

Operational productivity and performance in English NHS acute hospitals: Unwarranted variations

**An independent report for the Department of Health
by Lord Carter of Coles**

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Thanks and acknowledgements

The help we received from organisations and individuals are too numerous to list, but I would particularly like to thank NHS Procurement and Efficiency board members for the steer they gave us over the last 18 months: Sir Robert Naylor, Sir Ian Carruthers, Derek Sach, Sir Michael Rawlins, Tony Whitfield, Tony McCarthy, Mandie Sunderland, Catherine Frances, Giles Denham, Liz Woodeson, Peter Smith, Bill Crothers, Julian Kelly, and Keith Ridge.

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Finally I would also like to thank Professor Tim Briggs, Professor Tim Evans for their clinical insights Lyn McIntyre MBE for her nursing knowledge and perseverance and of course my team whose passion and dedication have been unwavering.

I am sure there are many people and organisations I have not mentioned above but I would personally like to thank everyone who has helped me and my team to compile this report.

Letter to Secretary of State

To Secretary of State for Health

In June 2014 you asked me to look at what could be done to improve efficiency in hospitals in England and in my interim report of June last year I described the widely varying resource utilisation across the NHS. I estimated that if we reduced unwarranted variation at least £5bn of the £55.6bn spent annually by acute hospitals could be saved. Further to my letter of 14th January 2015, I am now submitting to you my final report which details how these efficiencies can be achieved between now and 2020.

Since June 2015 I have engaged with 136 acute hospitals in England to share with them specific areas where their data indicates they could reduce variation relative to the NHS average or their peers. I have personally visited nearly 40 of these hospitals – around a third of all acute spend – to hear first-hand the challenges they face in delivering improved productivity and making efficiency savings. The value in meeting senior executives face-to-face cannot be overstated, and in the great majority of cases I have been impressed by the dedication and commitment shown by senior executives and their boards in facing up to the task.

I said in my interim report that the NHS has some of the best hospitals in the world, in terms of both quality and efficiency and everywhere we looked there was always a hospital doing something exceptional; however, it is apparent that most trusts need help and support if the £5bn of efficiency is to be realised over the next three to four years. Given this challenge there are five points from my report I wish to highlight. Firstly, my experience of the best of the NHS and other health care systems internationally shows that the provision of high quality clinical care and good resource management go hand-in-hand. All trusts should therefore grasp the use of their resources more effectively, the most important of which is their people. I have set out in my report where and how this clinical and administrative management ‘grip’ should be focussed.

Secondly, a single reporting framework should be adopted across all trusts, which pulls together clinical quality and resource performance data and compares it to the ‘best in class’. This constant analysis of performance for trusts, commissioners and regulators will identify areas of variation (good and bad) that they need to improve. The framework will also help trust boards hold their executive teams to account. However, there must be only one version of the truth that everybody, locally and nationally, will use to drive improvements, so we must endeavour to reduce and rationalise the plethora of reporting burdens currently placed on providers by commissioners and regulators.

This mandates on-going development of the NHS ‘model hospital’. Leading international healthcare systems have a clear, consistent approach to monitoring and managing the performance of their hospitals against expected standards of service and efficiency. Key performance metrics are rigorously benchmarked against plans and peer performance to a regular reporting cycle, daily, weekly and monthly.

My third point relates to delayed transfers of care for patients out of the acute hospital setting. Nearly all trusts wrestle with the problem of moving those who are medically fit into settings that are more appropriate for the delivery of their care or rehabilitation, and for the families and carers. This failure results in sub-optimal use of high acuity clinical resources and delays to treatments for other patients.

The resultant loss of income to trusts cannot be offset as costs are still incurred relating to clinicians, operating theatres and other overheads. Consequently, trusts are having to care for patients in the wrong clinical setting, find it more challenging to meet national standards for patient access, have poor clinical productivity, and incur operating losses. Some work well with their local partners to tackle the issues and the Department and NHS are working on a range of initiatives to help those trusts for which this is becoming a major problem. Nevertheless, a significant proportion of the £5bn cannot be unlocked unless delays in transfer are managed more effectively.


My fourth point relates to the issue of local and national collaboration and coordination. Nearly every trust I have spoken to recognises the efficiency opportunities and quality improvements open to them if they could change the way their clinical services were delivered or could share some supporting services. However, these are rarely realised owing to the considerable time and effort needed to present and explain the benefits to their local partners and communities. The Vanguards and Success Regime initiatives are leading the way in this respect, but all trusts should be enabled to pursue these opportunities routinely and the recommendations I have made in my report are designed to help local health economies demonstrate to their partners and communities the case for these improvements. National support is again critical, or another significant proportion of the £5bn of efficiencies will not be unlocked.

Finally I reiterate that the biggest challenge for the NHS in 2016 is to deliver the changes needed to achieve the efficiency and productivity improvements required by 2020. Rapid effective adoption and implementation of the recommendations by the leaders of our acute hospitals and those that work with them is imperative if we are to achieve this aim; as will be the engagement of NHS Improvement when it comes into being in April this year. The Department of Health must continue to work with the NHS and existing regulators to implement the recommendations I make pending their transition to NHS Improvement.

We should also not lose sight of the non-acute sector and primary care. I have been contacted by many mental health and community trusts expressing their wish to be involved in a similar approach. I believe the methodology and tools we have developed are transferable to these sectors, so I see no reason why the same approach should not be taken.

I am grateful for the opportunity to undertake this review and I would like to thank the cohort of 32 trusts who have dedicated considerable time and effort during a very challenging period for the benefit of the whole NHS. And of course I would particularly like to thank my team and all those who have advised and supported me over the last 18 months.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Carter of Coles', with a horizontal line underneath.

Lord Carter of Coles

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Executive summary

The NHS is expected to deliver efficiencies of 2-3% per year, effectively setting a 10-15% real terms cost reduction target for achievement by April 2021. Whilst the NHS ranks as the best value healthcare system in the world¹, we know more could be done to improve quality and efficiency in our hospitals so they can meet this expectation.

This review looked at productivity and efficiency in English non-specialist acute hospitals, which account for half of the total health budget, using a series of metrics and benchmarks to enable comparison. We conclude that there is significant unwarranted variation across all of the main resource areas, and although we found many examples of good practice, no one hospital is good at everything.

We estimate this unwarranted variation is worth £5bn in terms of efficiency opportunity – a potential contribution of at least 9% on the £55.6bn spent by our acute hospitals. The report makes 15 recommendations designed to tackle this variation and help trusts improve their performance to match the best.

Unwarranted variation

We looked at the key resource areas of clinical staff, pharmacy and medicines, diagnostics and imaging, procurement, back-office functions, and estates and facilities. We also looked at quality and efficiency through the lens of clinical specialties. Examples of the variation we found include:

Overall non-specialist acute hospital costs	Average cost of an inpatient treatment is £3,500 but there is 20% variation between the most expensive trusts (£3,850) and the least expensive (£3,150)
On the ward	Average 9.1 hours of care provided by registered nurses and health care support workers per patient day but variation from 6.33 to 15.48 hours, although we should be mindful of comparing different types of wards and trusts
In the operating theatre (Orthopaedics)	Deep wound infection rates for primary hip and knee replacements currently range from 0.5% to 4%. If all hospitals achieved 1% this would transform the lives of 6,000 patients and save the NHS £300m per year
Procurement	Average price paid for hip prosthesis varies from £788 to £1590, and trusts buying the most are not paying the lowest price
In the pathology lab	Pathology providers are considered productive if the cost of pathology to the trust is less than 1.6% of operating expenditure. Data gathered suggests a two-fold variation in the current cost – from 1.1% to 2.4%
In the medicine cabinet	Stockholding varies from 11 to 36 days, and if everyone achieved 15 days this would save £50m
HR Department	Sickness and absence rates vary from 2.7% to 5.8%. This is a variation of 116%
On the hospital estate	Total estates and facilities running costs per area (£/m ²) – trusts are considered good if their metric is lower than £320, the current variation is between £105 and £970; If everyone achieved the median this would save £1bn per year. Non-clinical space (% of floor area) – trusts are considered good if their metric is lower than 35%, the current variation is between 12% and 69%

¹ Commonwealth Fund report, *Mirror Mirror on the Wall*, 2014

Optimising resources

Professionals with backgrounds in areas such as nursing, pharmacy, diagnostics, procurement and estates management, engaged with their counterparts in a cohort of 32 trusts to discuss performance data, and to identify and codify what good looks like. This led to a set of benchmarks and indicators to enable comparison, and in some cases creation of new metrics such as Care Hours per Patient Day (CHPPD), all of which form the basis of a model hospital.

For clinical staff we observed variation in a range of indicators such as sickness rates and turnover, and in policies and practices such as rostering and specialising. We also became aware of variances in the use of medical staff job planning and the deployment of Allied Health Professionals. We also found variation in the use of modern digital systems such as e-Rostering, a theme that is constant throughout the areas we looked at. Even where trusts have invested in such technology we found trusts were not getting full meaningful use of it.

Optimising our staff resource is not just about policies and practices. It is apparent that some NHS staff have not been fully engaged in the productivity and efficiency agenda and we know that the link between staff engagement and quality outcomes is well understood and evidenced across high-performing organisations. We need to do more to improve staff engagement which is why we are recommending NHS Improvement develop a national people strategy.

In hospital pharmacy we know that the more time pharmacists spend on clinical services rather than infrastructure or back-office services, the more likely medicines use is optimised, however, we found significant variation of (2.5-71%) in the rates of prescribing pharmacists as a proportion of total hospital pharmacists. Similarly in pathology services we found the mix of qualified to unqualified staff varied from trust to trust and was inconsistent with trust activity.

In procurement we found astonishing variety in the numbers of products and suppliers used across and within trusts. A sample of 22 trusts use 30,000 suppliers, 20,000 different product brands, over 400,000 manufacturer products codes and more than 7,000 people are able to place orders. Analysis of the NHS estate identified variation in the use of space, with clinical space occupation ranging from 11% to 65%; and, significant variation in facilities management costs. Corporate and administration costs varied between trusts at 6%-11% of income with trusts failing to capture the benefits of scale.

Quality, efficiency and performance

There is strong international evidence that good hospital management practices can deliver both improved clinical outcomes and productivity. During our work we came across a number of trusts that had a strong grip on the management of their resources, while also doing well in their CQC ratings, however, we also found that hospitals and commissioners were often looking at different datasets and from different perspectives with inevitable disagreements.

To optimise quality and efficiency across the entire care pathway, a single version of the truth and an integrated performance framework is critical. We are therefore recommending that organisations should adopt a single integrated performance framework for performance, centred around customers, workforce and finances. This should incorporate the established CQC regulatory framework of five areas with development of the well-led questions and a new sixth area.

Such a framework also requires hospitals to improve their use of modern digital technology. The best performing hospital systems around the world have real-time monitoring and reporting at their fingertips enabling them to make decisions on a daily, weekly, monthly basis

to improve quality and efficiency performance. We were struck by the immaturity of trusts' use of such technology from e-Rostering systems, e-Prescribing and basic electronic catalogues for procurement, so we recommend NHS Improvement needs to incentivise trusts to fully utilise their existing digital systems, and where necessary, enable them to access some of the Spending Review commitment to invest in digital technologies.

We are also recommending that national clinical programmes designed to improve quality and efficiency across care pathways are coordinated under a single governance framework led by NHS Improvement to ensure they align with the performance framework.

In our discussions with trusts we repeatedly heard the challenges they face with two wider system issues; delayed transfers of care and barriers to greater collaboration, cooperation and economies of scale. These challenges inhibit trusts' ability to improve performance and result in sub-optimal clinical quality and efficiency across the local health economy. Whilst we found good examples of where trusts have taken matters into their own hands to address them, there is no doubt they need help and support at a national level, so recommend DH, NHS England and NHS Improvement develop a strategy for addressing these issues.

The model hospital

Highlighting variation requires the right metrics with detailed guidance on what good looks like. The adjusted treatment cost (ATC) is one way for trusts to see how they vary in their costs for a given output. The weighted activity unit (WAU) can also be used to compare performance and productivity across trusts. These metrics should be used to create a model hospital, which with associated best practice guidance will give trusts a single version of the truth on what good looks like from board to ward, to help trusts understand what good looks like. NHS Improvement should continue to develop the model hospital and its underlying metrics, so that there is one source of data, benchmarks and good practice.

Engagement with trusts and implementation

Realising the full productivity and efficiency opportunities set out in this review will be challenging. We have learnt from our conversations with trusts that close engagement and collaboration are essential and that this supportive approach needs to be maintained.

There is a need for national capability and capacity to help trusts identify and seize the opportunities to achieve productivity and efficiency gains using the analysis, professional insight, and engagement approach we adopted throughout the course of this review. We have therefore placed a heavy responsibility on NHS Improvement to manage the delivery of these savings, but it is imperative that all of the national organisations work together and we want to make it absolutely clear that trust boards should be held to account.

In our discussions with trusts we found that typically they recognised a third of the savings opportunities we put in front of them and already had plans in place for delivering them, a further third they were aware of but had no plans in place, and the final third were completely new to them. Nearly all trusts recognised the urgency for delivering the opportunities and were grateful for the help and support they received from the review team.

Recommendations

- 1** NHS Improvement should develop a national people strategy and implementation plan by October 2016 that sets a timetable for simplifying system structures, raising people management capacity, building greater engagement and creates an engaged and inclusive environment for all colleagues by significantly improving leadership capability from “ward to board”, so that transformational change can be planned more effectively, managed and sustained in all trusts;
- 2** NHS Improvement should develop and implement measures for analysing worker deployment during 2016, including metrics such as Care Hours Per Patient Day (CHPPD) and consultant job planning analysis, so that the right teams are in the right place at the right time collaborating to deliver high quality, efficient patient care;
- 3** Trusts should, through a Hospital Pharmacy Transformation Programme, develop plans by April 2017 to ensure hospital pharmacies achieve their benchmarks such as increasing pharmacist prescribers, e-prescribing and administration, accurate cost coding of medicines and consolidating stock-holding by April 2020, in agreement with NHS Improvement and NHS England so that their pharmacists and clinical pharmacy technicians spend more time on patient-facing medicines optimisation activities;
- 4** Trusts should ensure their pathology and imaging departments achieve their benchmarks as agreed with NHS Improvement by April 2017, so that there is a consistent approach to the quality and cost of diagnostic services across the NHS. If benchmarks for pathology are unlikely to be achieved, trusts should have agreed plans for consolidation with, or outsourcing to, other providers by January 2017;
- 5.** Trusts report their procurement information monthly to NHS Improvement to create a NHS Purchasing Price Index commencing April 2016, collaborate with other trusts and NHS Supply Chain with immediate effect, and commit to the Department of Health’s NHS Procurement Transformation Programme (PTP), so that there is an increase in transparency and a reduction of at least 10% in non-pay costs is delivered across the NHS by April 2018;
- 6** Trusts should operate at or above the benchmarks agreed by NHS Improvement for the operational management of their estates and facilities functions by April 2017; with all trusts (where appropriate) having a plan to operate with a maximum of 35% of non-clinical floor space and 2.5% of unoccupied or under-used space by April 2017 and delivering this benchmark by April 2020, so that estates and facilities resources are used in a cost effective manner;
- 7** Trusts should rationalise their corporate and administration functions to ensure their costs do not exceed 7% of their income by April 2018 and 6% of their income by 2020 (or have plans in place for shared service consolidation with, or outsourcing to, other providers by January 2017) so that resources are used in a cost effective manner;

- 8** NHS Improvement and NHS England should establish joint clinical governance by April 2016 to set standards of best practice for all specialties, which will analyse and produce assessments of clinical variation, so that unwarranted variation is reduced, quality outcomes improve, the performance of specialist medical teams is assessed according to how well they meet the needs of patients and efficiency and productivity increase along the entire care pathway;
- 9** All trusts should have the key digital information systems in place, fully integrated and utilised by October 2018, and NHS Improvement should ensure this happens through the use of 'meaningful use' standards and incentives;
- 10** The Department of Health, NHS England and NHS Improvement should work with local government representatives, to provide a strategy for trusts to ensure that patient care is focussed equally upon their recovery and how they can leave acute hospitals beds, or transfer to a suitable step down facility as soon as their clinical needs allow so they are cared for in the appropriate setting for themselves, their families and their carers;
- 11** NHS England and NHS Improvement should work with trust boards to identify where there are quality and efficiency opportunities for better collaboration and coordination of their clinical services across their local health economies, so that they can better meet the clinical needs of the local community;
- 12** NHS Improvement should develop the Model Hospital and the underlying metrics, to identify what good looks like, so that there is one source of data, benchmarks and good practice;
- 13** NHS Improvement should, in partnership with CQC and NHS England, by July 2016, develop an integrated performance framework to ensure there is one set of metrics and approach to reporting, so that the focus of the NHS is on improvement and the reporting burden is reduced to allow trusts to focus on quality and efficiency;
- 14** All acute trusts should make preparations to implement the recommendations of this report by the dates indicated, so that productivity and efficiency improvement plans for each year until 2020/21 can be expeditiously achieved; and
- 15** The national bodies should engage with trusts to develop their timetable of efficiency and productivity improvements up until 2020-21, and overlay a benefits realisation system to track the delivery of savings, so that there is a shared understanding of what needs to be achieved.

1 Introduction

In November 2015 the government set its spending plans for a sustainable NHS in England by confirming it will receive £10bn more in real terms by 2020-21, increasing the health budget from £101bn in 2015-16 to £120bn² by 2020-21. This is £2bn more than the NHS asked for in its Five Year Forward View but government still expects the NHS to deliver the efficiencies of 2-3% per year it said it can find, effectively placing a 10-15% real terms cost reduction expectation on trusts to achieve by April 2021.

HM Treasury's autumn statement said that efficiencies will be delivered through improvements to quality of care and prevention, staff productivity and better procurement, highlighting the £5bn Lord Carter estimated could be saved from better use of staff, medicines, and buying the most cost-effective goods and services. Whilst we know the NHS ranks as the best value healthcare system in the world³ we know we can do better. Our interim report⁴ described the inexplicable variation in the use of resources between NHS acute hospitals. The report stated that if we could help them to reduce this unwarranted variation then some £5bn could be saved from the £55.6bn spent by English non-specialist acute hospitals (see figure 1.1) – a significant contribution to the 10-15% expected over the next five years. In this final report, we set out how we think this can be achieved, improving the overall performance of our acute hospitals in England and the quality of care they provide to the public.

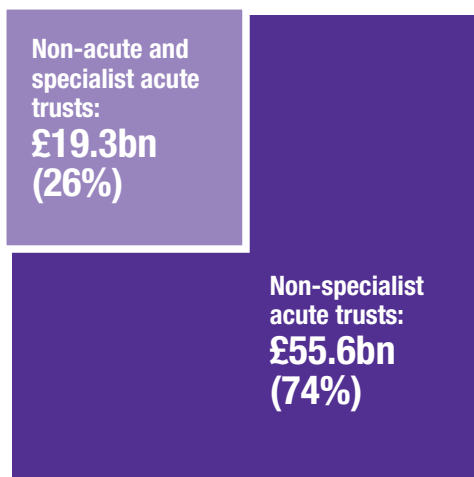


Figure 1.1 – All NHS providers 2014/15 operating expenditure⁵

A key recommendation in the interim report was the need for a common set of metrics that could serve as a barometer for hospitals to compare themselves with their peers, taking into account the complexity of care provided, and more importantly provide a baseline for future improvement. Over the last six months we have looked at three different ways to measure hospital productivity:

² <https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents/spending-review-and-autumn-statement-2015>

³ Commonwealth Fund report *Mirror Mirror on the Wall*, 2014

⁴ Interim Report: *Review of Operational Productivity in NHS Providers*, June 2015

⁵ Source: Consolidated accounts

- a new metric based on reference cost data, the adjusted treatment cost (ATC) and the associated potential savings opportunity;
- a new unit the weighted activity unit (WAU – see figure 1.2) and its associated metric, cost per WAU and other metrics; and
- specific measures such as revenue per WTE and the Purchasing Price Index.

All of these metrics are described in detail later in this report. We have used them to constantly and iteratively triangulate inputs, outputs and outcomes to come to estimated savings opportunities. We have learned that no one metric on its own is perfect or going to deliver the single answer to where efficiencies can be made, but by looking at costs from different perspectives, we can reveal the unwarranted variation that exists across the NHS.

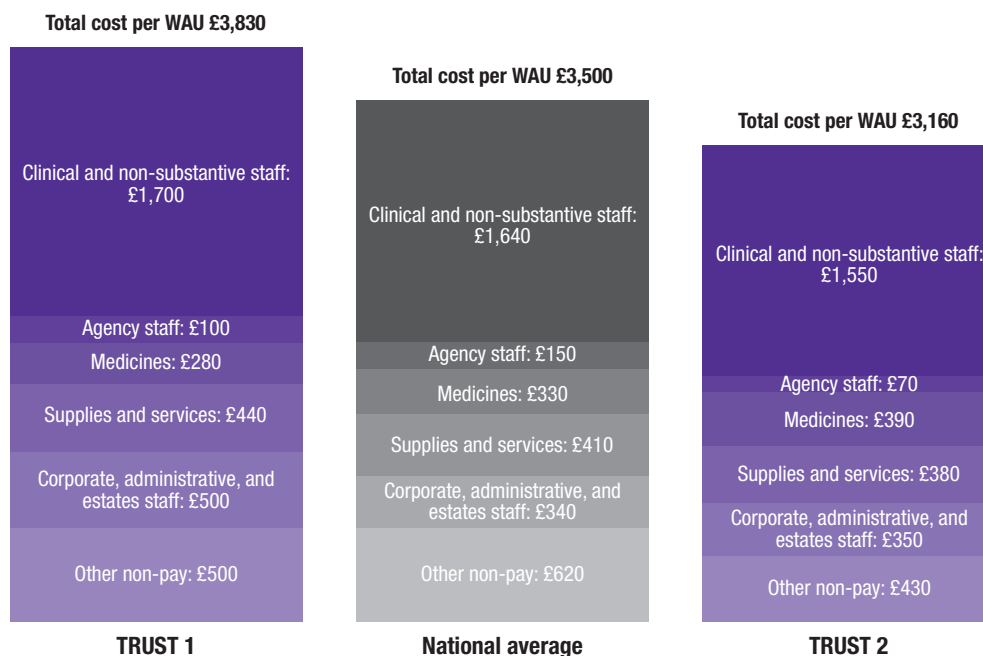


Figure 1.2 – A breakdown of total cost per WAU for two trusts. Trust 1 spends £330 more per weighted activity unit than the national average, and £670 more than trust 2.⁶

Trust 1 has noticeably higher corporate, administrative and estates staff costs compared to the national average, and appears to be above the average on all areas of spend other than medicines.

Trust 2 appears to be lower than the national average in most areas, although their spend on medicines seems to be higher than the average and might warrant further investigation.

Throughout this review we have recognised the need for a measure of hospital output which uses a single unit, similar to the Adjusted Admissions measure in the USA and the National Weighted Admissions Unit in Australia. We have developed the weighted activity unit (WAU) to meet this objective. We can use WAUs to measure the total units of activity in a trust where one unit, one WAU, represents a quantity of clinical activity equivalent to the cost of the average elective inpatient stay (£3,500).

⁶ Source: 2014/15 Reference costs, ESR, and consolidated accounts

During our analysis we consistently found imperfections in the data reported by individual trusts, whether it is allocation of staff to the national Electronic Staff Record (ESR), returns to the Estates Returns Information Collection (ERIC) or compilation of reference costs. Given this, we cannot stress strongly enough how important it is for trusts to record and report data accurately, particularly as this data will be used for a more open and integrated approach to performance management across the NHS.

Over the last six months we have continued to develop these metrics and apply them to various inputs across the NHS, keeping a focus on the key areas of cost: workforce, hospital pharmacy and medicines, diagnostic services, procurement, estates and facilities, and administration costs (see figure 1.3). In June, we estimated £2bn could be saved through workforce productivity, and £1bn each from pharmacy, procurement, and estates and facilities. Since then, we have re-assessed this estimate and we can now confirm that we think this is a realistic opportunity for trusts if they tightened up the management of their resources. What's more, we believe a large proportion of the estimated opportunity is already within reach.

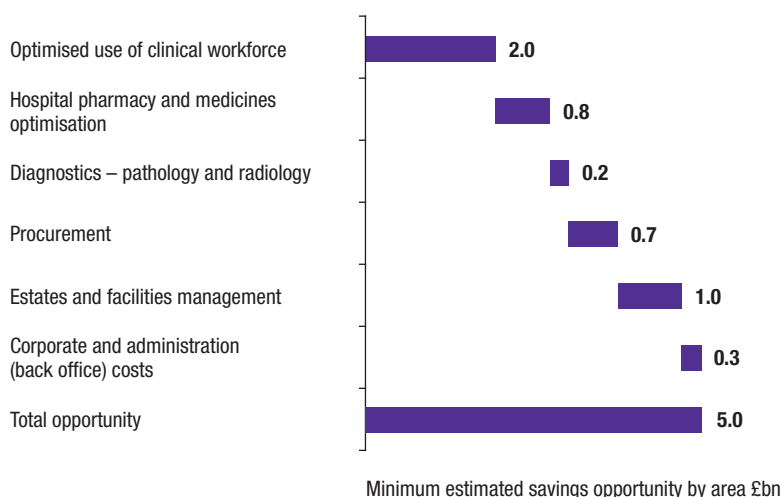


Figure 1.3 – A chart showing the breakdown of the estimated minimum £5bn savings by key areas of cost

To confirm this, we engaged with all 136 non-specialist acute trusts over the autumn and our discussions have confirmed that £3bn of the £5bn potential saving is already recognised by trusts. We are confident that as the model hospital work continues and the system issues described later in this report are addressed, all trusts will have greater confidence that £5bn is achievable. The benchmarks and indicators we have developed have revealed in detail the unwarranted variation that exists across the service, and they have shown us there is always one trust doing something exceptionally well, helping us to establish what good looks like so that others may aspire.

In our discussions with trusts it became clear there are two wider system issues that impact trusts' ability to deliver high quality care and the savings opportunity: delays to transfers of care and the issue of collaboration, coordination and economies of scale, both of which are covered in detail later in this report. We are recommending trusts need help with tackling these issues but we do not think they absolve trust boards' responsibility to get a tighter grip on the management of their resources. We feel strongly that boards be held to account and the NHS bodies and regulators support them in this respect.

The report contains 15 recommendations that need to be acted upon if the £5bn is to be delivered over the next three to four years. It is imperative that we act now; any delays to implementation will have a significant impact on the ability to deliver the savings we need. We have placed a heavy responsibility on NHS Improvement to manage the delivery of these savings, but it is imperative that all of the national organisations work together and we want to make it absolutely clear that trust boards should be held to account. Should we fail, the cost of not delivering is greater than a penny on income tax which is unacceptable given the savings are within our grasp.

2 Optimising clinical resources

In June we observed that staff costs in all acute and non-acute NHS providers were £45.3bn (£33.9bn for acute trusts), representing the biggest opportunity for productivity and efficiency savings. The clinical staff spend per trust varies significantly (see figure 2.1). Our analysis suggests at least £3bn could be saved by optimising these clinical resources along with medicines and diagnostics.

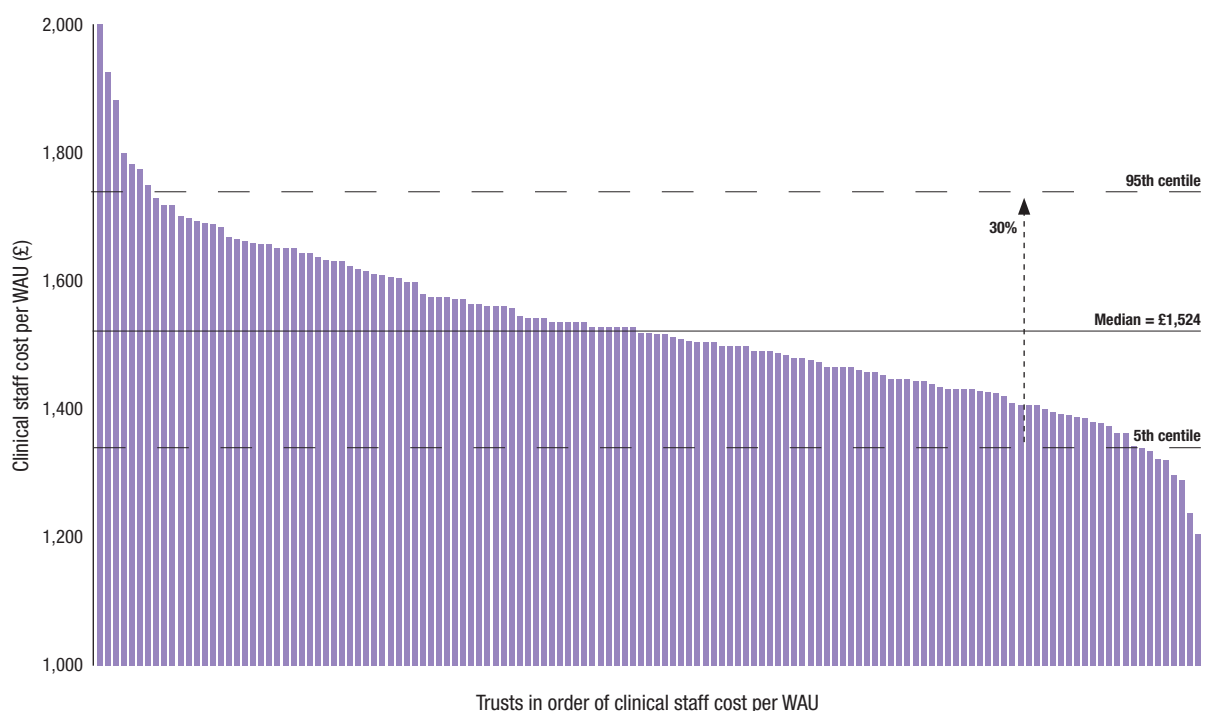


Figure 2.1 – A distribution of clinical staff cost per WAU. The most expensive trusts spend around 1.3 times more on clinical staff per WAU than the least expensive trusts⁷

Our staff are by far our biggest asset and at £45.3bn this represents a huge investment; however workforce is often regarded as a cost to be controlled rather than a creative and productive asset to be harnessed. The term ‘workforce’ only serves to reinforce this.

