

# How would clinicians use time freed up by technology?

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## Key points

- 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.
- If potentially time-saving technologies are to generate productivity benefits, then the time freed up has to be used effectively. This is often assumed but by no means guaranteed. The evidence review estimated that less than 1% of the literature on the impact of technology on staff time in health care actually considers how freed-up time is repurposed. Given this significant evidence gap, more research is needed.
- Our analysis cautions against the assumption that time freed up by technology will automatically translate into the equivalent amount of time being used for patient care. When we asked clinical staff how they would likely use freed-up time, survey respondents allocated only 27% of that time to patient care or direct clinical activity. It is important that policymakers, system leaders and those involved in workforce planning use realistic assumptions when it comes to modelling how freed-up time may be used.
- This figure, however, should not be taken as a general rule or upper limit on the use of freed-up time for patient care. Explicit planning is required to ensure the effective repurposing of time, and this should be done with staff and wider stakeholders. So good change management is critical to deriving the benefits from time-saving technologies.
- Our survey respondents and expert interviewees suggested that, in addition to potentially increasing care volumes, freed-up time could be used in a range of ways, from enhancing the quality of patient consultations to having more time to think and undertake wider professional activities like training, research and quality improvement. These activities can also benefit productivity – for example, through boosting care quality, enhancing knowledge and skills, streamlining service delivery and supporting staff wellbeing and retention. A broad view of how freed-up time can contribute to improved NHS productivity is therefore crucial.
- There is an important opportunity here for NHS leaders and employers to create a compelling ‘offer’ for staff, one making it clear that – in addition to increasing care volumes – a proportion of freed-up time could be used for activities, such as training or research, that would not only benefit productivity but make a crucial contribution to improving job quality.

# 1. Introduction

In addition to the potential for technology to improve clinical effectiveness and patient experience, the idea that it can free up ‘time to care’ for NHS staff has become a major focus of health policy in recent years. This was an underpinning assumption of [Eric Topol’s review of the digital future of health care](#) (2019), which envisaged technology giving ‘the gift of time’ to health care workers. It also shaped the ambitious productivity aspirations of the [NHS Long Term Workforce Plan](#) (2023) and informed the new NHS productivity plan announced in the 2024 [Spring Budget](#).

Last year, the Health Foundation launched a research project on this issue, with the aim of highlighting clinical perspectives and drawing out practice-based insights on how technology can support workforce capacity and time for care in the NHS. In addition to our own desk research and analysis, we collaborated with eight professional bodies on a survey and expert interviews, and commissioned a rapid evidence review (see Box 1). [Elsewhere](#), we have shared our findings on which technologies are making a difference to the time clinical staff have available for their work.

In this analysis, we examine the evidence on how time freed up by technology is repurposed in practice and explore clinician perspectives on how such time could be used in the NHS. In doing so, we challenge common policy assumptions about the way freed-up time translates into increased productivity. This analysis seeks to support a range of stakeholders – policymakers, economists, workforce planners, employers, managers, clinicians, and others – through enriching our understanding of this complex area. Ultimately, we need more nuanced, evidence-based, and proactive approaches to the use of freed-up time if the NHS is to maximise the gains that health care technologies can offer to improve productivity.

## Box 1: Our methodology and commissioned rapid evidence review

Our research draws on an anonymous online survey of clinical staff across the UK and semi-structured qualitative interviews with experts on the use of technology and AI in clinical practice.

We targeted eight professional groups in which there are workforce shortages and thus particular hopes for technology to save time and support staff capacity. To reach and represent each group, we worked directly with the relevant professional body:

- anaesthetists (via the Royal College of Anaesthetists)
- GPs (via the Royal College of General Practitioners)
- intensive care doctors (via the Faculty of Intensive Care Medicine)
- nurses (via the Royal College of Nursing)
- obstetricians and gynaecologists (via the Royal College of Obstetricians and Gynaecologists)
- physiotherapists (via the Chartered Society of Physiotherapy)
- psychiatrists (via the Royal College of Psychiatrists)
- radiologists and oncologists (via the Royal College of Radiologists).

The survey and interviews were conducted by the Health Foundation with support from these partners, who collaborated with us on the survey text and interview script.

