Evidence Brief: Productivity

Contents

Produced by the Knowledge Management team Evidence Briefs offer an overview of the published reports, research, and evidence on a workforce-related topic.

Date of publication: November 2024

Please acknowledge this work in any resulting paper or presentation as:
Evidence Brief: Productivity. Katie Nicholas. (November 2024). UK: Workforce, Training and Education Knowledge Management Team

There may have been an update to this Evidence Brief - to check you are reading the most current version please see the links below:
- Complete Evidence Brief list – link for Workforce, Training and Education staff
- Complete Evidence Brief list – link for External staff

Key publications – the big picture

[10 Year Health Plan working groups](#)
Source: GovUK
Publication date: November 2024
The 10 Year Health Plan working groups will consider the future vision for the NHS and areas of the NHS that will need to change to achieve this.
See group on "Physical infrastructure"

[Just managing: the role of effective management and leadership in improving NHS performance and productivity](#)
Author(s): John Power et al.
Source: Policy Exchange
Publication date: 19 September 2024
NHS management is back firmly in the spotlight amid significant operational pressures (including long waits for care), poor patient satisfaction (at its lowest levels since the early 1980s), high-profile cases of abuse and anaemic productivity growth since the pandemic.

[Independent investigation of the NHS in England](#)
Source: Department of Health and Social Care
Publication date: September 2024
Lord Darzi's report on the state of the National Health Service in England.
See p. 5 "The NHS budget is not being spent where it should be—too great a share is being spent in hospitals, too little in the community, and productivity is too low."
See p. 8 "Capital. The NHS has been starved of capital and the capital budget was repeatedly raided to plug holes in day-to-day spending."
See p. 13 "Drive productivity in hospitals. Acute care providers will need to bring down waiting lists by radically improving their productivity. That means fixing flow through better operational management, capital investment in modern buildings and equipment, and re-engaging and empowering staff."
"Tilt towards technology. There must be a major tilt towards technology to unlock productivity. In particular, the hundreds of thousands of NHS staff working outside hospitals urgently need the benefits of digital systems. There is enormous potential in AI to transform care and for life sciences breakthroughs to create new treatments."
"Contribute to the nation's prosperity. With the NHS budget at £165 billion this year, the health service's productivity is vital for national prosperity. Moreover, the NHS must rebuild its capacity to get more people off waiting lists and back into work. At the same time, it should better support British biopharmaceutical companies."
See Chapter 5 "where and how money is spent"
See p. 72 The big picture: workforce and productivity
See p. 79 Resources and productivity of services by setting
See p. 91 "As a Nobel prize winning economist once observed, productivity isn't everything, but in the long-run, productivity is almost everything316. And that's because a productive NHS can mean high quality care for all—and right now, too many are waiting too long for its help."

[Improving our nation's health: a whole-of-government approach to tackling the causes of long-term sickness and economic inactivity](#)
Author(s): Bosch et al.
Source: NHS Confederation
Publication date: 10 September 2024
Seizing the opportunity to improve health outcomes and boost economic growth in the UK.

[Preparing the NHS for the AI Era: A Digital Health Record for Every Citizen](#)
Source: Tony Blair Institute for Global Change
Publication date: 19 August 2024
The UK has a new government with a strong mandate for reform of the NHS. When Secretary of State for Health & Social Care Wes Streeting spoke at the Tony Blair Institute's Future of Britain Conference shortly after the election, he set out his ambitions for that reform. He described the "three big shifts" required to put the NHS back on track:

- A shift from treatment to prevention.

- A shift from hospitals to primary and community care.

- A shift from analogue to digital, with a focus on innovation.

[Frontline digitisation: creating the conditions for a digital NHS](#)
Author(s): Knight et al.
Source: NHS Confederation
Publication date: 6 August 2024
What ICSs need to be able to move from paper-based to digital systems for patient information, clinical notes and access to data.

[NHS financial management and sustainability 2024](#)
Source: National Audit Office
Publication date: 23 July 2024
This is our ninth report on the financial management of the NHS in England. We published our last report in February 2020, finding that, to bring about lasting stability, NHS England (NHSE) needed to engage in financial restructuring. We stated that the delivery of long-term financial sustainability would remain at risk unless all NHS bodies were on a realistic path to breaking even.

[[Long Read] Productivity in the NHS: what's getting in the way?](#)
Author(s): Thea Stein
Source: Nuffield Trust
Publication date: 23 July 2024
Following on from her earlier commentary on why our conversations about productivity in the NHS are not very productive, Thea Stein explores the many factors that may be affecting the health service's productivity. She also reiterates that few of them can be comprehensively reviewed without an environment of psychological safety.