We have arguably the greatest concentration of intellect and talent of any UK business, but there is little evidence it has been fully engaged to solve the efficiency and productivity issues trusts are facing. Whilst NHS staff, in the main, work extremely hard, often going beyond the call of duty, and are truly dedicated to the NHS and delivering care to patients, we need a mind-set shift from seeing people as the problem to seeing them as the solution. The link between colleague engagement and quality outcomes is well understood and evidenced across the high performing organisations, so if we can do this then we have a much greater chance of delivering and sustaining the savings we need. Later in this report we recommend NHS Improvement should develop a comprehensive national people strategy to address this.

⁷ Source: 2014/15 Reference costs, ESR, and consolidated accounts

Definition: Cost of all staff not coded to corporate services, administration and estates in 2014/15

Staff engaged in delivering clinical care are critical to the safety and well-being of patients and to ensuring the quality and effectiveness of the interventions they receive. In 2011-12 the NHS employed 722,000⁸ professionally qualified clinical staff, including 39,000 GPs, 38,000 hospital consultants, 411,000 qualified nurses and 112,000 Allied Health Professionals (AHPs). In 2014-15 the pay costs for clinical staff in the non-specialist acute sector was £33.9bn (see figure 2.2).

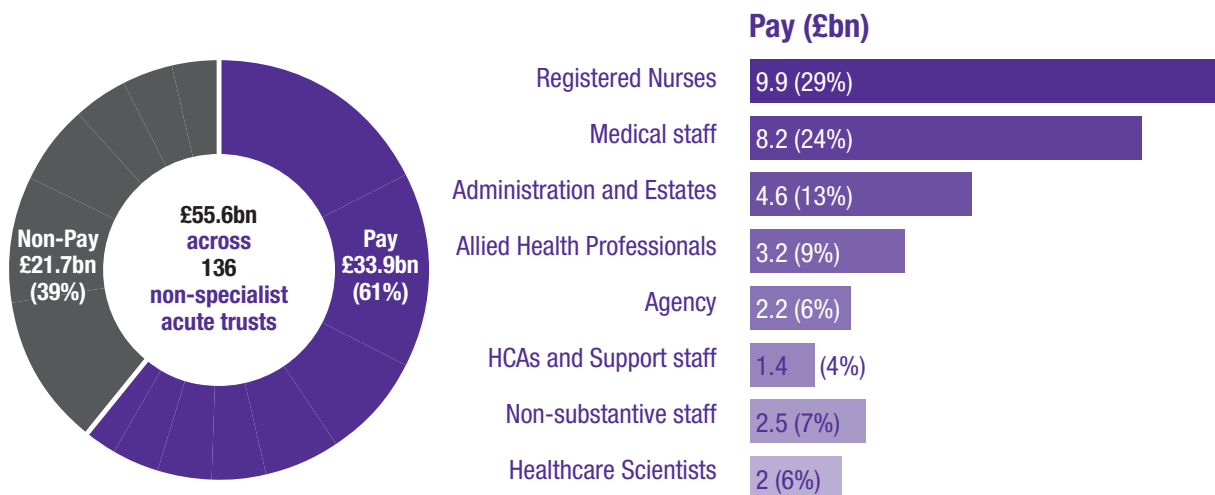


Figure 2.2 – A chart showing the pay and non-pay split of spend for the 136 non specialist acute trusts, with a breakdown of pay⁹

Optimising and improving the well-being of this resource will not only lead to improved efficiency but can also lead to improved clinical outcomes. It’s not a question of quality or productivity and efficiency but both: the NHS cannot compromise on quality and must deliver excellent services in the most productive and efficient ways. In June we estimated £2bn could be saved by optimising our staff resource. This equates to an increase in efficiency of 7% across the clinical workforce. On the basis of our work with trusts around the country we believe that is achievable within three years and greater efficiencies are within reach to April 2021.

Our interim report focused on nursing; since then we have extended our scope to look at all aspects of NHS staff and gathered more data from more trusts which have confirmed our early findings. There is no doubt there is significant variation across our hospitals across a number of dimensions including sickness, staff turnover, alleged bullying and morale. There is also variation in how we manage annual leave, shift patterns and flexible working, through to the use of technology and good practice such as e-rostering and the use of information to make decisions about staff utilisation. We need to review and improve our people policies and practices.

⁸ <https://www.gov.uk/government/news/latest-nhs-workforce-figures-published> (NHS Information Centre)

⁹ Source: Pay breakdown by staff group based on staff costs from ESR data

Improving people policies and practices

Absenteeism, bullying and turnover are proven indicators for helping organisations understand the well-being of their staff. The NHS overall does not score well on these indicators in comparison to other sectors. Evidence from other industries has shown that good staff wellbeing leads to increased productivity¹⁰, so we need to improve.

The average level of sickness absence across acute trusts for 2014-15 is just over 4%. As this calculation is made over 365 days and sickness absence is likely underreported in the NHS a truer reflection could be closer to 6% (13 days of approximately 225 working days a year). Either figure is higher than the average for the public sector (2.9%) and private sector (1.8%) in the UK¹¹ and is likely higher than for health systems in other countries. For example, in Australia the average in the healthcare sector is 9 days¹². Sickness absence rates also vary considerably between trusts (see figure 2.3) and the variation is only partly explained by staff mix.

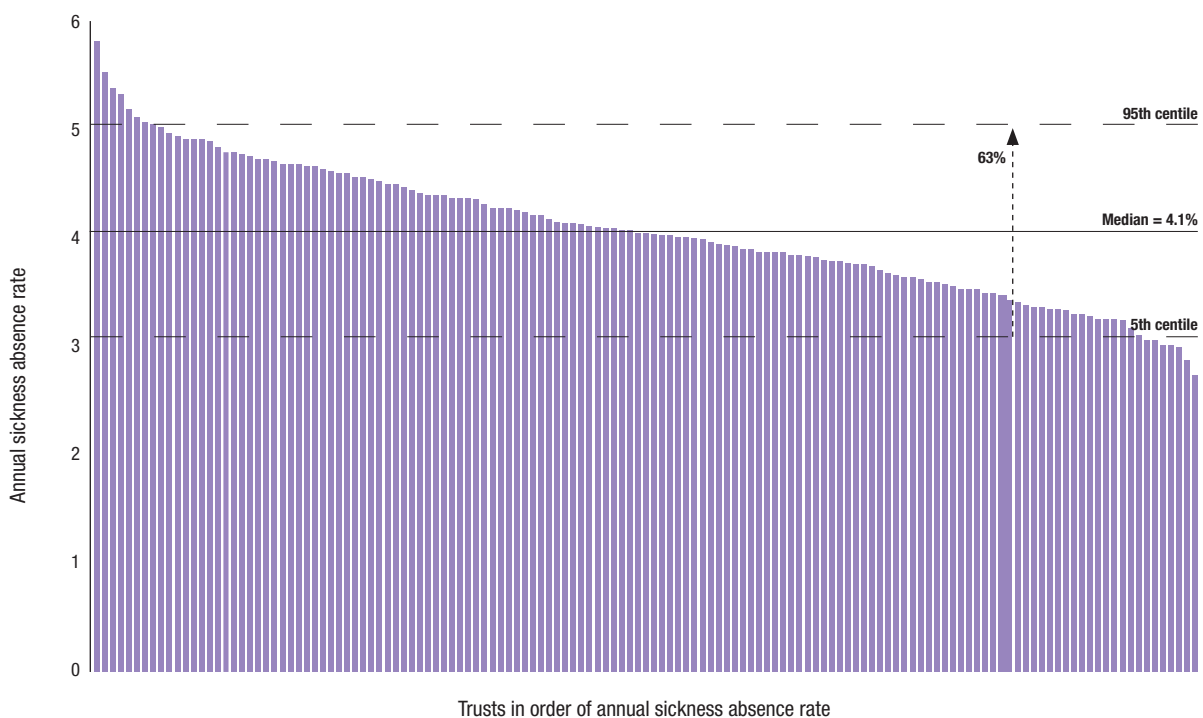


Figure 2.3 – A distribution of 2014/15 staff sickness rates. The trusts with the highest staff sickness rates are around 1.6 times more than the trusts with the lowest¹³

Just a 1% improvement in sickness absence equates to £280m in staff costs – without accounting for lower dependence on agency staff and reduced cancellations. To reduce sickness absence we need more timely and accurate information and we need to change our working practices to better motivate and support staff when they return to work. We also need to understand why some staffgroups have higher sickness levels than others, for example medical staff appears to be averaging 1.2% and this is probably only partly explained by under-recording in this group (see figure 2.4).

¹⁰ NHS Sickness Absence Rates April 2015 to June 2015, HSCIC, published October 22, 2015

¹¹ Sickness Absence in the Labour Market, ONS, February, data for 2013

¹² Workplace Info Australia 2013

¹³ Source: HSCIC

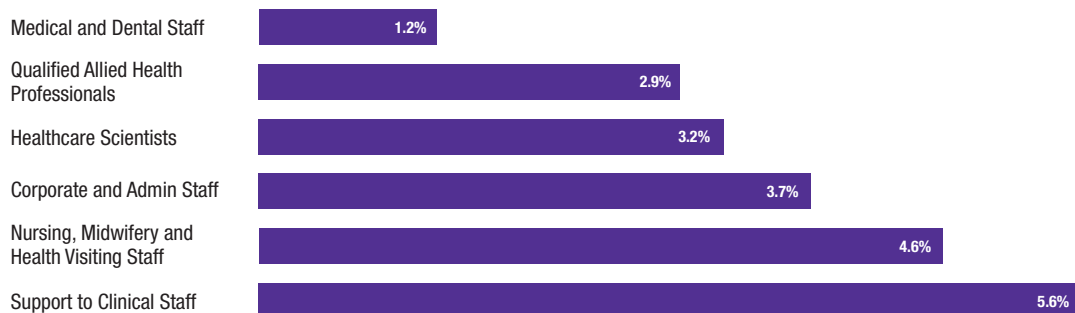


Figure 2.4 – A chart demonstrating the variance in 2014/15 sickness absence by staff group¹⁴

The high rates of alleged bullying and harassment reflected in the annual staff survey are also alarming and another important indicator of staff well-being. More skilled, consistent and effective management is urgently needed to address this. Similarly, number of staff employed in the 12 months to August 2015 rose by nearly 18,000 (1.5%)¹⁵, but 121,000 new staff joined¹⁶, suggesting a very high degree of attrition (103,000) from the service. It is imperative that the reasons for this are better understood and action taken to slow down the rate of departure. Trusts are going abroad to hire professionals, particularly nurses, but this is expensive and there is a lot of duplication. For instance, at a recent job fair in Spain, nine separate NHS trusts were each independently represented. Trusts need to embrace formal staff retention plans, including active use of exit interviews and feedback sessions to arrest this trend.

Executive turnover is also extremely high and vacancies can take a long time to fill. The average tenure of a chief executive is 2.5 years with one in five in post for less than a year¹⁷. It takes an average of nine months to fill nursing director positions and seven months to appoint chief operating officers¹⁸. External search and selection agencies are normally engaged for these appointments at a typical fee of £50k per chief executive and £30-40k per executive. This means an estimated £2.5m per year is spent on headhunter fees for chief executive searches alone, with the majority of candidates coming from within the sector. Add to this the cost of filling vacant posts with interim executives or non-substantive temporary promotions and it is evident that there is a great deal of avoidable cost at stake.

Despite all of this, we were struck by the extraordinary commitment and loyalty NHS staff have to their occupations and the service overall. They have high resilience but we have observed they are feeling jaded from the constant pressure to do more with less and the relentless scrutiny of their performance. Coupled with this, their pay has remained relatively flat for some time and is set to remain so for foreseeable future. We should recognise this reality and incentivise people to play their part in the turnaround. We need to find a way in which staff can share in success with incentives for them to contribute to the quality and efficiency challenge.

Over the last six months we have sought to understand the drivers for the low levels of engagement described above, and we found a number of issues that need to be addressed, including culture and organisation structures. Creating a working environment that is fair and transparent requires clear policies and procedures that are simple and swift. Managed well, they can contribute to a helpful, supportive and continuously improving culture. Managed poorly they can be destructive to engagement and morale, and be a major absorber of cost.

¹⁴ Source: HSCIC

¹⁵ 'NHS Workforce Statistics, August 2015, Provisional Statistics, Published 27 November 2015' published by HSCIC. Specifically the piece we referenced is under the 'Summary' section of the document. <http://www.hscic.gov.uk/catalogue/PUB18981/nhs-work-stat-aug-2015-pdf.pdf>

¹⁶ 'NHS Workforce Statistics, August 2015, Provisional Statistics, Published 27 November 2015' published by HSCIC <http://www.hscic.gov.uk/catalogue/PUB18981/nhs-work-stat-aug-2015-pdf.pdf>

¹⁷ King's Fund & HSJ Future of NHS Leadership report: Leadership vacancies in the NHS, Aysha Janjua, December 2014

¹⁸ King's Fund & HSJ Future of NHS Leadership report: Leadership vacancies in the NHS, Aysha Janjua, December 2014

Recommendation 1: NHS Improvement should develop a national people strategy and implementation plan by October 2016 that sets a timetable for simplifying system structures, raising people management capacity, building greater engagement and creates an engaged and inclusive environment for all colleagues by significantly improving leadership capability from “ward to board”, so that transformational change can be planned more effectively, managed and sustained in all trusts.

Delivered by:

- a) implementing a clear set of leadership capabilities used in the selection and performance management of leaders;
- b) engaging with staff with regular performance reviews ensuring that a culture of continuous improvement is developed;
- c) developing management practices to gain a better understanding of the reasons for high levels of staff attrition;
- d) improving sickness absence, which will require common definition and improved collection of data managed as part of the operational management scorecard and process;
- e) a reduction in the high rates of bullying and harassment with a sustained campaign led personally by each trust Chief Executive;
- f) trusts creating an environment that is fair and transparent, which requires policies, practices and agreements to be reviewed to ensure that they are clear, simple and swift to operate; and,
- g) mandating the use of a trust and national level succession planning processes along with the use NHS Executive Search to provide a candidate shortlist for executive appointments before external recruitment consultancies are considered.

Electronic staff record

During our visits to trusts we realised that despite the national electronic staff record (ESR), many trusts did not have a full picture of where all their staff are and what they are doing – which is critical if trusts are to optimise their resource. Our first iterations of the model hospital using the ESR data exposed this and made comparison difficult in some specialties. This is why we recently asked every trust for a snapshot of their staff so that we can work out where they are working and to enable us to make more meaningful comparisons across the NHS. Trusts must get a tighter grip of their coding to the ESR database and use the data in their daily management of staff as described later in this report so that such snapshot exercises will be unnecessary in the future.

Nursing and care staff

The cost of nursing and care staff in NHS trusts was £18.8bn in 2014-15¹⁹, the largest group in the NHS, and the demand for nurses has grown considerably since the Francis report²⁰. These costs vary significantly across acute trusts (see figure 2.5).



Figure 2.5 – A distribution of nursing cost per WAU. The most expensive trusts spend around 1.5 times more on nursing staff per WAU than the least expensive trusts²¹

We heard first-hand the difficulties trusts are facing in recruiting nurses and how this has resulted in increased use of agencies. It is therefore a priority for trusts to ensure they optimise their own nursing resources through improved productivity. Our work in this area has revealed variations across the NHS that if addressed, can help to reduce the cost pressures they are now facing.

Over the last 12 months we have worked with senior experienced professionals from within the cohort of 32 and wider service, using the collaborative methodology developed by the Institute of Healthcare Improvement. We invited 26 directors of nursing, along with their trust colleagues, regulatory bodies and Royal College of Nursing representatives to form a *nursing workforce efficiency improvement collaborative*. This collaborative approach proved to be a very effective means of mobilising the range and depth of expertise and experience across the NHS. The NHS has too frequently turned to external consultancies for such approaches in the past, but this activity has proved the NHS can do this for itself, so we recommend NHS Improvement builds on this approach.

¹⁹ Interim Report: Review of Operational Productivity in NHS Providers, June 2015

²⁰ Francis R (2013) Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry. London: The Stationery Office

²¹ Source: 2014/15 Reference costs, ESR, and consolidated accounts

Definition: 2014/15 nursing staff cost for registered and unregistered nursing staff, nurse learners, and all HCAs or support workers other than those coded to areas of work covered by AHPs or to 'estates or hotel services'.

The collaborative considered a range of issues and challenges faced by directors of nursing and developed good practice for tackling them. The outcomes of this work – the collaborative completes its work in February 2016 - will be shared across the NHS through conferences, articles and the development of good practice guidance this year. This will include guidance on gaining a tighter grip on unproductive time especially absences, headroom (the variation in which ranged from 18.5 to 27%²²), managing the need for bank and agency staffing, and a review of new nursing roles. All of this will develop what good looks like as part of the model hospital, with a focus on three key areas:

- the recording and reporting of nursing and care staff deployment;
- e-rostering systems; and
- specialising (enhanced care)²³.

Care hours per patient day (CHPPD)

One of the obstacles to eliminating unwarranted variation in nursing and care staff deployment has been the absence of a single means of recording and reporting deployment. Conventional units of measurement – such as reporting staff complements using WTEs, skill-mix or patient to staff ratios at a point in time – may not reflect varying staff allocation across the day. Also, because of the different ways of recording this data, no consistent way of interpreting productivity and efficiency is straightforward.

To provide a single consistent way of recording and reporting deployment of staff working on inpatient wards/units we developed and adopted Care Hours Per Patient Day (CHPPD). CHPPD can be used to describe both the staff required and staff available in relation to the number of patients. It is calculated by adding the hours of registered nurses to the hours of healthcare support workers and dividing the total by every 24 hours of in-patient admissions (or approximating 24 patient hours by counts of patients at midnight) (see figure 2.6). It can be broken down by grade – initially registered nurses and healthcare support staff, but ultimately bands/grades within these groups and all other staff groups contributing to ward-based care, including AHPs.

$$\text{Care Hours Per Patient Day} = \frac{\text{Hours of registered nurses} + \text{Hours of healthcare support workers}}{\text{Total number of inpatients}}$$

Figure 2.6 – Method of calculation of Care Hours Per Patient Day

This approach to recording and reporting reflects the best practice we have seen in Western Australia, New Zealand, and the US, where the grip on staff productivity is firmer and more assured. Efficiency is reviewed within a CHPPD range by which they check variation at ward level on a daily basis. We are keen to implement a similar approach and so we recommend NHS Improvement, in collaboration with the Chief Nursing Officer, the Royal College of Nursing and other organisations, defines staffing ranges for different types of wards as a guide for trusts to help them meet their quality and efficiency requirements.

The CHPPD can be used at various levels within hospitals from board to ward and it provides data which can be reported regionally and nationally to reflect safety and productivity. In

²² From data collection undertaken with 22 trusts in February 2015

²³ Specialising is where patients require 1:1 care and close observation because of significant cognitive impairment, challenging behaviour, risk of falls, risk of self-harm, and risk to others

practical terms it enables the different sorts of comparisons to be used as dynamic resource management information at each of these levels. For example, where wards have similar speciality, length of stay, layout and patient acuity and dependency, managers can compare wards' CHPPD and consider if variation is unwarranted to assist productive ward initiatives. By monitoring the trends in planned, required and actual CHPPD a rich insight into variations in staff use can be gained. When this data is used alongside quality measures, a meaningful picture of operational delivery is depicted.

Over the autumn we collected data from over 1,000 wards. Further analysis from the October data collections is currently being undertaken, but we have already observed significant variation of 144% from 6.3 CHPPD to 15.48 CHPPD (see figure 2.7) although we should be mindful of comparing different types of wards and trusts.

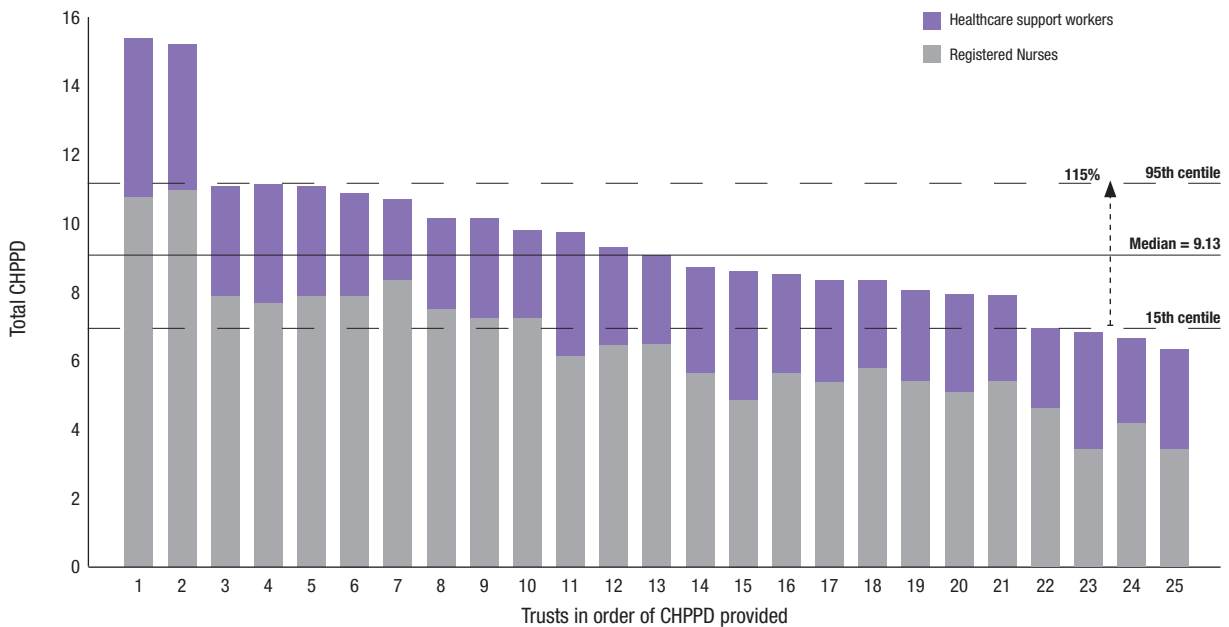


Figure 2.7 – A distribution of CHPPD across a sample of 25 trusts, for October 2015

We recommend that from April 2016 the CHPPD becomes the principal measure of nursing and care support deployment. We are now working to establish how the data, which can be collated from existing sources without imposing additional reporting burdens, can be systemised to help standardise its use. The data will be a feature of the nursing dashboards we are developing as part of the model hospital and will be reported as total nursing hours, split by registered nurses and healthcare support workers to provide a complete picture of care and skill mix. The dashboard will make stronger links with quality outcomes, staffing and patient indicators, at both local and national levels.

It should also be noted that the National Quality Board's guidance²⁴ on right people and skills in the right place at the right time is about to be refreshed in March 2016. We anticipate the updated guidance will support commissioners and trusts to improve efficiency, ensuring staffing decisions take account of the local context, inter-professional teams, and alignment to national staffing policies such as agency controls and CHPPD.

²⁴ National Quality Board (2013) *How to ensure the right people, with the right skills, are in the right place at the right time. A guide to nursing, midwifery and care staffing capacity and capability.* London: NHS England

e-Rostering

The second area we looked at was the use of e-rostering tools. While most hospitals use e-rostering, we found that few trusts were using its full functionality and benefiting fully from what it can do. A firmer grip of e-rostering will reduce dependency on bank and agency staff and it will improve predictability and consistency of deployment for staff even where recruitment is still a challenge. Figure 2.8 is an example of one ward in a trust showing care hours per patient day for a month. It highlights that on many days across the month, there are not enough substantive staff rostered on duty and on others there are more than required.

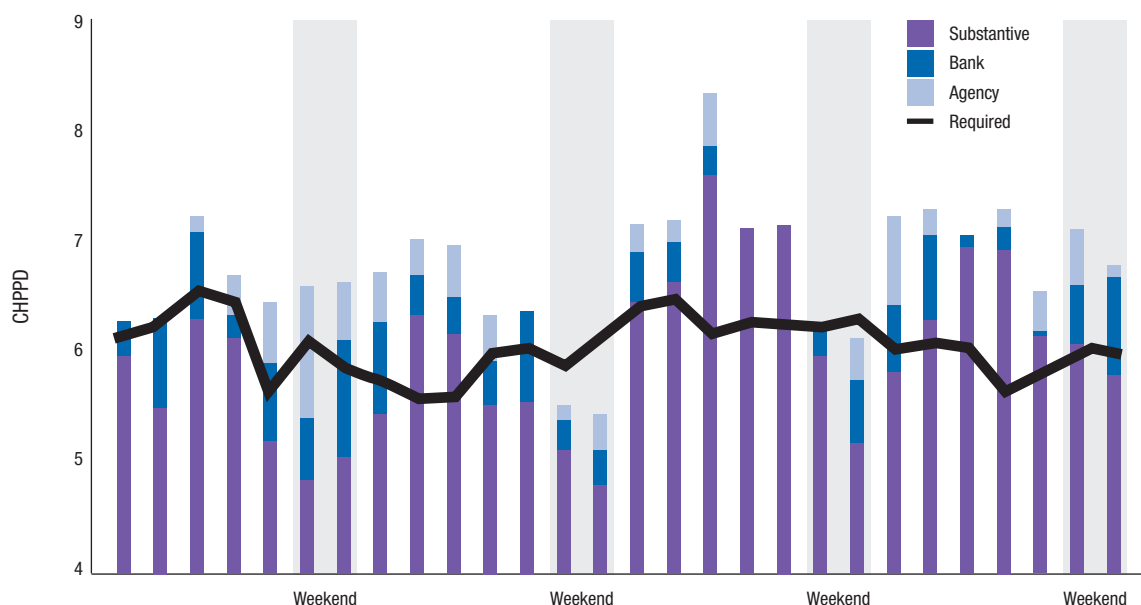


Figure 2.8 – A chart to show the required versus actual nursing hours per patient day for one ward in a trust²⁵

We recommend that all trusts use an e-rostering system and implement the following practices:

- an effective approval process by publishing rosters six weeks in advance and review them against trust key performance indicators such as proportion of staff on leave, training and appropriate use of contracted hours;
- a formal process to tackle areas that require improvement, with escalation paths, action plans and improvement tracking; and
- cultural change and communication plans to resolve any underlying policy or process issues.

²⁵ Source: Allocate Software



Rostering at Portsmouth Hospitals NHS Trust

A small project team reviewed nurse rosters and identified key performance indicators of good performance and how best to achieve them. These KPIs included headroom for leave and other absences.

Weekly reviews of rosters then helped managers review efficiencies with the aim of ensuring the right number of staff were available and additional resources were only called upon when strictly needed to cover unavoidable vacancies or urgent clinical care needs.

The weekly reviews resulted in a clear set of standardised requirements for managers to adhere to; with a Matron's checklist which provided an immediate and accurate overview. This also meant better planning for staff and greater clarity in how nurses are deployed.

The use of HSP and Agency was reduced by 7,000 hours.

Specialling (Enhanced care)

The third area we looked at was specialling. Here the variation in practices across acute trusts was vast. We noted in our interim report that one trust saved £1m by adopting a rigorous policy for managing enhanced care demands. Nine of the 26 trusts in the collaborative took a particular interest in this, reviewing their systems and processes and developing and testing different approaches.

The NHS Trust Development Authority has also recently delivered a 90-day rapid improvement cycle with 12 trusts which with the learning from our collaborative needs to be developed into a good practice guide and national programme for tackling variation in specialling across the service. The good practice guide should also replace the term specialling with 'enhanced care' to better reflect this management practice and patient intervention. We recommend that together with the good practice guide on e-rostering, the guide on enhanced care for acute trusts is implemented by trusts by 1st October 2016.