Partner organisations promoted the survey to their members across their communications channels. It was also shared with practitioners from relevant specialties via the Health Foundation's own networks. The survey was open between 24 November 2023 and 31 January 2024 across the survey platform Qualtrics. We received 614 completed responses. 54 of these were removed from the final dataset because they did not meet our eligibility criteria, which excluded those not working within one of our specific staff groups, not currently practising (for example, those who had fully retired) or working fewer than 4 hours per week. As the survey asked about current uses of technology and the potential for saving time, we wanted to focus on staff whose practice exceeded a minimum number of hours. These criteria left 560 eligible responses, which we used for our analysis and reporting.

For the qualitative interviews, partner organisations connected us with experts on the use of technology and AI in their respective specialties or staff groups. We conducted 17 video interviews between January and April 2024. The details of our interviewees appear in the acknowledgements.

We also commissioned the **Evidence Centre** to carry out a rapid review of the evidence base on the impact of digital and telephone technology on staff time in health care to help us understand the scope of literature. The review drew on published and unpublished studies available in English from any country between January 2010 and September 2023. The review was designed to provide an indication of the body of literature on this topic rather than to undertake a systematic review or a critique of the evidence base, and we deliberately set broad parameters. It sampled 500 studies most relevant to our search parameters on the impact of digital and telephone technology on health care staff time and workload.

## 2. What does the evidence tell us about how time released by technology is used?

Time savings come not just from technology but how it is used in practice

Before considering the evidence on how time freed up by technology is repurposed, it is important to recognise that the assumption that technology will necessarily free up time is problematic. The evidence base surrounding the impact of technology on time in health care is mixed – with some studies finding time savings and others finding no difference or even negative impacts (see, for example, this [systematic review](#)).

There are many examples of potentially time-saving technologies yielding disappointing results – a phenomenon sometimes termed the ‘[productivity paradox](#)’ in economic studies. Realising benefits in practice can take a substantial amount of time due to implementation challenges, and may also require ‘[complementary innovations](#)’ to optimise the use of technologies. For example, a [study](#) of remote monitoring and teleconsultation in primary care in Singapore found that although the technologies had largely positive effects on workload, it was the introduction of an additional tool to help the health care team prioritise patients that freed up time for staff to focus on other tasks. Efficiency gains resulted not simply from the primary technologies but rather from an additional tool brought in alongside them. Such examples demonstrate that time savings come not from technology in isolation but from [how it is implemented and used in context](#), which may require wider changes, such as workflow and service redesign and/or [new knowledge and skills](#).

The context specificity of how technology is implemented and used can also limit the generalisability of studies – particularly small-scale studies of an individual technology being introduced in a single setting. It is unclear whether the time savings seen in one site may be replicated elsewhere, even within the same organisation or professional group. For example, a [study](#) found the introduction of automated dispensing cabinets in a Finnish hospital saved nurses time in the anaesthesia and surgical unit but not in the intensive care unit (ICU). Potential reasons included changes in the spatial layout of the ICU before and after implementation as well as differing levels of nurse involvement in pharmaceutical tasks across the units.

Beyond challenges of technology implementation, a range of other complicating factors exist around freeing up time for care. These include whether time is freed up in readily usable amounts and also to whom it accrues (particularly if the technology results in the redistribution of work). A [study](#) looking at the implementation of the NHS Electronic Prescription Service in four early adopter English general practices showed how time spent on repeat prescribing both increased and decreased at various stages, concluding that time savings were not equally distributed among clinical and administrative staff. Some staff may even face additional ‘[time demands](#)’ from technology, for example, due to supporting their colleagues to use new systems.

## Increased productivity does not come simply from freeing up time – it depends how that time is used

Much of the discussion about technology implementation focuses on ensuring it frees up time in practice – a significant challenge. But there is another critical causal link in the chain that has to work if time-saving technologies are to generate productivity benefits: freed-up time has to be used effectively. This is often assumed but by no means guaranteed. (While in some cases, 'effective' use of freed-up time specifically means increased care volumes, it is not our intention to imply that here; further below we explore the range of activities it could involve.)