[Fixing public services: The NHS](#)
Author(s): Hoddinott and Davies
Source: Institute for Government
Publication date: 22 July 2024
Labour's NHS commitments are likely to require more spending. But recent spending increases have not generated commensurate performance improvements.

[Providers Deliver: Achieving value for money](#)
Source: NHS Providers
Publication date: June 2024
There is no doubt that the pandemic brought with it significant disruption and exacerbated many of the challenges that the NHS was already facing. Figures from the Office for National Statistics show that quality-adjusted healthcare productivity was 6.6% lower over the 2021/22 financial year than the 2019/20 financial year ([ONS, 2024a](#)).

[The fiscal implications of public service productivity](#)
Source: Institute for Fiscal Studies
Publication date: May 2024
The challenging fiscal situation facing the next government means that both Labour and the Conservatives are looking for ways to improve public services without large increases in

spending. Improving the productivity of public services is often proposed as a way to achieve this.

NHS productivity
Source: NHS England
Publication date: May 2024
This paper discusses the effect the pandemic has had on NHS productivity with details of NHS England's estimates for the drivers of the loss of productivity observed. The paper discusses the emerging plan to improve productivity in the coming years.

NHS value and efficiency map
Source: HFMA
Publication date: 18 April 2024
The HFMA has worked in partnership with NHS England to produce an NHS value and efficiency map which recognises the importance of a value-based approach to enabling the delivery of high-quality sustainable healthcare services.

Productivity of the English National Health Service: 2021/22 update
Author(s): Arabadzhyan et al.
Source: University of York and Centre for Health Economics
Publication date: April 2024
Healthcare expenditure is one of the largest elements, and a growing proportion, of public spending. In the context of limited resources, it is essential for patients and policy-makers to understand the return on investment in health care. Productivity, the ratio of output produced to input used, is therefore a key performance metric for the English NHS. In addition, measuring NHS productivity growth is an important tool for assessing future funding needs. Finally, in the aftermath of the COVID-19 pandemic, evaluating the extent to which the NHS has recovered to pre-pandemic levels of productivity is of great policy relevance.

The past and future of NHS waiting lists in England
Source: The Institute for Fiscal Studies
Publication date: February 2024
NHS waiting lists are likely to be a key issue in the forthcoming general election. The current government has made cutting NHS waiting lists one of its key priorities, while one of the Labour party's five national missions is to 'get the NHS back on its feet', including by cutting waiting times. In this IFS pre-election briefing, we outline what has happened to NHS waiting lists (in England, given that health is a devolved responsibility) over the last 17 years – the period for which consistent data are available – and present new scenarios of what could happen to waiting lists over the years to come. We focus on the elective waiting list – the list of people waiting for pre-planned hospital treatment and outpatient appointments. This is what most people mean when they talk about NHS waiting lists, but we also consider a range of other NHS waiting lists and waiting times. Alongside this report, we have updated our interactive online tool that allows you to produce waiting list scenarios under your own assumptions.

Investing to save: the capital requirement for a more sustainable NHS in England
Author(s): Jonathan Barron and Edward Jones
Source: NHS Confederation
Publication date: November 2023
It is a worldwide experience that as society ages, becomes wealthier and adopts less healthy lifestyles, healthcare becomes more expensive. The UK is no exception. Providing staff with the right tools and space to perform their jobs through capital investment is how to become more productive and to use the resources available most efficiently.

Stretched to the limit: tackling the NHS productivity challenge
Source: NHS Providers
Publication date: July 2023
Trusts are making great strides in recovering services, including carrying out more diagnostic tests than ever before and bringing down the number of people experiencing the longest waits. Figures show the efforts of frontline staff to treat high numbers of patients and to tackle long waiting lists. The number of patients waiting more than 78 weeks has decreased by 79% since December 2022 (NHSE, 2023a).

The NHS productivity puzzle: what has hospital activity not increased in line with funding and staffing?
Author(s): Freedman and Wolf
Source: Institute for Government
Publication date: June 2023
In response to the Covid-19 pandemic, the government provided the NHS with a large injection of funding. That funding means that hospitals now employ more staff than ever. But despite those increases, hospital activity remains below pre-pandemic levels on some metrics. This report examines why this has happened and what might be needed to bring productivity back in line with trend levels. It was funded by the Health Foundation, an independent charitable organisation working to build a healthier UK.

NHS Long Term Workforce Plan
Source: NHS England
Publication date: June 2023
The first comprehensive workforce plan for the NHS, putting staffing on a sustainable footing and improving patient care. It focuses on retaining existing talent and making the best use of new technology alongside the biggest recruitment drive in health service history.

See p. 5 "Reform: improving productivity by working and training in different ways, building broader teams with flexible skills, changing education and training to deliver more staff in roles and services where they are needed most, and ensuring staff have the right skills to take advantage of new technology that frees up clinicians' time to care, increases flexibility in deployment, and provides the care patients need more effectively and efficiently."