Specialling at Nottingham University Hospitals NHS Trust

As part of the Workforce Efficiency Improvement Collaborative, the Stroke Service aimed to reduce the premium pay expenditure on four stroke wards with high demand for bank and agency staff above the ward vacancy factor. By monitoring patient safety and quality of care, and gaining an understanding of cohorting and specialling Band 6 nurses, who led the programme, helped improve rostering, maintain patient safety, reduce in band and agency usage, and improve patient experience. It also improved Band 6 nurses engagement and their leadership.

In September 2015, the stroke service spent £45,869 less than in July 2015. The improvements have been maintained with no increase in patient harms – patients have reported they feel safe on wards and there has been a reduction in patient falls.

Allied Health Professionals

Together with other professional, scientific and technical staff, expenditure on AHPs represents the third largest group of staff at a total of £3.97 billion. Our early analysis suggests there is significant variation across acute trusts (see figure 2.9).

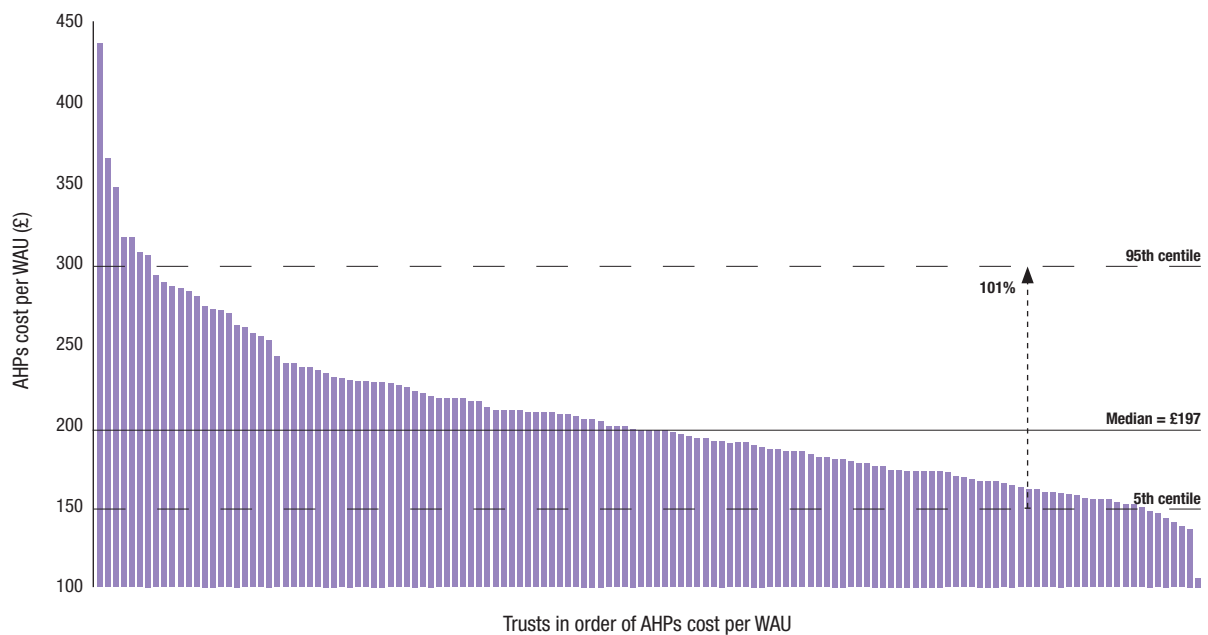


Figure 2.9 – A distribution of AHP cost per WAU. The most expensive trusts spend around 2.0 times more on AHPs per WAU than the least expensive trusts

²⁶We believe this is likely to be down to the variation in the deployment of these professions. Quality Watch reported in 2012 that the number of AHPs per 1,000 population varied from 0.95 in the East of England, to 1.43 in the North East²⁷ and as AHPs are often deployed across organisational boundaries, making comparisons across acute hospitals is difficult.

Twelve professions²⁸ fall under the banner of allied health professionals and we know their contribution often holds the key to unlocking inefficiencies in care pathways but this is not always optimised. For trusts to achieve a stronger grip on the deployment of these professions it is essential that first we understand how the services are configured in hospitals. We have already started this process with the recent collection of workforce data from all acute trusts, but we are planning to gather information on not just the number of each AHPs employed and by grade, but information on the organisational structures of which they form a part and the practices by which their work is scheduled.

We have learned a great deal from our work on nurses and healthcare support staff, and we think much of this learning could help identify productivity and efficiency benefits in the way AHPs are managed and deployed. We therefore suggest a workforce efficiency improvement collaborative is created to identify and solve issues that sub-optimize the use of AHP resources.

²⁶ source: 2014/15 Reference costs, ESR, and consolidated accounts
definition: 2014/15 costs for qualified and unqualified AHPs, ambulance staff, and any HCAs or support workers coded to areas of work covered by AHPs.

²⁷ *QualityWatch: Focus on: Allied Health Professionals. September 2015*

²⁸ AHPs comprise physiotherapists, occupational therapists, radiographers, paramedics, speech and language therapists, chiropodists, podiatrists, dieticians, drama / art / music therapists, orthoptists, prosthetists and orthotists

Some of the areas that need to be looked at include skill-mix and competencies, examining the relationship between specialist and generalist AHP roles in terms of productivity and the contribution unregistered clinical support staff can make in optimising the role of AHPs. Access to AHP services should also be examined. While AHPs are not traditionally part of the ward skill-mix they do make a significant contribution to admission and discharge processes, however, there is variation in how trusts use this resource and so the benefits are often not fully realised. A report by the College of Occupational Therapists last year identified the critically important role OTs can play in helping to bridge the gap between primary and secondary care settings²⁹.

In addition to these issues, a similar measure to the CHPPD for AHPs should be created that is integral to ward skill mix and patient flow in specialties, for example, on orthopaedic wards and in medical assessment units. We need to identify what good looks like to ensure that a more consistent approach to the management and deployment of AHPs is taken which should then be routinely adopted by all trusts that employ them, recognising the diversity of roles and professions across the group.

We also know that healthcare science staff are an essential part of today's healthcare team, contributing to prevention, diagnosis, treatment and rehabilitation and that they can play a major role in helping employers secure financial savings at the same time as increasing quality of care. As with AHPs, we recommend further work is done to identify the roles this staff group can play in the productivity and efficiency agenda.

²⁹ College of Occupational Therapists: Urgent Care. The value of Occupational Therapy. November 2015

Recommendation 2: NHS Improvement should develop and implement measures for analysing worker deployment during 2016, including metrics such as Care Hours Per Patient Day (CHPPD) and consultant job planning analysis, so that the right teams are in the right place at the right time collaborating to deliver high quality, efficient patient care.

Delivered by:

- a) NHS Improvement collecting CHPPD on a monthly basis (beginning April 2016), so that CHPPD becomes the principle measure of nursing and healthcare support worker deployment; with similar approaches in place for medical staff and Allied Health Professionals (AHPs) by April 2017 (excluding those in non-acute services), to ensure that the right teams are in the right place at the right time;
- b) improving analysis and application of consultant job plans;
- c) collaboration within and between specialist teams (working in adjacent hospitals) to improve productivity and 7 day working;
- d) developing medical staff banks to manage vacancies in shortage specialties across a geographical region;
- e) NHS Improvement building on the collaborative approach and the development of good practice guidance to rely on NHS staff knowledge (of all groups) rather than external consultancies;
- f) all trusts using an e-rostering system, with the following practices being implemented:
 - i. an effective approval process by publishing rosters six weeks in advance and reviewing against trust key performance indicators such as proportion of staff on leave, training and appropriate use of contracted hours;
 - ii. setting up a formal process to tackle areas that require improvement, with escalation paths, action plans and improvement tracking;
 - iii. developing associated cultural change and communication plans to resolve any underlying policy or process issues;
- g) trusts implementing the guide on enhanced care (previously referred to as 'specialling') by October 2016, which will be monitored by NHS Improvement, using an approach developed by them as an improvement priority;
- h) improving the understanding of the configuration of the AHP workforce in each trust;
- i) national bodies taking a more coordinated and proactive approach to managing the supply of staff to improve efficiency in the NHS, including overseas recruitment campaigns; and,
- j) continuing adherence to the agency rules set out by NHS Improvement.

Medical staff

The total cost of medical staff in NHS trusts was £10bn in 2014-15. As with all other clinical staffing groups we have observed significant variation across acute trusts (see figure 2.10).

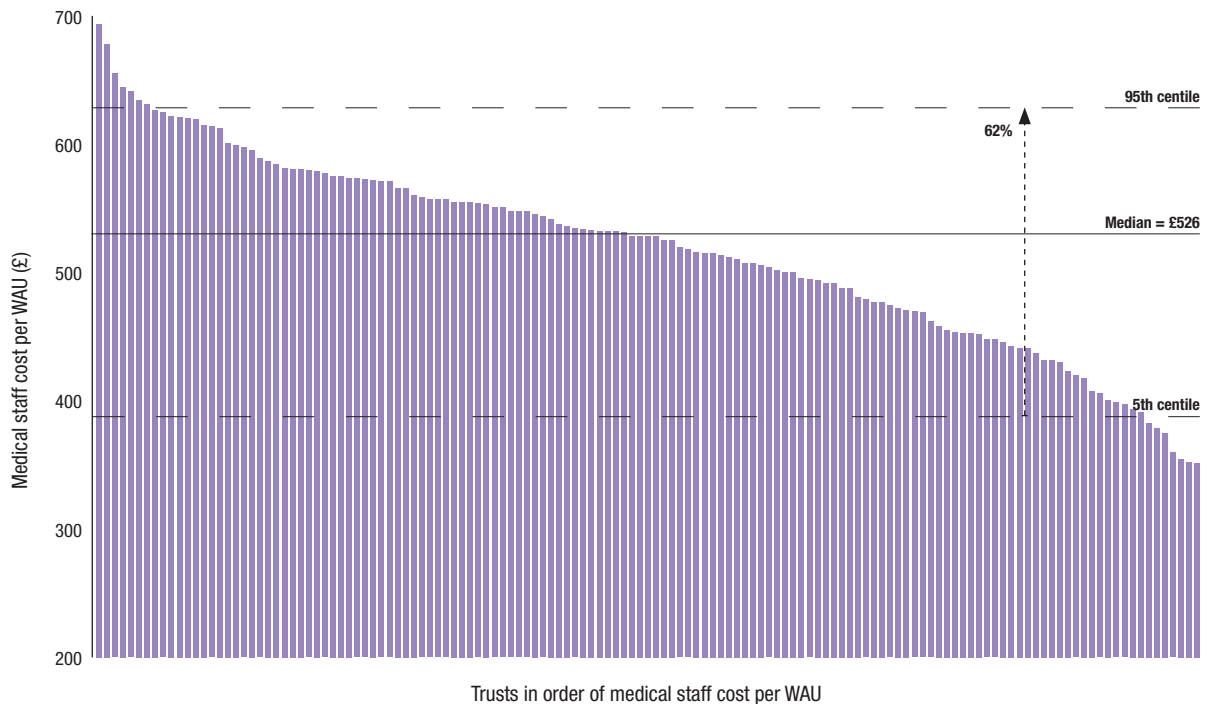


Figure 2.10 – A distribution of medical staff cost per WAU. The most expensive trusts spend around 1.6 times more on medical staff per WAU than the least expensive trusts³⁰

Our early iterations of the model hospital have also revealed this variation extends down into clinical specialties (for example, see figure 2.11 for variation in trauma and orthopaedics). The numbers of medical staff compared to activity varies greatly, and the income per WTE suggests there is an opportunity to improve productivity and efficiency.

We also found variation extended into the use of job plans for medical staff, with some hospitals doing very little planning, and the choices medical staff make about the care they provide for patients, which can have major cost consequences for trusts. For example, accepted good practice in the choice of fixation methods for primary hip replacements for the over 65 age group is to use cemented technology and yet we found huge variation across trusts with many using unexplained levels of more expensive cement-less technology (see figure 2.12).

³⁰ source: 2014/15 Reference costs, ESR, and consolidated accounts
definition: 2014/15 medical staff costs

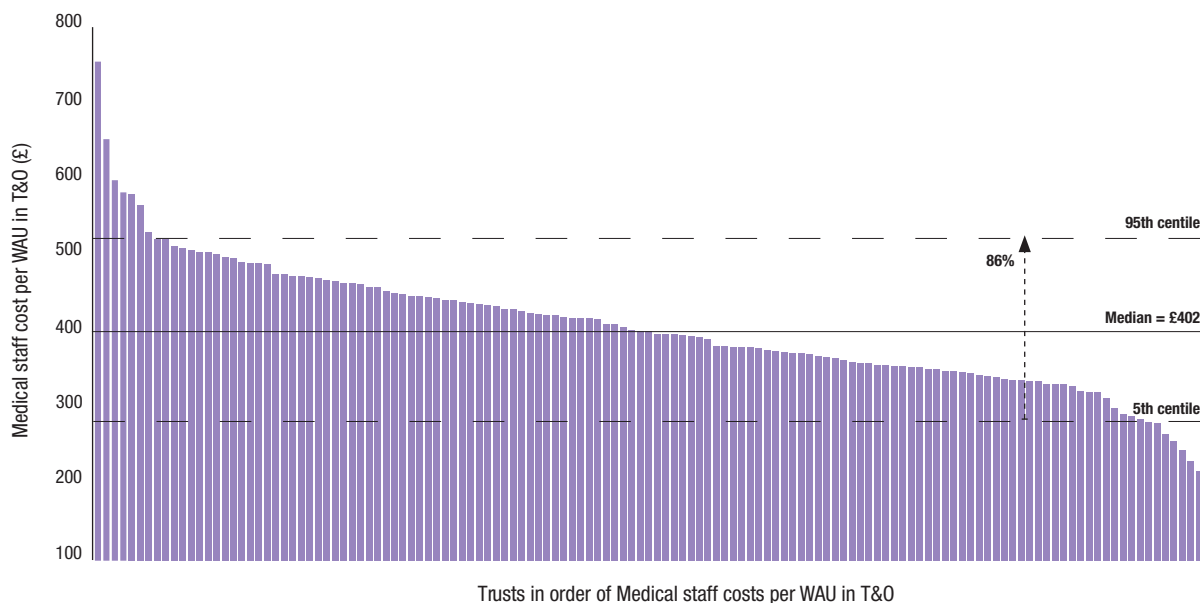


Figure 2.11 - A distribution of medical staff cost in Trauma & Orthopaedics per WAU. The most expensive trusts spend around 1.9 times more on medical staff in Trauma & Orthopaedics per WAU than the least expensive trusts³¹

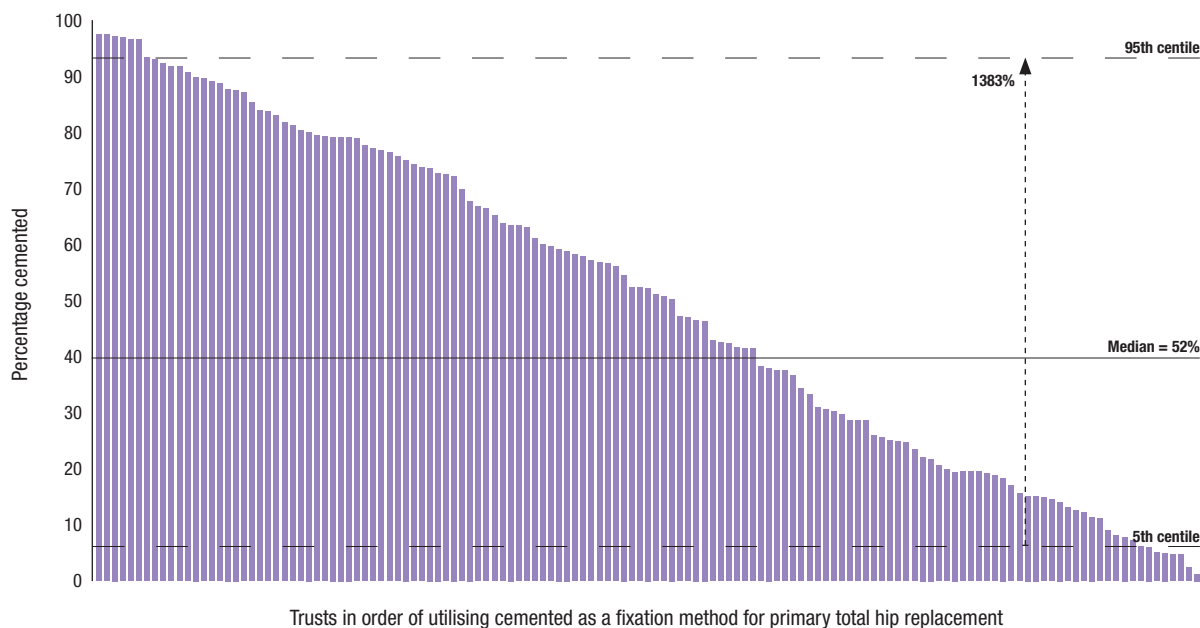


Figure 2.12 - A distribution of trusts' utilisation of 'cemented' as a fixation method for primary total hip replacement³²

More work is needed to understand variation in this staff group, but much has already been written on the productivity of medical staff and the critical role they can play in the efficiency agenda. The 2012 King's Fund report³³ described four themes, which need to be addressed to

³¹ source: 2014/15 Reference costs, ESR, and consolidated accounts
 definition: 2014/15 medical staff cost for staff in Trauma & Orthopaedics. Defined using occupational codes.

³² source: HES 2013/14 data
 definition: Only NHS Acute Provider Trusts delivering over 50 elective orthopaedic procedures in 2012/13 or 2013/14, only adults above 65 years, and elective primary total hip replacement only

³³ King's Fund report *Improving NHS Productivity* in 2012

ensure they play their part:

- engaging clinicians;
- tackling variation;
- incentivising productivity; and
- developing new ways of working.

We recommend these themes are now explored. Initially, this should involve an analysis of consultant job plans. Increased collaboration within and between specialist teams working in adjacent trusts should be required to improve productivity and facilitate 7 day working, and to manage more effectively vacancies in shortage specialties through, for example, the establishing of joint medical staff banks.

Hospital pharmacy and medicines optimisation

The NHS spends around £6.7bn on medicines in hospitals and £0.6bn on hospital pharmacy services with just over 16,000 pharmacy staff – of which 7,000 are pharmacists. The primary functions of the hospital pharmacy team are to work closely with patients, doctors and nursing staff to choose, prescribe and monitor clinical outcomes of medicines to meet clinical needs and to support their optimal use.

At a high level we found significant variation in total pharmacy and medicines costs across acute trusts (see figure 2.13). Some of this variation may be explained by the presence of teaching or specialist services, however, at this high level, if all trusts looked at how they might achieve the average cost, then the NHS could save at least £800m.

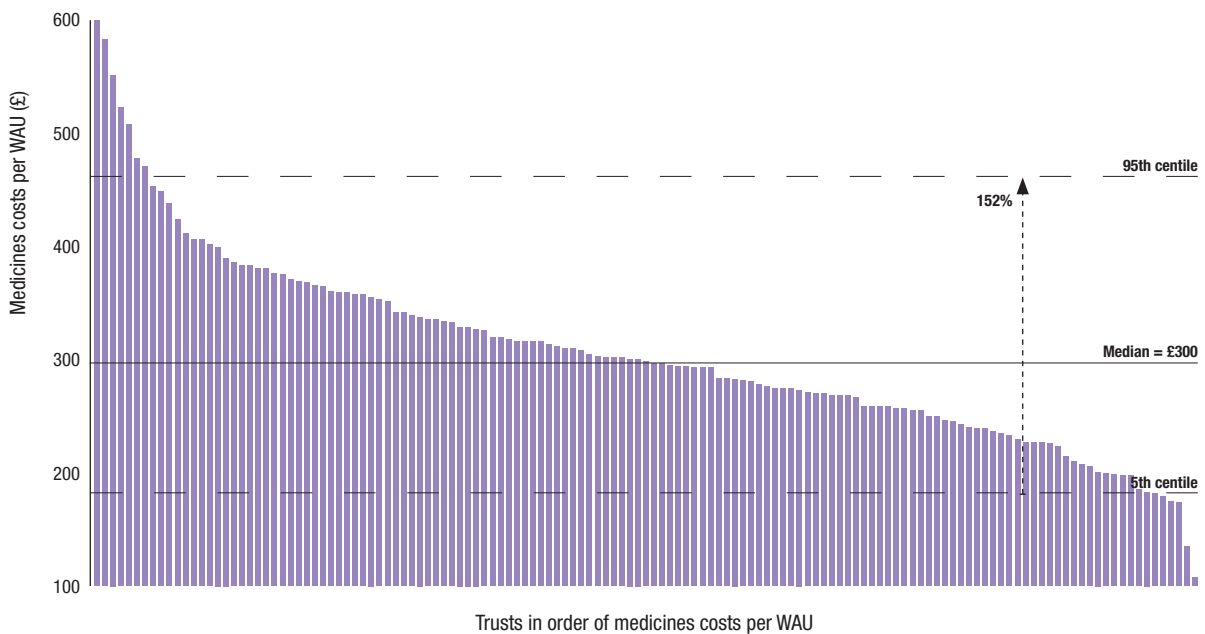


Figure 2.13 – A distribution of medicines cost per WAU. The most expensive trusts spend around 2.5 times more on medicines per WAU than the least expensive trusts³⁴

The delivery of hospital pharmacy services and the optimisation of medicines are intrinsically interwoven and, from a value perspective, can't be separated. Simply put, the NHS needs to focus the pharmacy workforce to drive optimal value and outcomes from the £6.7bn it spends

³⁴ source: 2014/15 Reference costs, ESR, and consolidated accounts definition: 2014/15 medicines cost from consolidated accounts

on medicines. Spend is increasing at a rate of 15% per annum as more complex and specialised medicines enter the market³⁵. The need to manage these medicines in the context of financial constraints is critical, so trusts should ensure clinical pharmacists are in place, with sufficient capacity, to meet this challenge. Trusts should therefore ensure more clinical pharmacy staff are deployed – working more closely with patients, doctors, nursing staff and independently – to deliver optimal use of medicines, make informed medicines choices, secure better value, drive better patient outcomes, and contribute to delivering 7 day health and care services.

During our investigations we found there was significant potential for the buying, making and supply of medicines, along with other back office functions, to become more efficient. We also discovered there is stark variation in the delivery of these services, which has as much to do with what is provided as how services are provided. As a general guiding principle, these infrastructure services are most efficiently delivered when undertaken through collaborative or shared service type-models, at local, regional and national levels. Indeed, we also believe that that these services don't always need to be delivered by NHS employed staff. This is in line with Government policy which states that pharmacy services in all sectors should be more clinically focussed³⁶, and has led us to recommend that acute trusts should ensure their pharmacists and clinical pharmacy technicians spend much more time on clinical pharmacy services than on other activities, such as supply chain.

We worked with a wide range of stakeholders to identify the variation in service provision in acute trusts. The variation in resources allocated to the two aspects of service provision (clinical and infrastructure) was undeniable (see figure 2.14). The more time pharmacists spend on infrastructure services the less time they have to maximise value and outcomes from complex and costly medicines and support prescribing choices across the service.

CLINICAL SERVICES	VARIABLE INFRASTRUCTURE SERVICES				
MEDICINES OPTIMISATION 1 Patient facing: ward pharmacy; medicines reconciliation; medicines discharge; prescribing; Out-patient and Pre-Admission Clinics; specialist Pharmacists; medicines administration and support 2 Organisational Assurance: Medicines Safety Officer; Governance role of Chief Pharmacist; Audit Programmes	SUPPLY CHAIN	E&T	ADVISORY SERVICES	R&D	SERVICES TO EXTERNAL ORGANISATIONS
Store/distribution and procurement; Aseptic; Production QC; Dispensing; Homecare					
Training provided to Pre-Registration Pharmacists and Technicians; NVQ Assistant staff; Post-Registration Pharmacy staff					
Medicines Information; Formulary					
Clinical Trials; Departmental Research					
Community; Mental Health; Hospices; Prisons; Care Homes; GPs					

Figure 2.14 – Hospital pharmacy services shown as clinical or infrastructure. On average 55% of pharmacy time is spent on infrastructure services

Medicines Optimisation activity

³⁵ HSCIC: *Prescribing Costs in Hospitals and the Community, England 2014-15*, November 2015.

³⁶ December 2015, Department of Health and NHS England (NHS E)

There is significant variation in the approaches and scale to delivering medicines optimisation, for example, we found rates of prescribing pharmacists as a proportion of total hospital pharmacists varied between 2.5% and 71% (average 14%)³⁷. We were also disappointed to find limited digital maturity with regards to medicines information technology, with great variation in the deployment of electronic prescribing and administration systems in both inpatient (13% of trusts) and outpatient (4% of trusts). We also uncovered inconsistencies in the way trusts code those medicines classified as high cost drugs³⁸. Some trusts have close working between their hospital pharmacy and finance teams to ensure correct mapping to the required treatment codes, while others do not match correctly leading to high cost drug data integrity issues between pharmacy reported and Reference Cost expenditure.

Hospital pharmacy infrastructure services

On average, 55% of pharmacy staff time (43% of costs) is spent on infrastructure services, with the largest element being supply chain activities (at 45% of staff time) encompassing the buying, making and supplying of medicines. Contracting for medicines takes place at national and regional levels only; however, we found that not all trusts make best use of these arrangements. We believe the nationally coordinated approach is well organised and is most likely achieving good prices, although this needs to be checked. In contrast, many trusts still have local pharmacy buying offices, stores and distribution services and we found significant variation in their efficiency, for example, with the adoption of e-ordering some trusts are still placing orders via telephone or fax. More efficient trusts, such as Plymouth make good use of e-ordering and invoicing facilities to reduce staff time in both pharmacy and finance departments.

We also found significant variation in medicines stockholding. Data for 120 acute trusts showed stockholding variance of between 11 and 36 days, with the average being 20 days. We estimate at 20 days, NHS trusts are holding £200m of stock at any one time. In addition, around 50% of medicines deliveries come from a small number of wholesalers, but the other 50% come direct from manufacturers. This can mean that an acute trust will receive up to 30 medicines deliveries every day which is time consuming for staff. We also learnt that some trusts have outsourced out-patient dispensing to community pharmacy providers. This is cost effective and frees up clinical pharmacy staff to focus on clinical services.

There is also variance in the operating practices of NHS pharmaceutical manufacturing and aseptic units, which produce medicines which are not commercially available. Better performing trusts such as Leeds, who having introduced standardised doses for chemotherapy, have benefited from reducing their pharmacy aseptic service demand by 24% for chemotherapy, whilst also reducing waste and drug expenditure.

We also found great variation in how the back office functions of medicines information, education and training are delivered, with some trusts preferring to procure them from neighbouring trusts, with some trusts regional services or commercial providers rather than provide them themselves.

³⁷ July 2015, NHS Benchmarking Network: Pharmacy & medicines optimisation provider project report

³⁸ Defined in HSCIC's national payment codes



NHS and Wholesaler partnership in Avon, Gloucester and Wiltshire

Since 2004, a contract in partnership between six trusts and the largest pharmaceutical wholesaler in Europe has been in place to provide better discounts, supply chain consolidation and reduced stock holding. The partnership has also helped the trusts improve how they order medicines by creating a bespoke online tool and reducing the number of deliveries the trusts receive each day.

One trust has seen their stock holding shrink from 35 days to 19 days, reducing costs from £3.13 million to £1.72 million. The same trust also consolidated the 20,000 invoices it received each year into monthly bills, saving £140,000.

Hospital Pharmacy Transformation Programme

Given the scale of change required to achieve the efficiencies needed, we believe a Hospital Pharmacy Transformation Programme (HPTP) should be developed at local, regional and national levels. To ensure all trusts achieve the model hospital benchmarks we have developed, trusts will need to have agreed plans by April 2017, which may include delivery through consolidation with, or outsourcing to, other providers who need not always be NHS employers.

Each trust board should nominate a director to be responsible for developing the local HPTP plans, and work with the trust chief pharmacist to implement the changes identified in their plan, in collaboration with professional colleagues locally, regionally and nationally to deliver more efficient services. NHS Improvement should sign-off, coordinate and monitor plans at regional and national levels in conjunction with the Chief Pharmaceutical Officer for England. The plans should ensure more clinical pharmacy staff are deployed on optimal use of medicines and delivering 7 day health and care services. Plans should also include the adoption of digital information systems such as electronic prescribing and medicines administration systems (EPMA), where they haven't yet done so, and the improvement of high cost drugs coding within trusts' NHS reference cost returns.

Trusts should also seek to reduce their medicines bill through best choices and from actively monitoring market developments, such as the launch of biosimilar products. For example, the launch of Infliximab in March 2015 should lead to a 40% reduction overall in the costs of this one medicine, saving the NHS over £60 million per annum. To support this, we recommend NHS Improvement regularly publish a list of the top 10 medicines with savings opportunities for trusts to pursue.