A small number of studies objectively quantify and measure the use of freed-up time (for example, through observational and **time-motion methods**) or ask staff how they would or did use that time. For example, **one study** looking at the use of speech recognition software for medical documentation in Germany found it yielded 43% greater time efficiency compared with typing; and in a survey completed by 31 clinicians, the majority stated that if they could save time on medical documentation, they would use it to deliver patient care. Meanwhile, other studies offer direct evidence of increased care volumes and clinical activity. For example, a **mixed-methods study** of an electronic drug-monitoring system in an Australian hospital's rheumatology department reported an increase in the number of nurse-led clinics from two to four per week, with the number of patients seen rising from 34 to 99.

Much more commonly, however, studies do not provide empirical data to support claims that freed-up time was repurposed for direct clinical activity or patient care, leaving it unclear whether this change was observed, reported or simply assumed.

There is in fact a significant gap in the literature when it comes to how time freed up by technology is subsequently used. The Evidence Centre's rapid review (see Box 1) found as many as 35,500 studies mentioning the impact of digital and telephone technologies on staff time or workload (although two-thirds of these did not appear to include empirical data). But only 28 studies described how staff used any of the time saved by technology use (and, of these, only three were conducted in the UK). Since the review's methodology (which relied mainly on screening abstracts) may not have identified all relevant studies, it conservatively estimated that less than 1% of studies mentioning the impact of digital and telephone technologies on staff time considered how staff used any time saved. While this was a rapid review of the evidence, studies on how freed-up time is repurposed nevertheless appear to be only a tiny proportion of the overall literature on technology and time in health care.

Ultimately, if freed-up time is not used as planned, the anticipated productivity gains will not materialise.



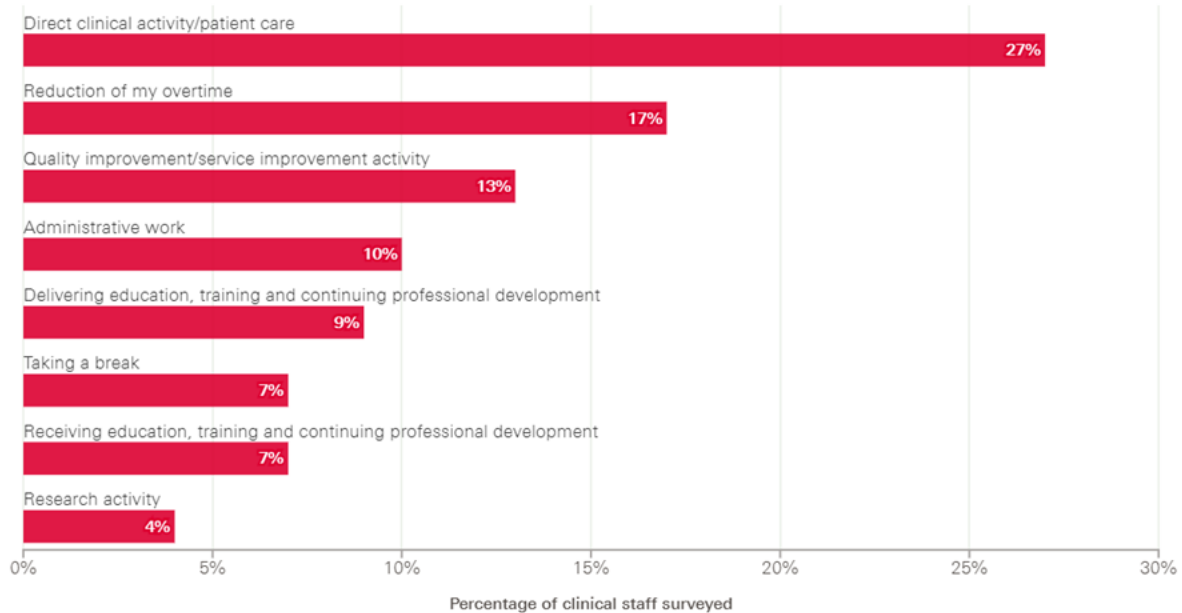
### 3. What do clinicians tell us about how they would use freed-up time?

Some evidence on the anticipated or actual use of freed-up time comes from self-reporting, typically by a small group of clinicians based in a single site. We used our survey to expand on this, presenting respondents with scenarios where the introduction of a new technology in their work freed up time and asking how they would most likely spend that time.

