts reporting a deficit, rising to 95% by the third quarter of 2015/16. However, although a lower proportion of other types of trust reported a deficit, in each case the number of trusts is rising (Table 3.2). For example, in 2012/13 no community trusts reported a deficit, but by 2014/15 32% did – despite a big increase in commissioner spending on community activity, as discussed in chapter 2.

Table: 3.2: Net adjusted surplus/deficit by sector, 2012/13 to 2014/15, £m, real terms

Net adjusted surplus/deficit, £m (proportion of trusts in deficit)	2012/13	2013/14	2014/15
Acute	£193 (17%)	-£438 (76%)	-£1,031 (65%)
Ambulance	£19 (9%)	£15m (50%)	£13 (20%)
Mental health	£263 (18%)	£185 (21%)	£99 (28%)
Community	£31 (0%)	£41 (16%)	£63 (32%)
Specialist	£124 (0%)	£115 (28%)	£14 (28%)
Total	£577	£-109	£-841

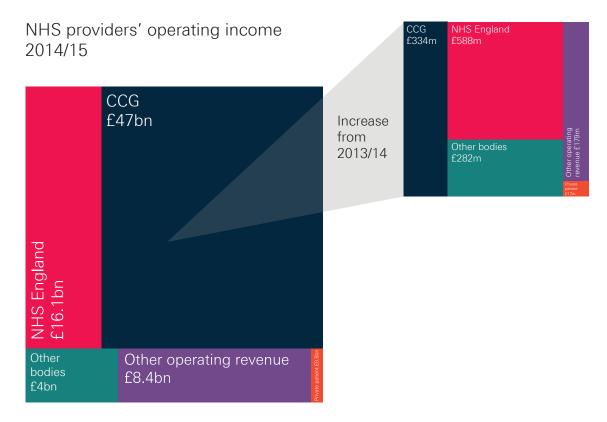
<sup>\*</sup> These are the reported totals, and do not sum from above due to inclusion of organisations such as NHS 111.

## Operating costs and income

One reason for the rising deficit is that the costs for NHS trusts to provide services rose faster than the income they received. In 2014/15, total operating costs rose by 2.2% (£1.6bn), while total income rose by 2.0% (£1.4bn) in real terms. Most of providers' income for patient care is received from CCGs (70%) and NHS England (24%). Providers can also receive revenue from private patients for delivering care, as well as from organisations such as other providers, the Department of Health and Public Health England.

The operating income of NHS providers rose by £1.4bn, from £74.6bn in 2013/14 to £76.0bn in 2014/15. Of the extra £1.2bn allocated to CCGs, £0.3bn went to NHS providers, a rise of 0.7% in real terms. NHS providers' income from NHS England rose by £0.6bn. Figure 3.4 shows a breakdown of the £1.4bn increase in NHS providers' operating income by source.

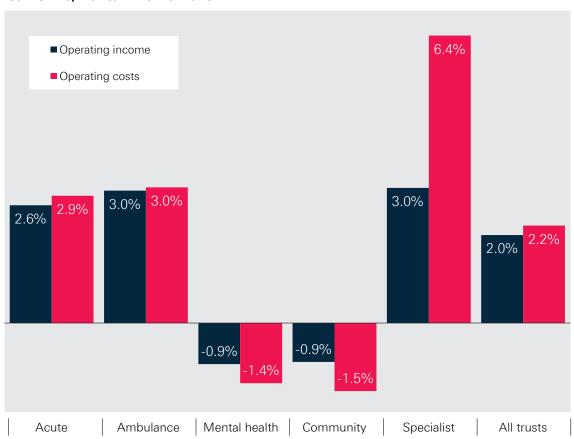
Figure 3.4: Sources of NHS providers' 2014/15 operating income and breakdown of £1.4bn annual change (2015/16 prices)



<sup>\*</sup> Note: these figures include the impact of non-current asset impairments and HM treasury technical budgeting adjustment and therefore do not reflect the financial position of trusts.

The greatest divergence between operating costs and income was for specialist hospitals, where operating costs increased by 6.5% in 2014/15, more than double the growth in the income they received (3.1%). Most of this cost increase is accounted for by Moorfields Eye Hospital NHS Foundation Trust, where operating costs increased by 16% in real terms as a result of higher levels of activity, increased depreciation costs associated with capital investment, non-recurrent investment to ensure that the trust was seeing patients on time and the non-recurrent closure costs for pharmaceutical manufacturing. <sup>18</sup> Similarly, Papworth Hospital NHS Foundation Trust's operating costs increased by 33% in real terms. This rise was mainly driven by an increase in impairments on property, plant and equipment. <sup>19</sup> Operating costs for both mental health trusts and community trusts fell in 2014/15. Operating costs and income of ambulance trusts rose at almost the same pace in real terms (Figure 3.5).

Figure 3.5: Annual change in operating costs and income by type of providers in real terms, 2013/14 to 2014/15



#### Staff costs

Staff costs are the biggest area of spending for NHS providers, accounting for 63% of total expenditure in 2014/15. Any change to staff costs will therefore have a substantive impact on the financial viability of NHS trusts.

Between 2011/12 and 2014/15 total staff costs rose by an average of 1.3% per year in real terms. However, the average number of full-time equivalent (FTE) staff increased at a slower average rate of 0.8% per year. So some of the extra costs have come from employing more people, but the average cost per FTE has also risen. A major reason for the increase in cost per FTE is the recent trend of increasing spending on agency staff.

In 2014/15, providers' staff costs grew by just over £1bn in real terms, an increase of 2.2% from £46.9 in 2013/14 to £48.0bn. Of this, 90% (£43bn) was spent on permanent staff, 7% was spent on agency staff and 3% was spent on other non-permanently employed staff (Figure 3.6).

Guidelines from Monitor provide more details on the differences between permanent staff, agency/contract staff and other non-permanent staff.<sup>20</sup>

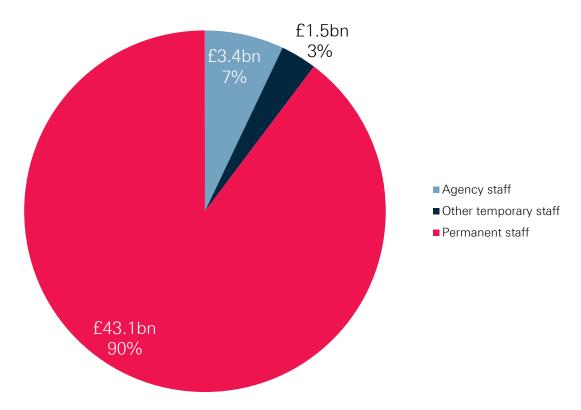


Figure 3.6: Staff cost by type of employee (2015/16 prices)

<sup>\*</sup> Staff costs include salaries and wages, social security costs, NHS pension scheme, other pension costs and termination benefits.

In real terms, spending on agency staff increased by 27% in 2014/15 alone, rising to £3.4bn from £2.7bn in 2013/14. This is substantially higher than the 1.8% increase in spending on permanent staff (from £42.3bn to £43.0bn). Spending on other temporary staff fell by 22% (£0.4bn)<sup>4</sup> (Figure 3.7).



Figure 3.7: Annual change in staff cost by type, 2013/14 to 2014/15, real terms

Source: Department of Health, Annual report and accounts 2014/15; NHS England, Our 2014/15 annual report: health and high quality care for all now and for future generations.

Agency staff are generally more costly than permanent staff. For example, in 2014/15 foundation trusts spent 6.6% of their staff costs on agency staff, who accounted for only 3.0% of the total workforce. This suggests that on average agency staff are paid over two times the rate of permanent staff. However, this is a crude estimate and does not account for differences in skill mix for permanent and agency staff (Figure 3.8). In response to this trend, Monitor announced that from 1 April 2016, agency staff could not be paid more than 55% above the substantive hourly rate for permanent staff.<sup>20</sup>

Permanent staff skill mix Agency staff skill mix £1,593.7 £142.2 23% 28% £204.9 40% £3,120.7 45% £2,182.3 £167.7 32% Medical and dental staff cost ■Nurses and midwives staff cost ■Other permanent staff cost

Figure 3.8: Skill mix of permanent and agency staff costs for foundation trusts, Q1 of 2015/16 (£m)

Source: Correspondence with Monitor, January 4, 2016

The proportion of staff costs spent on agency staff in the NHS is much higher than in some other parts of the public sector; for example the cost of supply teachers in academies in England accounted for 2.6% of those schools' total staff cost in 2013/14.22

The high spend on agency staff in the NHS is a major area of concern.  $^{23}$  It reflects the fact that it is becoming increasingly difficult to retain and recruit NHS staff.  $^{24}$  This is related to a number of factors. Firstly, the coalition and current government's policy on public sector pay means that average earnings for permanent employees have remained broadly flat in real terms since 2010/11, well below the long-run average increase of 2% per year.  $^{25}$  Also, Robert Francis QC's inquiry into the failings at Mid-Staffordshire NHS Foundation Trust indicated a need for better ward staffing.  $^{26}$  Following this there was an increase in the number of permanent FTEs employed in the acute sector, rising by 2.5% in 2014/15 (Figure 3.9).