We also recommend the DH's Commercial Medicines Unit (CMU) undertakes regular benchmarking with the rest of the UK and internationally to ensure NHS prices of hospital medicines continue to be competitive, and that it updates its processes in line with the DH's NHS Procurement Transformation Programme described later in this report. Further, consideration should also be given as to whether CMU is best located in the DH or in the NHS, along with exploring new models for procurement of specialise medicines. Consideration should also be given to the outcomes of the Accelerated Access Review in this regard³⁹.

³⁹ <https://www.gov.uk/government/organisations/accelerated-access-review>

We believe there is scope for improving supply chain management, though more effective collaboration at local, regional and national levels. Some trusts have developed more efficient centralised arrangements and some are working with pharmacy wholesalers to consolidate buying and reduce the number of daily medicines deliveries to hospitals. Closer working with manufacturers and pharmacy wholesalers, should lead to consolidation of the medicines supply chain, making full use of e-ordering and invoicing and aggregating and rationalising deliveries – preferably ready for use and to the ward. This would significantly reduce the numbers of daily deliveries to hospitals to less than five, thereby reducing stock holding (a reduction to 15 days would generate a £50 million one-off saving to the NHS in-year), as well as reducing pharmacy staff supply chain costs. We also believe that buying and supply services do not need to be delivered by NHS employed staff.

Trusts that have not currently outsourced their outpatient dispensing services should ensure their HPTP plans include a review of these services and have a plan in place for improving productivity and efficiency, including consideration of alternative supply routes, such as homecare providers or community pharmacies. The scope of these alternatives should not be limited to outpatient services alone, but also include repatriated homecare and discharge.

There are early signs that community pharmacy providers may be willing to take on discharge medication dispensing, supported by NHS clinical pharmacy services, to improve efficiency and enhance the patient experience. As in community pharmacy, there are also potential opportunities from large scale centralised dispensing of medicines, not only for outpatients, but also for patients at discharge (and possibly both on Saturdays and Sundays).

Opportunities for taking a national or regional approach to collaboration and re-design also exist in the manufacturing and preparation of bespoke medicines in hospitals. Aseptic preparation and supply can be more efficiently and cost effectively delivered through preparing standard doses. We therefore support the introduction of a national agreement to ensure chemotherapy doses are rounded up or down at the point of prescribing to support the delivery of standardised products, which the NHS England Medicines Optimisation Clinical Reference Group is currently developing. A similar standardisation approach should be developed for parental nutrition for both adults and children.

NHS Improvement, building on and working with NHS England Specialist Pharmacy Services, should also consider moving towards a four region approach to collaboration of NHS licensed medicines manufacturing services, integrating this more closely with procurement to develop an NHS Manufactured Medicines product catalogue.

Recommendation 3: Trusts should, through a Hospital Pharmacy Transformation Programme (HPTP), develop plans by April 2017 to ensure hospital pharmacies achieve their benchmarks such as increasing pharmacist prescribers, e-prescribing and administration, accurate cost coding of medicines and consolidating stock-holding by April 2020, in agreement with NHS Improvement and NHS England so that their pharmacists and clinical pharmacy technicians spend more time on patient-facing medicines optimisation activities.

Delivered by:

- a) developing HPTP plans at a local level with each trust board nominating a Director to work with their Chief Pharmacist to implement the changes identified, overseen by NHS Improvement and in collaboration with professional colleagues locally, regionally and nationally; with the Chief Pharmaceutical Officer for England signing off each region's HPTP plans (brigaded at a regional level) as submitted by NHS Improvement;
- b) ensuring that more than 80% of trusts' pharmacist resource is utilised for direct medicines optimisation activities, medicines governance and safety remits while at the same time reviewing the provision of all local infrastructure services, which could be delivered collaboratively with another trust or through a third party provider;
- c) each trust's Chief Clinical Information Officer moving prescribing and administration from traditional paper charts to Electronic Prescribing and Medicines Administration systems (EPMA);
- d) each trust's Finance Director, working with their Chief Pharmacist, ensuring that coding of medicines, particularly high cost drugs, are accurately recorded within NHS Reference Costs;
- e) NHS Improvement publishing a list of the top 10 medicines with savings opportunities monthly for trusts to pursue;
- f) the Commercial Medicines Unit (CMU) in the Department of Health undertaking regular benchmarking with the rest of the UK and on a wider international scale to ensure NHS prices continue to be competitive, and updating its processes in line with the Department of Health's NHS Procurement Transformation Programme as well as giving consideration as to whether the capacity and capability of the CMU is best located in the Department of Health or in the NHS, working alongside NHS England's Specialist Pharmacy Services and Specialised Commissioning functions;
- g) consolidating medicines stock-holding and modernising the supply chain to aggregate and rationalise deliveries to reduce stock-holding days from 20 to 15, deliveries to less than 5 per day and ensuring 90% of orders and invoices are sent and processed electronically; and,
- h) NHS improvement, building on and working with NHS England commissioned Specialist Pharmacy Services, should identify the true value and scale of the opportunity for rationalisation and integration of hospital pharmacy procurement and production, developing an NHS Manufactured Medicines product catalogue and possibly moving towards a four region model for these services.

Pathology and imaging services

In June we said that we wanted to look at other areas for efficiency opportunities including diagnostic services such as pathology and imaging. We faced difficulty in extracting national data to understand the costs of these services, which in turn has led to problems in comparing them across the NHS. Given these difficulties we have gathered data and information from the cohort of 32 trusts directly to establish a set of benchmarks for the model hospital and to assess unwarranted variation, but we recommend the WAU metric is developed to enable comparison across all NHS acute diagnostics services.

In pathology, we estimate the total cost of NHS pathology services (from the taking of the sample to the communication of the result) to be between £2.5 and £3.0 billion annually. This includes primary care (GP Direct Access); secondary care (acute); tertiary care (specialist); and screening programmes (breast, bowel, cervical cancer et cetera). As a broad high-level measure we found that costs as a proportion of trust operating expenditure ranged from less than 1.5% to over 3.0% (see figure 2.15), and that the mix and quantum of qualified employees was inconsistent with trust activity (see figure 2.16).

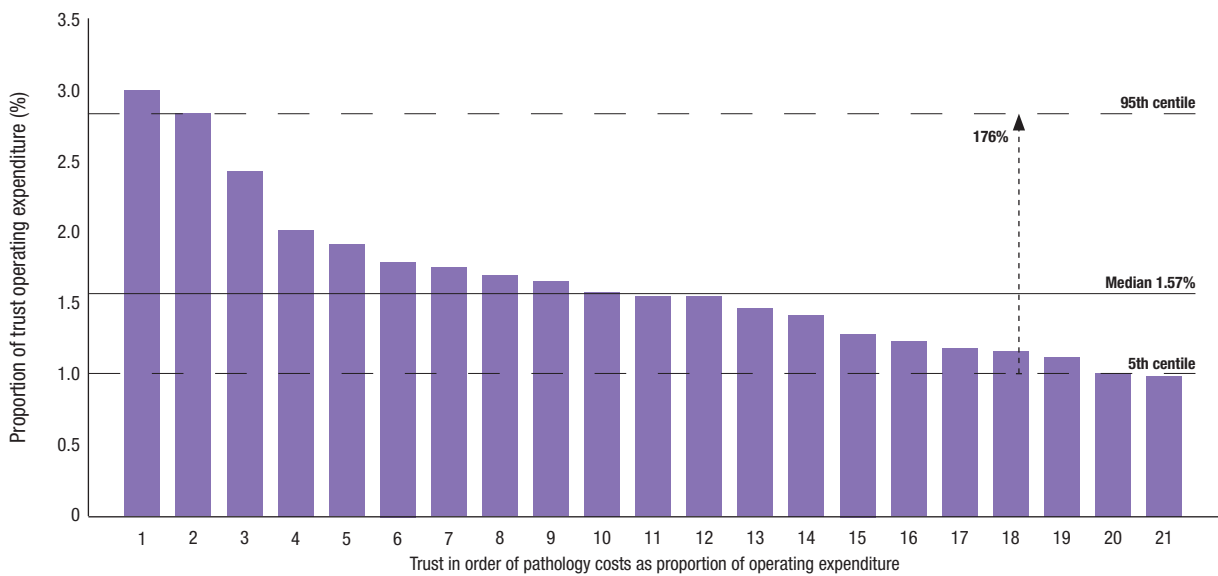


Figure 2.15 – A distribution of acute pathology costs as a proportion of trust operating expenditure. Some trusts spend around 2.8 times more on pathology provision as a proportion of their operating expenditure than others

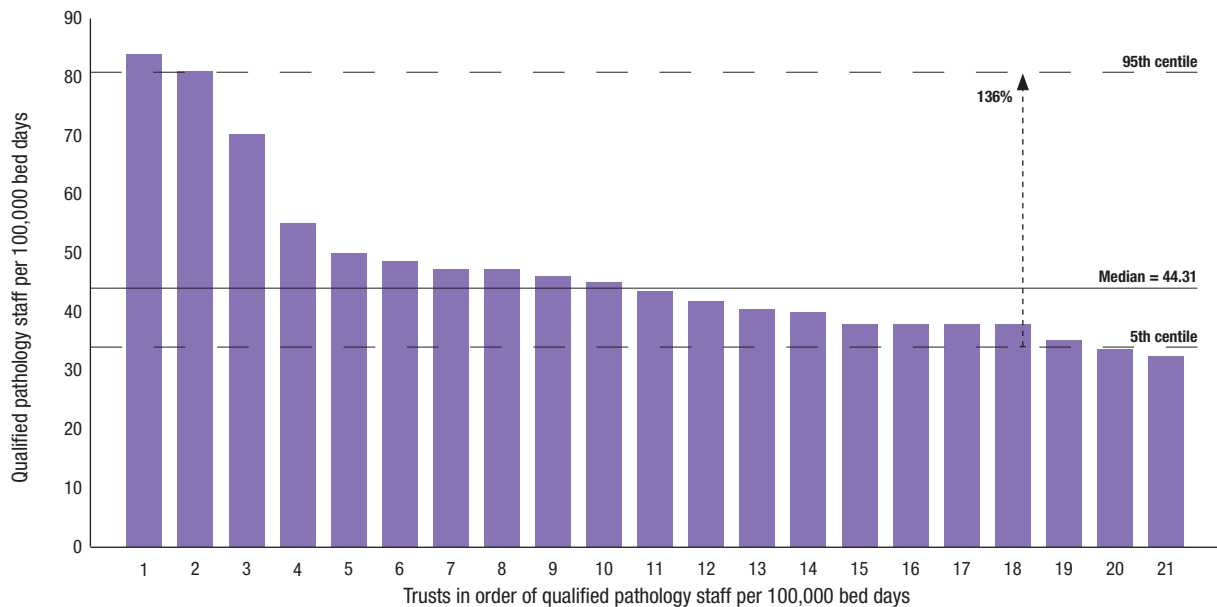


Figure 2.16 – A distribution of qualified pathology staff per 100,000 bed days. The trusts with the most qualified staff have around 2.4 times the number per 100,000 bed days than those trusts with the least

Over the last six months we have developed a national set of benchmarks and indicators as part of the model hospital that will allow trusts to compare their services with their peers both in terms of quality and cost.

The Carter review in 2008⁴⁰ gathered data and information that pointed strongly towards the consolidation of pathology services ‘as a means of improving both service quality and cost effectiveness’. Our further analysis has confirmed that consolidated pathology organisations are the most efficient in the NHS. For example, the consolidation of Ashford and St Peter’s pathology service into the existing joint venture between Frimley Park (prior to the recent merger with Heatherwood and Wexham Park) and the Royal Surrey both enabled the introduction of new technologies and ways of working at scale and resulted in a significant reduction in costs.

Significant improvements in reporting lead-times were also realised as a direct result of the consolidation of the pathology services at Coventry and Warwickshire, George Eliot and South Warwickshire trusts, as well as a cumulative reduction of cost of almost £4m. The formation of Pathology at Salford and Wrightington, Wigan and Leigh (PAWS), the collaboration between Salford Royal and Wrightington, Wigan and Leigh trusts resulted in one of the most efficient pathology services in the cohort, improving reporting lead-times, re-profiling the workforce, and saving almost 15% of costs.

⁴⁰ Lord Carter *Independent Review of NHS Pathology Services in England in 2008*



Surrey Pathology Services

Surrey Pathology Services (SPS), a consolidation of the pathology service at Ashford and St. Peters NHS Foundation Trust with Partnership Pathology Services - the existing pathology joint venture between Frimley Park (as was) and The Royal Surrey NHS Foundation Trusts - was formed to improve the quality, efficiency and effectiveness of the combined service. By forming a larger organisation, there were more training and development opportunities for staff, which enhanced recruitment and retention. The quality of service patients received was also improved, as scarce clinical expertise was shared across hospital sites and near-patient testing could be introduced at scale.

The formation of SPS directly resulted in an annual saving of £4m, and a reduction in posts of over 70 whole time equivalent staff members.

Given this, we recommend all trusts should achieve the acute pathology model hospital benchmarks by April 2017, or have agreed plans for consolidation with, or outsourcing to, other pathology providers by January 2017. They should be required to introduce the pathology quality assurance dashboard recommended by the *Review of Pathology Quality Assurance*⁴¹ to assure themselves and others that the pathology service provided to them is and remains of appropriate quality and safety. The dashboard should be hosted by NHS Improvement. HSCIC should publish a definitive list of NHS pathology tests and how they should be counted by October 2016, with NHS Improvement requiring trusts to adopt the definitions from April 2017.

NHS Improvement should also publish guidance notes for forming collaborative joint ventures and specifying Managed Equipment Service contracts for local adaptation by October 2016. Taking all this into account we think there is an opportunity for the NHS to save around £200m in the provision of pathology.

NHS Improvement should also develop actions for diagnostic imaging services in 2016. As with pathology, as a broad high-level measure, we found that costs as a proportion of trust operating expenditure ranged from less than 3% to almost 5% (see figure 2.17) and that the cost of diagnostic radiology per whole time equivalent department member varied between £55k and £108k (see figure 2.18).

Whilst not yet fully developed, we intend to engage with the cohort of 32 trusts, the relevant royal college and professional societies to develop and publish a set of radiology departmental benchmarks that trusts should aim to achieve by April 2018. As well as those indicators described above, we hope to introduce some for relative departmental productivity. This will extend to use of equipment (suppliers of equipment have shown us the wide variation in the mean time between scans for each scanner, suggesting there is an opportunity to optimise their use) and the activity of technical and clinical staff.

⁴¹ <https://www.england.nhs.uk/wp-content/uploads/2014/01/path-qa-review.pdf>

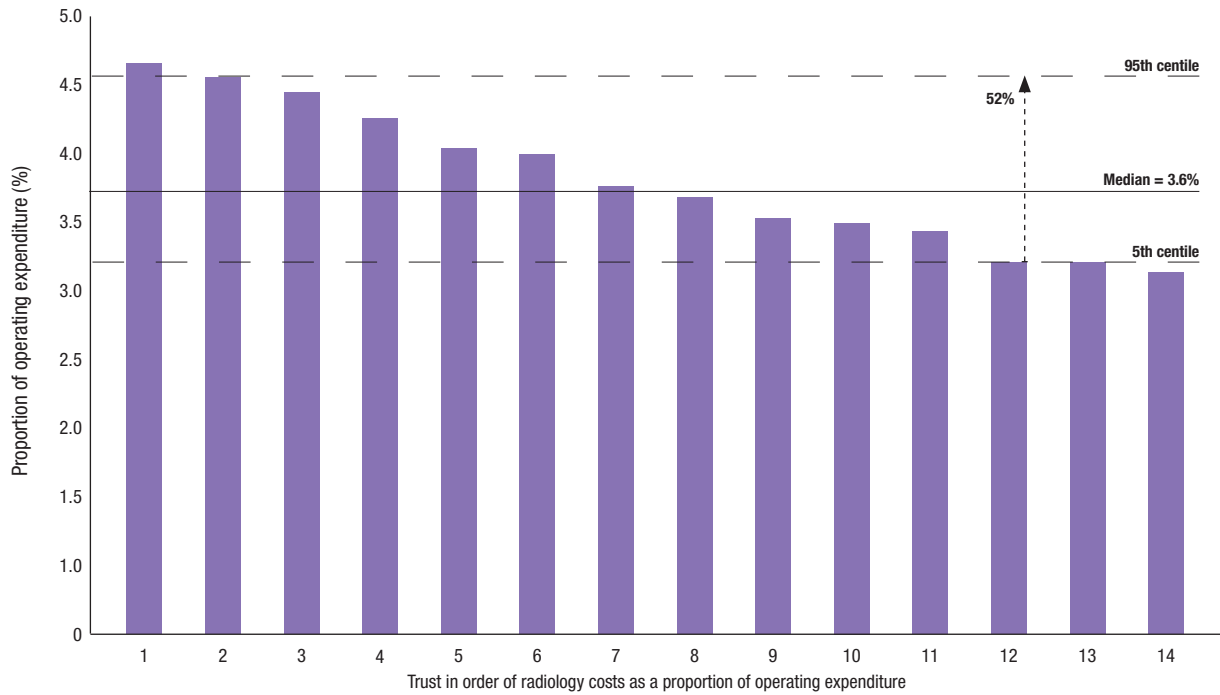


Figure 2.17 – A distribution of diagnostic radiology costs as a proportion of trust operating expenditure. Some trusts spend around 1.5 times more on diagnostic radiology costs as a proportion of their operating expenditure than others

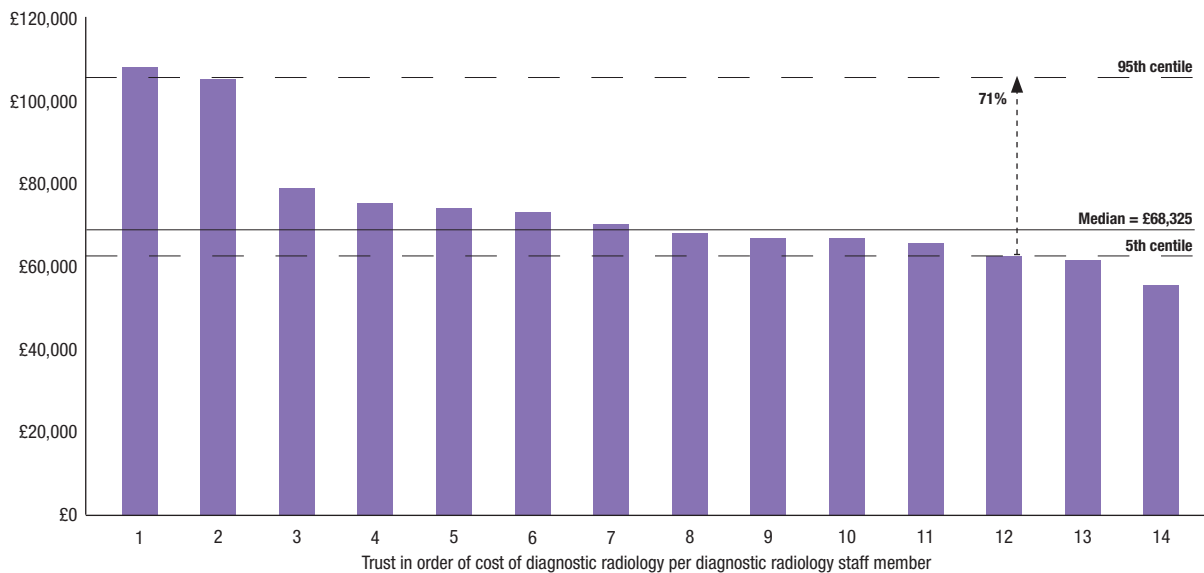


Figure 2.18 – A distribution of the cost of diagnostic radiology per diagnostic radiology staff member. Some trusts spend around 1.7 times more per diagnostic radiology staff member than others

Recommendation 4: Trusts should ensure their pathology and imaging departments achieve their benchmarks as agreed with NHS Improvement by April 2017, so that there is a consistent approach to the quality and cost of diagnostic services across the NHS. If benchmarks for pathology are unlikely to be achieved, trusts should have agreed plans for consolidation with, or outsourcing to, other providers by January 2017.

Delivered by:

- a) trusts introducing the Pathology Quality Assurance Dashboard (PQAD) by July 2016 to assure themselves and others that the pathology service provided to them is and remains of appropriate quality and safety, with NHS Improvement hosting the dashboard;
- b) HSCIC publishing a definitive list of NHS pathology tests and how they should be counted by October 2016, with NHS Improvement requiring trusts to adopt the definitions from April 2017;
- c) NHS Improvement publishing guidance notes for forming collaborative joint ventures and specifying managed equipment service contracts for local adaptation by October 2016; and,
- d) NHS Improvement introducing metrics that describe relative imaging departmental productivity related to the use of equipment and workforce activity by December 2016.

3 Optimising non-clinical resources

With clinical staff and resources accounting for two-thirds of hospital costs, staff productivity remains the biggest opportunity for efficiency savings. However, after analysing the variation in non-clinical resource costs we believe there is at least a £2bn opportunity across the areas of procurement, estates and facilities and administration (back-office) costs.

Procurement

Excluding agency staff, medicines, and estates and facilities management, NHS trusts spend around £9bn on procurement of goods and services of which £6bn is spent by the acute sector. Around a third of this is spent on common goods and services, a third on medical consumables and a third on high-cost medical devices⁴². At the highest level there appears to be considerable variation between trusts on the value they extract from this non-pay spend (see figure 3.1). Equally, with some exceptions, there is a lack of understanding of the hidden costs and inefficiency caused by weak compliance to purchase-to-pay systems, under investment in inventory control and poor engagement with industry on cost containment.

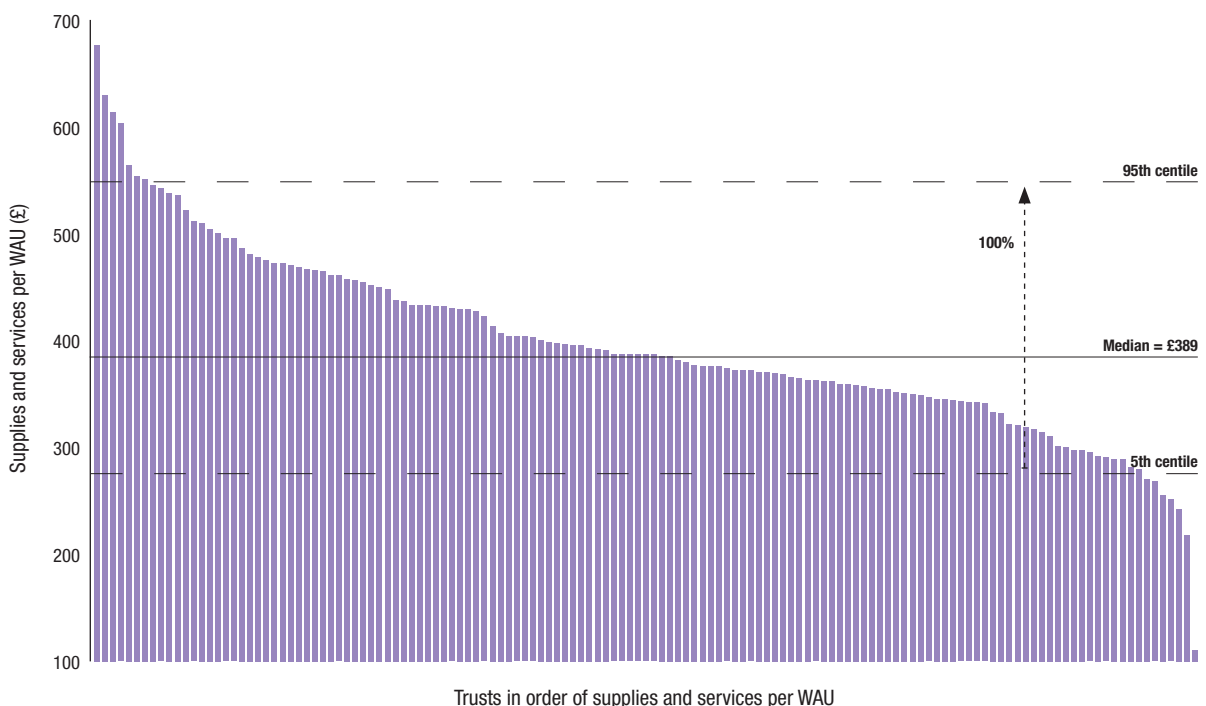


Figure 3.1 – A distribution of supplies and services spend per WAU. The trusts with the highest supplies and services spend are around 2.0 times more than those with the lowest ⁴³

⁴² Common goods & services includes transport, stationery etc, medical consumables includes dressings, syringes, gloves etc, and high-cost medical devices includes hip joints, cardio devices etc.

⁴³ source: 2014/15 Reference costs, ESR, and consolidated accounts definition: 2014/15 supplies and services costs from consolidated accounts (general and clinical combined)

We estimate there are around 5,000⁴⁴ staff working in procurement and the supply chain across trusts and third party organisations such as NHS Supply Chain, Crown Commercial Services and Collaborative Procurement Hubs, costing around £250m. International evidence suggests there is considerable scope for the NHS to reduce this cost, however the bigger prize is reducing the £9bn spent by trusts.

In June we estimated that around £1bn could be saved through better procurement. Since then we have obtained better data and although we think £1bn is still achievable for all acute and non-acute trusts we think this is very much a stretch target, with £700m more likely. This has been calculated on the basis of a 9.5% reduction on the £6.5bn clinical and general supplies/ services spend plus small additional savings related to agency and estates and facilities spends.

Whilst there have been excellent improvements by some trusts, most still don't know what they buy, how much they buy, and what they pay for goods and services. Very few trusts are able to demonstrate even a basic level of control or visibility over total inventory or purchase order compliance that is common practice in other health systems and industrial sectors such as retail. Furthermore, there continues to be a systematic failure to capitalise on the national nature of the NHS. That said, we have seen some trusts begin to collaborate and take volume commitment to market, which has further confirmed both the unwarranted variation described in June and the opportunity to deliver significant savings by trusts simply acting in a coordinated way.

The sheer amount of variation in products used across the NHS makes it almost impossible to make meaningful comparison. For example, a sample of 22 trusts covering approximately 16% of NHS spending revealed that in one year they used 30,000 suppliers, 20,000 different product brands, more than 400,000 manufacturer product codes with more than 7,000 people are able to place orders⁴⁵. This high product and supplier/brand variety disaggregates and undermines NHS buying power with the inevitable results of variation and higher prices. This variation is further compounded by supplier catalogues changing at a rate of 30% per year. Furthermore, product variety is the root cause of hospital supply chain waste such as high inventories, expiration and obsolescence, and low value orders and delivery charges.

Although a lot of effort has been put in at trust level to manage key clinical categories such as cardiac stents, the supply base and product offering has steadily increased in fragmentation and variety. For example the first generation drug eluting stent was introduced to the UK several years ago and since then variety has grown out of all proportion and across a sample of 10 trusts (see figure 3.2) we have seen 50% difference in the average price being paid, and total spend disaggregated across 26 brands and 11 suppliers.

Similarly across a wider cohort of fifteen trusts, over twenty different hip prosthesis brands are being purchased with a difference in average price of 102% (see figure 3.4). In both examples it should be noted that highest volume purchasers are not achieving best price, a major contributing factor is the degree of brand proliferation.

⁴⁴ Estimate from ESR data and staffing in intermediaries such as NHS Supply Chain

⁴⁵ NHS/ BravoHealth Cohort

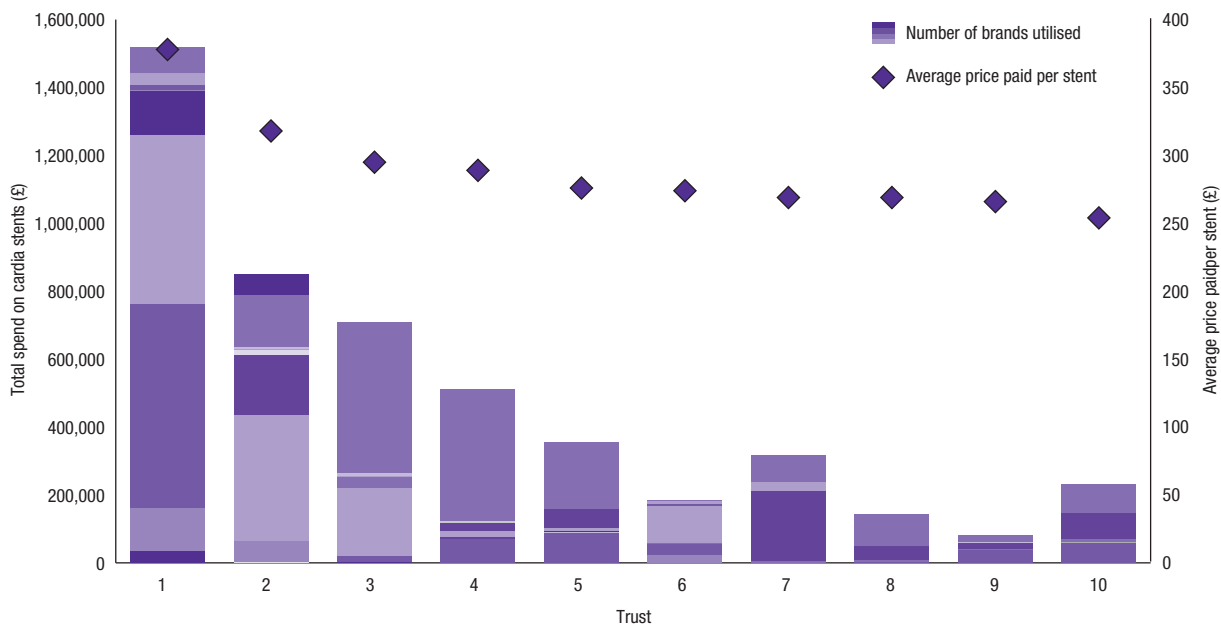


Figure 3.2 – Cardiac stent total spend, average price, and brand variation across a sample of 10 trusts⁴⁶.