Respondents were first given a scenario in which a new technology freed up 1 hour of time for them to use per week. We asked them to select – from a multiple-choice list – one activity on which they would most likely spend that time based on their current clinical role and responsibilities. The top three options were: ‘direct clinical activity/patient care’ (chosen by 27%), ‘reduction of my overtime’ (17%) and ‘quality improvement/service improvement activity’ (13%) (see Figure 1). The picture was slightly different among those working in primary care, where ‘reduction of my overtime’ ranked highest (27%), followed by ‘direct clinical activity/patient care’ (23%).

Figure 1

How clinical staff surveyed indicated they would use 1 hour of time freed up by technology

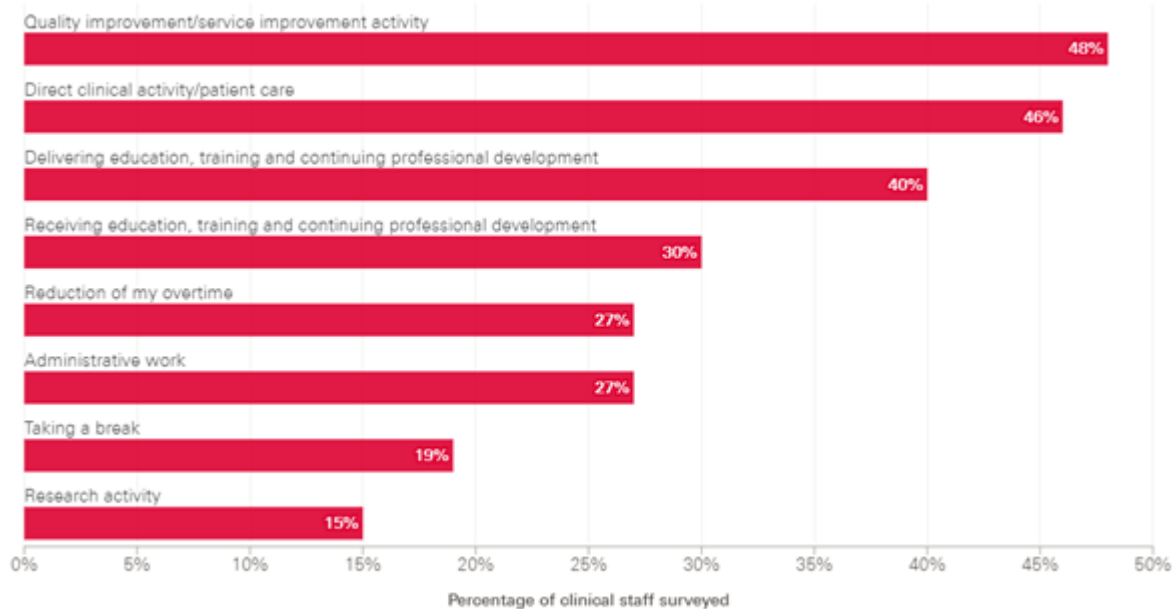


 The Health Foundation © 2024 Of the remaining respondents, 4% selected 'other' and 2% selected 'don't know'.

We then asked respondents to imagine a scenario where a new technology freed up 3 hours of time for them per week. They were presented with the same multiple-choice options but could select up to three activities on which they were most likely to spend that time. With more time freed up, the picture changed. The highest-ranked option was 'quality improvement/service improvement activity' (chosen by 48%), followed by 'direct clinical activity/patient care' (46%) and 'delivering education, training and continuing professional development' (CPD) (40%) (see Figure 2).

Figure 2

### How clinical staff surveyed indicated they would use 3 hours of time freed up by technology



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Respondents were able to select up to three options. Further to the above, 3% selected 'other' and 1% selected 'don't know'.