Managing NHS backlogs and waiting times in England: Report – Value for money
Source: National Audit Office
Publication date: 17 November 2022
At the start of the COVID-19 pandemic, the NHS in England had not met its elective waiting time performance standard for four years, nor its full set of eight operational standards for cancer services for six years. Due to the pandemic, the number of people receiving elective and cancer care then reduced sharply. Between March 2020 and August 2022, on average there were 8,300 COVID-19 patients in hospital in England at any one time with peaks in this number during waves of infection. Backlogs of patients, both visible on waiting lists and hidden because they had not yet seen a doctor, grew rapidly.

Healthcare as social infrastructure: productivity and the UK NHS during and after Covid-19
Author(s): Diane Coyle
Source: Bennett Institute for Public Policy Cambridge
Publication date: February 2022
This paper discusses the implications of the demand surge experienced during the Covid-19 pandemic for the UK's rationed, largely free at the point of need, National Health Service (NHS). It explores the impact of the past emphasis on cost efficiency of the service in the light of considering the health system as part of the national social infrastructure. An infrastructure perspective

incorporating resilience and peak demand considerations sheds new light on the performance of the NHS and underlines the role of the health care system in human capital investment and economy-wide productivity.

Theatre productivity programme
Source: NHS England Getting It Right First Time
To support elective recovery, GIRFT is helping to lead a national theatre programme which aims to draw together all key national workstreams engaged in improving theatre productivity, efficiency and workforce. The key aims of the programme are to support providers and systems to maximise the effectiveness and throughput of their surgical theatres through improvements across the surgical elective pathway. The programme reports into the National Theatre Board and onward to the National Elective Recovery Programme.

The NHS, innovation and productivity
Source: Social Market Foundation
Publication date: June 2018
This report analyses why greater innovation and productivity growth is necessary in the NHS, and the policies that could help this be achieved. It goes on to assess how the NHS can drive productivity in the wider economy.

Productivity in NHS hospitals (Carter's Review)
Source: Department of Health and Social Care
Publication date: June 2015
Lord Carter's review of efficiency in hospitals shows how large savings can be made by the NHS.

Case Studies

See "What are trusts doing to improve productivity?" from NHS Providers report Stretched to the Limit

Stories of improvement
Source: NHS England
Publication date: 16 October 2024
After close collaboration with NHS staff across the country, we are delighted to announce the publication of 4 new case studies. These case studies showcase exemplary practices in diagnostics and will help diagnostic teams enhance their productivity. As part of NHS England's broader improvement efforts through NHS IMPACT, each case study offers:

- a step-by-step guide to implementing change

- details on benefits, challenges, and solutions

- a theory of change

- additional resources to support improvement

Case Study: Creating efficiencies by optimising patient pathways
Source: HFMA
Publication date: 4 July 2023
In summer 2022, One NHS Finance expanded the NHS Finance Innovation Programme submission process to collect examples of clinical transformation which would be published on the HFMA website and included in future editions of the NHS value and efficiency map. Submissions must include top tips for other organisations embarking on clinical transformation projects.

Case study: Artificial intelligence helping speed up skin cancer diagnosis in Leicester, Leicestershire, and Rutland integrated care system
Source: NHS England
Publication date: February 2023
Dermatology services in Leicester, Leicestershire, and Rutland integrated care system (ICS) are embracing digital innovation so that patients with suspected skin cancer can be seen more quickly. This comes after a pilot using artificial intelligence (AI) led to increased capacity within multiple teams to meet the rise in referrals following the COVID-19 pandemic.

Implementing a cloud-based productivity monitoring tool to facilitate management of cancer diagnostic pathways in Cheshire and Merseyside
Source: NHS England
Publication date: February 2023
A case study showing how an innovative digital tool was implemented in Cheshire and Merseyside to better manage the cancer diagnostic pathway and ultimately improve health outcomes.

Case study: Driving value and efficiency through automation
Source: NHS Business Services Authority
NHSBSA data services provides accurate and timely data internally, to the wider NHS, and other stakeholders who rely on our information. The data supports effective decision making on finances, patient safety and patient outcomes which are vital in supporting the NHS.

Blog posts and Features

Delivering efficiency and value through collaboration and partnerships
Author(s): Andrew New
Source: NHS Providers
Publication date: 1 November 2024
As we approach another busy winter, the NHS continues to face challenges of increasingly complex health needs, alongside unprecedented financial constraints and increasing global instability.