Whilst we are confident the Department of Health’s *NHS Procurement Transformation Programme (PTP)* (see figure. 3.3) will address the issues of poor data, weak collaboration and inability to capitalise on the benefits of scale, this will take time and we need to act now. We therefore recommend implementation of a new *purchasing price index* with immediate effect, starting with a basket of around 100 products, so that trusts are able to compare their performance with their peers on price and volume. Throughout 2016, we would like the index to develop with more products added and reported on a monthly basis, with three separate sub-indices focused on common goods, clinical consumables and high-cost medical devices. Furthermore we recommend NHS Improvement hold trusts to account on their performance against the index from April 2016. In the medium term (one to two years) we would like this to develop into a national analytics and reporting system so that trusts have full visibility of what they buy, how much they buy and what they pay, and how this compares with their peers. For the first time this will provide the NHS with a single national reporting system on purchase prices.

⁴⁶ Source: NHS Southern Procurement Partnership/BravoHealth Group 2015

Procurement Transformation Programme

The Procurement Transformation Programme joins together a number of activities to improve procurement within the healthcare system, aiming to save £750m per annum from the total NHS spend on goods and services. The programme has three main components:

NHS Catalogue

This strand has the goal of creating a high quality, national catalogue of goods where trusts can have confidence both in the range and price at which they are procuring. Work includes range rationalisation and price recompetition in a number of key product areas. National category strategies for all category areas are being developed and an independent, clinically driven, product testing and evaluation capability established. Given the breadth of products utilised within the NHS, this work is expected to be on-going.

Future Operating Model for procurement and supply chain in the NHS

Recognising that part of the issues preventing delivery of procurement savings today is the underlying model for procurement and supply chain within the NHS, this strand is focused on using the opportunity created by the end of the existing NHS Supply Chain contractual arrangements (October 2018) to re-structure the procurement and supply chain delivery model to rationalise the procurement landscape, reduce spend and consolidate purchasing power. Potential models have been discussed with NHS and supplier stakeholders in 2015, a decision is expected by the end of April 2016 as to the proposed future model, and procurement of these arrangements are expected to start in summer 2016 with staged transition arrangements.

eProcurement

This strand is designed to drive adoption to the global GS1 coding and PEPPOL messaging standards throughout the healthcare sector and its supporting supply chains. Six demonstrator sites were announced in January 2016 and these are intended to provide to demonstrate a variety of delivery approaches and provide additional evidence of the benefits available through increased use of eProcurement technologies.

Figure 3.3 – Procurement Transformation Programme

In June we said the best performing hospital chains in the world limit the range of products they buy, have strict controls around electronic catalogues achieving over 90% compliance, and full digitisation of their purchase-to-pay (P2P) processes. Furthermore, any member of staff purchasing outside of these controls without authority, faces disciplinary action. If NHS trusts are to gain a tighter grip on their non-pay expenditure then they must impose such controls. Our research has informed us that compliance to catalogues and digital maturity across the NHS is inconsistent, inevitably leading to the proliferation of products described earlier.

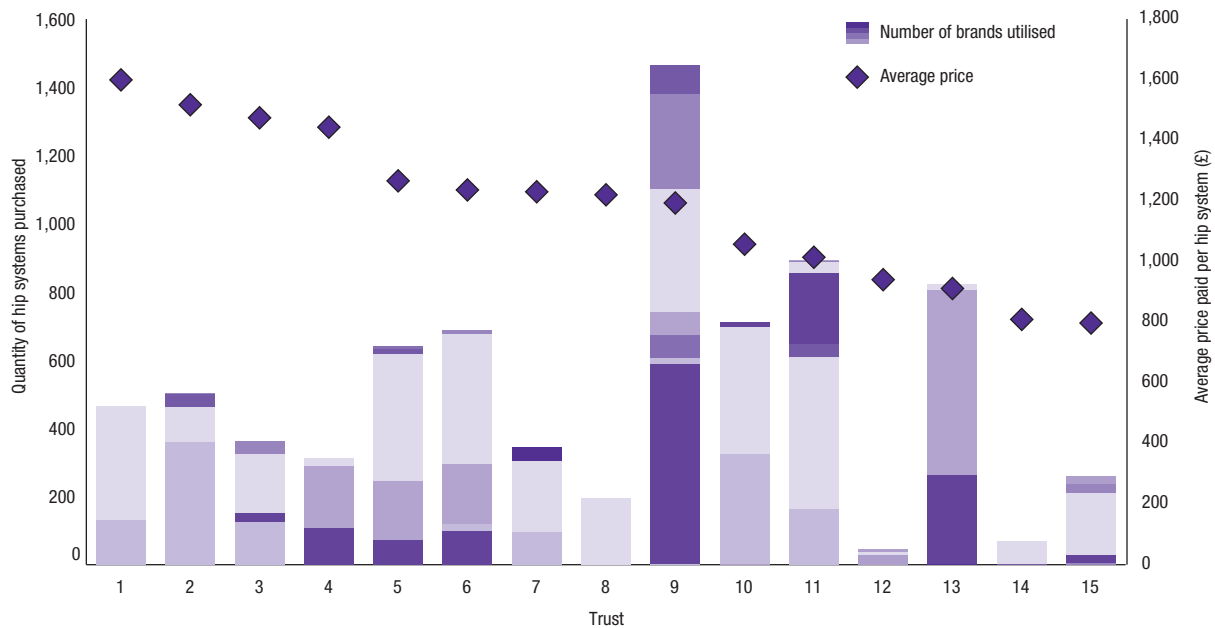


Figure 3.4 – Hip system total spend, average price, and brand variation across a sample of 15 trusts⁴⁷

Most trusts have some form of electronic catalogue but their use and standard varies widely. We said in June that the quickest way to solve this problem would be to create a single NHS electronic catalogue. We still believe this is needed, which is why it is a key feature of the Department's PTP, but this will take time and in the meantime we recommend trusts seek to rationalise their catalogues and increase their compliance to at least 80%, learning from the best in the NHS (see Guys and St Thomas' case study later in this report).

The same goes for P2P systems, the level of purchase order compliance varies enormously with some trusts operating below 30%. In 2016 it is simply not acceptable that the NHS has not embraced digital technology in this area. Most trust executives we spoke to agree and were keen to see a joined-up plan for modernising procurement once and for all. We think the Department's Procurement Transformation Programme will address these issues in time, but trusts need to act now.

We should point out that a number of enterprising trust procurement staff have taken these challenges head-on, and have not only sought to address them in their own trusts but also to collaborate with others to share resources and data. The Southern Procurement Partnership case study is one of a number of examples that demonstrate what can be achieved by this collaborative approach. The Shelford group collaboration is another, but again there is inconsistency; if we are to truly capitalise on the benefits of scale, all procurement activity needs to be joined-up and orchestrated across the whole of the NHS.

⁴⁷ Source NHS Southern Procurement Partnership/BravoHealth Group 2015



Collaboration on data and reducing prices at NHS Southern Procurement Partnership

NHS Southern Procurement Partnership standardised the manufacturer and price data they collected as individual trusts for generic products they buy such as exam gloves or disposable aprons.

This data was then validated in a leading spend analytics platform. Prices were compared for similar products to identify and prioritise opportunities to make cost savings. The trusts were then able to aggregate demand before taking their combined volumes to market.

Results from this early work indicate savings of between 15-50% beyond current best NHS prices and it reduced the variety of different products across manufacturers by up to 80%.

If this collaborative and standardised data-sharing strategy was used across the NHS, the Partnership estimates that the NHS could save £500m.

We need to empower those procurement staff who are keen to modernise, and we need to remove the freedoms for those who are not performing. To start this process we are proposing a set of benchmarks as part of the model hospital, which will enable trusts to understand their maturity and performance across a number of dimensions. These include:

- % transaction volume on a catalogue with a purchase order
- % transaction volume with a purchase order
- % transaction volume with a contract
- inventory turnover.

We recommend that all trusts should be operating with 80% of their transaction volume through an electronic catalogue by September 2017. Furthermore, we recommend 90% of trusts' transaction volume is covered by electronic purchase orders by the same date, and a benchmark for inventory stock-turns is established. A combination of these measures and performance against the purchasing price index described earlier will enable trust boards to understand the relative performance of their procurement function.

We also recommend trusts should collaborate with at least five other trusts to share data and resources to modernise their procurement function. Consideration should also be given to the sharing or even outsourcing of their procurement back-office such as P2P services. We also think it is imperative trusts use the national solutions, both in the short term with the existing NHS Supply Chain and in the longer term with commitment to the DH PTP. We have recently re-negotiated the NHS Supply Chain contract with DHL to improve transparency and to encourage closer working with the national solution. This has already led to improved savings performance with £134m saved in the last 18 months.

It is our view that any trusts not performing should face consequences, potentially with trusts losing controls and being mandated to join shared service solutions, use the national solutions or other actions to be determined by NHS Improvement.

In the same way that we have recommended the establishment of Hospital Pharmacy Transformation Programmes, joined up at national, regional and local levels, we recommend the same structure should be established to modernise and improve NHS procurement, led by NHS Improvement and the Department's NHS Procurement Transformation Programme. Every trust should have a local PTP in place by July 2016 covering plans to meet the model hospital benchmarks, collaborate with other trusts and the national solutions such as NHS Supply Chain. We expect these plans to be agreed with NHS Improvement and ideally we would like to see alignment with NHS Improvement's proposed regional structure.

The current National Customer Board chaired by Sir Ian Carruthers has been leading the way on regional engagement and we see no reason why this cannot be built on under the guidance of NHS Improvement and the Department of Health.

Modernisation of procurement will require trusts boards to give this attention, so we recommend a board director should be nominated to work with their procurement leaders to ensure PTPs are firmly embedded in every trusts' performance improvement plans.

In developing PTPs, trusts should consider the role collaborative procurement hubs could play in helping them achieve their model hospital benchmarks. We do not expect to see hubs competing with or undermining the national solutions, so we recommend trusts take this into account in developing their PTP plans.

Whilst our main focus for procurement has been on modernisation and reducing non-pay spend, we are very aware of the potential role industry can play in helping trusts reduce their costs, whether through medical technologies that enable trusts to deliver speedier care more efficiently, or by delivering more cost-effective services. More needs to be done to understand these opportunities and the work we are doing with the Ministerial Medical Technology Strategy Group is helping us in this regard. This work is examining a handful of medical technologies that claim to help the NHS be more productive and efficient, so we are working with industry, NHS England, the Office for Life Sciences and trusts to understand how their potential introduction can be reflected in the model hospital benchmarks.

Finally, in June we recommended that a 'Sunshine Act' or similar should be explored to improve transparency in the NHS' dealings with industry and so we welcome the Secretary of State's announcement in August 2015 requiring trusts to keep a mandatory log of all payments, gifts and hospitality offered to staff by suppliers.

Recommendation 5: All trusts should report their procurement information monthly to NHS Improvement to create an NHS Purchasing Price Index commencing April 2016, collaborate with other trusts and NHS Supply Chain with immediate effect, and commit to the Department of Health's NHS Procurement Transformation Programme (PTP), so that there is an increase in transparency and a reduction of at least 10% in non-pay costs is delivered across the NHS by April 2018.

Delivered by:

- a) developing PTP plans at a local level with each trust board nominating a Director to work with their procurement lead to implement the changes identified, overseen by NHS Improvement and in collaboration with professional colleagues locally, regionally and nationally;
- b) NHS Improvement providing a national spend analysis and benchmarking solution from high quality trust spend data to be fully operational by April 2017. This will include a purchasing price index starting with an initial basket of 100 products with immediate effect. NHS Improvement will hold trusts boards to account in performance against the index from October 2016;
- c) all trusts to prioritise the role of procurement on ensuring effective system control and compliance, building supply chain capability in terms of both inventory management systems and people. Trusts to aim to work in collaboration both with national procurement strategies and other trusts to explore common systems adoption e.g. efficient electronic catalogues using retail system standards, enhancing current purchase to pay systems, adopting (GS1) and Pan European Public Procurement Online (PEPPOL) standards detailed in the eProcurement Strategy, and to align with NHSSC on category initiatives;
- d) trusts focusing on the measurement of key procurement metrics and being responsible for driving compliance to the following targets by September 2017: 80% addressable spend transaction volume on catalogue, 90% addressable spend transaction volume with a purchase order, 90% addressable spend by value under contract;
- e) trusts accelerating collaboration with other trusts to develop aggregated sourcing work plans to reduce variety (including with NHS Supply Chain for their categories) for 2016-17 and 2017-18, including contributing to clinically driven product testing and evaluation, and adopting the outcome of these processes, switching products where appropriate, unless a clinically agreed exception exists; and,
- f) trusts embracing the adoption and promotion of the NHS Standards of Procurement with the support of the new Skills Development Networks, with those that have already achieved Level 1 achieving Level 2 of the standards by October 2018; and those trusts that are yet to attain Level 1 achieving that level by October 2017. All trusts to produce a self-improvement plan to meet their target standard by March 2017.

Estates and facilities management

As we stated in June, the NHS operates more than 1,200 hospitals as well as around 3,000 other treatment facilities. Many of these operate 24 hours of the year. The occupied floor area of the NHS is around 25million⁴⁸ m². This is the equivalent of around 3,500 football pitches and the cost of running these facilities is over £8 billion per annum and these costs are rising. At the highest level, comparing costs using m² floor area, we have again observed significant variation across acute trusts (see figures 3.5).

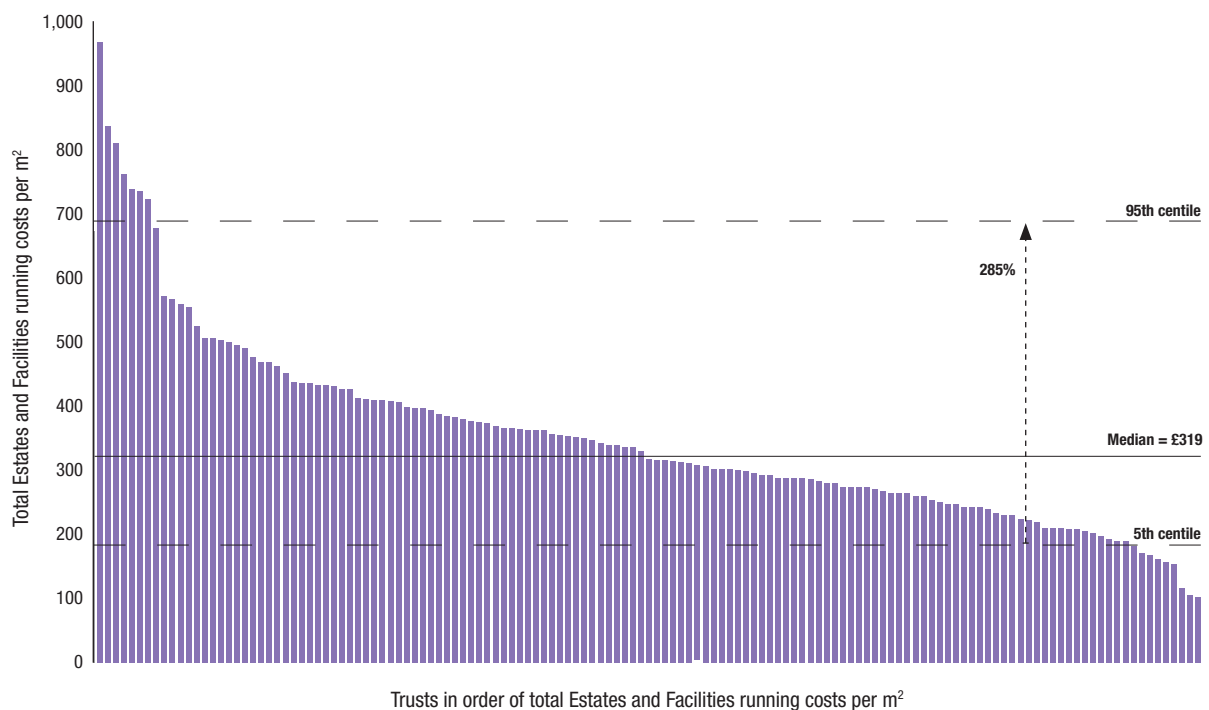


Figure 3.5 – A distribution of estates and facilities running costs per m². The most expensive trusts spend around 3.8 times more on running costs per m² than the least expensive trusts. Analysis showed no direct correlation between running costs and safety or quality⁴⁹

The NHS estate is diverse and complex, spread across cities and rural locations. The result is that cost drivers can vary widely due to the size, age, and condition of buildings, and local delivery models. This makes comparison of estates and facilities management costs (E&FM) across hospitals complicated. However, working with the cohort of 32 trusts we have developed an E&FM dashboard that provides each trust with a clear understanding of their costs and pointers for efficiency opportunities, including an indication of what they could potentially save by improving their performance in line with their peers. This dashboard covers all aspects of the operational management of the estates and facilities function, including energy consumption, patient food, cleaning and linen and laundry services.

Despite the complexity of the estate, unsurprisingly we found unwarranted variation and we still believe up to £1bn could be saved if all trusts were able to move to the median benchmark of their peers. This variation is at its highest when we compare the use of space in trusts. Space not occupied by patients (non-clinical space) ranges from 12% to as much as 69% (see figure 3.6).

⁴⁸ All Estates & Facilities data was provided by HSCIC's from the annual Estates Returns Information Collection (ERIC) for 2014-15

⁴⁹ source: 2014/15 Estates Return Information Collection

Our experience has shown that trusts should operate with a maximum of 35% non-clinical floor space⁵⁰. Similarly a trust’s amount of unoccupied or underused space should be set at a maximum of 2.5%. We therefore recommend all trusts should have a strategy in place to achieve these benchmarks by April 2017, and they should ensure E&FM costs are embedded into their patient costing and service line reporting systems.

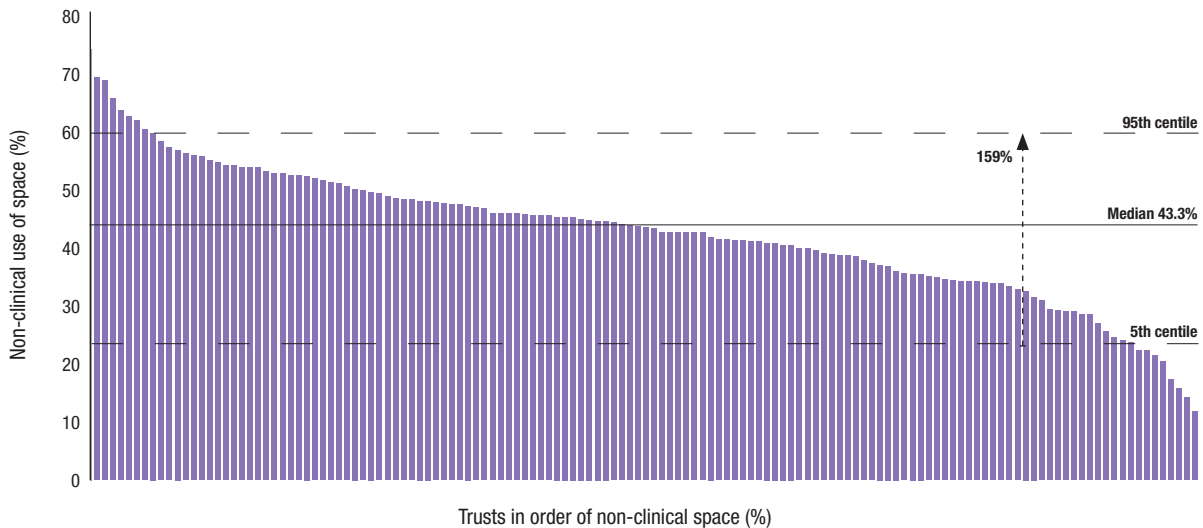


Figure 3.6 – A distribution of non clinical space in NHS trusts. The trusts with the highest non clinical use of space have around 2.6 times more than those trusts with the lowest⁵¹

We also think there is a significant opportunity for trusts to achieve cost efficiencies by reducing their energy consumption which will also help to mitigate against the effects of climate change through improved energy efficiency. Acute trusts spend around £500m per annum on energy and if all trusts could move to the median benchmark then £36m could be saved. This saving could increase to as much as £125m if trusts were able to invest in energy saving schemes such as LED lighting, combined heat and power units, and smart energy management systems. We know trusts have an appetite for such schemes as the 2013-14 £50m energy efficiency fund was oversubscribed four-fold with pay-backs in less than four years. Given this we recommend the Department of Health establish a new ‘invest to save energy efficiency fund’ by April 2017, working in partnership with Salix or others (Salix Finance Ltd delivers interest free capital loans to the public sector to improve energy efficiency and reduce carbon emissions) , to help trusts deliver the opportunities for reduced energy consumption.



Energy efficient lighting at Royal Marsden

To improve lighting in patient areas, reduce maintenance disruption and save on energy and carbon costs, the trust invested £168k to install energy efficient LED lights across the hospital’s existing fixtures.

The trust has directly saved £55k annually and predicts to save £258k over the first five years of operation. This will directly contribute to 11% of the capital costs of two state-of-the-art CT scanners.

⁵⁰ Clinical space is that used for the clinical treatment of patients, ie, Wards, OPD, A&E, Theatres, ITU, SCBU, CCU, day surgery, radiology, clinics, etc. non-clinical space are those departments that are not accessible to patients, for example, administration offices, laboratories, industrial process, plant rooms, operational support areas and amenity areas.

⁵¹ source: 2014/15 Estates Return Information Collection

Our analysis of soft FM costs has again revealed significant variation. For example in cleaning the NHS spends around £725m per annum and if all trusts could achieve the median benchmark we think £93m could be saved. Similarly in patient food services, costs are £407m per annum and the savings potential is £52m. Figures 3.7 and 3.8 show the level of variation we found across the cohort of 136 trusts for these services.

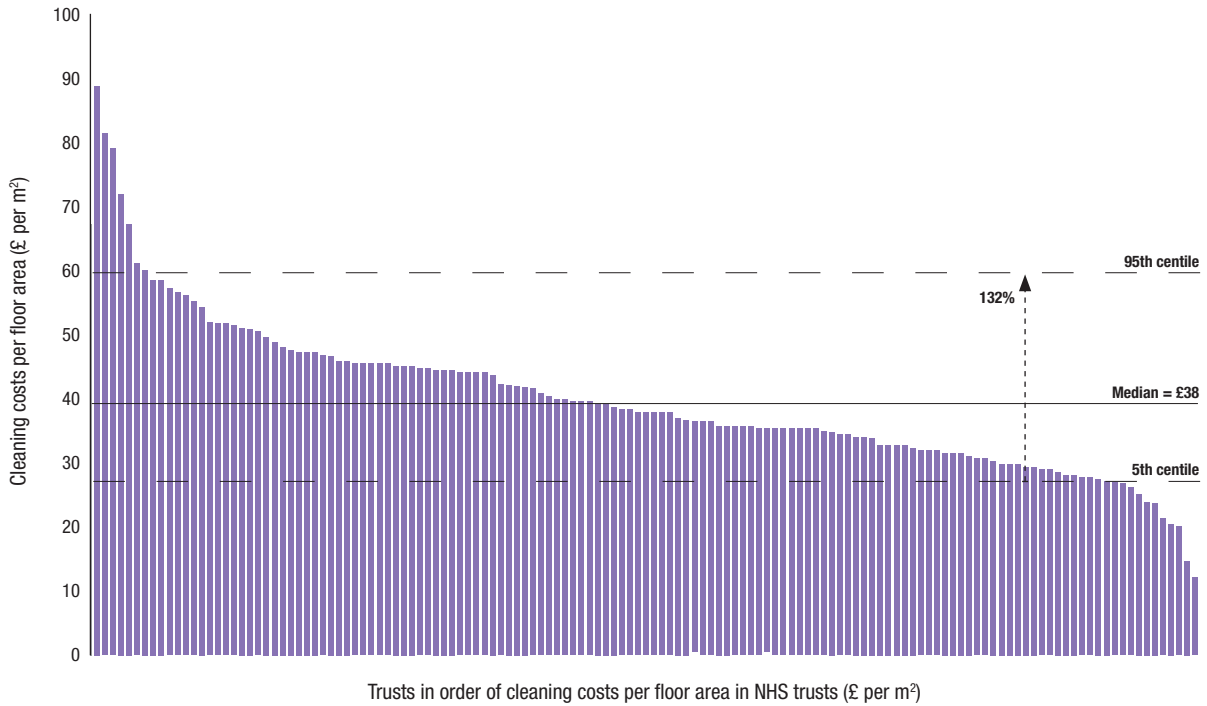


Figure 3.7 – A distribution of cleaning costs per floor area (m²). The most expensive trusts spend around 2.3 times more on cleaning costs per m² than the least expensive trusts⁵²

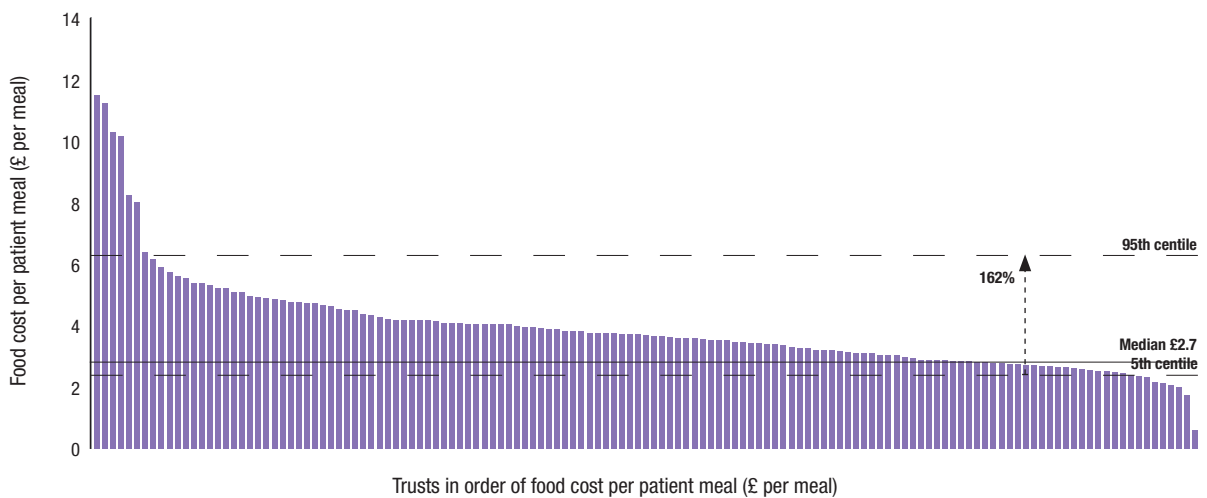


Figure 3.8 – A distribution of food costs per patient meal. The most expensive trusts spend around 2.6 times more on food cost per patient meal than the least expensive trusts. There is no correlation observed between food cost per patient meal and food quality⁵³

⁵² Source: 2014/15 Estates Return Information Collection

⁵³ 2014/15 Estates Return Information Collection

Based on the work we have developed so far, we recommend all trusts should operate at or above the average benchmarks for all aspects of the operational management of the estates and facilities function by April 2017, with NHS Improvement setting the levels by April 2016. Over the last 12 months we have collected a number of case studies that demonstrate good practice and provide trusts with a resource to help them achieve these benchmarks. We have set up an estates and facilities portal which contains these case studies to provide a platform for sharing good practice across the NHS.



High quality catering at Royal Brompton

The trust ethos is that patients deserve good, nutritious food to make their stay pleasant and to aid their recovery - nutrition, quality and providing good value for money are key considerations. The trust procures 20% of their food from local or organic sources - by keeping purchasing locally and seasonally and by going directly to the producer or farmer, costs are lower.

The trust has helped reduce their carbon footprint - deliveries have been reduced to three times a week instead of five or six. Two suppliers now use bio-diesel by converting old vegetable oil for their vehicles.

HRH The Prince of Wales praised the hospital's commitment to providing patients and staff with top quality food when he attended a seminar organised by the Soil Association. Patients continue to rate the hospital's food highly and waste is kept to a minimum.



Ward pantry stocks at Mid Yorkshire

The trust installed cupboard locks to restrict access to pantry stocks out of hours after noticing that provisions were depleting faster than expected. Ward Housekeepers became responsible for managing stocks and keeping the cupboards locked.