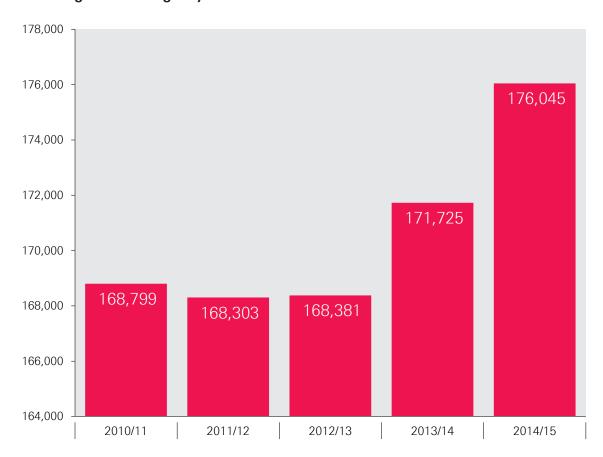


Figure 3.9: Number of nurses employed in acute, general and elderly sectors, excluding bank and agency staff.

Source: HSCIC. NHS workforce statistics, September 2015

However, despite this increase in nurses, a recent report by the National Audit Office (NAO) found that local workforce plans have still underestimated the workforce needed, as they are often driven more by financial constraints than true staffing needs. Plans also tend to focus on existing staffing models and roles rather than what will be needed to respond to the changing way services are being delivered. Overall the NAO found that the gap between the supply of, and need for, staff was greatest for nursing, midwifery and health visiting, with a shortfall of 7.2% of the workforce in 2014. This follows a 20% fall in nurse training places over the last decade. Just over 13,000 nurses were trained in 2014/15, 3,000 less than were trained in 2004/05.<sup>27</sup> In his evidence to the Public Accounts Committee, Professor Ian Cumming said that 'this year had been the lowest year for output of nurses because of decisions made in 2011, so NHS employers did not have enough nurse graduates to employ'.<sup>28</sup>

A recent report from NHS Improvement found that the push for higher staffing levels following the Francis Inquiry did not create an unprecedented demand. Instead, the ratio of the number of nurses to beds in hospitals returned to the same level observed in 2011 (Figure 3.10).<sup>29</sup> It is therefore likely that the impact of the increased demand could have been reduced with strong workforce planning.

108 107 Admissions 106 Index from Sep 2009 (12-month moving average) 105 104 103 102 bed ratio 101 100 99 98 Average length of stay 97 96 95 Sep 2010 Mar 2011

Figure 3.10: Trends in nurse-to-patient ratio, admissions and length of stay, 2010 to 2015

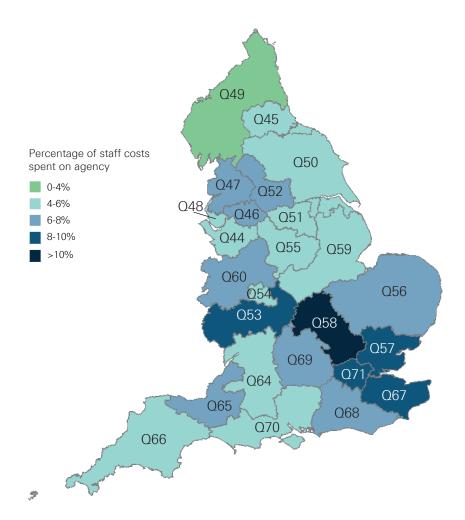
Source: NHS Improvement, Evidence from NHS Improvement on clinical staff shortages, NHS Improvement, 2016

There is substantial variation across England in the proportion of staff costs spent on agency staff. This ranges from 11% in Hertfordshire and South Midlands area team to 4% in Cumbria, Northumberland and Tyne & Wear areas teams (Figure 3.11, overleaf). Reducing unwarranted variation across the NHS is a key aspect of Lord Carter of Coles' recent report on how non-specialist acute trusts might achieve up to £5bn saving by 2020. 30 Two-thirds of these savings are expected to come from optimising use of the clinical workforce. This includes through taking steps to reduce absenteeism and using e-rostering tools to improve workforce planning to reduce the dependency on agency staff.

Sep 2011 Mar 2012 Sep 2012 Mar 2013 Sep 2013 Mar 2014 Sep 2014

Although agency staff play an important role in providing NHS services, it is unlikely that the extreme variation across England represents best practice, and spending on agency staff is likely to be a clear area of focus to help providers move toward financial balance. This is discussed further in chapter 4.





Area team of	and a					
	Area team code					
Q44 Chesh	nire, Warrington & Wirral	Q57	Essex			
Q45 Durha	am, Darlington and Tees	Q58	Hertfordshire and South Midlands			
Q46 Great	er Manchester	Q59	Leicestershire and Lincolnshire			
Q47 Lanca	ashire	Q60	Staffordshire & Shropshire			
Q48 Merse	eyside	Q64	Bath, Gloucestershire, Swindon and Wiltshire			
Cumb Q49 &Wea	oria, Northumberland, Tyne ar	Q65	Bristol, North Somerset, Somerset & South Gloucestershire			
Q50 North	Yorkshire & Humber	Q66	Devon Cornwall & Isles of Scilly			
Q51 South	Yorkshire & Bassetlaw	Q67	Kent and Medway			
Q52 West	Yorkshire	Q68	Surrey and Sussex			
	n, Herefordshire and estershire	Q69	Thames Valley			
Birmin Q54 Coun	ngham, Solihull and the Black try	Q70	Wessex			
Q55 Derby	yshire & Nottinghamshire	Q71	London			
Q56 East A	Anglia					

# Leadership

Strong, long-term leadership is considered a vital component in successful organisations. Yet the difficulty in retaining staff has also been seen at the executive level. In September 2015, the chief executives at nearly 30% of acute and specialist trusts were either interim or had been in position less than a year; the same is true for 14% of mental health trusts, 28% of community trusts and 50% of ambulance trusts (Figure 3.12).  $^{32}$ 

The proportion of interim chief executives was higher in trusts that were in deficit than in trusts with a surplus in 2014/15. Of the chief executives of trusts in deficit, 21% were in an interim position, compared to 12% for trusts in surplus (Figure 3.13, overleaf).

It is important not to make assumptions on causality here. For example, we are not able to say in what cases the interim chief executive was a cause or a result of the financial difficulties, or whether both situations are the result of other causes.

Figure 3.12: Employment status of chief executive of NHS providers by type as of September 2015

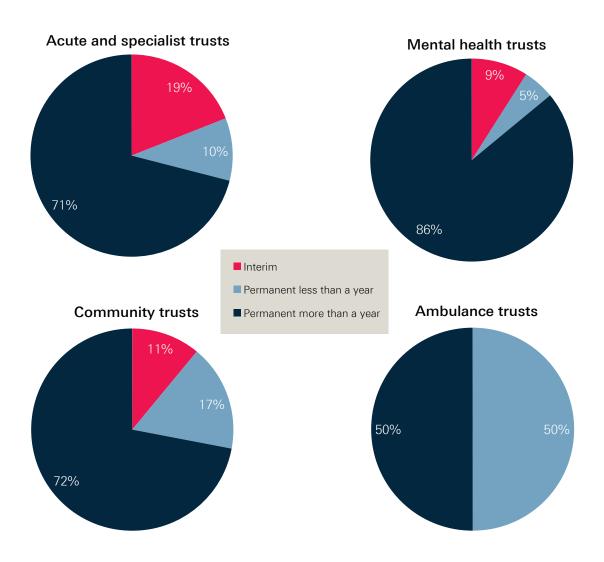
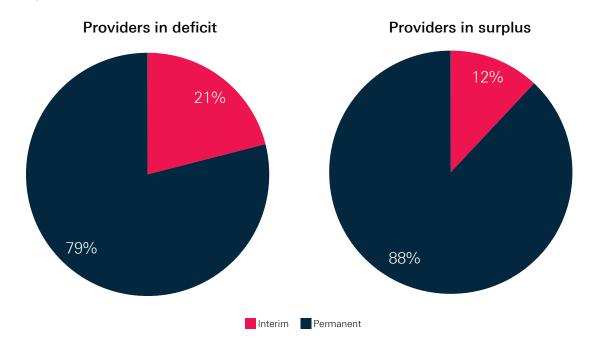


Figure 3.13: Employment status of chief executive of NHS providers in trusts in surplus and deficit



## Activity

Another factor contributing to the increasing financial pressure on NHS providers is the increased demand for health services. Between 2011/12 and 2014/15 the total number of inpatient admissions rose at an average rate of 2.2% per year. Of this, non-elective admissions rose by 1.7% per year<sup>33</sup> and emergency admissions rose by 2.5% per year. At the same time, outpatient first attendances increased by an average of 2.6% per year.