The NHS's productivity dilemma
Author(s): Nicola Burgess
Source: The Health Foundation
Publication date: 2 October 2024
The recent review of the NHS by Lord Ara Darzi concluded that 'productivity is too low' and 'there is urgent need to boost it'. This is a verdict echoed by the Health Foundation, which found that productivity growth has stalled since 2017, as well as by the University of York Centre for Health Economics and NHS England.

Health care prioritisation: no easy answers but plenty of difficult questions
Author(s): Sally Gainsbury
Source: Nuffield Trust
Publication date: 26 September 2024
Following a speech this week by the Secretary of State for Health and Social Care, Sally Gainsbury reflects on how there are no easy answers to questions about prioritising scarce health care resources.

[AI and the NHS: is it the silver bullet that will improve the health service's productivity?](#)
Author(s): Dr Jessica Morley
Source: Nuffield Trust
Publication date: 15 August 2024
There are continued hopes that artificial intelligence (AI) will help solve some of the NHS's problems. In this guest blog, Dr Jessica Morley from Yale University says it is important that the optimism for the role of AI in the NHS comes with necessary realism, as she describes the three key considerations that must be taken into account before we get carried away with AI's potential for the health service.

[The mythbuster: How the NHS gets productivity wrong](#)
Subscription required to view
Author(s): Steve Black
Source: HSJ
Publication date: 27 August 2024
Real efficiency gains come from improving the overall mix of resources, not just increasing the number of clinical staff.

[Five deep dives into improving NHS productivity](#)
Source: The Health Foundation
Publication date: 31 July 2024
Put simply, 'NHS productivity' determines how much care is delivered with the resources available. It measures how well the health service can turn 'inputs' (like staff, drugs and equipment) into outputs (like appointments and operations). But of course, it's a lot more complicated than that.
We've collected five of our best deep dives to help you understand NHS productivity and why it's fallen over recent years (including the impact of the pandemic). These pieces cover how productivity in the health service can be improved, and what role increased use of technology and artificial intelligence will play.

[NHS trusts are committed to productivity, but the government needs to step up too](#)
Author(s): Sir Julian Hartley
Source: Public Finance
Publication date: 26 June 2024
Sir Julian Hartley explains that NHS trusts are making productivity gains despite the huge pressure they are under, and urges the next government to end the funding brinkmanship providers have now endured for years.

[IT is key for productivity gains but processes must be standardised first](#)
Author(s): Thomas Webb
Source: NHS Confederation
Publication date: 24 June 2024
There are very real opportunities for the NHS to become more productive, writes Thomas Webb of Ethical Healthcare Consulting.

[NHS productivity: from diagnosis to action](#)
Author(s): Kelly and Tallack
Source: The Health Foundation
Publication date: 25 June 2024
Rarely is there a discussion of the challenges facing the NHS in which productivity isn't mentioned. Debates on this issue can quickly become quite technical. This can obscure how fundamental productivity growth is to the future of the NHS and why it should be top of the to-do list for the new Secretary of State for Health and Social Care. So why does it matter so much, and what needs to change?

[Are people getting less from the NHS?](#)
Author(s): Barron and Tether
Source: NHS Confederation
Publication date: 7 June 2024

It is claimed that the NHS has more money and more staff than ever before but delivering less. Is that the case?

How would clinicians use time freed up by technology?
Author(s): Mould and Horton
Source: The Health Foundation
Publication date May 2024
The idea that technology can free up 'time to care' for NHS staff, allowing the health service to increase volumes of clinical activity, has become a major focus of health policy, informing the NHS Long Term Workforce Plan and the NHS productivity plan announced in the 2024 Spring Budget. This analysis from the Health Foundation explores how freed-up time might be used, drawing on a survey of clinical staff, expert interviews and a rapid evidence review.

Which technologies offer the biggest opportunities to save time in the NHS?
Author(s): Moulds and Horton
Source: The Health Foundation
Publication date: 29 April 2024
In the face of huge demand pressures, technology presents a significant opportunity to support workforce capacity in the NHS, as recognised in the 2024 Spring Budget and NHS Long Term Workforce Plan. Drawing on new Health Foundation research – including a UK-wide clinical staff survey and expert interviews – this analysis spotlights clinicians' views about which technologies might help the NHS boost productivity and release time for care, and sets out what steps will be important to realise these gains.

Thoughts on the NHS's productivity decline
Author(s): Siva Anandaciva
Source: The King's Fund
Publication date: 28 February 2024

Health and care secretaries have some common preoccupations. These include: announcing reviews of NHS leadership and management (often led by former CEOs of Marks & Spencer or Sainsburys); efforts to get more clinicians into NHS management roles; initiatives to bust bureaucracy and cut red tape; and, of course, reviews of NHS productivity.

Feature: Does the NHS have a productivity problem?
Author(s): Richard Vize
Source: BMJ
Publication date: January 2024
With the NHS getting more staff and money for little measurable improvement in patient care, there are concerns that the health service has a productivity problem. Does it, asks Richard Vize— and, if so, why?

