Evidence Brief: Digital skills development

Contents

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

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- Complete Evidence Brief list – link for External staff

Key publications – the big picture

Digital transformation January 2023, NHS Digital
We're using technology to help health and care professionals communicate better and enable people to access the care they need quickly and easily, when it suits them. From websites and apps that make care and advice easy to access wherever you are, to connected computer systems that give staff the test results, history and evidence they need to make the best decisions for patients, we're working smarter to provide better care than ever before. The NHS Long Term Plan (2019) underpins the importance of technology in the future NHS; setting out the critical priorities that will support digital transformation and provide a step change in the way the NHS cares for citizens.

How we can support digital inclusion January 2023, NHS Digital
Health and care staff do not always have knowledge and confidence in using digital health resources themselves. This means that they are unlikely to act as digital champions and recommend digital tools to their patients. This can be one of the biggest barriers to digital inclusion.

Digital skills assessment tool (no date), Health Education England
A new digital skills assessment tool has been developed for use by the wider NHS and social care workforce. It is an interactive online assessment tool that allows people to answer a set of questions to determine their current digital literacy levels and help identify areas of learning need. Once an individual has completed the self-assessment questionnaire, they will be directed to relevant learning resources to help them develop their skills in specific areas.

Harnessing digital technologies for workforce development, education and training: an overview November 2022, Health Education England
The profile of the health and care workforce needs to change significantly to meet demand, enabling the delivery of services in a digitally enabled environment. It is predicted that "in the next decade the NHS workforce needs to grow twice as fast and the social care workforce four times as fast as in the previous decade to meet demand." More than 50% of today's workforce will still be working in 2032. Policy makers and leaders need to maximise digital technologies to:
- take a system-wide approach to workforce planning and supply
- transform the delivery of education and training
- upskill the existing workforce
- inform clinical decision-making
- design and deliver personalised healthcare services

A plan for digital health and social care June 2022, Department of Health & Social Care
To equip the adult social care workforce with the right skills and support to embed digital ways of working, and align with wider workforce ambitions, we:
- will provide a digital learning offer that includes accessible training and online resources over the next 3 years. In March 2022, we published a digital skills framework alongside a collection of digital skills training resources for social care staff. We are finalising the framework and implementing a self-assessment tool to sit alongside. Social care staff will be supported via digital skills training such as the NHS Digital Academy
- working in partnership with Skills for Care, the National Care Forum, Digital Social Care and Cosmic, this year we have delivered 2 free training programmes to support social care professionals to develop their skills and help drive digital

transformation and change across the sector. We are now working to formally evaluate the training to help shape a scaled-up future digital learning offer

[Video] Preparing staff for the digital NHS of the future The King's Fund, December 2021
In this session, we examined how we can bring staff on board and help them understand and demystify the process of implementing data-driven solutions on the ground. Watch now to hear the practical, tangible benefits AI technology brings for NHS staff and to learn how data analytics can transform every aspect of health care, from preventing medical harm to helping a trust define what it wants to focus on, to better service integration at the integrated care system level.

Putting data, digital and tech at the heart of transforming the NHS November 2021, Department of Health & Social Care
The extent of the changes envisaged by this report should not be under-estimated; they get to the heart of how the centre of the NHS operates, and critically the culture, skills and capabilities, incentives and operating processes in place. It will be tempting to focus on the organisational consequences. However, implementation will fail unless the accompanying enablers for change are followed through. As such, the change management effort is significant […].

What skills do we need to make digital transformation work in the NHS? May 2021, NHS Confederation
Many enter the health service because it is a caring profession. Nurses may value the opportunity to build a direct relationship with a patient as they take them through tests, answering questions or providing reassurance as they go. If they're going to be logging into an IT system to view a patient's pre-submitted test results instead, will that feel as rewarding? What additional skills will be needed to ensure nurses are equipped to 'coach' patients in how to use remote tests and to view and analyse the test results in the system?

This is as much about addressing skills gaps as it is about understanding patient needs and staff motivations. Soft skills and intuitive, visual ways of judging a person's overall wellbeing in person are woven into the fabric of current service provision and it's hard to imagine a time when that wouldn't be the case. The future is not about digitising everything but about understanding where technology can help us be more efficient and responsive.