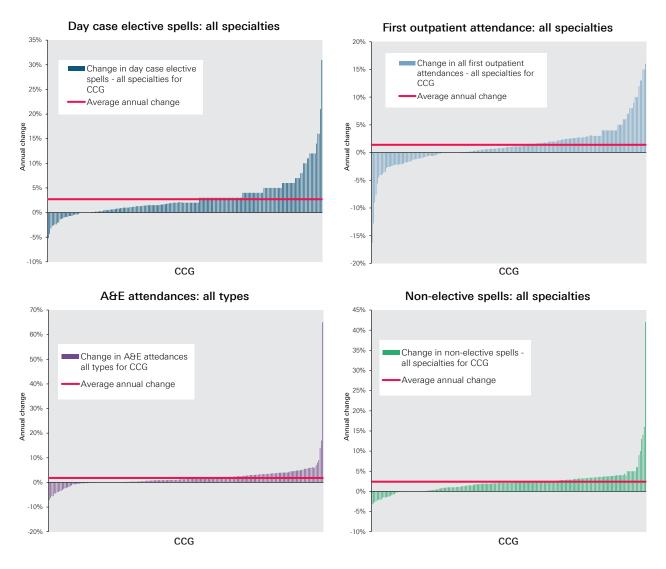
Although demand for health care services is increasing, it is not rising at an unprecedented level. Between 2008/09 and 2010/11 the rate of increase in activity was higher than between 2011/12 and 2014/15, when NHS finances deteriorated rapidly (Table 3.3). NHS providers are paid for delivering this growth in activity. However, changes in the national prices paid have limited the income that they received, as discussed in the next section.

Table 3.3: Average annual increase in hospital activity based on providers' time series, 2008/09 to 2015/16<sup>14,33</sup>

	2008/09- 2010/11	2011/12- 2014/15
Outpatient first attendances	5.3%	2.6%
<b>Total admissions</b> of which:	3.0%	2.2%
non-elective	2.8%	1.7%
elective	3.2%	2.5%
A&E admissions	2.7%	2.3%

CCGs are also planning for further growth in demand for health care, but activity is expected to grow at a lower rate than last year. CCGs expect the fastest growth to be in day case elective spells (average 2.7%) and the lowest in outpatient attendances (average 1.4%). They are also planning for an annual increase in A&E attendances (average 1.8%) and non-elective spells (average 2.4%). In 2015/16 about 25% of CCGs are planning a decrease in first outpatient attendances, about 17% are planning reduced activity in A&E attendances, while 12% and 11% are expecting reduced activity in elective and non-elective spells (Figure 3.14).

Figure 3.14: Change in CCGs' planned activity for 2015/16



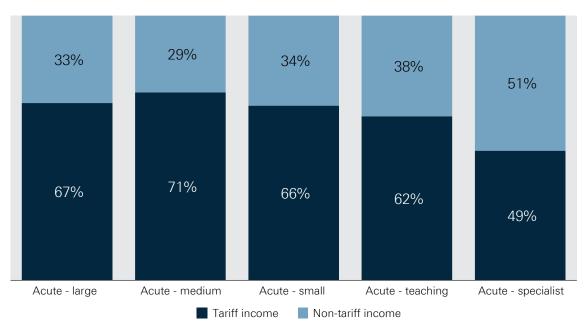
#### NHS payment system

NHS providers receive payments for delivering acute care in two ways: through payment by results (PbR) tariff income (nationally fixed prices for case-mix adjusted episodes of care) and through non-tariff income (pricing that is set locally). In 2014/15, 60% of NHS providers' total income was received via PbR tariff payments.

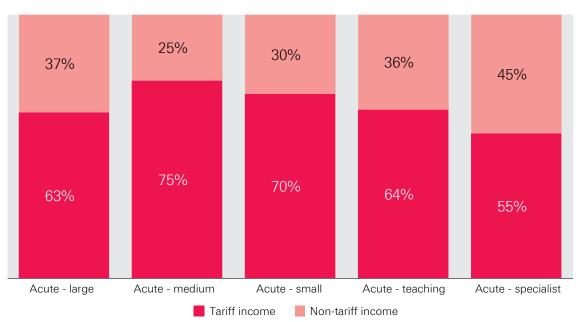
Income from PbR tariff is higher for acute trusts, where it accounted for 67% of income in 2014/15, up from 65% in 2013/14. In recent years, specialist trusts have seen the greatest increase in their reliance on PbR tariff payments, rising from 49% of income in 2012/13 to 55% in 2014/15 (Figure 3.15).

Figure 3.15: Proportion of income covered by tariff income by size and type of acute trusts, 2012/13 and 2014/15





#### 2014/15



With such a dependence on the PbR tariff for income, it represents a key factor in the financial position of many trusts. However, while acute activity rose between 2012/13 and 2014/15, the average payment from national tariff fell in real terms (Table 3.4).

Under the Health and Social Care Act 2012, the responsibility for the NHS payment system was transferred from the Department of Health to NHS England and Monitor. NHS England is now responsible for determining groupings of activities to be paid for (the currencies), while Monitor is responsible for setting the national price.

Monitor set the value of the PbR tariff for 2014/15 based on reference cost data from 2011/12. These are adjusted to reflect cost pressures (cost uplift factor) and assumed growth in efficiency (efficiency factor). The efficiency factor includes expected savings through initiatives such as the Quality, Innovation, Productivity, and Prevention (QIPP) programme; about 40% of the expected £20bn QIPP savings were expected to be delivered through the efficiency factor. As a result, between 2011/12 and 2014/15 the national efficiency target was set at 4% each year and so the average tariff fell in real terms each year. The average reduction in the tariff in 2014/15 was 1.5% (Table 3.3). $^{36}$ 

Monitor has proposed to reduce the efficiency factor to 2.0% for 2016/17. This means national tariff prices would rise by an average of 1.8%, <sup>37</sup> the first time they have risen in real terms since 2011. <sup>38</sup>

Table 3.4: Change in cost adjustment factors of national tariffs<sup>36</sup>

	2012/13	2013/14	2014/15
Cost uplift factor	2.2%	2.7%	2.5%
Efficiency factor	-4.0%	-4.0%	-4.0%
Total cost adjustment	-1.8%	-1.3%	-1.5%
Source: Monitor 2015			

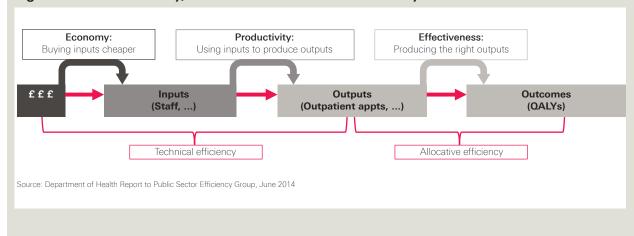
<sup>\*</sup> The efficiency factor quantifies an expectation that over time providers should deliver services at a lower cost while improving quality of care.

# **Productivity**

#### **Box: Productivity and efficiency**

Productivity and efficiency are related, but different, measures of the performance of the health system. Productivity is the ratio of outputs of care (eg the number of hip replacements performed, patients treated in accident and emergency, etc) to inputs used to produce the care (numbers of staff, numbers and types of drugs, etc). Figure 3.16 shows the relationship between productivity, technical and allocative efficiency. The key difference between efficiency and productivity is that while productivity focuses on the number and mix of inputs used to deliver care, efficiency also considers the cost of the inputs.

Figure 3.16: Productivity, technical and allocative efficiency



The NHS five year forward view (Forward View) stated that the NHS would need to make efficiency savings of 2-3% per year up to 2020/21 to be able to maintain the range and quality of services provided to the population with the planned budget. There is a strong expectation that the majority of these saving will be realised in the acute sector.