With a small investment of £1k, the trust has significantly reduced the food and drink items consumed out of hours and at weekends, saving the trust £70k each year.



Over-ordering food

Some trusts have fallen into the habit of over-ordering meals to make sure that there was sufficient choice for all patients. This meant that there was a high proportion of uneaten meals returned to the kitchen.

By focusing efforts to improve the ordering system, trusts were then able to ensure that the right number of meals were delivered to the right number of patients on the ward and every patient received the meal they ordered.

During our analysis of E&FM costs across the service we have found that trusts' returns to the Estates Returns Information Collection (ERIC) database are not as accurate as they could be, so we recommend trust chief executives and finance directors improve the governance and assurance of data returns in time for the 2015-16 returns due in July 2016.

To bring all of this together we also recommend every trust has a strategic estates and facilities plan in place, including in the short term, a cost reduction plan for 2016-17 based on the model hospital data and benchmarks, and in the longer term (by April 2017), a plan for investment and reconfiguration where appropriate for their whole estate, taking into account the trust's future service requirements.

Recommendation 6: All trusts estates and facilities departments should operate at or above the benchmarks for the operational management of their estates and facilities functions by April 2017 (as set by NHS Improvement by April 2016); with all trusts (where appropriate) having a plan to operate with a maximum of 35% of non-clinical floor space and 2.5% of unoccupied or under-used space by April 2017 and delivering this benchmark by April 2020, so that estates and facilities resources are used in a cost effective manner.

Delivered by:

- a) ensuring every trust has a strategic estates and facilities plan in place, including in the short term, a cost reduction plan for 2016-17 based on the benchmarks, and in the longer term (by April 2017), a plan for investment and reconfiguration where appropriate for their whole estate, taking into account the trust's future service requirements;
- b) investing in energy saving schemes such as LED lighting, combined heat and power units, and smart energy management systems, funded through a new Department of Health 'invest to save energy efficiency fund' set up by April 2017, working in partnership with Salix (who provide interest free capital loans) and other partners, to help trusts deliver the opportunities for reduced energy consumption;
- c) HSCIC and trusts should ensure better data accuracy by improving the governance and assurance of the ERIC data in time for the 2015-16 returns due in July 2016 with trust Finance Directors ensuring the financial ledger and ERIC reported costs are aligned by July 2016; and,
- d) ensuring estates and facilities costs are embedded into trusts' patient costing and service line reporting systems, which will be monitored by NHS Improvement.

Corporate and administration (back-office) costs

NHS acute trusts attribute around £4.3bn of workforce spend to corporate back-office (corporate) and operational administration (admin) costs, of which corporate costs are around £2bn and administration £2.3bn. This incorporates 137,100 budgeted full time equivalent (FTE) employees, of which 53,500 are corporate and 83,600 administration.

At a high-level we found inexplicable variation in corporate and administration costs across trusts ranging from 6%-11% (with a mean of 8%) spend of trust income (see figure 3.9) and using the WAU (see figure 3.10). Given this, we estimate the range of savings opportunity across the NHS providers to be at least £300m of the £4.3bn spend (8-10%), if all trusts operated at 7% of their income. We also found that, broadly, the range of variation remained the same regardless of the type and size of the organisation across both corporate and administration costs.

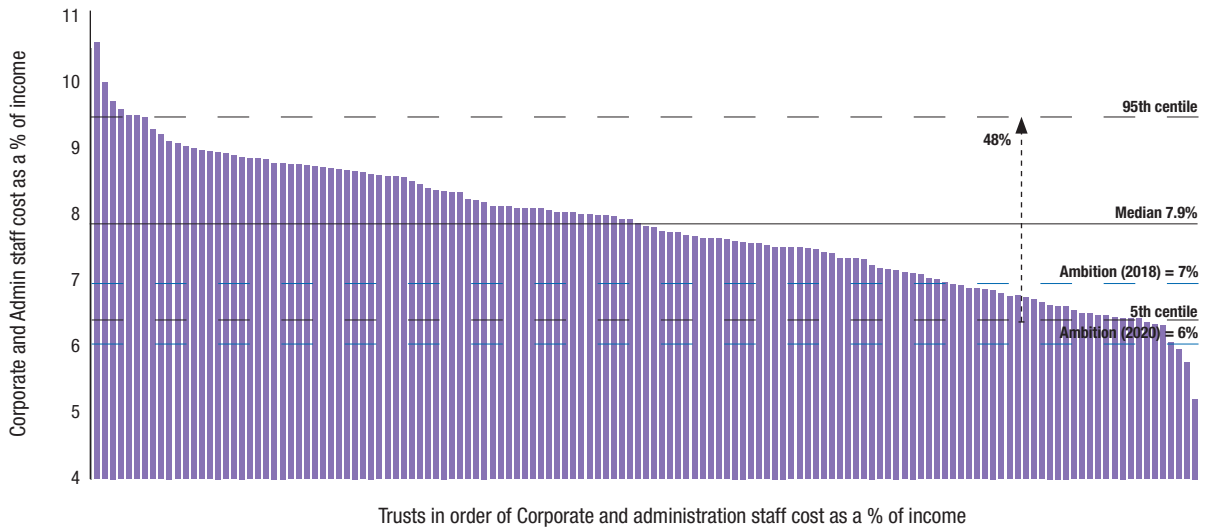


Figure 3.9 – A distribution of administrative and corporate staff cost as a % of income. The most expensive trusts spend around 1.5 times more on administrative and corporate staff as a % of income than the least expensive⁵⁴

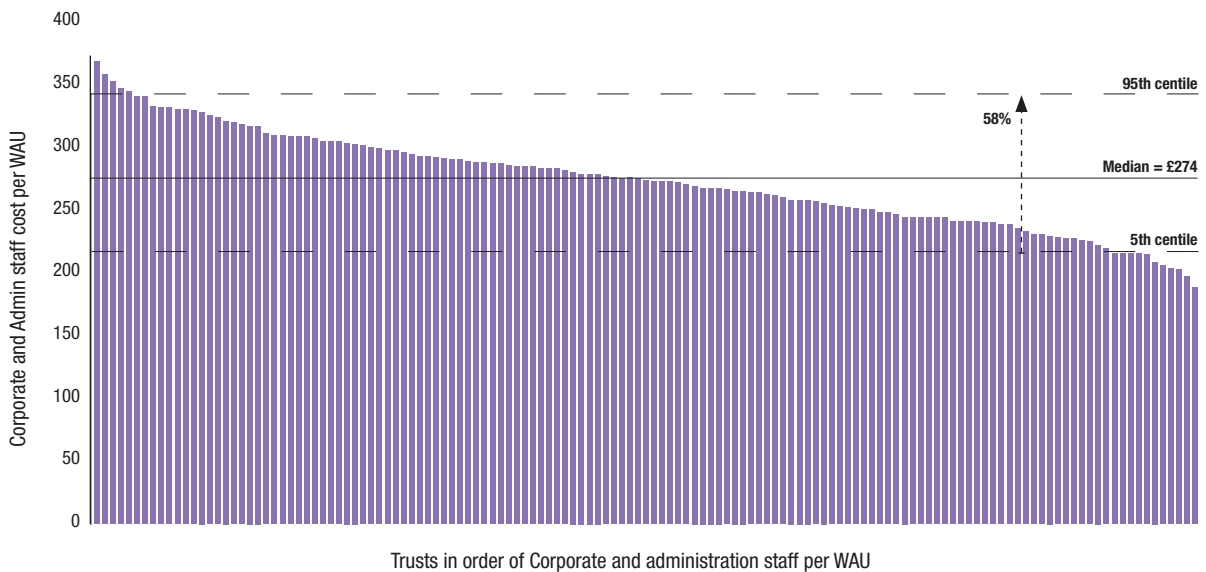


Figure 3.10 – A distribution of administrative and corporate staff cost per WAU. The most expensive trusts spend around 1.6 times more on administrative and corporate staff per WAU than the least expensive trusts⁵⁵

Separating corporate and administration, we found the range to be between 1-6% and 3-8% respectively, highlighting the opportunity for savings varies from trust to trust. We have developed further benchmarks to help trusts understand their corporate and administrative costs, for example we examined the split between managers and staff and found that on average trusts are operating with 4.1 staff per manager among corporate staff and 16.9 staff per manager among

⁵⁴ source: Administrative and Corporate Staff costs: total ESR staff costs for 2014/15 Income data: 2014/15 trust consolidated accounts

definition: Cost of all staff coded to corporate services, administration and estates in 2014/15

⁵⁵ source: total ESR staff costs for 2014/15 definiton: Cost of all staff coded to corporate services, administration and estates in 2014/15

administration staff, with the variation across the NHS ranging from below 3.5 to 8.5 and 5.4 to above 25 respectively. We also looked at clinical to administration staff ratios and found that on average there are 3.7 clinical staff (medics and nursing staff) per admin FTE, and again there was significant variation from 2.3 to 7.9.

In relation to corporate costs we know from other sectors, including some local authorities, savings of 20-25% are possible through establishment and proper use of shared services. In the context of the NHS, this would suggest £375m could be saved if trusts commit to shared services more rigorously. Work carried out by NHS Shared Business Services (SBS) estimated that £100m alone could be saved by moving some of the transactional components of the corporate back-office function into a shared service model across the service, but much greater savings could be realised through system integration.

As yet the NHS has failed to fully capture the benefits of scale consistently; however, we did uncover some examples of good practice. For example, in relation to payroll services, Northumbria have formed a shared payroll function providing services to over 40 clients including a number of NHS trusts. Growing the service to this scale has enabled them to achieve a cost per payslip approximately 26% below the national average⁵⁶.

In relation to administration, some organisations have transformed parts of their administrative function to establish a call centre model to provide patients with improved access and reducing costs through economies of scale. Another small cohort of trusts have developed, or are developing, patient portals that allow the patient to directly manage their own bookings which enables administrative cost reductions.

Given all of the above we think 8-10% saving on current costs is achievable for those trusts that have not examined their corporate and administration costs closely, and even those that have, there are even greater opportunities for more savings if they were to commit to shared service models more rigorously. We have observed from international hospital chains that mandated shared services can lead to huge savings for the group. Presently in the NHS, the use of such services has been optional and market-driven. A more rigorous approach would involve trusts routinely testing their existing services against proposed national solutions and where comparison highlights savings of 5% or more, then a stronger commitment should be made to the solution.

We therefore recommend where trusts' corporate/administration workforce costs are above 7% of their income they should submit a plan for reducing it to NHS Improvement by 1st April 2016. In doing so, we would expect trusts to compare their functions and services against a national set of benchmarks we are developing for April 2016 (as part of the model hospital) for the key functions of HR, Finance, IM&T, and Procurement and this should include plans to commit to national shared service models.

⁵⁶ Source?



Northumbria Healthcare NHS Foundation Trust

Northumbria Healthcare NHS Foundation Trust has established a subsidiary payroll services function, NHS Payroll Services. This has been a successful collaborative way of providing lower cost and higher quality payroll services, both to the trust and to a wide range of NHS organisations.

NHS Payroll Services provide a full range of payroll and pension services to over forty NHS organisations, including acute, community and mental health trusts as well as social enterprises, clinical commissioning groups and GP practices.

In addition to reducing costs by approximately 26% on average, NHS Payroll Services has been able to deliver a high quality service, with an accuracy rate of 99.98% across the 800,000 transactions made every year, leading to a 100% client retention rate.

Recommendation 7: All trusts corporate and administration functions should rationalise to ensure their costs do not exceed 7% of their income by April 2018 and 6% of their income by 2020 (or have plans in place for shared service consolidation with, or outsourcing to, other providers by January 2017), so that resources are used in a cost effective manner.

Delivered by:

- a) testing their existing services against shared service solutions and where comparison highlights savings of 5% or more, these savings should be delivered; and,
- b) trusts submitting a plan to NHS Improvement by October 2016 if their corporate/ administration workforce costs are above 7% of their income for the financial year 2015/16, including comparing their functions and services against a national set of benchmarks that NHS Improvement are developing for July 2016 for the key functions of HR, Finance, IM&T, and Procurement with plans to commit to national shared service models.

4 Quality and efficiency across the patient pathway

Much has been said about the variation in quality across the NHS. Last year's Atlas of Variation published by Public Health England, NHS England and NHS Right Care⁵⁷, highlighted the unwarranted variation in the quality of healthcare across the system. The outcomes of CQC's inspections⁵⁸ have also highlighted this variation. Less, if anything, has been said about the relationship between quality care, high productivity and efficient use of resources in the NHS, and yet we see the best performing hospitals around the world not only provide high quality care but do so with a keen eye on productivity and a tightened grip on resources.

There is strong international evidence that good hospital management practices deliver both improved outcomes and productivity⁵⁹. It seems every country has variation, but the best performing hospitals are typified by strong leadership and management of both quality and efficiency. There is less evidence of the link between quality and efficiency at a system or local health economy level and yet we know when one part of the patient pathway underperforms it can have a devastating effect on the others – such as with delayed transfers of care.

In the NHS, whilst we have seen improvements in the quality of care, the relative productivity of individual hospitals has varied little over the past five years. 81% of those that were above or below average in 2009-10 stayed above or below average in 2013-14⁶⁰. That said, a more positive picture emerges when changes in the provision of specific areas of care are analysed, for example, increases in generic prescribing rates in primary care from 20% in 1976 to 84% in 2013 saved the NHS around £7.1 billion and allowed more than 490 million more items to be prescribed to patients⁶¹. Similarly, reductions in hospital length of stay between 1998-99 and 2013-14 enabled more patients to be treated and avoided the need to provide 10,000 hospital beds⁶². A rise in the rates of day surgery over the same period also produced savings of around £2 billion, enabling 1.3 million more elective procedures to be carried out. All of these examples prove that improved efficiency can have a significant impact on the quality of care provided⁶³.

During our work we came across a number of trusts that had clearly got a stronger grip on the management of their resources than their peers and a number of them were able to achieve both high quality CQC ratings and efficient ATC scores, indicating that high quality care and efficient care are not mutually exclusive.

Measuring quality and efficiency across the care pathway

To optimise quality and efficiency across the entire care pathway, data and information on performance is critical. From what we have seen, the different partners in the health economy look at care through their own lenses, interpreting data for their own ends. Rarely, if ever, is data in one place and agreed by all parties. There is a need to create a single version of the truth – and we discuss this in greater detail later in this report.

⁵⁷ <http://www.rightcare.nhs.uk/index.php/nhs-atlas>

⁵⁸ <http://www.cqc.org.uk/>

⁵⁹ Management in Healthcare: Why good practice really matters, LSE, (2009)

⁶⁰ Hospitals finances & productivity: In a critical condition? The Health Foundation April 2015

⁶¹ King's Fund report *Improving NHS Productivity* in 2012

⁶² King's Fund report *Improving NHS Productivity* in 2012

⁶³ King's Fund report *Improving NHS Productivity* in 2012

We have already started this process, building on the *Getting it Right First Time* initiative. This work has pulled together a number of data sources that combine to provide a picture of the elective orthopaedics patient pathway (see figure 4.1). This is the first time quality, productivity and efficiency performance metrics have been pulled together into a single performance dashboard. Many of the trusts we spoke to have found this information invaluable; prompting productive conversations between clinicians and management to tackle unwarranted variation. The data has also prompted discussions across local health economies and highlighted the improved quality and efficiency that comes with ring-fenced beds and dedicated elective facilities.

Wound infection

Deep wound infection rates on primary hip and knee replacements vary between 0.5% and 4% with one trust running at 15% for a short period. Three trusts cited examples of infection rates escalating from 0.5% to 4% following the loss of ring fenced elective orthopaedic beds. Deep wound infection is traumatic and devastating for the individual patients, and are estimated conservatively to cost the NHS an additional £50k per patient (studies have quoted a range of between £50k and £100k). If a cost of £100k per patient is accepted then this equates to an extra £1,000 for each arthroplasty procedure to cover the costs of readmission, reoperation and medication for infected patients. At the national level trusts achieving a 1% deep infection rate would equate to transforming the lives of 6,000 patients per year and save the NHS £300m per year – driving a saving of £1.5 billion over five years.

Procurement

Many orthopaedic teams we met were unaware of the profile of their prosthetic purchasing – evidence base or relative cost. This is particularly true for their loan kit expenditure, rates of cemented vs un-cemented hip fixation, and the amount spent on loan kit or prosthesis selection. The deep dives evidenced an average spend of £200,000 per annum on loan kits and a reduction of 90% within the next two years would generate a saving of £108m over the next five years. A potential saving of £40m per year has been identified if trusts move to the best prices available for prostheses. Moving all trusts to a position whereby approximately 75% of patients over 65 receive a cemented fixation would increase the number of cemented fixations by 11,000 per annum leading to a saving of approximately £16m per annum. Then the consequent savings from reduced revision rates and also a reduction in the numbers of more complex revisions following fracture would also begin to accrue over time.

Litigation

GIRFT also found that litigation is rising rapidly. The team are now studying litigation claims to see what could be done to reduce these costs but we think there is the potential to save £50m.

Figure 4.1 – Unwarranted variation: findings from Getting it Right First Time analysis of trauma and orthopaedics

We have already started work to build on the GIRFT approach for other surgical specialties, including: spinal, general surgery, urology and renal, vascular, ear nose and throat, cardiothoracic, ophthalmology, oral and maxillofacial, neurosurgery, paediatric surgery, and obstetrics and gynaecology. We aim to collate data for all of these specialties as part of the model hospital and recommend extending this work to non-surgical specialities starting with cardiology and intensive care medicine.

We are also aware that other organisations, including NHS England, are looking at various parts of specific care pathways. Indeed, there are currently multiple programmes in operation across the landscape, designed to identify and drive improvements in areas ranging from demand management and commissioning, to provider efficiency, productivity and outcomes. These are at various stages of evolution, have differing scope and do not cover all aspects of the pathway, leading to potential gaps, confusion and duplication.

There is therefore an opportunity to build on the proven approach and successful architecture developed to deliver the clinical quality and efficiency programme, using the GIRFT methodology and model hospital to provide a robust and systematic evaluation of the full pathway (Figure 4.2), and to develop national recommendations and policy across all clinical specialties that can be implemented and managed effectively through robust, system-wide performance management. This would mandate the bringing together of all programmes currently in operation in this landscape under one governance structure within a national clinical quality, efficiency and productivity unit.

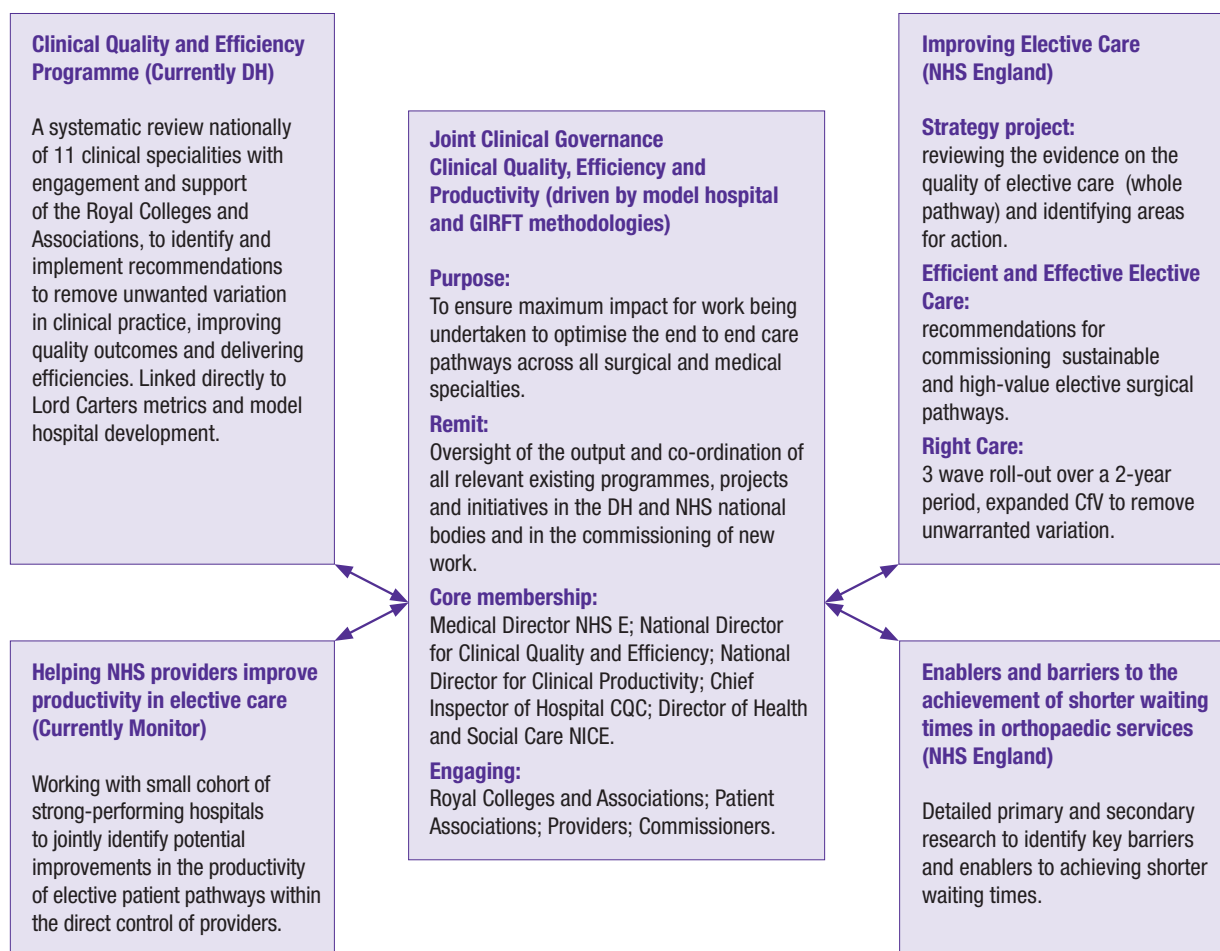


Figure 4.2 – Bringing together a system approach to elective care pathways

The proposed model, supported by clinical stakeholders, would join up the whole pathway of care and work collaboratively to evaluate everything from demand management and commissioning, clinical management and prescribing, to post discharge and ongoing community-based care. Practice and quality outcomes would be assessed to ensure these are not adversely affected by any changes in commissioning, procurement, practice, and local service architecture.

It is therefore recommended that NHS Improvement establishes such a unit to be led by the National Clinical Directors for Quality and Productivity (respectively: Professors Tim Briggs and Tim Evans) who have already started this work. The unit should cover the full extent of the care pathway, ensuring consistency by supporting both Commissioners and Providers with relevant information. To deliver this effectively all clinical improvement programmes and resources should be focussed within this unit to bring accountability and remove any duplication.

This model supported by clinical stakeholders would join up the whole pathway of care, working collaboratively to consider everything from demand management and commissioning, through prescribing, to post discharge and ongoing community based care, looking at practice and quality outcomes, to ensure these are not adversely affected by any changes in commissioning, procurement, practice, and local service architecture.

The ability to bring all clinical programmes into one governance model would provide a platform to use this approach to focus on a total pathway. This enables key recommendations and changes to be considered holistically, and expands the opportunities to deliver greater benefits and efficiencies at pace whilst eliminating potential duplication and ensuring all aspects of the pathway are considered strategically and operationally, ensuring that recommendations and changes are complimentary and not detrimental to other aspects of the pathway.

Enabling digital technology and information systems

As stated earlier, data and information is critical for managing quality and efficiency performance across the care pathway. The GIRFT initiative has highlighted the enormous effort that is needed to compile data in one place, and even then it is a snapshot in time. To truly performance manage quality and efficiency on a regular basis, seamless real-time data is needed, which in turn requires investment in inter-operable information technology.

Data, if it exists, currently resides in independent pockets, sometimes guarded by data owners. This cannot continue. The best performing hospital systems around the world have real-time data at their fingertips enabling them to make decisions on a daily, weekly, monthly basis to improve performance⁶⁴. It's long been said that the NHS, as a national system, has a huge opportunity to join up this data across boundaries but we continue to struggle to make this happen.

⁶⁴ International hospital chains such as Tenet Healthcare operate Lean Daily Management systems

Recommendation 8: NHS Improvement and NHS England should establish joint clinical governance by April 2016 to set standards of best practice for all specialties, which will analyse and produce assessments of clinical variation, so that unwarranted variation is reduced, quality outcomes improve, the performance of specialist medical teams is assessed according to how well they meet the needs of patients and efficiency and productivity increase along the entire care pathway.

Delivered by:

- a) bringing into this governance and implementing the three-year clinically-led Quality and Efficiency project (GIRFT), Right Care and similar programs currently operated by the Department of Health, NHS England and Monitor by July 2016;
- b) NHS Improvement establishing an interactive, online portal that enables comprehensive access to this intelligence for use by providers and commissioners, to enable them to adjust their practices and clinical pathways to reduce unwarranted variation;
- c) NHS Improvement extending the scope of these programs to cover all clinical specialties including surgical, medical and dental, that take responsibility for the end to end pathway as part of an accelerated and extended clinical quality, efficiency and productivity programme by July 2016;
- d) NHS Improvement establishing national registries for all clinical and medical specialities where one does not presently exist by October 2016;
- e) NHS Improvement bringing all existing clinical registries and data source feeds into its new structure in order to establish National and Local dashboards for each clinical specialty, to enable real time assessment of clinical performance, to identify and drive the required changes by July 2016;
- f) the innovative use of system-wide information and communications technologies approved by HSCIC that support the clinical processes, with the aim of improving the quality, efficiency and safety of the care delivered. Such systems can also empower patients to be effective members of their own care teams, thus improving their experience; and,
- g) Trust boards being made accountable and mandated to review the dashboards for three clinical or medical specialties each month, to benchmark themselves against the established metrics and best practice, and routinely track progress by October 2016.

In the November 2015 spending plan for the NHS⁶⁵, the government said it will “invest £1 billion in new technology over the next 5 years to deliver better connected services for patients and ensure that doctors and nurses have the information they need at their fingertips; by September 2018, 80% of clinicians in primary, urgent and emergency care will have digital access to key patient information; and by 2020 integrated care records will give every health and care professional concerned with an individual’s care the information they need to provide safe and prompt care”. It is critical some of this investment is made in systems that underpin the collection of performance data on quality and efficiency, and that such systems are interoperable to allow the flow and

⁶⁵ <https://www.gov.uk/government/publications/spending-review-and-autumn-statement-2015-documents/spending-review-and-autumn-statement-2015>

visibility of information across the patient pathway, enabling healthcare leaders and managers to both identify good performance and address poor performance promptly.

Through our discussion with trusts we found many good examples of where trusts have embraced technology in this way, however it is inconsistent and rarely integrated.



The Nursing Informatics Team

The Nursing Informatics Team at University Hospitals Coventry & Warwickshire NHS Trust have developed an app for Care Contact Time data collection for all key clinical groups.

The programme was launched in October 2015, utilising the existing iPod technology they use for patient observations and bed side assessments. It aims to provide instant access to data showing staff contact with patients in the organisation.

The app is flexible to use with other clinical teams and provides the ability for wards to view full resources, including roles currently excluded (AHPs, Junior Medical Teams and Activity Coordinators). More importantly the app helps to improve patient experience and outcomes.



Optimising the non-patient supply chain at Guy's & St Thomas'

The trust identified significant hidden costs within the current purchase-to-pay process. The challenge faced by the trust and by many trusts is that the existing 'clunky' online ordering systems have a range of built-in inefficiencies. There are over-orders and errors due to various reasons including lack of good product detail, no link between the ordering system and the hospital's inventory and no transparent delivery charges and no delivery tracking.

The trust used the same technology used by some of the UK's largest retailers – real-time Amazon-style purchase-to-pay platform – that has a built-in catalogue and product information management solution.

This innovative procurement platform will enable the trust to deliver a further £3m (10%) annual cost reduction in targeted spend areas. It will provide a step-change in interoperability, transparency and visibility (especially track and trace) across the trust's end-to-end supply chain, and a major improvement in productivity and efficiency.

The NHS National Information Board's *digital roadmaps* are setting the direction for a paper-free NHS⁶⁶, but trusts need to better use the full functionality of their existing systems and/or invest in new modern systems to improve the access and accuracy of data they need to manage their performance. At the very least we think trusts should have the key systems for e-rostering, e-prescribing, patient-level costing and accounting, e-catalogue and inventory management, RFID systems where appropriate, and electronic health records, and that these systems should be integrated.

We also think trust boards should be made accountable for ensuring these systems are used to their full potential to provide the data and information they need to manage their organisations.

⁶⁶ <https://www.gov.uk/government/publications/personalised-health-and-care-2020>

But we know the NHS does not have a good track-record in implementing such systems, so we are recommending NHS Improvement take the lead by setting the standards for ‘meaningful use’ of such systems and incentivising trusts to achieve them. Furthermore, the Department of Health should make some of the Spending Review investment for IT available for trusts to meet these standards, with a suitable ‘meaningful use’ clause embedded in contracts.