Our survey respondents included greater representation of those at a later or more advanced stage of their career. The answers shifted slightly for those at an earlier stage. Among specialty trainees, for instance, 1 hour was still most likely to be spent on 'direct clinical activity/patient care' and 'reduction of my overtime', but the third choice was 'receiving education, training and CPD'. With 3 hours, 'direct clinical activity/patient care' was the top option for this group, followed by 'receiving education, training and CPD' and then 'delivering education, training and CPD'. Those at different stages of their careers or with different levels of seniority may have different priorities and/or levels of autonomy when it comes to repurposing their time, and are likely to have different work patterns. For example, the rotational nature of medical training could affect the likelihood of trainees using freed-up time for improvement activities that may outlast their placement at a particular site. (As only 40 respondents were specialty trainees, it is difficult to draw robust conclusions about this group, and more research is needed to explore this issue.)

Our findings suggest that how clinicians would use freed-up time is contingent on a range of factors, from the setting in which they work and their career stage to how much time is released.

We asked those respondents who suggested they would spend some of their freed-up 3 hours on patient care or direct clinical activity to estimate – to the nearest half hour – how much of the 3 hours they would spend on this. 28% said 1 hour, followed by 24% who said 2 hours. On average, respondents who said they would use some of the 3 hours on patient care (46% of the total sample) allocated around 106 minutes each to this (59% of the total possible 3 hours). If 46% of respondents would use 59% of their freed-up time on patient care, this means that 27% of the time freed up across all respondents would be used in this way. While this calculation extrapolates from a relatively small sample of clinicians presented with a speculative scenario, it nevertheless points to the importance of exercising caution when assuming that any time freed up by technology will necessarily create the equivalent amount of additional time for patient care. Our findings suggest only a minority of freed-up time may be repurposed for this.

## 4. What do clinicians tell us about how their professions and the wider NHS would use freed-up time?

Our qualitative interviews with experts gave us the opportunity to further interrogate staff perceptions on the use of freed-up time. We used these interviews to explore how different specialties, professional groups and the wider NHS might repurpose time and investigated the enablers for and barriers to time being used in different ways.

### More time for patient care

Several interviewees noted that, with rising service pressures, technology could be used to increase productivity and care volumes to some extent. Toni Brunning (Consultant Anaesthetist, Worcestershire Acute Hospitals and Council Member and Trustee, Royal College of Anaesthetists) said that, within her specialty, if they could 'streamline' processes, they 'could do more cases in a day, and so more people would get an operation in a more timely fashion'. She thought this would have a 'direct impact' on elective backlogs and waiting lists and be 'satisfying' for theatre teams, who sometimes experience 'delays and waiting around'. Stephen Harden (Consultant Radiologist, University Hospital Southampton and Vice-President for Clinical Radiology, Royal College of Radiologists) described how technology could 'enable [radiologists] to interpret more scans in the set period of time, to have greater patient throughput'. Both interviewees linked increased care volumes to the nature of their work.

It is possible that more referral-based or list-based specialties such as anaesthesia and radiology may be more amenable to using freed-up time in this way, although overall productivity gains may be contingent on efficiencies across care pathways. Workforce planning around the use of technology therefore requires a nuanced understanding of how the nature of workloads and clinical processes within different specialties might affect the repurposing of time.

Interviewees cautioned against assumptions that freed-up time would allow ever greater numbers of patients to pass through the system, however. They warned that this focus on 'throughput' alone was not a solution to rising patient demand and greater case complexity. They highlighted that expecting staff to absorb ever-increasing and more complex caseloads would exert considerable pressure and present an obvious risk of burnout. Further, it was noted that technology will generally support rather than replace clinical staff, and so will not eliminate the need for continued workforce expansion.

Significantly, for our interviewees, time for care could encompass two key aspects: boosting the quantity of care (for example, increasing appointments/interventions) and/or improving the quality of care (for example, through spending more time with patients and delivering more holistic, proactive or preventative care). Joseph Alderman (Anaesthetic and Intensive Care Registrar, University Hospitals Birmingham NHS Foundation Trust and doctoral researcher, University of Birmingham) suggested that the ideal scenario would be one 'giving us free time to speak to patients and do the human tasks that only we can do to care',

while Barney Kennedy (Assistant Service Manager Physiotherapy, Belfast Health and Social Care Trust and Vice-Chair, Chartered Society of Physiotherapy Northern Ireland Board) imagined 'being able to have a better conversation with your patient', which for him entailed 'being able to do wider health promotion'.