Data Driven Healthcare in 2030: Transformation Requirements of the NHS Digital Technology and Health Informatics Workforce March 2021, Health Education England
The COVID-19 pandemic in 2020 has forced people to work from home and deliver services, and also think differently about how they can sustain remote service models to deliver care to patients safely. This has required a cultural step change in the thoughts, behaviours and attitudes of workforce and patients alike, in adopting and adapting to digital innovation. Embedding innovation around digital technology in healthcare, as was seen during the pandemic, and ensuring future sustainability will require ongoing funding, the necessary technical infrastructure, and a digital and data-literate healthcare workforce. It also requires investment in – and professional recognition of – a staff group whose area of work is primarily focused on digital technology and health informatics. This report aims to help understand the demand for this staff group and how the NHS can invest in the necessary job roles and skills to build and sustain a digitised NHS.

Digital Skills in Adult Social Care: Rapid Evidence Review Skills for Care, March 2021
Approaches to learning and development can be split into formal and informal opportunities. Formal approaches include: learning pathways, with or without accreditation/certification; academy approaches to developing specialist skills, technology enhanced learning for example virtual workshops, eLearning etc. Digital champions are emerging in social care as a less formal approach to learning and development. This involves an individual being available to help digitally upskill others. There is no standardised approach to digital champions however, emerging evidence would endorse the concept as an effective enabler to supporting the development of skills in staff. Other informal approaches include peer-to-peer support platforms and networks which allow staff to share knowledge and build confidence to lead and develop skills. Finally, intergenerational methods where younger people upskill older people (e.g. primary schools working in care homes) are more likely to succeed when young people understand the barriers their learners face.

Digital Inclusion in Health and Care: Lessons learned from the NHS Widening Digital Participation Programme (2017-2020) September 2020, Good Things Foundation
[Chapter 7: Upskilling the health and care workforce] As part of the NHS Widening Digital Participation programme, several pathfinders explored ways to upskill local practitioners in health, care, and community services. Sometimes this was a focus from the outset but sometimes, the need for upskilling practitioners only became apparent as pathfinders faced reluctance or resistance from staff to use digital tools.

The Topol Review: Preparing the healthcare workforce to deliver the digital future February 2019, Health Education England
For technology to be of maximum value to the NHS, the entire healthcare workforce will need to be supported to work in this technology-enhanced environment. 'Healthcare workforce' in this report is taken to encompass scientific, therapeutic and technical disciplines, as well as managers and commissioners alongside clinical staff. Almost all of the healthcare workforce is likely to be affected and should all be offered the opportunity to develop a broad scope of digital and genomic literacy. Developing the digital and genomic literacy of the existing healthcare workforce is as important as the education and training of those at the start of their careers. HEE's workforce strategy calculates that more than 50 per cent of today's workforce will still be working in the service in 15 years' time and most are, at best, self-taught in digital technology.

Barriers to Access for Technology Enhanced Learning Health Education England (no date)
Evaluating the proposed TEL against the likely barriers will help strike the right balance between using the latest technology and the difficulties the learners may encounter. Some barriers could be overcome with co-ordinated stakeholder planning; another approach is to increase accountability for how HEE (and its equivalents in the other home nations) funding is spent and accessibility of resources. With technology changing so rapidly, it is also essential to keep abreast of developments and build in agile approaches to TEL development through horizon-scanning processes. Finally, sharing good practice and case studies that demonstrate the benefits of supporting video streaming, the accessibility of social media and approaches to supporting Wi-Fi provision, etc., may also help to inform change

in areas which have been resistant to addressing the barriers to TEL.

Case Studies

[Equality, diversity and inclusion within the digital workforce](#)
2023, Health Education England
Health Education England seek to embrace a workforce that is representative of the diversity found in the communities that we serve and demonstrate our commitment to diversity and inclusion for our workforce, the way we manage our business and our influence with stakeholders. We know that a diverse and inclusive workforce can help us to develop new ways of thinking leading to improvement and innovation in the way we work. For us, it is vital that all colleagues, and the learners we support, are treated fairly and are enabled to reach their full potential. The Digital Readiness Team shares this commitment to equality, diversity and inclusion and it is integral to our work. For each project we consider and complete an Equality Impact assessment to ensure that our processes and products are inclusive and do not disadvantage any vulnerable groups or people with protected characteristics. The following are just a few practical examples of the work we are doing.