Use of radio-frequency identification in Wolverhampton

The SafeHands programme uses real-time locating software (RTLS) to improve patient safety. It uses infra-red and radio-frequency technology to pinpoint patient, equipment and staff locations and movements across the hospital with accuracy at bed level and automates the auditing of staff-patient contact hours, acuity of patients, capacity management, and hand hygiene monitoring.

Tracker badges attach to people and equipment with information being fed into rules driven software to interpret real-time information. This data can trigger alerts, alarms and on-screen warnings to drive improvements in patient safety, reduce risk of cross-infection, speed up bed availability and improve hand hygiene compliance.

Uniquely, the system allows the trust to track staff to patient contact time, which can begin to help plan rotas and redeploy staff as patient acuity requires.



Electronic prescribing and medicines administration

Trusts that have mature, digital systems that provide electronic prescribing and medicines administration (EPMA), such as Cambridge, Royal Cornwall and University Hospital Birmingham, benefit from a range of clinical quality, patient safety and productivity improvements through wide scale EPMA implementation. Benefits include:

- a) supporting medicines optimisation – in relation to choice of the best medicines for the clinical condition, for the patient and for the NHS in terms of costs;
- b) integrating structured clinical decision support within the patient’s journey through the hospital;
- c) helping to reduce harm caused by Adverse Drug Events;
- d) improving access to information when required at the point of patient care;
- e) releasing medical, nursing and other clinical professionals from the current, paper-based processes; and
- f) delivering structured data via GS1, Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT) and other standards, to support clinical care, procurement, out-sourcing and patient care.

In order to deliver the National Information Board 2020 vision for personalised health and care, implementing full EPMA across the NHS is essential.

Recommendation 9: All trusts should have the key digital information systems in place, fully integrated and utilised by October 2018, and NHS Improvement should ensure this happens through the use of ‘meaningful use’ standards and incentives.

Delivered by:

- a) trusts having in place by October 2018, fully integrated and utilised e-rostering systems, e-prescribing systems, patient-level costing and accounting systems, e-catalogue and inventory systems for procurement, RFID systems where appropriate, and electronic health records;
- b) NHS Improvement setting the standards for ‘meaningful use’ of such systems and incentivising trusts to achieve them;
- c) DH to make some of the Spending Review investment for IT available for trusts to meet these standards, with a suitable ‘meaningful use’ clause embedded in contracts.



‘Meaningful Use’ in the US healthcare system

The American Recovery and Reinvestment Act of 2009 specified three main components of ‘meaningful use’: the use of a certified electronic health record (EHR) in a meaningful manner; the electronic exchange of health information to improve quality of health care; and the use of certified EHR technology to submit clinical quality and other measure. Simply put, ‘meaningful use’ means providers need to show they’re using certified EHR technology in ways that can be measured significantly in quality and in quantity.

If organisations and physicians do not adopt and successfully demonstrate meaningful use of such technology then there are financial penalties, such as a 1% downward adjustment in the Medicare physician fee schedule.

Patient pathway issues

Whilst our primary focus has been on helping trusts gain a tighter grip of their resources, nearly every trust we spoke to described the challenges they face with wider system issues. The first is the issue of delayed transfers of care and the second is collaboration, cooperation and economies of scale. Both are not only inhibiting trusts’ ability to improve performance but also result in sub-optimal quality and efficiency across the local health economy.

Delayed transfers of care

Achieving timely patient transfers to appropriate care settings is critical to patient flow along the care pathway. Many of the trusts we visited said that a significant proportion of beds were occupied by patients who were medically fit to be transferred to care settings more appropriate to their needs. Official statistics on delayed transfers of care show a recent increase to around 5,500 patients per day⁶⁷. However, information provided by trusts reveal that the problem could be much larger and we estimate that on any given day as many as 8,500 beds in acute trusts

⁶⁷ NHS England, <https://www.england.nhs.uk/>

are blocked with patients who are medically fit to be transferred⁶⁸. The cost of these delays to NHS providers could be around £900m per year⁶⁹.

These delays also have a knock-on effect resulting in cancellations of elective operations because of a lack of bed capacity, and work going out to the independent sector. NHS expenditure in the non-NHS sector has increased in recent years, and currently stands at over £11bn per annum⁷⁰ (see figure 4.3). Acute care makes up about £2bn of this cost and is rising in some key areas of elective care – the number of knee procedures being carried out in by independent hospitals has risen by 60% since 2011⁷¹. Our review has identified that the majority of purchased healthcare by acute providers is elective care.⁷² Delayed transfers in NHS trusts are a likely contributory factor to these increases.

	2014/15	2013/14	% Change	CQC score
	£m	£m		Good
NHS Providers - Acute	482	36	32%	Good
NHS Providers - Non Acute	297	280	6%	Outstanding
NHS England Group - CCGs	10,297	9,373	10%	Good
Totals	11,076	10,019	11%	Good

Figure 4.3 – A table highlighting the level of NHS expenditure in the non NHS sector

Of course it is not guaranteed that trusts will be able to increase activity if they solved the problem of delayed transfers. They would need to make decisions about whether they can fill the released capacity with more elective care, or cut their costs accordingly. However, the expected growth in elective activity should provide opportunities to increase efficiency in the current system rather than increase capacity elsewhere.

Trusts, and their local partners, are currently working within a system where the incentives and processes around transfers of care are not always clear and rarely fully aligned. Bureaucracy and confusion leads to delays for patients and adds cost to the system, clearly demonstrating how failure to look at quality and efficiency across the patient pathway impacts on the organisations in the system. This is why we are recommending that DH, NHS England and NHS Improvement should work with local government to provide a strategy to help trusts ensure patient pathway runs smoothly, with the measures and incentives in the right place.

During our discussions we found examples of where acute trusts have taken matters into their own hands by setting up their own arrangements for step-down care, or have entered into partnership with local authorities or the independent sector. The national strategy should encourage trusts to do more of this to find rapid local solutions to the problem of delayed transfers.

⁶⁸ Calculated from information submitted by 96 (check) acute providers. They were asked to estimate the number of beds occupied at any point in time by patients that would be more appropriately cared for in an alternative setting.

⁶⁹ Estimated cost of £300/bed day calculated from Monitor & TDA, Quarterly report on the performance of the NHS foundation trusts and NHS trusts: 6 months ended 30 September 2015, November 2015.

⁷⁰ 2014-15 DH annual accounts.

⁷¹ National Joint Registry, <http://www.njrcentre.org.uk/>

⁷² 41 acute trusts were asked for the breakdown of healthcare purchased from non-NHS bodies in their 2014/15 annual accounts. These trusts reported 74% consisted of elective care and 26% was renal services.



Reducing Delayed Transfers of Care

Some trusts are looking to dedicated support and brokerage to reduce delayed transfers of care. These services work personally with families and beyond the traditional care hours model to support people to move to a care home of their choice, step-down care or back into their own homes. For example CHS Healthcare has worked with the Dudley Group of Hospitals to halve the days spent in hospital by fit to discharge patients saving 995 bed days over four months, at a net benefit of £170,000.



Reducing Delayed Transfers of Care

The Mid Yorkshire Hospitals NHS Trust are one of the cohort trusts that have been working with the Programme since it began. As part of their ongoing programme of improvement work, guided by the principles of the Programme, the trust has developed an approach to addressing delays in accessing non-acute care for medically optimised patients on their wards. One of the challenges that the trust faces in moving these patients on to a lower intensity care setting or to their own homes with an appropriate package of care is the absence of sufficient community or intermediary care in the local health economy. The trust estimate there to be eighty patients per day who are medically optimised and no longer need to be acutely managed who are therefore receiving a higher level of caring hours per patient day than is necessary for their level of acuity.

To support the process of moving medically optimised patients to the most appropriate setting for their clinical and care needs, the trust established a forty-two bedded unit at Pontefract. This facility is specifically staffed to operate as a less intensive care setting than the acute wards meaning that patients receive more appropriate care focussed on therapy and rehabilitation.

The facility opened in November 2015, and the trust saw a reduction in length of stay on acute wards which positively impacted on the organisation's flow of patients and throughput. The lower staffing ratios required on the unit at Pontefract mean that the cost per bed day per patient is lower than on an acute ward. The trust is also in the process of investigating other options which are not bed-based, such as mobile intermediate care teams to tackle other delays to the flow of patients to the most appropriate facility for their needs and will pilot these in the spring.

Recommendation 10: DH, NHS England and NHS Improvement, working with local government representatives, to provide a strategy for trusts to ensure that patient care is focussed equally upon their recovery and how they can leave acute hospitals beds, or transfer to a suitable step down facility as soon as their clinical needs allow so they are cared for in the appropriate setting for themselves, their families and their carers.

Delivered by:

- a) identifying how trusts can best cooperate tactically with other health and social care partners within their local health economy on a daily cycle of early and proactive transfer out of hospital;
- b) enabling trusts to optimise their IT systems to allow the capture of patients data across a variety of care settings – e.g. acute, community, and care homes;
- c) identifying the barriers, such as assessment and financial incentives, that prevent patients from being transferred from hospitals; and,
- d) developing a model and guidance on when and how to provide new alternative capacity (such as sub-acute step-down facilities) outside of acute hospitals.

Collaboration, cooperation and economies of scale

The second system-wide issue is economy of scale. We have said elsewhere in this report that there has been a systematic failure to capture the benefits of scale; this is particularly true in the delivery of clinical services. In our discussions with trusts, the majority recognised the quality and efficiency improvements open to them if they could change the way their services were delivered so they could better meet the clinical needs of their local community. However, these are rarely realised owing to the considerable time and effort needed to present and explain the benefits to their local partners and communities.

Again we have seen good examples where trusts and their partners have grasped the nettle and collaborated to coordinate services across the local health economy.

The Vanguards and Success Regime initiatives are helping in this respect, albeit the pace needs to be accelerated, but all trusts should be enabled to pursue these opportunities routinely and so we are recommending trusts should work with NHS England and NHS Improvement to unlock them.



Acute trusts, Greater Manchester

The Greater Manchester health economy costs £6bn and the eight acute trusts in the area have a combined Reference Cost expenditure of more than £3bn.

With the guiding hand of Sir Howard Bernstein we were impressed by the willingness to look at quality and efficiency across the whole of the Manchester area. Trusts are collaborating with each other and other organisations in the local health economy to identify where they can deliver services using different configurations. We estimate the total ATC opportunity for these trusts is £335million and we are already seeing signs of progress with the establishment workstreams in the following areas; pathology and radiology, capital and estates, pharmacy, back office and procurement. We think much can be learned from Manchester's approach and would encourage other health economies to consider similar approaches.

Recommendation 11: Trust boards to work with NHS Improvement and NHS England to identify where there are quality and efficiency opportunities for better collaboration and coordination of their clinical services across their local health economies, so that they can better meet the clinical needs of the local community.

Delivered by:

- a) trusts completing the area plans as per the 2016-17 planning guidance; and,
- b) successful implementation of the New Care Models, Vanguard and Success Regime programmes, and trusts not involved in these programmes learning, adapting and implementing the findings of these programmes as they develop.

5 Creating the model hospital and an integrated performance framework

In June we said that many hospitals would welcome detailed guidance on what good looks like, so we committed to developing a model hospital to meet this request. We also committed to developing and refining a set of metrics for measuring high-level efficiency in hospitals. Since June we have continued to develop these initiatives to turn them into a set of tools that not only help and support trusts in their quest for improved productivity and efficiency, but could also become the basis for a single integrated performance framework for the NHS.

Highlighting variation requires the right metrics. Many of the metrics we have developed are introduced earlier in this report. Trusts need to use all of these metrics to track their own progress in achieving their efficiency opportunity. In this section we describe the set of metrics we have developed to estimate and analyse the savings opportunity for each acute trust. We also describe the development of the model hospital and how we envisage this supporting an integrated performance improvement framework for the NHS.

Creating a set of metrics for measuring efficiency

A key recommendation in our interim report was the need for a set of metrics that could serve as a barometer for hospitals to compare themselves with their peers, taking into account the complexity of care provided, and more importantly provide a baseline for future improvement.

In terms of measuring efficiency, an important step is to have a common currency to measure hospital output. For example the Australian health system uses the National Weighted Activity Unit and the US system uses Adjusted Admissions. To this end, we have developed the weighted activity unit (WAU), a measure of activity where one WAU is a unit of hospital activity equivalent to an average elective inpatient stay⁷³.

We have looked at several different ways to measure productivity and efficiency and to estimate the potential to raise productivity. These are shown in the figure 5.1 in three groups, the ATC, the cost per WAU and area specific productivity metrics⁷⁴. None of these measures are perfect, and as indicated in the diagram, they will need to be used in combination to understand trust level productivity overall and to track improvements over time.

There are specific issues with inaccuracies in the data used to calculate these measures as reported by individual trusts, whether it is allocation of staff to areas of work in the national Electronic Staff Record, returns to the Estates Returns Information Collection (ERIC) or compilation of reference costs. However, whichever measure we use the results tend to be comparable so we are confident they can be the base for future performance reporting. By encouraging trusts to make better use of these data collections, we hope this work will lead to improved accuracy and quality. We cannot stress strongly enough how important it is for trusts to report data accurately, particularly as this data will be used for a more open and integrated approach to performance management across the NHS.

⁷³ The number of WAUs within each trust is calculated by adding together all the different types of activity weighted according to the national average cost of providing that activity. All types of activity counted in reference costs are included, for example non-elective work, outpatients and diagnostic tests as well as elective admissions.

⁷⁴ A trust's output in terms of WAUs can be compared to the amount spent by the trust on providing that quantity of clinical activity, to calculate the total cost per WAU. This can be used as a measure of the efficiency for each trust.

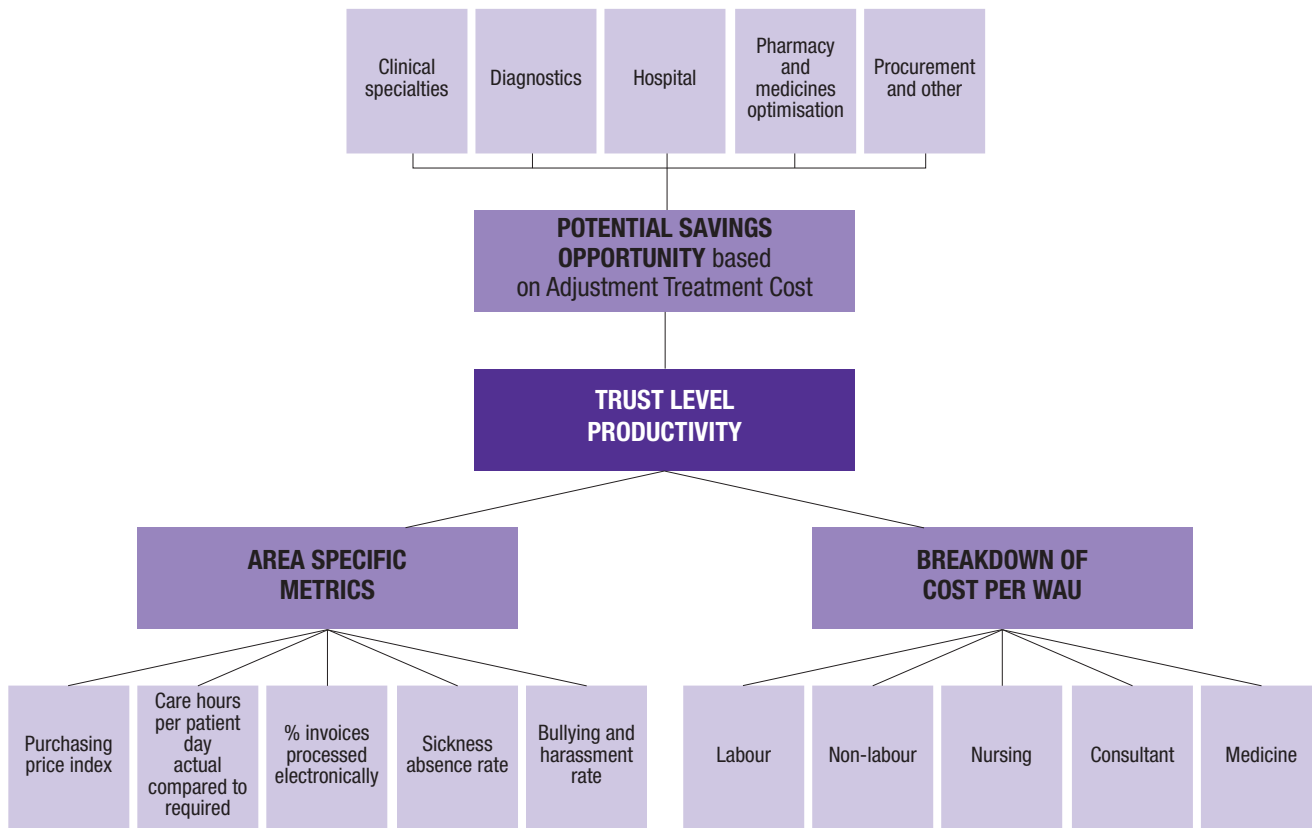


Figure 5.1– Three ways to measure productivity and efficiency, and to estimate the potential to raise productivity

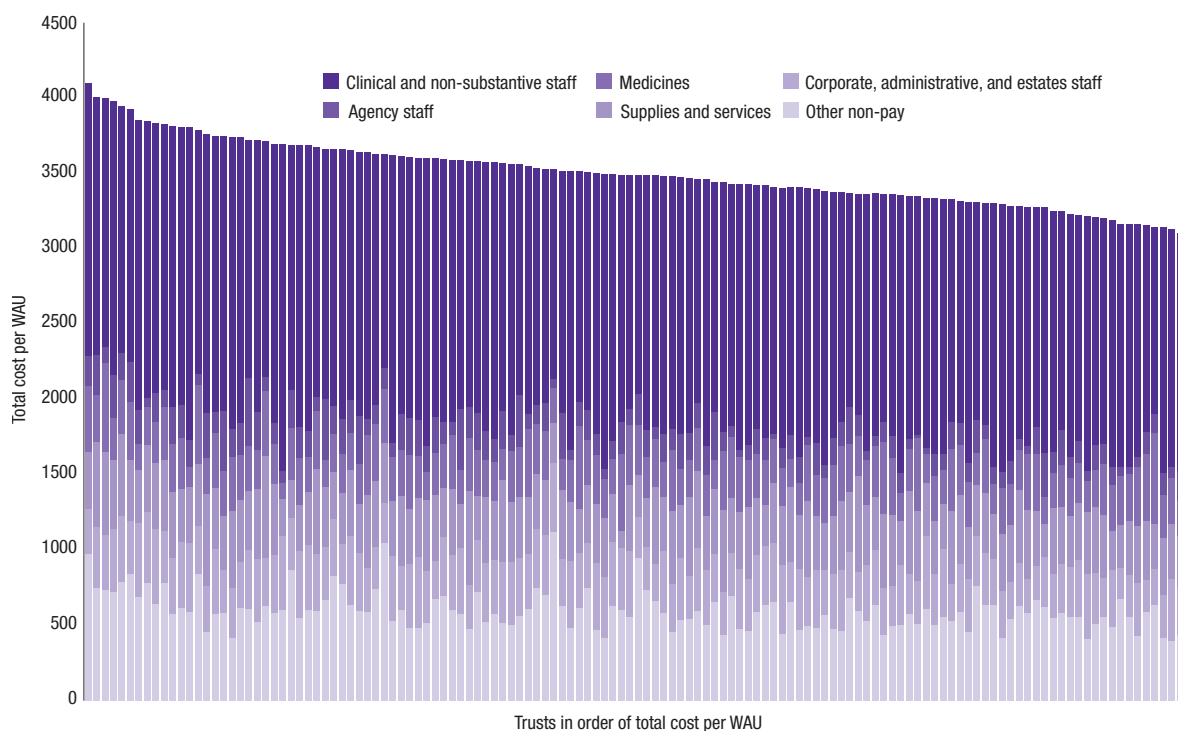


Figure 5.2 – A distribution of the cost per WAU breakdown by trust⁷⁵

⁷⁵ source: 2014/15 Reference costs, ESR, and consolidated accounts

The adjusted treatment cost (ATC) metric and the cost per WAU metric provide two lenses on the overall efficiency of a hospital.⁷⁶ The cost per WAU can be broken down into the different elements of cost. Figure 5.2 shows the distribution of total cost per WAU across all acute non-specialist trusts and provides an illustration of how this can be broken down into areas of spend to allow trusts to identify where their savings opportunities lie. Figure 5.3 brings home what we found in that there are always trusts that have done excellently in some areas, but very few trusts excel at everything.

The ATC was used to calculate the potential saving opportunity for every non-specialist acute trust, and these estimates have provided the starting point for discussions about the savings they will be able to make over the next three years. To estimate the potential savings opportunity for each trust we benchmarked trusts' reference cost expenditure relative to the mean for each HRG. All HRGs were allocated to 1,608 different calculation points. We calculated the difference between the actual cost and the expected (national average) cost for each calculation point. If savings exceeded 50% of the mean they were capped at 50%. Where performance was better than the mean this was excluded from the calculation. Summing across all non-specialist acute trusts our total estimated savings potential via this method was £4.8bn.

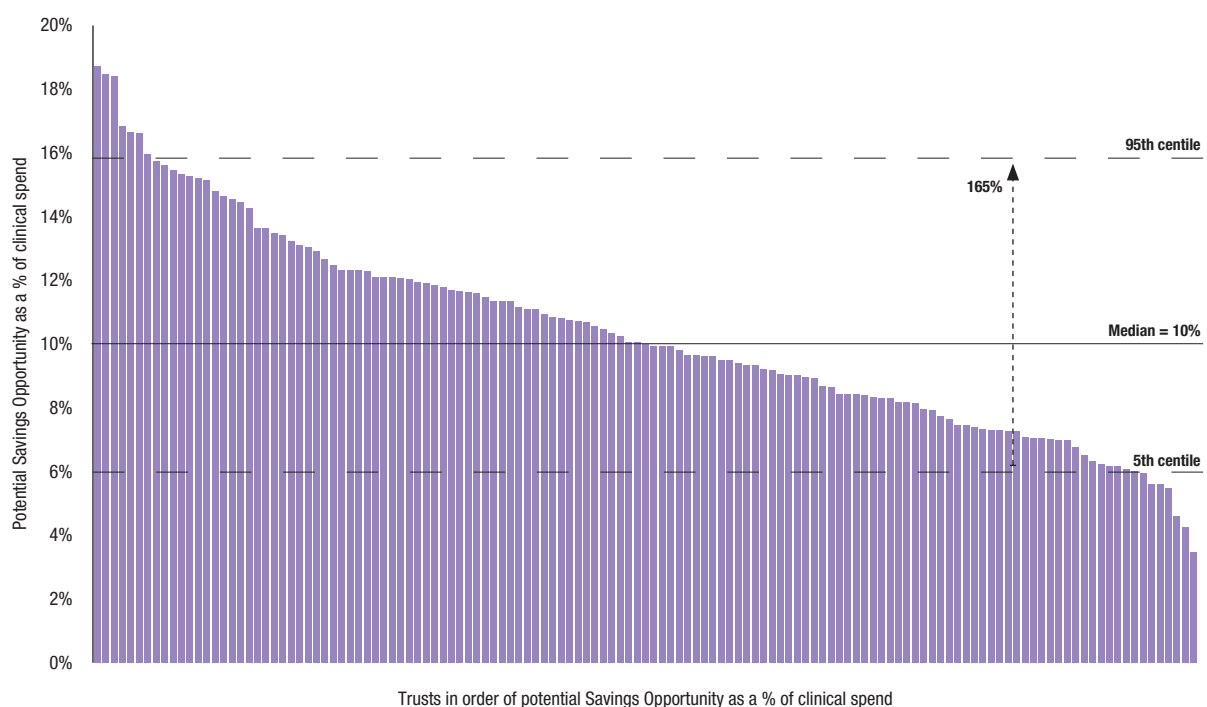


Figure 5.3 – A distribution of the potential savings opportunity by trust. The least productive trusts have a potential savings opportunity around 2.6 times higher than the most productive trusts

We are confident these measures provide a good starting point of each trusts' relative efficiency performance so we recommend NHS Improvement calculate the ATC, total cost per WAU and develop the broader set of productivity metrics we have outlined in this report for all acute trusts

⁷⁶ The cost per WAU and the Adjusted Treatment Cost (ATC) are two equivalent measures of productivity and are calculated in much the same way. The cost per WAU represents the cost of providing £3,500 worth of healthcare at a given trust, whereas the ATC represents the cost of providing £1 worth of healthcare in that trust. Trusts with a high total cost per WAU (>£3,500) will have an ATC index over £1, and trusts with a low total cost per WAU (<£3,500) will have an ATC index less than £1).

annually starting in April 2016. In addition the WAU should be used as the key unit of activity for tracking cost and efficiency across NHS acute trusts by central bodies including NHS England and NHS Improvement from April 2016. The utility of this will be greatly enhanced as trusts' improve the quality of their data.

Tracking progress on improving productivity in year will be vital in order to gain assurance that productivity improvements are being made. Therefore analysts from the Department of Health and NHS Improvement should develop a mechanism to track total cost per WAU for all 136 non-specialist acute trusts at regular intervals in year, for example quarterly. This will allow good progress in achieving productivity gains to be recognised and slow progress caught early and acted upon via help and advice from NHS Improvement.

It also became apparent to us during our analysis that there is huge inconsistency in costing and budgeting approaches across the NHS, which is impairing our ability to compare data across the service. We understand Monitor's *costing transformation programme*⁷⁷ will address these issues and we recommend every effort is made to deliver the programme by the 2020 deadline. However, the review has also highlighted the value of a common chart of accounts for overall provider finances, and we think that one should be adopted urgently whilst improvements in patient level costing are pursued.

The model hospital

Trust boards have primary responsibility for improving productivity and efficiency in acute providers; however, our engagement with them has all too often revealed that non-executives and Chairs often do not feel that they know what good looks like.

Leading international hospital systems by contrast have a clear, consistent approach to setting expected standards that a good hospital should meet. Key performance metrics are compared to both internal plans and peer benchmark and definitions of good performance are cascaded down through these organisations with metrics appropriate at each level so that everyone knows what good looks like in their own area of responsibility (see figure 5.4).

A typical NHS hospital is structured along a number of dimensions, including patient pathways, clinical specialties and key resources. In addition to whole-organisation performance, trust leadership teams report that they often do not know whether individual parts of their hospital are operating at high quality and efficiency, resulting in planning based on scattered and often anecdotal information. There is a plethora of information, guidance and expertise made available to support trusts, but it needs to be brought together in a coherent way that recognises the constraints on management time, the value of peer comparison and an articulation of what good looks like. During the course of our engagement over the autumn, most have been quick to identify opportunities from information presented to them.

The way to address this is to develop a model hospital, which will give trusts information on key performance metrics, from board to ward. It should reflect the way in which hospitals are organised and include:

- clearly defined performance metrics, encompassing patient outcomes, people productivity and financial sustainability;
- the ability for organisations to compare performance against their internal plans, peer benchmarks and the views of NHS experts; and

⁷⁷ <https://www.gov.uk/guidance/costing-transformation-programme>

- good practice checklists to guide improvement action, including links to detailed guidance and knowledge sharing by top performers.



Figure 5.4 – Average length of stay cascade diagram demonstrating examples of what good looks like at each level



The model hospital collates a clear, consistent, dataset from trusts across the country to enable a top-level monthly view of performance.



The model hospital is a source of the actual and comparative performance and efficiency data NHS boards need to monitor and improve their organisations' service delivery and efficiency.