The key ingredients for a sustainable NHS: long-term investment and productivity growth
Author(s): Anita Charlesworth
Source: The Health Foundation
Publication date: 15 December 2023
As the NHS braces for another highly pressured winter and waiting lists continue to rise, two key issues have moved centre stage. Why is recovering activity proving so difficult when the NHS has more money and staff? And how can the NHS be at serious risk of running out of money when funding has increased substantially since the pandemic?

Is there really an NHS productivity crisis?
Author(s): Warner and Zaranko
Source: Institute for Fiscal Studies
Publication date: 17 November 2023
The NHS has more funding and more staff than pre-pandemic, but the number of patients being treated in hospital has increased by nowhere near the same amount. On the face of it,

that implies that the system has become less productive – and alarmingly so. But is that the whole story? This week, Amanda Pritchard, NHS England Chief Executive, suggested to the Health and Social Care Select Committee that 'there is a misunderstanding at the moment of the state of productivity in the NHS' and that although 'this doesn't mean there aren't still productivity challenges', these might be much smaller than often suggested.

[Long Read] Agility: the missing ingredient for NHS productivity
Source: The Health Foundation
Publication date: 13 October 2021
Some improvement approaches that can increase productivity, and how to make them happen

In the News

The UK productivity crisis: An opportunity missed (Open Access Government, 1 November 2024)

NHS productivity must improve in return for more cash - Streeting (BBC News, 31 October 2024)

How do we solve the NHS productivity puzzle? (The New Statesman, Open Access Government, 12 October 2024)

More money and staff – so why isn't the NHS more productive? (BBC News, 14 July 2024)

The Star for workforce redesign

More resources and tools are available in the Star

Statistics

Public services productivity
Source: Office for National Statistics
Publication date: Quarterly (March to June 2024)
Output, inputs and productivity estimates for public services in the UK, including estimates of healthcare and education productivity.

Productivity in the NHS and health care sector
Source: The King's Fund
Publication date: 14 June 2024
Productivity is one way people measure the performance of a sector – it compares the growth in the quantity of outputs to the growth in the quantity of inputs. Different bodies measure health care productivity in England in different ways.

National Data Programme

Workforce, Training and Education staff can look at the National Data Warehouse (NDL) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

The Hernia 'CAMP' model: a collaborative action to maximise productivity within the NHS
Author(s): Koshy et al.
Source: Hernia 24(4)
Publication date: January 2020
Background: An ever-growing and long surgical waiting list is a challenge within the NHS. Long waiting times can result in complications of the condition with more challenging operations and additional procedures. All of which implies reduced quality of life for patients and increased strain on NHS finances. On an average there are about 160 patients on the waiting list for groin hernia surgeries, with over a half of them waiting more than 30 weeks. Three patients every year breach the 52 weeks timeline, flagging a never event, with negative implications for the trust. Methods: The Hernia CAMP model was proposed to improve productivity and enhance patient experience. It helped create a pathway with experienced non-consultant surgeons, stepping up to free up consultants to attend to the pressing cancer and complex cases. This dedicated pathway, improved the patient experience and staff team-spirit too. Results: The Hernia CAMP resulted in a 40% improvement in efficiency. With better ratio per list/session, it makes care more cost-effective. It also improved the work environment amongst staff and rapport with patients. The patient-peer support and greater involvement meant better overall experience too. This supportive environment also has the potential for theme-based learning and training. Conclusions: The Hernia 'CAMP' is a transferable and adaptable model. It impacts not just long waiting lists, but also improves productivity with definite cost benefits, teambuilding, patient experience and creates a great opportunity to train too.

How health policy shapes healthcare sector productivity? Evidence from Italy and UK
Author(s): Atella et al.
Source: Health Policy
Publication date: 2018
The English (NHS) and the Italian (SSN) healthcare systems share many similar features: basic founding principles, financing, organization, management, and size. Yet the two systems have faced diverging policy objectives since 2000, which may have affected differently healthcare sector productivity in the two countries. In order to understand how different healthcare policies shape the productivity of the systems, we assess, using the same methodology, the productivity growth of the English and Italian healthcare systems over the period from 2004 to 2011. Productivity growth is measured as the rate of change in outputs over the rate of change in inputs. We find that the overall NHS productivity growth index increased by 10% over the whole period, at an average of 1.39% per year, while SSN productivity increased overall by 5%, at an average of 0.73% per year. Our results suggest that different policy objectives are reflected in differential growth rates for the two countries. In England, the NHS focused on increasing activity, reducing waiting times and improving quality. Italy focused more on cost containment and rationalized provision, in the hope that this would reduce unjustified and inappropriate provision of services.