Themes around personalisation and prevention were raised by Asif Bachlani (Consultant Psychiatrist, Priory Group and Associate Non-Executive Director, Kent and Medway NHS and Social Care Partnership Trust), who imagined how freed-up time could help fundamentally shift approaches to care: 'Maybe if we had more time to reflect about patient care, more resources in terms of both time and capacity, we could have more directed, beneficial treatments for people who are disadvantaged or marginalised, which I would say we don't do so well at the moment. Going even further, hopefully in the ideal scenario we would have a mixture of focusing on population health, wider determinants of health, much better personalised care and I think potentially even early intervention.'

Freeing up time for better care could be an important benefit of technology but is not the same as freeing up time for more care.

In policymaking and public discourse, clinicians spending more time with patients is often taken as a proxy for increased quality of care. As our interviewees attest, however, how that time is spent is crucial. A [study](#) looking at the impact of the adoption of electronic health records on nursing work and caring efficacy in a US hospital found that, after implementation, there was an increase in the proportion of nursing interventions performed per hour and nurses spent significantly more time in patient rooms. Despite this, the nurses reported a slight decrease in [caring efficacy](#). The study suggested that changes such as the added presence of a computer in the patient's room may have disrupted nurse-patient interactions. We should be cautious in assuming that technology always enables clinicians to provide better quality interactions.

It is telling that, in our interviews, experts characterised scenarios with a greater emphasis on the quality of care as 'ideal' or 'aspirational'. Many highlighted the tension between how they believed freed-up time should be used versus how it would be expected to be used in practice (that is, an expectation of vastly increased 'throughput', or numbers of patients passing through the system). These demands were sometimes portrayed as a challenge to improved quality of care or quality of work. One example of this was put forward by Laura Rowlinson (Clinical Lead Physiotherapist, East Lothian Rehabilitation Service, East Lothian Health and Social Care Partnership), who described how the NHS currently struggles to navigate between being 'reactive' to demands and more proactive 'preventative' approaches; more time could enable a greater focus on the latter.

## More time for wider professional activities

Many interviewees also saw current service pressures as a challenge to using time for wider professional activities, such as education and training, research and quality improvement. In our interviews, both national policy and local leadership were seen as critical for fostering a culture whereby the value of wider

professional activities (including their contribution to improving productivity) is recognised. Anaesthetic and Intensive Care Registrar Joseph Alderman said that change is about ‘making the point at the very highest level within the health service’ that this type of work is ‘mission critical’ and a ‘system requirement’, while Susan Shelmerdine (Consultant Paediatric Radiologist, Great Ormond Street Hospital for Children and Member, Royal College of Radiologists’ AI Clinical Radiology Working Group) said the system needs to come to ‘a mindset where all of this is important’.

Several of our interviewees also emphasised the importance of clinicians having time to think and reflect. Sandy Jackson (Specialty Trainee in Anaesthetics and Intensive Care Medicine and NIHR doctoral fellow, University of Southampton) wanted technology to ‘reduce the cognitive load and reduce fatigue’ so clinicians ‘can take 5 minutes and just breathe and have a think and work through things’. Thinking time was variously seen as important for supporting patient care, improving wellbeing and enabling service redesign. Paul Bradley (Consultant Psychiatrist and Chief Clinical Information Officer, Hertfordshire Partnership University NHS Foundation Trust and Specialist Advisor for Mental Health Informatics, Royal College of Psychiatrists) said that ‘learning about new technology and adapting ways of working for the future requires quite a lot of free thinking time’, while Faith Ndebele (Consultant Psychiatrist, Solent NHS Trust and Chair, Digital Psychiatry Special Interest Group, Royal College of Psychiatrists) explained she would like to see time ‘go more towards giving [clinicians] a little bit of space to spend in reflection, in thinking a little bit more strategically about their work, [...] looking at their caseloads, finding new innovative ways of doing things, spending more time thinking about how they can change systems’.