[Developing the digital skills of the social care workforce: Evidence from the Care City test bed](#) 2021, Nuffield Trust
Providing opportunities for care workers to develop new skills and use new technologies can improve job satisfaction and help staff progress towards their career goals or inspire new career pathways. Digital skills have positive consequences on broader skills development and creating a fertile context for greater health and social care integration. Digital skills development must sit within a wider career pathway for social care, with a clear pay and progression framework that rewards staff for the

new responsibilities they acquire. Without recognition or reward of the new skills acquired by care staff, there is a risk that staff will move onto more attractive roles in other sectors, further increasing staff turnover.

HEE Star

More resources and tools are available in the [HEE Star](#); search for **"digital skills"**

HEE National Data Programme

HEE staff can look at the [National Data Warehouse (NDL)](#) SharePoint site to find out more about datasets and Tableau products.

Published Peer Reviewed Research

Current competencies

[Digital Health Competencies Among Health Care Professionals: Systematic Review](#) August 2022, Journal of Medical Internet Research
The different areas of competencies investigated to date might be considered while designing curricula for undergraduate, postgraduate, and continuing education processes. From the perspective of researchers, these competencies may drive the development of competence assessment tools, given the lack of validated instruments in this field, identifying more objective measures in addition to those based on self-perception. Furthermore, researchers should consider moving attention from the self-rated technical competencies to those embodying

a patient-centered digital health care approach and related aspects that might affect the use of digital technologies.

In future frameworks and measurement tools, digital health competencies should be considered as a multicomponent competence, not limited to the technical skill, but rather expanded toward elements that might affect them. As our review showed, confidence, attitudes, beliefs, and awareness have been studied with increasing interest, suggesting the need to explore the relationships between different elements and understand how to train health care professionals properly. Curricula embedding the development of technical skills, knowledge, and psychological and emotional aspects of digital technology are recommended.

A Digitally Competent Health Workforce: Scoping Review of Educational Frameworks November 2020, Journal of Medical Internet Research
Of the 30 frameworks included in this scoping review, a majority target nurses, originate from high-income countries, and have been developed using an iterative approach. Our analysis of digital health competency frameworks can help inform the development of future digital health training programs for health care workers. Existing frameworks largely focus on the development of basic IT skills, proficiency in managing health-related information and digital communications, and awareness of ethical, legal, privacy, and security implications relating to IT. Future frameworks and training programs need to take into consideration the evolving nature of digital health and have to be able to incorporate upcoming digital trends, such as artificial intelligence and robotics.

Digital health competencies for primary healthcare professionals: A scoping review November 2020, International Journal of Medical Informatics
There are three important knowledge and research gaps regarding digital health competencies in primary care: how to include competencies in primary care/family medicine curriculum, the need to obtain strong positive evidence about the use of digital health technologies, and the need for wider digital health support, beyond training and education.

Digital health education

NHS knowledge and library services in England in the digital age December 2022, Health Information and Libraries Journal
This article explores initiatives on resource discovery as well as the need for system-wide partnership working to ensure that biomedical knowledge in computable form is findable, accessible, interoperable and reusable. Low levels of health and digital literacy pose a significant barrier to using health information and accessing health services. A range of interventions are aimed at enhancing citizens' digital and health literacy skills. The education and life-long learning needs of the knowledge and library services workforce are considered. Working with CILIP and higher education institutions, HEE delivers a range of educational offers through its Learning Academy. As Artificial Intelligence and automation are implemented in health systems, knowledge and library staff form a crucial bridge between technology and those who use it.

Health Professional Digital Capabilities Frameworks: A Scoping Review December 2022, Journal of Multidisciplinary Healthcare
This scoping review confirms the assumption that digital skills will empower all healthcare stakeholders is incorrect. This review also draws attention to the need for more research to enable digital healthcare systems and services to be designed

to realize complex human behaviors and multiple person-centered care requirements. Now more than ever, it is imperative to align healthcare capabilities with technologies to ensure that the practice of person-centered digital healthcare (PCDHc) is the empowering journey for the healthcare user that theory implies.