Productivity in the NHS: why it matters and what to do next
Author(s): Jennifer Dixon et al.
Source: BMJ; 363
Publication date: 2018
A clear strategy for increasing productivity is vital for a sustainable NHS, argue Jennifer Dixon and colleagues.

[Hospital Trusts productivity in the English NHS: Uncovering possible drivers of productivity variations](#)
Author(s): Aragon et al.
Source: PLoS One
Publication date: August 2017
Background: Health care systems in OECD countries are increasingly facing economic challenges and funding pressures. These normally demand interventions (political, financial and organisational) aimed at improving the efficiency of the health system as a whole and its single components. In 2009, the English NHS Chief Executive, Sir David Nicholson, warned that a potential funding gap of £20 billion should be met by extensive efficiency savings by March 2015. Our study investigates possible drivers of differential Trust performance (productivity) for the financial years 2010/11-2012/13. Methods: Following accounting practice, we define Productivity as the ratio of Outputs over Inputs. We analyse variation in both Total Factor and Labour Productivity using ordinary least squares regressions. We explicitly included in our analysis factors of differential performance highlighted in the Nicholson challenge as the sources were the efficiency savings should come from. Explanatory variables include efficiency in resource use measures, Trust and patient characteristics, and quality of care. Results: We find that larger Trusts and Foundation Trusts are associated with lower productivity, as are those treating a greater proportion of both older and/or younger patients. Surprisingly treating more patients in their last year of life is associated with higher Labour Productivity.

[Productivity Growth in the English National Health Service from 1998/1999 to 2013/2014](#)
Author(s): Bojke et al.
Source: Health Economics 26(5) pp. 547-565
Publication date: April 2016

Productivity growth is a key measure against which National Health Service (NHS) achievements are judged. We measure NHS productivity growth as a set of paired year-on-year comparisons from 1998/1999–1999/2000 through 2012/2013–2013/2014, which are converted into a chained index that summarises productivity growth over the entire period. Our measure is as comprehensive as data permit and accounts for the multitude of diverse outputs and inputs involved in the production process and for regular revisions to the data used to quantify outputs and inputs. Over the full-time period, NHS output increased by 88.96% and inputs by 81.58%, delivering overall total factor productivity growth of 4.07%. Productivity growth was negative during the first two terms of Blair's government, with average yearly growth rate of −1.01% per annum (pa) during the first term (to 2000/2001) and −1.49% pa during the second term (2000/2001–2004/2005). Productivity growth was positive under Blair's third term (2004/2005–2007/2008) at 1.41% pa and under the Brown government (2007/2008–2010/2011), averaging 1.13% pa. Productivity growth remained positive under the Coalition (2010/2011–2013/2014), averaging 1.56% pa. © 2016 The Authors Health Economics Published by John Wiley & Sons Ltd.

Health and Wellbeing

[Barriers and facilitators to implementing workplace health and wellbeing services in the NHS from the perspective of senior leaders and wellbeing practitioners: a qualitative study](#)
Item Type: Journal Article
Authors: Quirk, Helen;Crank, Helen;Carter, Anouska;Leahy, Hanna and Copeland, Robert J.
Publication Date: 2018
Journal: BMC Public Health 18(1), pp. 1362
Abstract: BACKGROUND: The National Health Service (NHS) seems appropriately placed to be an exemplar employer in

providing effective and proactive workplace health and wellbeing services for its staff. However, NHS staff sickness absence costs an estimated 2.4 billion. Evidence suggests staff health and wellbeing services delivered in the NHS can improve health, productivity and sickness absence and yet the adoption of these services remains a challenge, with few examples nationally. This research aimed to explore the perceptions of NHS senior leaders and health and wellbeing practitioners regarding barriers and facilitators to implementing workplace health and wellbeing services for staff in the NHS., METHODS: Semi-structured interviews were conducted with NHS staff, consisting of four senior leaders, four heads of department and three health and wellbeing practitioners in one region of the UK. Interviews were transcribed verbatim and analysed using thematic analysis., RESULTS: Themes describe the experience of delivering workplace health and wellbeing services in the NHS, and barriers and facilitators to implementation from senior decision makers. Barriers to implementation of services include; a busy and pressurised environment, financial constraints and reluctance to invest in staff health and wellbeing. Barriers to staff engagement were also reported and include difficulty of access to health and wellbeing services and lack of time. Initiating services were facilitated by financial incentives, a supportive organisational structure and culture that takes a preventative, rather than reactive, approach to staff health and wellbeing. Facilitators to implementing health and wellbeing services include a coherent, strategic approach to implementation, effective communication and advertisement, being creative and innovative with resources and conducting a needs analysis and evaluation before, during and after implementation., CONCLUSIONS: Barriers to the successful initiation and implementation of health and wellbeing services in the NHS are numerous and range from front-line logistical issues with implementation to high-level strategic and financial constraints. Adopting a strategic and needs-led approach to implementation

and ensuring thorough staff engagement are amongst a number of factors that facilitate implementation and help overcome barriers to initiation of wellbeing programmes in the NHS. There is a need for a culture that supports staff health and wellbeing in the NHS.