However, the rapid increase in NHS providers' costs has led to a decrease in acute sector productivity. Using the latest NHS reference cost data for 2014/15, we have updated the analysis of acute hospitals' productivity from our previous work assessing productivity over the last parliament. Our new analysis shows that in 2014/15 acute hospital productivity in England fell for the third consecutive year – by 0.96%. This is a result of inputs rising faster (5.7%) than outputs (4.7%) (Figure 3.17).\*

Acute sector inputs have risen at a faster rate than cost-weighted activity since 2012/13 (Figure 3.17). As a result, hospital productivity increased by just 0.3% between 2009/10 and 2014/15, an average rate of 0.1% per year (Figure 3.18). While our analysis focused only on acute care provided by hospitals, recent work by University of York (CHE) estimated the productivity of all NHS providers (including other types of trust) and found a fall in productivity of -0.5% between 2013/14 and 2014/15. A substantial improvement on this will be required if the NHS is to meet the challenge set out in the Forward View.

<sup>\*</sup> This is a different calculation of the increase in income and costs observed for all NHS providers used earlier in this chapter (2.0% and 2.2% respectively).

Figure 3.17: Change in hospital productivity, 2009/10 to 2014/15

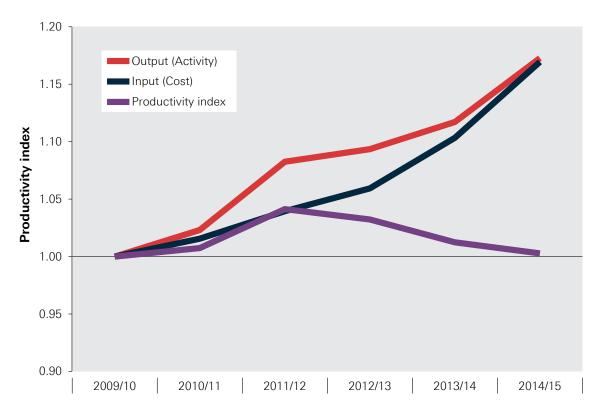
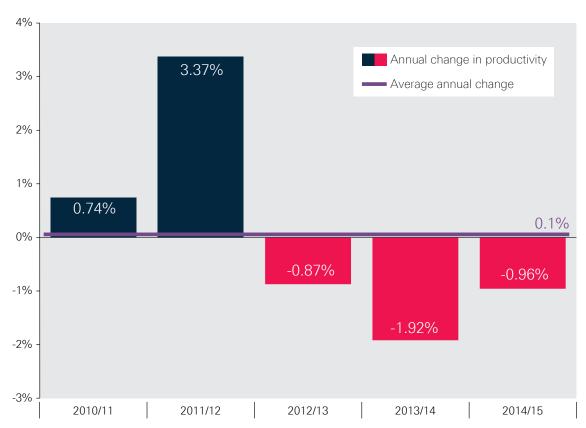


Figure 3.18: Annual change in hospital productivity index, 2009/10 to 2014/15



Monitor estimated that acute and specialist trusts achieved a higher rate of efficiency growth of 1.4% between 2008/09 and 2013/14. This analysis uses a cost uplift factor (CUF) instead of the hospital and community health services (HCHS) pay and price index used in the analysis by York and ourselves. The CUF forecasts the rate of inflation of health care cost components, including input cost inflation, labour and drug costs and changes in capital costs.<sup>37</sup> The HCHS pay and price index measures the observed inflation rate of pay and hospital services. The CUF rose at a faster rate in recent years than the HCHS pay and prices index, leading to a higher observed efficiency rate (Table 3.5). This higher estimate of efficiency growth is still below the rate of 2–3% required in the Forward View.

Table 3.5: Annual increase in hospital and community health services (HCHS) pay and price index and cost uplift factor (CUF), 2011/12 to 2014/15.

	HCHS pay and price index	Cost Uplift Factor
2012/13	1.7%	2.2%
2013/14	1.1%	2.7%
2014/15	0.9%	2.5%

# Income from private patients

While both NHS trusts and foundation trusts receive the vast majority of their income from NHS England and CCGs, they are able to earn non-NHS income. When created, NHS foundation trusts had a 'cap' in terms of the amount of private income they were able to generate. The Health and Social Care Act 2012 replaced this cap with additional governance requirements on plans to increase private income.<sup>42</sup>

Income from private patients made up 1% of total income for NHS providers in 2014/15. Between 2009/10 and 2014/15, income from private patients rose at an average rate of 2.9% per year, from £463.2m to £541.6m. The greatest increase during this period was in 2011/12, when it rose by nearly 6% (Figure 3.19).

Over this period, income from private patients rose fastest for specialist trusts (10.1% per year, £64m) and mental health trusts (7.6% per year, £0.3m). Acute trusts saw a much more modest rate of growth in income from private patients, 0.4% per year (£7m) (Figure 3.20).

Figure 3.19: Annual change in income from private patients (2009/10 to 2014/15), real terms

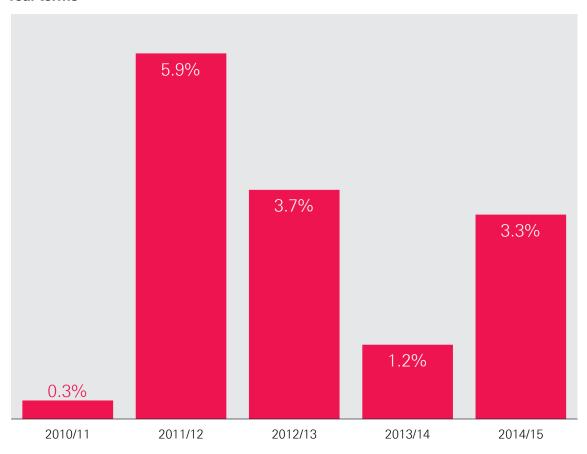
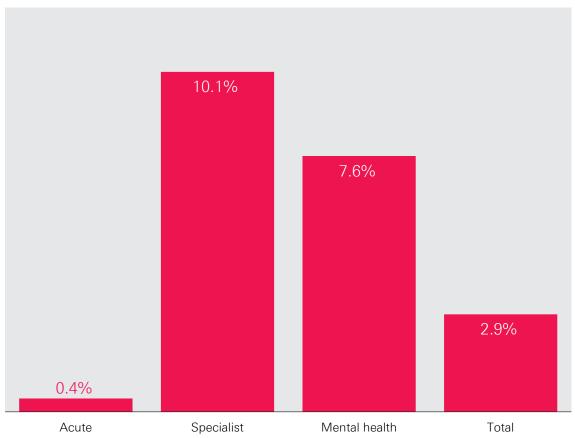


Figure 3.20: Annual average rate of income from private patients from 2009/10 to 2014/15, real terms



# Summary

NHS providers are currently in severe financial difficulty, with a net deficit of over £841m reported in 2014/15. This is projected to exceed £2.8bn by the end of 2015/16, based on current trends. 2014/15 is the second year in succession that providers have reported a net deficit, and the first time that foundation trusts have done so.

This is not down to a small number of struggling organisations, but rather is a systemic issue, with nearly half of trusts reporting a deficit in 2014/15, and over three-quarters in deficit by quarter three of 2015/16. Although there is no clear regional pattern to the declining finances, the deficit is concentrated in acute trusts, with 65% reporting a deficit in 2014/15.

The worsening finances are a result of the costs of delivering health care rising far faster than the income that providers are receiving. We have explored some of the reasons for this in detail:

- Staff costs account for three-fifths of NHS providers' total expenditure. These costs have risen in recent years, due to a rising numbers of FTEs and increasing cost per FTE. A major driver for this is increasing spending on agency staff, representing a substantial cost pressure for NHS providers. Spending on agency staff rose by 27% (£0.7bn) in 2014/15 alone.
- At the same time, many organisations are struggling to retain members of their senior executive team; in September 2015, three in 10 acute and specialist trusts had a chief executive who was either interim or had been in post for less than a year. Strong, long-term leadership is considered a vital component of successful organisations. However, this is not in place for a number of struggling NHS providers.
- Costs are also rising due to increased demand for services. This would not create an issue if providers were fully reimbursed for additional activity. However, the PbR tariff, which accounts for 60% of provider income, has fallen in real terms in recent years due to a high efficiency factor in the tariff calculations. As a result, the average payment received for providing services covered by the PbR tariff has fallen relative to the cost of delivering these services.

All this means that acute sector productivity has fallen for the third year in a row. Between 2009/10 and 2014/15 we estimate that crude acute sector productivity has risen by an average of just 0.1% per year. This is of particular concern given the current aim of the NHS to achieve efficiency growth of 2-3% per year.

# 4. Factors associated with financial performance of acute and specialist trusts

In chapter 3 we showed that the financial position of most NHS providers is deteriorating rapidly, particularly that of acute trusts. We looked in detail at some of the reasons for this – specifically rising spending on agency staff and falling prices for the PbR tariff. However, these are not the only challenges facing NHS providers. Therefore we ran an econometric analysis of a wider number of indicators that aimed to identify the factors that are associated with poor financial performance for acute and specialist trusts in 2014/15.