More broadly, the fundamental question of how freed-up time is used was seen as interconnected with job quality, staff wellbeing and retention. Ben Jeeves (Associate Chief Clinical Information Officer, Clinical Safety Officer and Advanced Practice Physiotherapist, North Integrated Musculoskeletal Service, Midlands Partnership University NHS Foundation Trust) remarked, ‘It needs to be things that interest people, and that can be different things for different clinicians, whether that’s leadership, education, training, digital.’ He felt that a ‘variety of tasks’ would help ‘avoid burnout’. Consultant psychiatrist Faith Ndebele explained that being ‘flexible’ in how freed-up time was used ‘might go a long way in improving retention of staff within the NHS’, since varied jobs would be ‘better and more fulfilling’. Implicit in these descriptions is the desire of clinical staff for policymakers and employers to understand how to improve job quality – to make work more manageable, more meaningful and a better experience.

The need for decisions about how time is repurposed to be jointly made by stakeholders was highlighted by several interviewees. For physiotherapist Barney Kennedy, this approach would entail ‘a shared decision between the people who provide service and the people who the service [is] provided for’. Faith Ndebele imagined a scenario where ‘conversations’ were held with clinicians to get their ‘buy-in’ on how capacity could be increased, with the system ‘giv[ing] something back’ through an agreement that clinicians would then have a certain amount of time for wellbeing or professional development activities. Similarly, radiologist Susan Shelmerdine felt staff would be ‘more inclined to buy in’ to changes if it would mean ‘protected’ time for other activities. Once again, interviewees suggested supportive leadership and

nuanced policymaking were crucial enablers for this more collaborative approach to the use of freed-up time.



## 5. How can the potential for technology to release 'time to care' be realised?

Technology has huge potential to improve health care, including by supporting workforce capacity and freeing up staff time. However, as the research findings presented here demonstrate, the assumption that time-saving technology will automatically release equivalent amounts of time for patient care is problematic. Moreover, while there are important opportunities to scale up volumes of care, we heard from staff that freed-up time could also be used to deliver higher-quality patient interactions and support wider professional activities, all of which could offer diverse benefits for productivity, patient care and staff experience and wellbeing.

Our analysis suggests several areas where policymakers and organisational and system leaders could take action to better realise the gains for staff time offered by technology:

- **Use realistic estimates and modelling of how freed-up time gets used.** Despite some encouraging examples of technology freeing up time, there is limited empirical evidence to support assumptions that time released by technology will necessarily be used to increase patient care by the equivalent amount. Policymakers and economists must therefore exercise caution – including in relation to the forthcoming NHS productivity plan – when modelling how particular technologies could increase capacity or care volumes. In particular, the ways in which freed-up time is used will not only depend on the amount of time freed up but likely vary across (and within) care settings, specialties and staff groups.
- **Prioritise effective implementation and change management processes to ensure freed-up time is used purposefully.** In the scenarios presented to our survey respondents, we found that less than a third of freed-up time would be spent on patient care or direct clinical activity. This should not be taken as a general rule or upper limit on the use of freed-up time for patient care, however. Determining the use of freed-up time is a key part of the change process and therefore amenable to good change management. Providers and employers need to ensure that conversations about how any time released will be used are built into the implementation process (and, where appropriate, these decisions should be reflected in job planning). The key is to recognise that successfully releasing and repurposing time is not just about the piece of technology but contingent on a range of factors, including consensus around new ways of working, effective workload management and, in some cases, service redesign.
- **Gather more evidence on how time freed up by technology is used in practice.** Building on promising examples identified here, we need more research and evaluation (especially in real-world settings) on how freed-up time is used, including how this varies by setting, locality and staff group.

- **Adopt a broad view of the factors contributing to improved NHS productivity.** Our research suggests that time released by technology could improve productivity in multiple ways, only one of which is scaling up volumes of care. In other cases, technology could improve productivity by boosting the quality of patient encounters, for example by delivering greater personalisation and holistic care to improve health outcomes. Many of the other activities on which staff might use freed-up time could also indirectly contribute to increased productivity, such as training, quality improvement, reflective practice and breaks or reductions in overtime to alleviate fatigue and burnout. Further, it is important that policymakers and planners recognise that uses of freed-up time that contribute to better job quality and satisfaction will also support productivity through improving the NHS's ability to recruit and retain staff.
- **Create a compelling offer for NHS staff, ensuring some freed-up time can be used in ways that improve job quality.** In planning how the NHS uses any time released by technology, NHS leaders and employers need to consider not only how they can increase care volumes, but how they can make work more meaningful and rewarding for staff. This might include, for example, providing greater opportunities for staff to undertake wider professional activities and ensuring the time and space to deliver better-quality patient encounters. Not only can training, research, quality improvement, reflective practice and a balanced workload make crucial contributions to productivity, they are all important for reasons that go beyond the productivity agenda, including their impact on job quality and clinical outcomes. This approach could also help gain staff buy-in for new ways of working and unlock the potential benefits that improved job quality could have for productivity.