Digital health education: the need for a digitally ready workforce June 2022, Archives of Disease in Childhood - Education and Practice
This article explains the importance of digital health education, lists accessible resources and provides examples of health apps that can be recommended.

Digital health: a neglected part of health curricula? March 2022, Future Healthcare Journal
The utilisation of digital health is advancing rapidly, in part, accelerated by the current pandemic. HCPs will thus need to be competent in using and interpreting information from these technologies, as well as be duly equipped to deal with any challenges that may result. Despite this, digital health education in the UK remains highly varied, and the point at which practitioners should develop these critical skills remains unclear and under-researched. What is clear is that early development of such competencies provides a strong foundation for future clinical practice, particularly if developed as a continuous, multidisciplinary curriculum around existing NHS digital capabilities frameworks. Such a curriculum would undoubtedly provide a coherent approach across undergraduate and postgraduate education, and a better understanding of the current provisions and challenges of digital health education is essential if we are to better prepare the next generation of HCPs for the digital future.

The NHS Digital Academy – learning from the past to look ahead October 2020, Future Healthcare Journal
There are three key areas which will need to be addressed to ensure sustainability of the academy but also to have a positive impact on the NHS. Firstly, to build a strong, diverse and proactive talent pipeline. Secondly, to ensure alignment with mainstream NHS leadership development. Lastly to coordinate opportunities linked to professionalism for the whole digital workforce as well as those who have a need for digital knowledge and development. The academy needs to be representative of the workforce and also the different settings the NHS operates in including mental health, community and social care. The academy will provide a host of learning opportunities for all levels and one that reaches a far larger number of people through more open source and easy to access development opportunities.

Digital literacy

Hot Cases: A platform to improve digital literacy during the COVID-19 pandemic November 2022, Future Healthcare Journal
Hot Cases enhanced medical educators' confidence in delivering virtual teaching. Anxiety about the technical aspects of presenting online could be alleviated by distributing a crib sheet to presenters prior to sessions. Furthermore, appointing a Hot Cases committee that ensures continued responsibility for the programme would enhance its sustainability.

Digital skills gap in the healthcare sector: Technical report October 2021, Coventry University
This report focuses on how higher education providers can engage with healthcare sector management to identify current and emerging digital skills gaps, as well as opportunities for

supporting transformative change. Various skills gaps are identified among front-line healthcare practitioners, senior-management and back-end officers (staff who analyse digital data collected). Senior management plays a key role in taking the digital revolution forward. However, research has found that management groups generally lack sufficient understanding on the value and application of digital technology for effectively guiding and driving digital transformation. Front-line practitioners who are dealing with patients on a daily basis need to be equipped with sufficient knowledge and skills on how they can use the data collected (Castle-Clarke and Imison 2016). Moreover, they are expected to take an active role in effectively educating and supporting patients in adopting and persistently using digital tools for best results (Castle-Clarke 2018).

[A look at digital literacy in health and social care](#) September 2021, British Journal of Cardiac Nursing
It is essential that developing digital literacy is not seen as a one-off initiative, but rather an ongoing process which should be integrated into everyday life and working. Nonetheless, digital capabilities need to be acknowledged and embedded within curricula to ensure learners enter the workforce with both the necessary skills and attitudes/behaviours. Non-professionals also need to be recruited for digital literacy and/or inducted, orientated and developed going forward in digital literacy capabilities. Organisations will benefit from an audit of existing digital capabilities in the workforce, and digital champions should be supported fully to work with staff and individuals/patients. Ultimately, it is in all our best interests to provide the best care we can for individuals. In the case of TEL and TEC, many of us will need to embark on the development of new skills.