We ran a multivariate regression model using data from 151 acute and specialist trusts.\* We included information on the drivers of cost, while controlling for provider characteristics to provide a clearer picture of the relationship between different factors and financial performance.<sup>†</sup>

### Factors included in the model

We set the dependent variable as a provider's net surplus/deficit as a proportion of total operating cost. We used this as a proxy for financial performance as it provides information about the scale of any financial difficulty, rather than a statement of whether they finished the year in surplus or deficit.

We then examined the statistical relationship between a trust's financial performance and a number of factors that we expected to be driving this position, while controlling for a number of the trust's characteristics.

Details of the variables included in the model are available in the technical appendix to this report. † The variables included is not an exhaustive list of everything that might affect a trust's financial position, but are the key areas we believed to have the largest impact, for which data were available.

Not all the variables were shown to be statistically significant. In the results section of this chapter we have discussed those that are significantly associated with a trust's financial position, as well as some of that we expected to be but were not.

<sup>\*</sup> Partial financial accounts were excluded from the analysis.

We ran our multivariate regression model using SAS 7.1 statistical software. We used the stepwise option to identify the variables that are statistically significant at a significance level of 0.1. A multicollinearity test was conducted on the variables which help to select the variables to include in the model. The technical appendix to this report provides more detailed information about methodology use and variable tested in the model. See www.health.org.uk/perfectstorm

<sup>\$</sup> See www.health.org.uk/perfectstorm

# Results

As Table 4.1 shows, a trust is more likely to have a worse financial position if:

- a higher proportion of its staff spending is accounted for by agency staff,
- it receives a higher than average proportion of its income through national tariff payments,
- staff are less likely to be happy for a friend or relative to be treated there
- the trust received and rating of 'Inadequate' following and inspection by the Care Quality Commission (CQC)
- it is not a specialist trust
- it provides services from fewer sites.

We discuss these specific associations in more detail below, as well as some that were not significant which are of particular interest.

Table 4.1: Estimations of results of multivariate regression model on net deficit as a proportion of total cost ( $r^2 = 0.4597$ )

Variable	Parameter estimate <sup>ii</sup>	Standard error <sup>iii</sup>
Specialist***	0.02635	0.00788
Total number of hospital sites***	0.000268	7.58E-05
Agency cost***	-0.37047	0.07524
Tariff income above average***	-0.014	0.00496
If a friend or relative needed treatment I would NOT be happy with the standard of care provided by this organisation(%)***	-0.00098	0.000432
Inadequate CQC rating*	-0.02132	0.01129

<sup>\*</sup>Significant at 90% confidence level, \*\*Significant at 95% confidence level, \*\*\*Significant at 99% confidence level.

Parameter estimate refers to the variable coefficient. It indicates the nature of the relationship between the dependent variable (positive or negative) and the linear dependence between two variables

Standard error measures derivation from the mean

#### Spending on agency staff

In chapter 3 we described the increasing spending on agency staff in the NHS, and how this has increased the cost burden on providers. This is strongly supported by our model, with a significant association between a trust's spending on agency staff and its financial performance observed at 99% confidence level (p<0.01). This suggests that for every one percentage point increase in a trust's staff costs accounted for by agency, their net financial position is likely to fall by 0.4% of their operating costs.

This relationship is shown in Figure 4.1, where most of the trusts with higher net surplus have lower agency spend, compared to trusts with higher net deficit which are associated with higher agency spend.

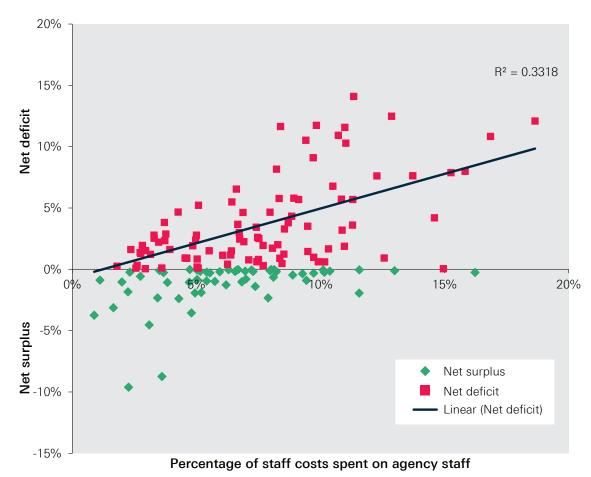


Figure 4.1: Net deficit and agency staff spend

#### Quality of care - NHS staff survey and CQC ratings

This report has explored the declining financial position for NHS providers, and some of the reasons for it. Although this is a serious issue in its own right, it becomes even more serious if it impacts on the quality of services provided to patients. A recent study by the King's Fund shows that 53% of finance directors have reported that quality of care has worsened in their local area in the past year.<sup>43</sup>

<sup>\*</sup> For ease of interpretation of this graph, the value of the net deficit is positive while the value of net surplus is negative.

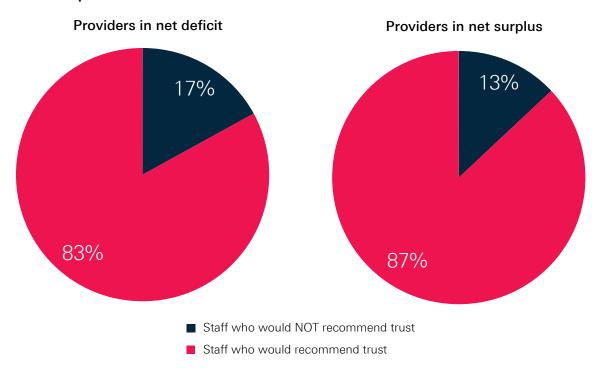
Two of the indicators that we tested as a proxy for quality were shown to be significantly associated with financial position, and in both cases a worse result was associated with a worse financial position.

#### NHS staff survey

The first indicator was the question from the 2014 staff survey <sup>44</sup> asking 'If a friend or relative needed treatment I would be happy with the standard of care provided by this organisation'. This indicator was found to be significant at a 99% confidence level (p<0.01). This suggests that staff working in a trust with higher deficit will also be less satisfied with the quality of care provided by their organisation. For every percentage point increase in the number of staff saying they would not be happy, a trust's financial position is likely to fall by 0.1% of their operating cost.

Figure 4.2 shows that staff working for providers in net deficit are more likely not to recommend their trust. Of the staff working for a provider that reported a net deficit, 17% would not recommend their trust to friends and family, compared to 13% of staff working for providers that reported a net surplus.

Figure 4.2: Relationship between staff satisfaction with standard of care and financial performance



#### **CQC** ratings

The second indicator of quality was whether the trust was rated as 'Inadequate' following an inspection by the Care Quality Commission (CQC) (see box below). This was found to be significant at a 90% confidence level (p<0.1). If a trust was inspected and found rated as 'Inadequate', their financial position was found to be lower by an average of 2.1% of their operating cost.

#### **CQC** ratings

The CQC uses a sophisticated methodology to analyse routinely collected data from all NHS acute trusts to provide an assessment of the risk to quality of service relative to other trusts. This is not a firm judgement on the quality of these providers, but rather an indication of whether all services are safe, effective, caring and well-led, to help prioritise the order for inspections. Following an inspection, CQC publish an overall rating for the trust, categorised into 'Outstanding', 'Good', 'Requires improvement' and' Inadequate'. This rating is based on information from staff, patient surveys, mortality rates, waiting times and infection rates. Crucially for our model, it is not directly influenced by the trust's financial position.

As of May 2015, 66 acute trusts had been inspected. In our model each rating was included as a separate variable with a value of 1 or 0. A fifth variable was included for 'not yet inspected'. We found that the only quality rating significantly associated with poor financial performance was 'Inadequate', which the CQC defines as 'The service is performing badly and we've taken action against the person or organisation that runs it'.  $^{45}$ 

Figure 4.3 shows the association between quality rating of the 66 acute trusts that have been inspected and their financial performance. Most of the trusts with a quality rating of outstanding or good reported a net surplus or a small net deficit relative to their total operating costs. Trusts rated as 'Inadequate' were associated with larger deficits relative to their total operating costs (Figure 4.3). Further analysis would be required to understand whether the poor financial position is leading to the lower quality of care, or whether the lower quality of care leads to a worse financial position.