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### Professional body partners

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#### Faculty of Intensive Care Medicine

- Daniele Bryden – Dean

#### Royal College of Anaesthetists

- Sharon Drake – Deputy CEO and Director of Clinical Quality and Research

#### Royal College of General Practitioners

- Danielle Fisher – Assistant Director of Policy, Research and Campaigns
- Victoria Tzortziou Brown – Vice-Chair (External Affairs)

#### Royal College of Nursing

- Dawn Dowding – Co-Chair, Digital Nursing Forum
- Christine Callender – Head of Nursing
- Sarah Seeley – Senior RCN Officer

#### Royal College of Obstetricians and Gynaecologists

- Louise Thomas – Head of Quality Improvement

#### Royal College of Psychiatrists

- Thomas Rutherford – Policy and Campaigns Officer

#### Royal College of Radiologists

- Stephen Harden – Vice-President for Clinical Radiology
- Alex Burns – Policy Adviser

## Interviewees

1. Adrian Hayter – GP Partner and Medical Director for Clinical Policy, Royal College of General Practitioners
2. Asif Bachlani – Consultant Psychiatrist, Priory Group and Associate Non-Executive Director, Kent and Medway NHS and Social Care Partnership Trust
3. Barney Kennedy – Assistant Service Manager Physiotherapy, Belfast Health and Social Care Trust and Vice-Chair of the Chartered Society of Physiotherapy Northern Ireland Board
4. Ben Jeeves – Associate Chief Clinical Information Officer, Clinical Safety Officer and Advanced Practice Physiotherapist, North Integrated Musculoskeletal Service, Midlands Partnership University NHS Foundation Trust
5. Dawn Dowding – Professor of Clinical Decision Making, University of Manchester and Co-Chair, Digital Nursing Forum, Royal College of Nursing
6. Faith Ndebele – Consultant Psychiatrist, Solent NHS Trust and Chair, Digital Psychiatry Special Interest Group, Royal College of Psychiatrists
7. Joseph Alderman – Anaesthetic and Intensive Care Registrar, University Hospitals Birmingham NHS Foundation Trust and doctoral researcher, University of Birmingham
8. JP Lomas – Consultant in Anaesthesia and Intensive Care Medicine, Bolton NHS Foundation Trust and Chair, UK Society for Computing and Technology in Anaesthesia
9. Laura Rowlinson – Clinical Lead Physiotherapist, East Lothian Rehabilitation Service, East Lothian Health and Social Care Partnership
10. Mark Simmonds – Consultant in Critical Care Medicine and Deputy Medical Director, Nottingham University Hospitals NHS Trust
11. Nick Woznitza – Consultant Radiographer, University College London Hospitals and Clinical Academic, Canterbury Christ Church University
12. Paul Bradley – Consultant Psychiatrist and Chief Clinical Information Officer, Hertfordshire Partnership University NHS Foundation Trust and Specialist Advisor for Mental Health Informatics, Royal College of Psychiatrists

13. Sandy (Alexander) Jackson – Specialty Trainee in Anaesthetics and Intensive Care Medicine and NIHR doctoral fellow, University of Southampton
14. Stephen Harden – Consultant Radiologist, University Hospital Southampton and Vice-President for Clinical Radiology, Royal College of Radiologists
15. Susan Shelmerdine – Consultant Paediatric Radiologist, Great Ormond Street Hospital for Children and member, Royal College of Radiologists' AI Clinical Radiology Working Group and AI Conference Programme Committee
16. Toni Brunning – Consultant Anaesthetist, Worcestershire Acute Hospitals and Council Member and Trustee, Royal College of Anaesthetists
17. Toyosi Adeniji – GP Partner and National First5 Chair, Royal College of General Practitioners

## 7. Supporting information

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