Technology

[Improving Theatre Productivity by Digitising Surgical Equipment Repairs](#) Abstract only*
Author(s): Buddhdev et al.
Source: Cureus 16(6)
Publication date: June 2024
Introduction A few cancelled surgeries are due to surgical equipment issues representing a significant burden to both patients and National Health Service (NHS) hospitals on waiting lists. Despite this, there remain very few strategies designed to tackle these avoidable cancellations, especially in combination with digitisation. Our aim was to demonstrate improved efficiency through a pilot study in collaboration with Broomfield Hospital (Broomfield, United Kingdom), MediShout Ltd (London, United Kingdom), and B. Braun Medical Ltd (Sheffield, United Kingdom) with the digitalisation of the equipment repair pathway. Methods MediShout digitised two distinct repair pathways: ad-hoc repairs and maintenance equipment services (MES). Pre- and post-digitisation outcome measures were collected including the number of process steps, staff contribution time, non-staff continuation time, turnaround time, cancelled surgeries, planned preventative maintenance compliance, and staff satisfaction. The number of steps, staff contribution time, and non-staff contribution time were calculated using cognitive task analyses and time-motion studies, respectively. Turnaround time and cancellation data were taken from existing hospital data sets and staff satisfaction was measured through two staff surveys. Results Digitising the ad-hoc repair pathway reduced the number

of steps by 18 (118 to 100) and saved 74 minutes of total staff time (Broomfield Hospital and B. Braun) per repair, resulting in annual efficiency savings of £21,721.48. Digitising the MES repair pathway reduced the number of steps by 13 (74 to 61) and saved 56 minutes of total staff time per repair, resulting in annual efficiency savings of £3469.44. Turnaround time for the repaired kit decreased by 14 days and 29 days for the digital ad-hoc and digital MES pathways, respectively. Elective operations cancelled due to equipment issues decreased by 44%, from 1.5 operations/month pre-pilot to 0.83 operations/month post-pilot. Planned preventative maintenance compliance across the MES pathway increased by 67% (33% to 100%). Staff satisfaction with the repair pathway improved from 12% to 96%. Conclusion This pilot study showcases the numerous benefits that can be achieved through digitisation and offers an innovative case study to approach avoidable cancellations due to equipment failure.

Child health technology: shaping the future of paediatrics and child health and improving NHS productivity Full text available with NHS OpenAthens account*
Item Type: Journal Article
Authors: Dimitri, Paul
Publication Date: 2019
Journal: Archives of Disease in Childhood 104(2), pp. 184–188
Abstract: In the last decade, technology has revolutionised the way we deliver healthcare. Smartphones, tablets, personal computers and bespoke devices have provided patients with the means to access health information, manage their healthcare and communicate with health professionals remotely. Advances in technology have the potential to change how acute and long-term conditions are diagnosed and managed and how illness is prevented using technological advances in artificial intelligence, virtual and augmented reality, robotics, 3D printing, new materials, biosensor technologies and data analytics. In the future, predictive analytics will help with earlier disease diagnosis

in at-risk populations. Historically, development of child health innovation and technology has taken place in a relatively emergent manner with little formal coordination. The aim is to move away from the traditional approach of repurposing adult technologies to provide a large-scale and coordinated approach for the development of bespoke health technology for children that is anatomically, physiologically and developmentally appropriate, versatile and that has been designed with children and young people. The challenge for the National Health Service alongside healthcare systems across the world is to deliver increasingly complex healthcare at lower cost and with better quality of life and greater efficiency.

Volunteering

The value of international volunteers experience to the NHS
Item Type: Journal Article
Authors: Zamora, B.;Gurupira, M.;Rodes Sanchez, M.;Feng, Y.;Hernandez-Villafuerte, K.;Brown, J. and Shah, K.
Publication Date: 2019
Journal: Globalization and Health 15(1), pp. 31
Abstract: BACKGROUND: Global Engagement works with health partnerships to establish workforce and educational translation on a global scale to support the National Health Service (NHS). There is growing evidence on how international experiences (through volunteering, exchanges and placements) benefit the NHS through an innovative workforce that develops international best practice and promotes lifelong learning. Most of this evidence has been captured though surveys to returned international volunteers. However, there is limited evidence about how to quantify the value that returned international healthcare volunteers bring back to their country of residence., METHODS: This paper identifies the various benefits to the NHS