Both of these indicators show a strong link between the financial performance of an acute or specialist trust and the quality of services it provides to patients. It is important to note this is an association not causation. For example, we cannot infer that having an 'Inadequate' CQC rating 'causes' the financial deficit, or that a financial deficit directly leads to poor quality of care. They may both be associated with other factors that we have not measured here.

However, it does highlight the clear association between a trust's financial status and the quality of services provided. From this we can conclude that, as the financial status of trusts declines, the quality of services provided to patients is also likely to be getting worse.

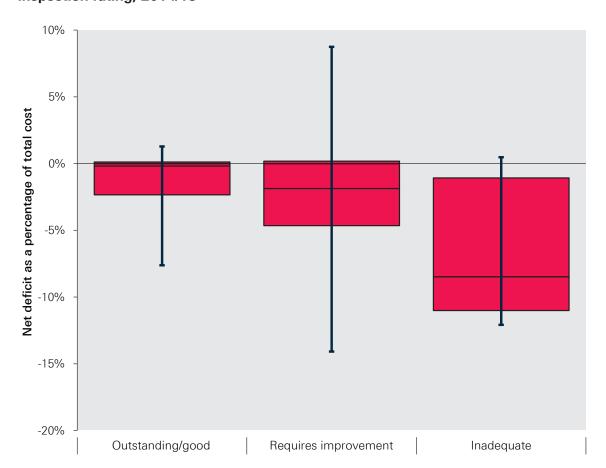


Figure 4.3: Association between 66 hospitals' financial position and their CQC risk inspection rating, 2014/15\*

#### Tariff income

In chapter 3 we highlighted that the value of payments via the national PbR tariff had fallen in real terms every year between 2012/13 and 2014/15. This is a particular issue for acute trusts, who receive an average of nearly 70% of their income from the tariff. It seems likely that trusts who receive a higher share of their income from tariff payments will be more affected by the reduced payments, and therefore experience greater financial difficulty. This theory is supported by our results.

Among the 151 trusts in our analysis, the average income covered by the tariff was 68%. We found that where the proportion of income that a trust receives via the national tariff is above this average, their financial performance is likely to fall by 1.4% of their operating costs.

Figure 4.4 shows the proportion of income coming from the national tariff is higher for acute trusts reporting a net deficit (69%) compared to those reporting a net surplus (62%).

<sup>\*</sup> For details of how to interpret boxplot charts, see: www.health.org.uk/how-do-i-interpret-boxplot-chart

Figure 4.4: Proportion of income from PbR tariff for acute providers reporting a net deficit compared to providers reporting net surplus, 2014/15



Providers in surplus

Providers in deficit

#### **Specialist trusts**

If a trust is a specialist, rather than an acute trust its financial position is likely to be an average of 2.6% of their operating costs higher. In chapter 2 we showed that income from CCGs for all providers rose by £334m, while income from direct commissioning from NHS England rose by £558m. Specialist services account for nearly half of all direct commissioning. As specialist providers offer more specialist services by definition, it appears they have been relatively, although not fully, protected from the systemic financial pressures.

#### **Number of sites**

The number of hospital sites that a trust operates was also shown to be statistically associated with its financial status. For every extra site that a trust has, its financial position is likely to be an average of 0.03% percentage points better. It is possible that this is a measure of economies of scale.

#### Variables not statistically significant

Some variables that were not found to be statistically significant in the model are worthy of note. It is important to be clear that we cannot conclusively state that they have no impact, just that we are not able to find evidence that they do in our model.

#### Leadership

In chapter 3 we highlighted that a large number of trusts are struggling to maintain stable leadership at the executive level, with one-third of chief executives of acute and specialist trust either interim or having been in position for less than a year. Strong, long-term leadership is considered a vital component in successful organisations, so one might expect that the presence of an interim or new chief executive would be associated with a worse financial position. No evidence was found in our model to support this theory. However, with so many trusts in this position, it is likely that there is not enough information to differentiate trusts. Many factors influence leadership and future analysis should test other proxies of leadership to test the hypothesis.

#### e-rostering

In his recent report on productivity of acute hospitals, Lord Carter of Coles estimated that up to £2bn could be saved through optimising the use of clinical workforce. <sup>30</sup> A major recommendation was that acute trusts should implement and use fully integrated e-rostering systems to reduce a trust's reliance on bank and agency staff. For this reason, we included an indicator for whether a trust had an e-rostering system, and found that it was not statistically associated with a trust's financial position. However, the indicator did not account for how effectively the trust was using the system. In his report, Lord Carter of Coles found that 'While most hospitals use e-rostering, we found that few trusts were using its full functionality and benefiting fully from what it can do'. This suggests that our result may be due to the data not fully reflecting the situation.

#### Private Financial Initiative (PFI)

Private Financial Initiative (PFI) deals are often cited as a major cause of the financial challenges of NHS providers. However, we found no evidence to support this in our model. Although PFI costs have risen at an average of 8% per year between 2009/10 and 2013/14, they still only account for around 1% of the total operating cost of all providers. <sup>46</sup> Payments towards PFI deals did account for over 5% of total spending for nine trusts in 2014/15, so it may still be a serious factor for some providers. However, it does not appear to be a crucial issue for the NHS as a whole. It is also worth noting that trusts struggling financially received interim support from the Department of Health. One form these extra revenue can take is public dividend capital (PDC) revenue and trusts with high PFI costs would receive financial support from the Department of Health to help them balance their books. PDC revenues have increased more than five-fold between 2010/11 and 2013/14, from £83m to £526m in 2013/14. <sup>47</sup> Further analysis should examine the correlation between PDC revenue and PFI costs, as it could explain why PFI wasn't a significant variable in our model.

#### Delayed transfers

The number of delayed transfers of care (DToC) was not a significant variable in our final model. However, it is worth noting that when the model was run on 132 acute trust (excluding specialist trusts), we found that an higher number DToC was associated with higher deficits, significant at a 90% confidence level.

# Summary

Although all sectors are facing a decline in their financial position, the biggest deficits are observed in the acute sector. To help understand what factors are associated with worse financial position, we tested a number of indicators likely to be linked with a higher deficit among acute and specialist trusts.

We found that an acute or specialist trust is statistically more likely to have a higher deficit if the following factors apply:

- A higher proportion of its staff costs are spent on agency staff.
- It is providing a lower quality of service, as measured by:
  - more staff disagreeing with the statement in the 2014 staff survey, 'If a friend or relative needed treatment I would be happy with the standard of care provided by this organisation'
  - receiving a rating of 'Inadequate' following a Care Quality Commission (CQC) inspection.
- It receives a higher share of its income from the PbR tariff.
- It is an acute rather than a specialist trust.
- It provides services from fewer sites.

We found no statistical association between the financial position of an acute or specialist trust and the following factors:

- The length of service of the chief executive.
- Whether the trust has an e-rostering system.
- The existence or size of a PFI deal.

# 5. Discussion

NHS providers' finances deteriorated sharply in 2014/15. For the first time, the foundation trust sector as a whole moved into deficit. In addition, the majority of acute hospitals (65%) could not balance their budget. This situation has worsened in 2015/16, with NHS providers reporting a net deficit of £2.3bn nine months into the year and 95% of acute trusts in deficit. This net deficit is projected to rise to over £2.8bn by the end of the year.  $^{48}$ 

There are two key factors underlying the deteriorating financial position of the NHS. First, as our multivariate analysis presented in chapter four shows, NHS providers' increasing reliance on expensive agency staff is a major factor associated with deteriorating financial performance. The second key factor is the poor performance of the NHS in sustaining productivity improvements over recent years.

# Staff costs

Since 2010 public sector workers – including NHS staff – have been subject to very tight pay restraint. To a large extent this has mirrored the experience in the wider economy. The years following the recession in 2008 have seen very low earnings growth across public and private sector. Pay restraint has been critical to NHS financial sustainability. Between 2001/02 and 2010/11 increases in the bill for NHS pay consumed more than £4 in every £10 of the additional investment in the NHS. Since 2011/12 this has fallen to less than £1 in every £5 of additional NHS funding. But as the rising cost of spending on agency staff shows, this pay restraint will not be a sustainable strategy indefinitely. The government recognises the pressure from agency spending and is implementing a series of measures to attempt to rein it in. The hourly rates per shift for agency staff are being capped to 55% more than substantive staff by April 2016 (reflecting employment costs such as holiday pay, national insurance and pension contributions).

Total public sector pay is planned to rise by 1% per year in cash terms between 2016/17 and 2020/21.<sup>49</sup> But the ability of the NHS to hold down earnings growth without affecting retention will depend on wider factors in the labour market. In the economic and fiscal outlook published alongside the 2015 Autumn statement, the Office of Budget Responsibility set out the official forecast for the UK for the rest of the decade.<sup>50</sup> They estimate whole economy average earnings growth of between 1.7% and 1.9% per year over and above inflation for the rest of the decade. Further restraint in earnings for NHS workers will therefore be much more difficult to maintain – even with the new policies on agency payments – without recruitment and retention difficulties.