Competency Frameworks

[Equality, diversity and inclusion within the digital workforce](#) (no date), Health Education England
We know that a diverse and inclusive workforce can help us to develop new ways of thinking leading to improvement and innovation in the way we work. For us, it is vital that all colleagues, and the learners we support, are treated fairly and are enabled to reach their full potential. The Digital Readiness Team shares this commitment to equality, diversity and inclusion and it is integral to our work. For each project we consider and complete an Equality Impact assessment to ensure that our processes and products are inclusive and do not disadvantage any vulnerable groups or people with protected characteristics. The following are just a few practical examples of the work we are doing.

[Digital literacy: standards and framework mapping](#) (no date), Health Education England
Digital literacy capabilities, standards and frameworks that are available significantly map successfully across the HEE Digital Literacy definition and domains. Integrating digital leadership and ethics and across all domains are two potential areas that will need particular consideration by HEE when developing a capabilities framework for digital literacy.

[Digital literacy: existing educational resource mapping and analysis](#) (no date), Health Education England
The purpose of the report is to provide HEE with a database of tools and resources to continue its work supporting health and social care professionals to become, and remain, digitally literate. The report builds on previous research of developing a digital literate workforce that focused on (i) identifying resources and tools relevant for health and social care professionals with different digital needs and levels of competence; (ii)

encouraging the leadership and culture across the health and social care sectors to support digital learning and technological innovation in service delivery; and (iii) developing digital champions within the health and social care workforce to share their digital expertise with others.

Digital Capabilities for the Pharmacy Workforce 2021, Health Education England
This paper describes work undertaken to relate this tool to the pharmacy workforce across healthcare settings and then signpost individuals to a range of training programmes to help improve their knowledge, skills and competencies that should support their ability to adopt and adapt to the changes in practice the digital transformation will enable. For the purpose of this work, the pharmacy workforce includes those working in general roles across multiple healthcare settings.

Development of a digital competency framework for UK Allied Health Professionals 2020, Health Education England
This framework has been developed to support the enhancement of digital competence (knowledge and skills associated with digital technology in practice) for all allied health professions from band 3 to band 9. It is intended to be a developmental and supportive tool that can enable all staff to meet their digital potential.

A Health and Care Digital Capabilities Framework 2018, Health Education England
The digital capability framework has been developed to support the improvement of the digital capabilities of everyone working in health and care. It is intended as a developmental and supportive tool that can empower and enable all staff. It is intended that anyone accessing the framework can be provided with guidance towards extending their digital capabilities to be

able to provide better care in our complex, ever-changing digital world.

Improving Digital Literacy 2017, Health Education England and the Royal College of Nursing
Digital literacy is about the ability for everyone working in healthcare being able to learn, work and develop effectively in a digital workplace and society. The project aims to promote the adoption of clear education, training and development strategies that will enable this and which will also promote and support the adoption and spread of new technologies and techniques for the whole health and social care workforce. The Digital Literacy Project works to fulfil the requirements of the Health Education England mandate, as provided by the Department of Health, and as part of the National Information Board's Building a Digital Ready Workforce work stream.

Desktop review: Examining the extent to which employers and organisations are meeting the challenge of improving the digital literacy of their workforce 2016, Health Education England
Digital disruption is being embraced across retail, banking and digital sectors. However, despite a number of policy commitments and initiatives, it would seem that the NHS is almost resisting digital disruption by focussing more on maintaining existing NHS workflows, rather than embracing creative applications or the potential liberation that mobile technologies can bring to practice. This could have serious consequences at both a societal and individual level in terms of health and the failure of the sector to contribute to a digital ecosystem that will equip people to 'thrive in a digital society' (Kennedy & Scott, 2016).

Literature review: Examining the extent to which digital literacy is seen as a challenge for trainers, learners and employees in the workplace 2016, Health Education England
A lack of digital literacy development is a factor in the poor adoption of digital health technologies resulting in missed opportunities to support clients, patients and carers to self-care. To ensure that employees feel justified and empowered to use and harness digital ways of working, they need the confidence to know that these approaches are valued by their employers as 'legitimate work activity'. Employers should not assume that younger workers have developed a rounded skill set in terms of digital literacy. Digitally savvy does not mean digitally literate. Trainers and employers need to embrace and harness the valuable resource of their employees' prior digital learning activities, thus enriching digital skills applicable in the workplace. The need for leadership and a strategic approach to digital literacy acquisition is clear.

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