from returned international healthcare volunteers. The outcomes from returned international volunteers, which have been identified as relevant form a NHS perspective, are linked to three key areas in a multisector analytical framework used by the World Bank to evaluate labour market programmes: (1) Investment climate and Infrastructure, (2) Labor market regulations and institutions, and (3) Education and skills development. The monetary value of these outcomes is quantified through productivity indices which capture the economic value that the achievement of these outcomes have on the quality of the NHS labor force. This model is applied to a dataset of international volunteers provided by the Global Engagement health partnerships., RESULTS: The results suggest that international volunteering generates average productivity gains of up to 37% for doctors and up to 62% for nurses. Average productivity gains estimated from health partnerships data vary depending on duration of volunteering periods and occupational category mix., CONCLUSIONS: Our analysis offers a value for money rationale for international volunteering programmes purely from a domestic and NHS perspective. The valuation method considers only one of the aims of international volunteering programmes: the development of the existing and future NHS workforce. Broader benefits for health system strengthening at a global level are acknowledged but not accounted for. Overall, we conclude that if the acquisition of volunteering outcomes is realised, the NHS can accrue a productivity increase of between 24 and 41% per volunteer, with a value ranging from 13,215 to 25,934 per volunteer.

Workforce Planning

[What happens when the tasks dry up? Exploring the impact of medical technology on workforce planning](#)
Author(s): Maynou et al.
Source: Social Science & Medicine 352
Publication date: July 2024
Increasing evidence suggests that new technologies tend to substitute for low skilled labour and complement highly skilled labour. This paper considers the manner in which new technology impacts on two distinct groups of highly skilled health care labour, cardiologists and cardiac surgeons. We consider the diffusion impact of PCI as it replaces CABG in the treatment of cardiovascular disease in the English NHS, and explicitly estimate the degree to which the cardiac surgical workforce reacts to this newer technology. Using administrative data we trace the complementarity between CABG and PCI during the mature phase of technology adoption, mapped against an increasing employment of cardiologists as they replace cardiothoracic surgeons. Our findings show evidence of growing employment of cardiologists, as PCI is increasingly expanded to older and sicker patients. While in cardiothoracic surgery, surgeons compensate falling CABG rates in a manner consistent with undertaking replacement activity and redeployment. While for cardiologists this reflects the general findings in the literature, that new technology enhances rather than substitutes for skilled labour, for the surgeons the new technology leads to redeployment rather than a downsizing of their labour.

[Securing a sustainable and fit-for-purpose UK health and care workforce](#) Abstract only*
Author(s): Anderson et al.
Source: The Lancer 397(10288)
Publication date: May 2021

Approximately 13% of the total UK workforce is employed in the health and care sector. Despite substantial workforce planning efforts, the effectiveness of this planning has been criticised. Education, training, and workforce plans have typically considered each health-care profession in isolation and have not adequately responded to changing health and care needs. The results are persistent vacancies, poor morale, and low retention. Areas of particular concern highlighted in this Health Policy paper include primary care, mental health, nursing, clinical and non-clinical support, and social care. Responses to workforce shortfalls have included a high reliance on foreign and temporary staff, small-scale changes in skill mix, and enhanced recruitment drives. Impending challenges for the UK health and care workforce include growing multimorbidity, an increasing shortfall in the supply of unpaid carers, and the relative decline of the attractiveness of the National Health Service (NHS) as an employer internationally. We argue that to secure a sustainable and fit-for-purpose health and care workforce, integrated workforce approaches need to be developed alongside reforms to education and training that reflect changes in roles and skill mix, as well as the trend towards multidisciplinary working. Enhancing career development opportunities, promoting staff wellbeing, and tackling discrimination in the NHS are all needed to improve recruitment, retention, and morale of staff. An urgent priority is to offer sufficient aftercare and support to staff who have been exposed to high-risk situations and traumatic experiences during the COVID-19 pandemic. In response to growing calls to recognise and reward health and care staff, growth in pay must at least keep pace with projected rises in average earnings, which in turn will require linking future NHS funding allocations to rises in pay. Through illustrative projections, we show that, to sustain annual growth in the workforce at approximately 2·4%, increases in NHS expenditure of 4% annually in real terms will be required. Above all, a radical long-term strategic vision is needed to ensure that the future NHS workforce is fit for purpose.

*Help accessing articles or papers

Where a report/ journal article or resource is freely available the link has been provided. If an NHS OpenAthens account is required this has been indicated. It has also been highlighted if only the abstract is available. If you do not have an OpenAthens account you can self-register here.

If you need help accessing an article, or have any other questions, contact the Knowledge Management team for support england.knowledgemanagement@nhs.net