Figure 5.1 shows how the public-private hourly pay differential has changed over the last decade. It compares pay alone with pay plus employer pension contributions as, for the public sector, pension contributions typically contribute a large element of total reward packages. In Figure 5.1 pay is adjusted for differences in education and skills characteristics.



Figure 5.1: The public-private hourly pay differential for workers with similar characteristics

Source: The Review Body on Doctors' and Dentists' Remuneration (DDRB) Review for 2016. Written Evidence from the Health Department for England. 2016.

In 2008 there was almost no difference in pay, although public sector workers enjoyed a premium over those working in the private sector when pension contributions were taken into account. Initially, as the recession hit, private sector earnings responded more quickly and a differential opened up. However, following national public sector pay restraint, the relative earnings and reward packages for public and private sector are now back where they were in 2008. This will make it more difficult to recruit and retain staff.

NHS providers' increasing reliance on agency staff is also a consequence of problems with the way the supply of clinical staff has been managed in the NHS. The National Audit Office (NAO) found that 'there are shortcomings in how the supply of clinical staff is managed, in terms of both planning the future workforce and meeting the current demand for staff'. Local workforce plans have underestimated the workforce needed as they are often driven more by financial constraints that true staffing needs. Plans also tend to focus on existing staffing models and roles rather than the changes that will be needed to respond to the changing way services are being delivered. Overall the NAO found that the gap between the supply of, and need for, staff was greatest for nursing, midwifery and health visiting, with a shortfall of 7.2% of the workforce in 2014. In 2014 more than 25,000 nurses left the NHS (either through retirement or earlier in their career) but there were just 13,400 newly qualified nurses. While some nurses were recruited from outside the NHS in England, this gap between leavers and newly qualified nurses meant the NHS had to rely on recruitment from overseas and temporary staff, both of which are expensive.

The NAO report shows that the number of nurse training places has fallen by 20% over the last decade, so that 3,106 fewer adult nurses were being trained in 2014/15 than in 2004/05. The numbers in training fell to as low as 11,509 in 2012/13 (Figure 5.2). This fall in training places contrasts with rising hospital activity as the population in England has been increasing and is aging, with a rising prevalence of chronic disease. The problem is then exacerbated by big regional disparities in the gap between the supply of and need for nurses. The location of nurse training places does not neatly match the demand for nurses but there is evidence that nurses tend to work close to where they have trained. While many of the staffing problems in the NHS reflect fundamental shortcomings in the national system to supply enough qualified clinical staff, they are exacerbated by shorter-term issues. For example, the NAO report finds relatively little use of return-to-practice schemes, that overseas recruitment is not well coordinated and that more needs to be done to tackle the number of nurses leaving the NHS before retirement age. It is estimated that the gap between supply and demand for nurses will not be closed until 2019/20.<sup>28</sup>

18,000 16,000 14,000 Fraining places commissioned 12,000 10,000 8,000 6,000 4,000 Adult nurses Allied health professionals 2,000 Undergraduate medical 0 2011/12 2013/14 2006/07 2010/11 2009/10 2014/15 2004/05 2005/06 2007/08 2008/09 2012/13

Figure 5.2: Number of training places commissioners for clinical staff, 2004/05 to 2014/15

Source: National Audit Office, 2016. Managing the supply of NHS clinical staff in England 2015.

# **Productivity**

Efficiency and productivity growth are crucial for the NHS in the current environment. The Forward View states that the NHS will need to achieve efficiency growth of 2-3% a year until 2020/21 to maintain the quality of services provided with the agreed funding allocation.

In a recent report, the Centre for Health Economics at the University of York calculated total factor productivity and labour productivity for the NHS as a whole up to 2013/14 (Table 5.1).<sup>41</sup> This is the most comprehensive analysis of productivity for the NHS in England. It includes a wide range of NHS activity (in primary care and secondary care, commissioning and providing). It also adjusts output for quality. The York analysis finds that productivity performance was strong in 2010/11 then the rate of growth slowed – to around zero in 2012/13 before picking up markedly in 2013/14.

Table 5.1: University of York NHS productivity estimates

	Total Factor productivity Growth (mixed method)	Total Factor productivity Growth (indirect method)
2009/10 - 2010/11	3.2%	3.7%
2010/11 - 2011/12	2.1%	2.4%
2011/12 - 2012/13	0.4%	-0.3%
2012/13 - 2013/14	2.2%	2.1%
Annual average 2004/05 to 2013/14	1.4%	1.4%
Annual average 2009/10 to 2013/14	2.0%	2.0%
Source: Bojke et al 2016		

The York team also calculated productivity growth for all NHS providers (acute, specialist, mental health and community trusts) in 2013/14. They found that, while NHS-wide productivity grew by just over 2% in that year, provider productivity fell by around 0.5%. This difference between system-wide productivity performance and NHS provider-wide performance is in large part accounted for by the very low input growth resulting from the switch from relatively expensive primary care trusts (PCTs) and strategic health authorities (SHAs) to the less resource-intensive NHS England and CCGs. This is a one-off change which cannot be repeated.

Our analysis of acute providers' productivity is more limited than the York work but also finds that provider productivity fell in 2014/15. Our results show a larger fall in productivity (0.96%) – although this may be the fact that NHS acute providers' productivity fell more sharply than all providers. This would be consistent with the pattern on deficits

and rising staff costs, which are most pronounced in acute hospitals. However, we may be over-estimating the fall in productivity as we do not adjust for quality of care and had to exclude outpatient services from our analysis due to data quality issue. Our results suggest productivity fell again for acute hospitals in 2014/15. The University of York's wider measure of productivity is not yet available for 2014/15. Monitor estimated that acute and specialist trusts achieved a higher rate of efficiency growth of 1.4% between 2008/09 and 2013/14, which they have used to set the efficiency factor for the national PbR tariff. This uses a different inflation factor (the cost uplift factor, CUF) which is appropriate for the tariff, and rose at a faster rate in recent years than the HCHS pay and prices index use by York and our analysis, leading to a higher observed rate of efficiency growth. However, even this higher estimate for efficiency growth is below the rate of 2–3% required in the Forward View.

2014/15 has clearly been a very challenging year for NHS acute providers. The data from the Department of Health on QIPP savings also shows the system struggling to sustain the level of improvements required to balance the books. As Table 5.2 shows, QIPP savings in 2014/15 were less than half the savings in each of the preceding three years. Beyond the one-off changes of the Health and Social Care Act 2012 reforms and the policy of national pay restraint, the NHS is struggling to find sustainable underlying improvements in the efficiency and productivity of services.

Table 5.2: NHS QIPP savings 2011-12 to 2014/15

Year	Outturn/forecast	Saving (£ bn), cash terms	Saving (£ bn) 2015/16 prices
2011-12	Outturn	5.8	5.9
2012-13	Outturn	5.0	5.1
2013-14	Outturn	4.3	4.4
2014-15	Outturn	1.8	1.8
TOTAL		16.9	17.1
Source: Correspondence with NHS England on 04/02/2016			

# The outlook for the NHS in England

The 2015 comprehensive spending review set out the scale of the challenge facing the NHS for the rest of this decade.  $^{52}$  NHS funding per person will grow in 2016/17, followed by a year of no real-terms growth. Spending will then fall for two years (Figure 5.3). Overall the settlement for the next five years delivers the same real terms growth in funding as we saw over the last parliament. After inflation, it amounts to a 0.85% per year increase in the total NHS budget. This is a 0.1% per year increase in health service funding per head. That means we are halfway through a decade of stagnant real terms spending per person in England.

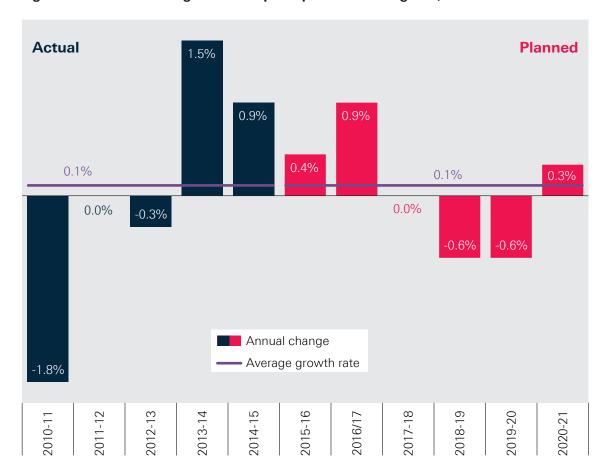


Figure 5.3: Annual change in NHS spend per head in England, real terms

There is a strong interdependency between the NHS and social care services. While funding for the NHS rose in real terms over the last five years, funding for public provision for adult social care fell by an average of 2.2% per year between 2009/10 and 2014/15. This led to a 25% reduction in the number of people receiving publicly funded social care. It is hard to quantify the additional burden this has placed on NHS services, but it is likely to have had an impact. Following the 2015 comprehensive spending review, public funding for adult social care is planned to rise by an average of 0.6% per year between 2015/16 and 2019/20. This increase in funding is welcome, but demand for services is projected to grow at a rate of 4% per year.  $^{53}$  It is therefore likely that the level of unmet need for adult social care will rise in the near future.