For executives and senior managers, the model hospital drills down to greater areas of detail. Three main 'lenses' will group larger sets of indicators to support further analysis of the factors impacting on performance

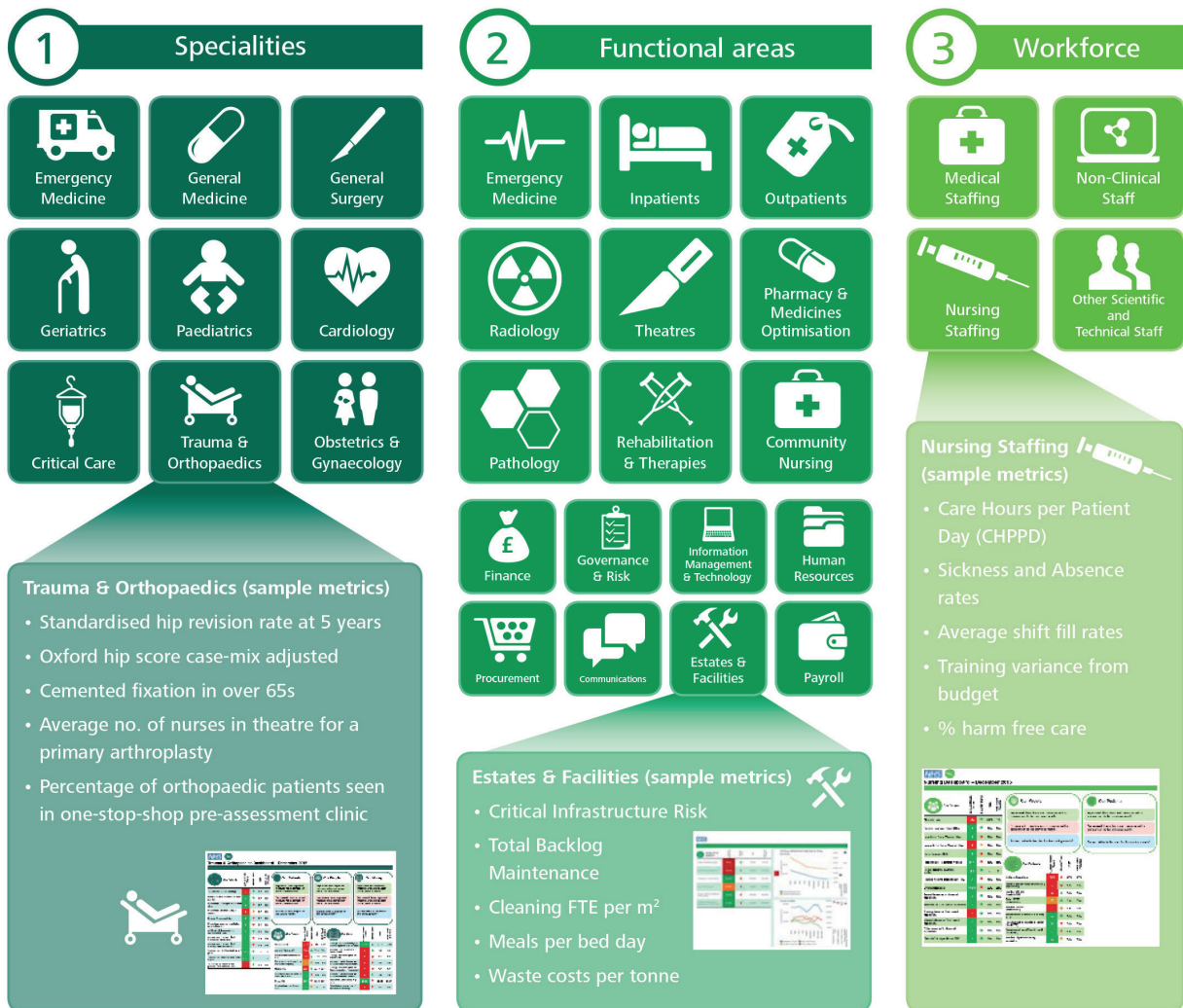


Figure 5.5 – The anatomy of the Model Hospital⁷⁸

78 source: WMC Healthcare, Germany

The metrics should be presented in a systematic way, according to the needs of a broad audience, and come together in dashboards intended to support Board, senior and operational management levels (see figures 5.4 and 5.5).

We have set out a programme of work to develop the model hospital and all its components, across clinical specialties, functional areas and workforce groups. We have already begun to develop some elements of the model hospital, including an organisational level dashboard that gives trusts the critical information they need to assess their performance and drive efficiency programmes. As referred to earlier in this report, metrics and definitions of what good looks like in a number of areas have been identified and this process should be accelerated by NHS Improvement. This should also include the first iteration of metrics for non-acute trusts by April 2017.

Recommendation 12: NHS Improvement should develop the Model Hospital and the underlying metrics, to identify what good looks like, so that there is one source of data, benchmarks and good practice.

Delivered by:

- a) establishing a continuous programme of development for the design and maintenance of all the components and benchmarks that make up the Model Hospital, completing the first full phase of development by April 2017;
- b) NHS Improvement creating the benchmarks and guides of best practice so that they can be used as the operating standards of good hospital management;
- c) NHS Improvement calculating the adjusted treatment cost (ATC), total cost per weighted average unit (WAU) and developing the broader set of productivity metrics we have outlined in this report for all acute trusts annually starting in April 2016;
- d) analysts from the Department of Health and NHS Improvement developing a mechanism to track total cost per WAU for all 136 non-specialist acute trusts at regular intervals in year, for example quarterly. This will allow good progress in achieving productivity gains to be recognised and slow progress caught early and acted upon via help and advice from NHS Improvement;
- e) Trust boards ensuring that the Electronic Staff Record (ESR) is reconciled to the financial ledger on a weekly basis, with a minimum reconciliation of 95% from October 2016;
- f) identifying with trusts their preferred comparator organisations for each of the ten specialties and functions that represent their largest potential productivity and efficiency gains;
- g) ensuring consistency in costing and budgeting approaches including a common Chart of Accounts and the use of a standard patient level costing system (PLICS) in all trusts by April 2017; and
- h) ensuring the model hospital and underlying metrics are expanded to cover non-acute trusts by April 2017.

Moving to a single integrated performance framework

In preparing this report we have talked to many trusts about how they approach continuous improvement and the information used to support this. We have found that board and committee reports are often hundreds of pages long, yet often miss information that is key to driving performance.

We also found that trusts often have to provide information on similar aspects of performance to different organisations. One trust's HR director was asked to make over 140 different returns one month; and in another it was estimated that 50% of the chief operating officer's time in one week was devoted to responding to such requests.

Over time, in addition to providing benchmarking and information on what good looks like, the model hospital should also become the primary source of information for a **single integrated performance framework** across the acute sector, covering quality and efficiency and serving regulators, commissioners and inspectors. These bodies must agree a single set of data on which to base their work and cannot continue to request diverse data returns as is currently the case.

The development of the model hospital as the single source of best practice provides an opportunity to reduce the considerable reporting burden placed on trusts. NHS Improvement should work with NHS England, commissioning groups, the Department of Health, CQC and HSCIC to rationalise the reporting requirements on acute providers, demonstrating a clear reduction in burdens over time.

Many successful organisations use a simple way to think about performance, centred round customers, workforce and finances. We think that the model hospital and performance framework can benefit from this approach but should adapt it to incorporate the established CQC regulatory framework of five key questions. We recommend development of CQC's Well-led question to create a culture of continuous daily improvement on all aspects of people management, leadership and engagement. A new sixth key question around Money and Resources will also be needed. This last area will not only include the financial accounts but will also reflect areas such as procurement, estates and use of agency staff (see figures 5.6 and 5.7).

Key question	Description
Safe	People are protected from abuse and avoidable harm
Effective	People's care, treatment and support achieves good outcomes, promotes a good quality of life and is based on the best available evidence
Caring	Staff involve and treat people with compassion, kindness, dignity and respect
Responsive	Services are organised so that they meet people's needs
People, management and culture: Well-led	The leadership, management and governance of the organisation assures the delivery of high-quality person-centred care, supports learning and innovation, promotes an open and fair culture and promotes a culture of continuous daily improvement on all aspects of people management, leadership and engagement
Money and Resources	Managing financial resources and maintaining sustainability

Figure 5.6 – Recommended key questions

NHS Example Trust Board Dashboard - January 2017

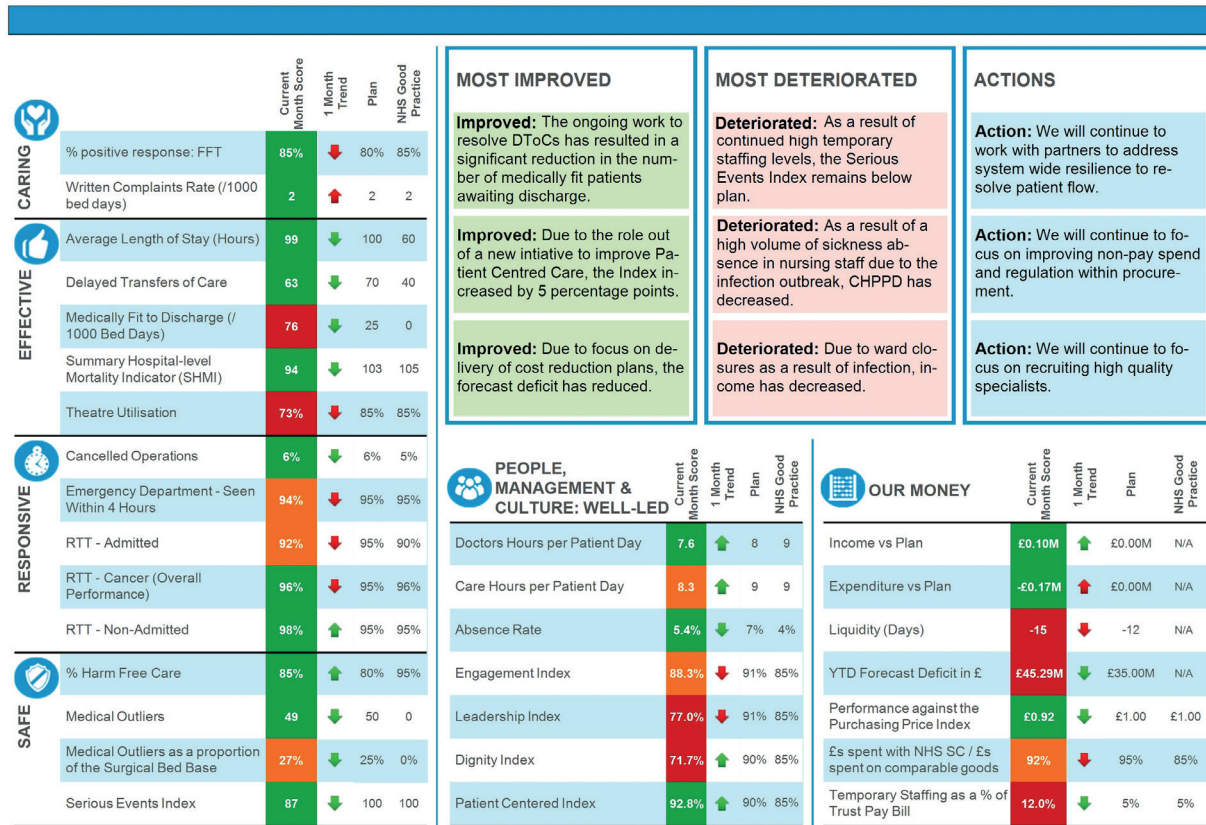


Figure 5.7 – An example trust board dashboard

Analysing metrics will not in itself deliver improvements. The model hospital should be accompanied by guidance on its use, including a reporting cycle that ensures priority areas for improvement are raised as necessary but there is also continuous improvement across the organisation, rather than focus shifting from one hot topic to another.

The reporting cycle should be sharply focused, rigorous and reliable. Some things need to be monitored by senior executives every day, others each week or each month; and some will properly form the subject of quarterly scrutiny. To embed the reporting and scrutiny of key data sets we recommend trusts adopt a process of *lean daily management (LDM)*. LDM is not new and many trusts have already adopted elements. What is needed now is greater consistency not only in approach (hence the recommendations made about trusts' capability above) but also in what is measured and monitored. We recommend trusts adopt an LDM approach around an agreed set of metrics that are simple and visible, that non-executive directors understand and by which they hold executive teams to account.

The exact form of the external element of reporting will need to be agreed by NHS Improvement, with input from commissioners, providers and the CQC. However, during the course of this review we have developed an example, based on international and NHS experience, of what an organisational level performance report could look like (see figure 5.7).

Recommendation 13: NHS Improvement should, in partnership with NHS England by July 2016, develop an integrated performance framework to ensure there is one set of metrics and approach to reporting, so that the focus of the NHS is on improvement and the reporting burden is reduced to allow trusts to focus on quality and efficiency.

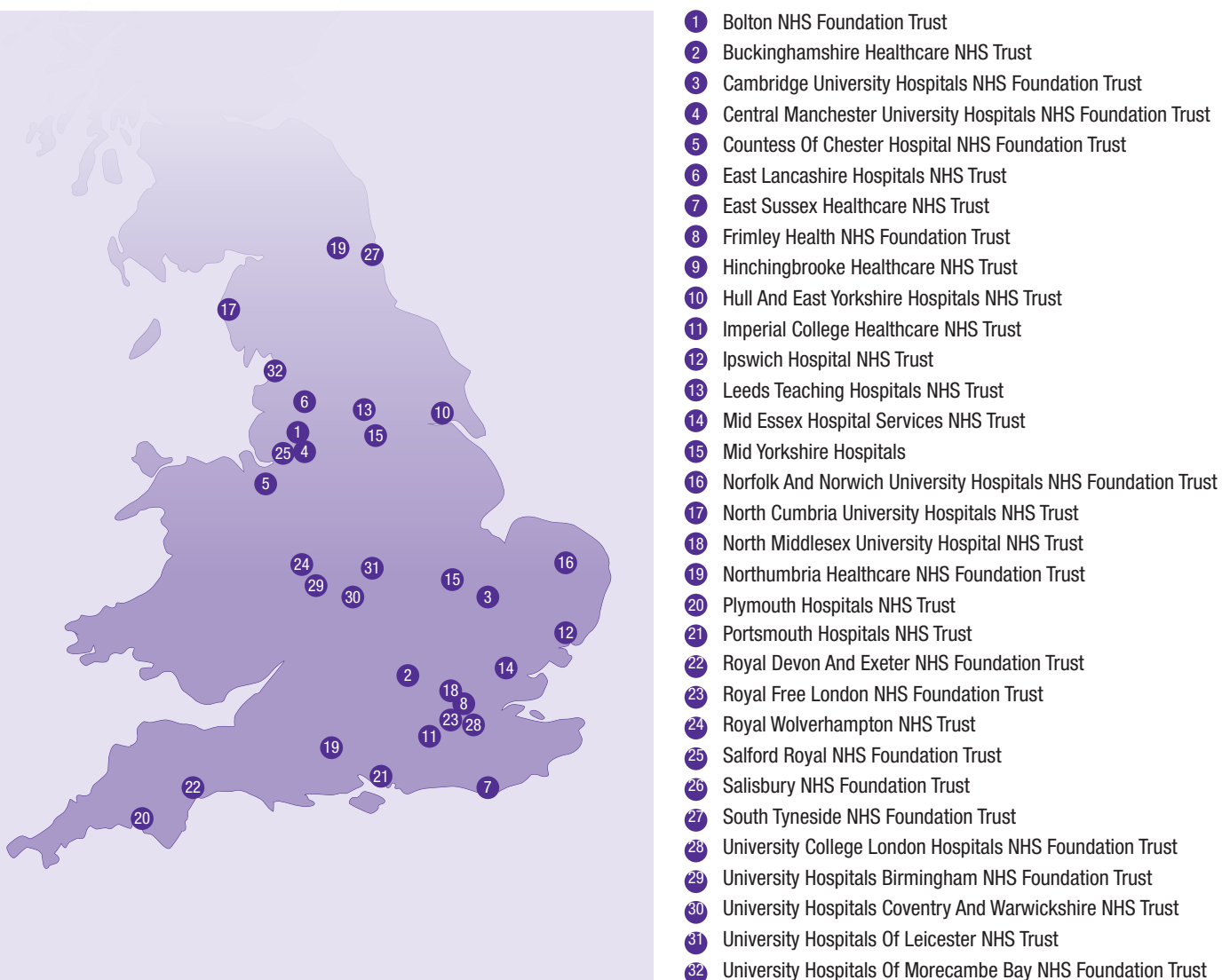
Delivered by:

- a) NHS Improvement creating the integrated performance framework based on the Model Hospital, including the operational management process, with a set reporting cycle “from ward to board” to drive efficiency, productivity and care improvements, and ensuring it is aligned with the requirements of commissioners, the CQC and regulators;
- b) NHS Improvement engaging with trusts to identify the scope and nature of the reporting burden, followed by a plan which identifies what reporting requirements can be ended and when; and, implementing a one in/two out approach to data requirements, demonstrating a reduction in reporting burdens by April 2017; and,
- c) trusts working to improve, cleanse and validate their data submissions to ensure that the data is robust enough for benchmarking.

6 Engagement with trusts and implementation

Engagement with trusts to date

Professionals from our team with backgrounds in areas such as nursing, procurement, pharmacy, estates and facilities and diagnostics engaged with relevant staff from a cohort of 32 trusts to discuss their data and identify and measure what good looks like within key elements of the model hospital. The cohort has a combined expenditure of £16bn out of the total £55.6bn for the acute sector in England, and contains large teaching trusts and district general hospitals of various sizes across the country (see figure 6.1).



As described in this report, our professionals have seen much good practice through their work which, if replicated by other trusts, can lead to efficiencies across the service. These examples of good practice have informed specific recommendations which, together with the development of the model hospital over the coming years, will support trusts to meet their efficiency challenge.

Over the autumn, engagement was widened to trusts outside of the cohort and we produced information packs for all 136 acute trusts in England to highlight the estimated savings opportunities identified by the Adjusted Treatment Cost (ATC) methodology and to share the first iterations of the model hospital. We have spoken to more than 80 trusts through one to one meetings and regional events and heard that while the analysis can still be refined, the majority of trusts broadly recognised the scale of savings opportunities identified for them. A handful of trusts did not recognise the numbers calculated for them and we are working with them to investigate why this is the case.

We have found that the use of national data sets for comparisons between trusts has identified some anomalies at a local level and trusts have suggested ways for the analysis to be improved in future. However, many welcomed the information in its current form as a way of identifying areas of variation that require further investigation and to triangulate against other existing information. A number of trusts also said that they would be incorporating parts of the analysis into their cost improvement plans for 2015-16 and 2016-17 and that this would help them avoid having to engage management consultants to do this work.

Trusts we have spoken to have estimated the savings they think they can deliver on their own over the next three years but are keen to be involved with the development of the model hospital in the future, to understand more about what efficient and safe services look like and how they can move towards these. Based on our experience to date, we firmly believe that trusts should continue to be engaged as the model hospital is expanded to cover more components, to ensure that its outputs meet their needs.

Our sense from talking to trusts is they see savings opportunities in three main areas:

- those savings that can be delivered quickly (within a year) through a tighter grip on resources;
- those that may take 2-3 years because they require a process of coordination or collaboration; and
- those that will take longer because they are structural (up to 5 years) such as dealing with delayed transfers of care, requiring capital investment, or needing major public consultation.

We have learnt from the feedback given by trusts that the degree of close engagement and collaboration will need to be sustained if they are to successfully deliver the full savings opportunities in each of the three areas.

Implementation

Realising the full productivity and efficiency opportunities set out in this review will be challenging. In this section we set out the arrangements we consider necessary for ensuring successful implementation. There is much we think trusts can do, critically, in strengthening organisational capability by equipping leadership teams, managers at all levels and by enriching staff engagement and delivery. Equally, there is much the national NHS bodies and regulators need to do to enable and support improvements locally.

Delivering and sustaining change locally

For trusts to be able to approach the task of delivering the change required – and of sustaining and building on the benefits accrued – there is a need for an enabling organisational infrastructure. That infrastructure includes a set of management practices common to successful organisations the world over. In the NHS in England, these practices are not common enough nor are they consistently and rigorously used. They are key to overcoming the sorts of structural, organisational and cultural impediments that inhibit optimal productivity and efficiency.

The need for these changes is most clearly demonstrated by the importance of realising the wealth of talent and expertise possessed by all those who work in the NHS. At almost two-thirds of total spend, people represent a huge investment for trusts but as we said earlier, they can sometimes be regarded as a cost to be controlled rather than a creative and productive asset. It is clear from the annual staff survey that the culture in trusts is not always conducive to problem solving and engagement. The survey shows alarmingly that 23% of staff have experienced harassment, bullying or abuse from other staff in the last 12 months (the best acute trusts record 17%⁷⁹); only 56% would recommend the NHS as a great place to work; 41% feel their work is valued by their trust; and 39% have felt unwell as a result of work-related stress.

This type of culture directly affects motivation and morale, and the degree to which people are prepared to give their best at work. Until trusts address these issues and create more open and respectful working environments we stand little chance of improving performance and productivity in trusts. In short, a mind-set shift from seeing people as the problem to seeing them as the solution is needed. The adoption of the nine management practices we recommend will provide the momentum to create that shift (see figure 6.2).

Management Practices	Practice Synopsis
Values-based behavioural framework	Developing a values-based behavioural framework – agreeing at the very outset the trust’s underpinning values, determining their behavioural implications for all occupational groups and roles, and informing any system and process redesign
Patient-centred organisation	Moving towards a patient-centred organisation design – ensuring structure, workflow and resource allocation is designed around the patient through each stage of their hospital journey, as opposed to being designed around functional specialisms
Structural improvements	Adopting basic structural improvements – ensuring adherence to best practice management spans and layers, consistency of roles, and defining clearly individual accountabilities and decision rights
Leadership strategy	Developing a Board-sponsored leadership strategy – based on business need and a clear set of expectations, and encompassing all leaders from Board to frontline; including recruitment, engagement, development, talent management and succession planning
Operational management process	Implementing a comprehensive operational management process – a regular and highly disciplined series of Ward to Board management meetings that drive operational performance, cost reduction, increased efficiency and continuous improvement

⁷⁹ KF19, 2014 National NHS Staff Survey

Management Practices	Practice Synopsis
Dashboards	In tandem with this process, adopting the Model Hospital dashboards - a series of upwardly cascading metrics that provide a balanced view of patient, people and financial performance at any given management level of the organisation
Individual performance management system	Instituting an individual performance management system – a process for appraising both task and behavioural performance for every individual in the trust, including a range of feedback mechanisms such as 360s, peer review, colleague survey results and actions; linking this to positive and negative consequences including reward, development, career progression
Engagement	Building engagement across all occupational groups – harnessing the ideas and viewpoints of everyone in the trust, paying particular attention to clinical engagement and the role of the Clinical Leader
Colleague opinion survey	Repurposing the colleague opinion survey – reflecting more appropriately targeted questions and surveying sections of the workforce on a rolling monthly or bi-monthly basis to deliver a more timely pulse of people’s views, and using the outcomes as a key metric in all managers’ performance appraisals

Figure 6.2 – Recommended management practices

These practices address the structural, organisational and procedural impediments to change. While six are principally cultural and organisational design enablers and three address structural shortcomings, they are complementary not separate. Each requires a programme of work to achieve their full benefits; and they all require an overarching programme which ensures that the whole is greater than a sum of the parts. The purpose and activity involved in each management practice is outlined below. It is important to stress that the adoption of these practices will help simplify and reduce complexity. They will clarify expectations and help nurture a working environment in which everyone feels more collectively engaged and more personally satisfied.

We have worked with The Countess of Chester NHS Foundation Trust to test an approach to change implementation that combines the application of the improvements described in figure 6.2. Based on this experience, arrangements need to be developed for delivering and sustaining change in trusts. This should take the form of detailed guidance with accompanying toolkits and workbooks that trusts can follow, supported by external facilitation and challenge. We recommend that provision is made, including through the appointment of a People Director and support team, to help trusts implement their integrated performance, ‘Our Patients’ and ‘Our Money’ plans and a wider change programme to create a culture of continuous daily improvement. Part of this programme should also include a series of training and mobilisation events for chairs and non-executive directors, and for executive teams, to establish a common understanding of the challenges and set common objectives, share details of best practice approaches and support, and map the way forward.

Recommendation 14: All acute trusts should make preparations to implement the recommendations of this report by the dates indicated, so that productivity and efficiency improvement plans for each year until 2020/21 can be expeditiously achieved.

Delivered by:

- a) Chief executives, having identified the productivity and efficiency opportunities that their organisations can deliver on their own and those which require collaboration and cooperation, planning how and when these will be realised as a schedule of priorities over at least the next three years;
- b) Chief executives ensuring that the management information they will be required to submit for the Model Hospital and Integrated Performance Framework is robust and reliable;
- c) Chairs and chief executives preparing their Boards, including their non-Executive Directors, to use the Model Hospital and anticipate the introduction of the Integrated Performance Framework;
- d) Directors of nursing or chief nurses ensuring that nurse and healthcare support staff are managed using the recommended e-rostering, 'Enhanced Care' and CHPPD recording and reporting arrangements;
- e) Medical directors ensuring that each consultant has an up to date accurate job plan which clearly sets out the sessions allocated to the performance of clinical procedures, patient/carer facing time and quality improvement; that the chief pharmacist, working with a nominated trust board director, is able to create HPTP plans (including for the model hospital) implementing the relevant hospital pharmacy and medicines optimisation recommendations in this report;
- f) Medical directors ensuring that the recommendations of the GIRFT report for the hospital are implemented;
- g) Finance directors using the new purchasing price index of 100 products to optimise value in procurement expenditure and work towards achieving the benchmarks of spend against catalogue, under contract and by purchase order by 2018; and,
- h) Chief executives introducing the recommended lean daily management (LDM);
- i) HR directors introducing the nine management practices that strengthen organisational resilience, effectiveness and productivity.

Delivering and sustaining change nationally

Trusts told us that they valued our assistance in knowing what they could achieve and how they could achieve what good looks like. Of our suggested areas for savings, they said on average that a third related to things they were already working on, a third they had considered but not started work on and a third they had not yet thought of. This is why the model hospital should contain not only the measures and the benchmarks of 'what good looks like' but explanations of how good can be achieved and sustained. Implementation is critical but it isn't a one-off activity; it is a process of continuous improvement and sustaining high performance. This is why

the model hospital needs to be a dynamic not a static tool, and why it is important that the data that feeds it is both reliable and current.

On their own the model hospital and integrated performance framework are not sufficient to ensure effective implementation of productivity and efficiency gains even though they are key tools to unlocking them. There is a need for a set of arrangements that flow naturally from the findings of the fieldwork and analysis we have undertaken.

There is a need for a national capability and capacity to help trusts identify and seize the opportunities to achieve productivity and efficiency gains. This capability and capacity must operate differently from the way parts of the centre have tended to operate in the past. Its effectiveness will depend on establishing and maintaining relationships which are something more than purely regulatory, important though the regulatory function is, and we recommend it builds on the analytical – professional – engagement approach we adopted for this review.

For example, an integral feature of the concept of the model hospital is comparative analysis – identifying what good looks like in comparable organisations and helping understand how to improve. The national capability needs to have these analytical skills.

Also, the new arrangements must help overcome the barriers to productive collaboration that organisational and professional self-interest can erect. There are many examples of good collaboration around the country but there are many more examples of where providers need someone to make a decision to rationalise or reconfigure service provision. Sometimes making such decisions may not be popular but if the NHS is held to account for further efficiencies, it will require other stakeholders and interest groups to compromise not on quality but on what can, when looked at objectively, appear a parochial defence of a more costly, less productive *status quo*. Professional input is critical in this regard and the national capability needs to have a careful balance of professional and business skills.

Finally, the need for trusts to have access to supportive assistance is reflected in trusts over-dependence on external consultancy. This is compounded when trusts end up paying for the same advice over and over again. Not only is the cost of this itself an opportunity for efficiency gain, the outcome of this support is too often limited to diagnostic advice and action plans: outcomes which though sometimes helpful, fall short of the practical assistance providers require. There is a compelling case for the national capability to provide advice through supportive engagement with trusts.

Prototypes of these arrangements have been developed by the programme. For example, the clinical-led Quality and Efficiency plans for ten surgical specialities will build on the success of the GIRFT initiative in orthopaedics. Fully funded, this three year programme is designed to improve care pathways, patient experience, and outcomes – with significant cost savings of up to £3.86 billion. Similarly, different arrangements have been used by the review's workforce project, for example, using the collaborative methodology the network of directors of nursing in the cohort of 32 successfully developed the means to tackle the variation in enhanced care (specialising) and rostering practices.

The national capability needs to build on these approaches and go further and faster. We think that capability and capacity needs to sit in NHS Improvement and the approach become the organisation's core purpose.

Recommendation 15: National bodies should engage with trusts to develop their timetable of efficiency and productivity improvements up until 2020/21, and overlay a benefits realisation system to track the delivery of savings, so that there is a shared understanding of what needs to be achieved.

Delivered by:

- a) the Department of Health continuing to host the development of the Model Hospital and engage with trusts to derive a business plan for activities up until July 2016, until this programme of work fully transitions to NHS Improvement;
- b) NHS Improvement establishing an Analytical Unit which will provide the capability and capacity to continue the development of the Model Hospital and the systems to collate, interpret and regularly and reliably report performance data as a 'single version of the truth' so as to obviate the need for other routine and ad hoc requests to trusts to report and provide other data;
- c) NHS Improvement enlisting a Professional Lead for each component of the Model Hospital and other features of the Integrated Performance Framework, to provide the leadership in developing the metrics and benchmarks for each component and feature, and to engage key stakeholders;
- d) NHS Improvement establishing engagement resources (probably regionally based) to support trusts develop their plans and the professional leads in developing and using both the Model Hospital and the features of the integrated performance framework by engaging with trusts so that their need for external consultancy radically reduced;
- e) NHS improvement mobilising the tripartite 'Analytical, Professional and Engagement' arrangements to work with trusts' executives and non-executives directors in a way which employs senior level interaction and is facilitative, enabling and supportive;
- f) NHS Improvement developing and implementing a phased programme of activities which introduce the full use and functionality of the Model Hospital and the Integrated Performance Framework as early as is practicable; and,
- g) NHS Improvement convening a series of mandated change implementation mobilisation events for chairs, non-executive directors, CEOs and executive team members in the second quarter of 2016, so that a clear and shared understanding of the challenges is established and targets set for achievement.

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