The NHS planning guidance<sup>54</sup> indicates that providers face cost pressures of 3.1% in nominal terms (1.4% in real terms) in 2016/17. Staff costs are the single biggest component of cost pressures in 2016/17 as the NHS responds to additional pension costs rising from changes to the state pension. Staff costs are therefore expected to rise by 3.3% in nominal terms (1.9% in real terms) despite the continued low growth in headline pay awards and low inflation.<sup>36</sup> Pay pressures are therefore expected to consume around £1.5bn of the extra £4.1bn cashterms increase in funding for the NHS in  $2016/17.^{55}$  With a current deficit of over £2bn, restoring providers to balance will consume much of the remaining additional funding, leaving very little to invest in real transformation or improving services.

<sup>\*</sup> Figure in 2016/17 prices.

Beyond 2016/17 there is very little growth in NHS resources. Therefore the health service will only be able to sustain the quality and range of services available to patients if it can very quickly turn around the poor productivity performance and then sustain a much higher rate of growth in productivity for the rest of the decade. Lord Carter of Coles' review of hospitals' operational efficiency identified £5bn of potential savings. However, the NHS planning round for 2016/17 has started with no national NHS efficiency plan and no clear framework of support for NHS providers to help them deliver the changes necessary to improve efficiency and productivity.

Analysis by Deloitte for Monitor<sup>56</sup> and previous research by the Health Foundation<sup>25</sup> identified that there are significant variations in the efficiency and productivity of NHS acute providers. Raising the productivity and efficiency of those organisations which are below the top-performing trusts would realise significant savings. The potential to realise the so-called 'catch-up' efficiency gains has underpinned the approach to setting the prices NHS trusts are paid for care over recent years. But it is clear that this policy approach has been largely unsuccessful as variation in productivity among acute trusts has changed little from 2009/10 to 2014/15. The upper quartile of the productivity index range increased from 1.12 in 2009/10 to 1.14 in 2014/15 while the lower quartile fell from 0.94 to 0.92 (Figure 5.4).

If the NHS is to realise the savings from efficiency gains, a new approach is urgently required. This is likely to be one which includes more expert help to organisations to change the way care is organised and delivered.<sup>57</sup>

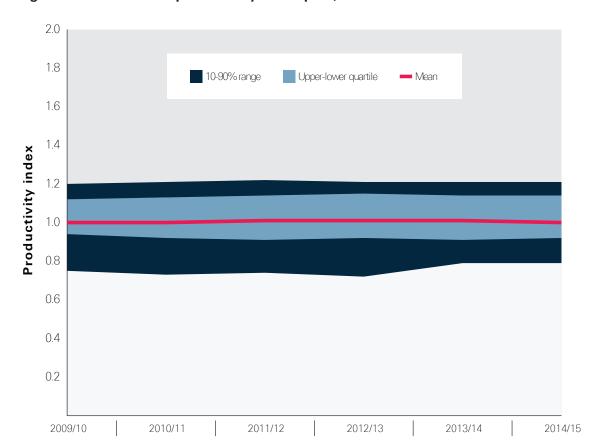


Figure 5.4: Variation in productivity of hospital, 2009/10 to 2014/15

## Conclusion

2014/15 saw a continuation of the worrying trend of rising deficits for NHS providers. It is not possible to highlight a small number of trusts who are struggling to control their finances; rather it has become a systemic problem where the majority of providers are seeing their financial position decline. Based on current trends, the total deficit could exceed £2.8bn by the end of 2015/16. This is not a case of a small number of struggling organisations who need help. 95% of acute trusts posted a deficit in quarter three of 2015/16.

Clearly this trend cannot continue without having a real impact on the quality of services that the NHS provides to the public. In chapter 4 we identified a strong link between the extent of a trust's financial difficulties and the quality of care provided, according to staff and as assessed by the CQC. Although we're not able to fully determine causality, it seems clear that quality of care and financial status are interlinked.

The government has announced additional real-terms investment of £4.5bn for the NHS over the next five years. <sup>52</sup> However, this is unlikely to keep up with demand pressures due to a growing and aging population as well as rising costs, expectations and prevalence of long-term conditions. <sup>58</sup> NHS England recognised this in their *NHS five year forward view*, <sup>39</sup> stating that the NHS would need to make efficiency savings of at least £22bn by 2020/21. Some of these savings are expected to come from the public sector pay settlement, <sup>59</sup> although these may not be realised if reliance on agency staff continues to rise – not to mention the rising cost of pension payments. Potential savings worth up to £5bn for the acute sector were identified in the recent report by Lord Carter of Coles. These depend heavily on optimising use of clinical staff and medicines, as well as improving procurement and estate management. <sup>30</sup> However, these still represent only a quarter of the total savings required, and there is no clear guidance for how the NHS will be able to save the full amount.

If the financial pressures are not to overwhelm the health service, urgent and concerted action is needed on two key fronts. First, the NHS needs national action to tackle the gap between the need for skilled staff and the supply of suitably trained workers. Second, as we have previously argued, providers need financial and practical support to realise the undoubted productivity savings which exist across the system.

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Sarah is a Senior Economist at the Health Foundation. She joined the Health Foundation from the Nuffield Trust where she conducted financial analysis of NHS funding. Previously, Sarah worked at the Health Analytical Services of the Scottish government where she worked on a number of health and social care projects and publications such as the integration of health and social care project and the new social care survey.

Sarah has a master's degree in ecological economics from University of Edinburgh. Her MSc dissertation was on the government cost of occupational cancer in Great Britain where she conducted a cost and benefits analysis of implementing a health policy to prevent occupational cancer. She graduated from McGill University in Canada with a double major in international development and environmental studies focusing on the ecological determinants of health in society.

#### Anita Charlesworth

Anita is the Health Foundation's Director of Research and Economics. Before joining the Health Foundation in May 2014, Anita was Chief Economist at the Nuffield Trust for four years where she led the Trust's work on health care financing and market mechanisms.

Anita was Chief Analyst and Chief Scientific Advisor at the Department of Culture, Media and Sport from 2007 to 2010 and, prior to this, she was Director of Public Spending at the Treasury from 1998-2007, where she led the team working with Sir Derek Wanless on his reform of NHS funding in 2002. Anita has a Masters in Health Economics from York University and has worked as an Economic Advisor in the Department of Health and for SmithKline Beecham pharmaceuticals in the UK and USA.

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#### Adam Roberts

Adam is the Head of Economics at the Health Foundation. He joined the Foundation in July 2014 as Senior Economics Fellow, exploring past, present and future trends for health care funding in the UK.

Before joining the Health Foundation, Adam was a Senior Research Analyst at the Nuffield Trust where he worked on projects including the project funding gap facing the NHS in England and Wales, allocation of national resources to GP practices, lifetime cost for social care, travel distances for emergency care, and trends community prescribing.

Prior to his time at the Nuffield Trust, Adam was responsible for the production of risk estimates of NHS organisations for the Care Quality Commission (and the former Healthcare Commission) to support the programme of targeted inspections. These estimates were generated by applying cutting edge methods to all relevant and available data sources, both quantitative and qualitative, to identify areas of possible concern for the commission to follow-up.

Adam graduated from Keele University in 2004 where he achieved a First Class Dual Honours Degree in Statistics and Economics.

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

Our aim is a healthier population, supported by high quality health care that can be equitably accessed. We learn what works to make people's lives healthier and improve the health care system. From giving grants to those working at the front line to carrying out research and policy analysis, we shine a light on how to make successful change happen.

We make links between the knowledge we gain from working with those delivering health and health care and our research and analysis. Our aspiration is to create a virtuous circle, using what we know works on the ground to inform effective policymaking and vice versa.

We believe good health and health care are key to a flourishing society. Through sharing what we learn, collaborating with others and building people's skills and knowledge, we aim to make a difference and contribute to a healthier population.

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