

# Improving Digital Literacy



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## Foreword

### Ian Cumming

Sound literacy capabilities are needed by everyone working and learning in health and social care if we are to maximise the potential of technology and digital in health and social care. It's no longer possible to think about digital literacy as either purely technical proficiency or just something 'other people' do. We all need the right digital knowledge, skills, attitudes and behaviours that will enable us to provide the best possible care for all.

Progressing the Department of Health and National Information Boards' Personalising Health and Care 2020 agenda requires us to ensure that everyone working in healthcare be able to learn, work and develop effectively in a digital workplace and society. Being confident and competent around technology and data will empower our workforce to provide more effective and compassionate care, give people, and anyone in a caring role, more control over their own health and wellbeing, reduce the administrative burden and support the development of new medicines, treatments, technologies and practices.

Health Education England (HEE), working in partnership with the National Information Board, is working to bring about that improvement in the digital literacy of our learners and staff. I am very pleased to see the progress made in having a single definition of digital literacy for use across health and social care and the creation of a new capability framework to support the workforce in developing skills and capabilities.

I am delighted that HEE is working in partnership with the Royal College of Nursing and that they have endorsed our work to date. I would encourage the widest use of the digital literacy definition and domains described in this document.

### Ian Cumming

Chief Executive

Health Education England

### Janet Davies

We are living through a technological revolution and digitalisation is developing at an incredible speed. It will continue to impact on many aspects of our lives and has the potential to transform the art and science of healthcare creating many opportunities for the population and those who care for them. It will stimulate innovation and enable us to work in very different ways.

We may not be able to predict exactly how these changes will shape our future however it is important the nursing and midwifery workforce are prepared and equipped to lead and deliver this change, working in partnership with our patients and clients and within our multi professional teams. We do know that our society and our workplaces will transform and we know that we need to prepare for the emerging connected world.

So, it is time to grasp this opportunity as the nursing and midwifery workforce is crucial to the successful outcome of this revolution. Developing these digital capabilities is the first step and the goal is to bring tangible benefits for citizens and patients.

### Janet Davies

Chief Executive and General Secretary

Royal College of Nursing

## Working in partnership Health Education England and the Royal College of Nursing

The definition and digital literacy domains described in this document are applicable for all working in health and social care. Health Education England (HEE) hopes that these will be widely adopted and used to inform strategies and policies directed at improving the digital capabilities of all staff.

HEE welcomes working in partnership and is delighted that the Royal College of Nursing (RCN) has endorsed the digital literacy work undertaken to date. Digital literacy is a key strand of the National Information Board's Building a Digital Ready Workforce and HEE is delivering on this work stream. It is vital that the work is tested with different professional groups and working with the RCN means that we can do this. Supporting the RCN 'Every Nurse an e-Nurse' work stream and nursing's Leading Change Adding Value programme or work around using technology/digital is an opportunity for us all to work collaboratively and effectively. Ongoing work together will look at the specific needs of nursing staff in relation to digital literacy.

## Health Education England and digital literacy Introduction

Health Education England (HEE) is the national body formed in 2012 to undertake leadership and co-ordination of education and training within both the health and public health workforce. HEE is responsible for delivering a better health and social care workforce for England. It is the organisation responsible for the education, training and personal development of every member of staff and for recruiting for values.

In 2013, the Technology Enhanced Learning (TEL) Programme was established with the vision that healthcare in the UK be underpinned by world-class education and training that is enhanced through innovation and the use of existing and emergent technologies and techniques. The Programme has a wide remit and has several ongoing projects, one of which is the Digital Literacy Project.

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.



## Improving the digital literacy of the health and social care workforce

### Why is this important?

It is no longer possible to think about digital literacy as either purely technical ability or as something done by a few experts. Everyone who works in health and social care must have sound digital capabilities grounded in the knowledge, skills, attitudes and behaviours that will enable them to provide the most effective and compassionate care for all.

Healthcare has traditionally been slow to adopt new digital tools and technologies that have significant potential to improve how we can provide the very best health and social care. By building and improving excellent literacy capabilities, the uptake and adoption of new digital tools and technologies can be dramatically improved. We can truly transform the way we practise clinically and provide care.

The evidence suggests that people who have better digital literacy tend to have more positive attitudes and behaviours to adopting new technologies. With the fast pace of change in technologies that are developed to support and improve individual care and outcomes, everyone needs to be ready to support and lead on change and innovation.



*Moving towards paperless.*

*We must be ready to  
support and lead.*





*Data and information literacies are key to improved patient outcomes.*

We are increasingly digitally literate in our own personal lives, whether it be smart phones, consuming TV and new media, booking holidays or ordering a take-away; when we're motivated to learn, we do. Many skills are easily transferable to our work lives where they can be used in supporting the best outcomes for all.

Increasingly, we are becoming digitally-enabled to be active in our own health, wellbeing and care through wearable technologies, online tools and apps. Technology is enabling increased and improved collaboration between individuals and those caring for them with better outcomes as a result. Digitally-enabled, individual-centric care is already happening through the digital recording of high quality data, improved information management, communication and collaboration on care plans and real time monitoring of patient journeys. These digital innovations lead to less duplication of activity, reduced mis-communication and increased patient safety.



*We are all developing digital skills in our personal lives.*



**“ The pace of technological change is a challenge to us all in maintaining and improving our digital capabilities in order to provide the best care.”**

We also know that the pace of technological change presents a challenge to us all in maintaining and improving our skills. Meeting technology that we're not familiar with on a regular basis can lead to frustration and lack of confidence. However, there is good work already taking place across professions, sectors and nations that can be built on and developed through this digital literacy project.

The digital literacy work by Health Education England is:

- supporting awareness-building about those capabilities that make up sound digital literacy across professions and disciplines
- increasing individual motivation to develop those capabilities supporting individuals in accessing and using digital tools and resources
- unlocking some of the barriers to accessing technology in healthcare.

In this paper, we introduce six key domains of distinct digital capabilities required to meet the challenge of living in a digital society.



Digital can help us lead and promote healthier lifestyles



You may be surprised that some of the domains do not appear to be digital at all. As Paul Gilster (1997), pioneer in the use of the term digital literacy, said, it is about “mastering ideas – not keystrokes”. Being digitally literate is an ongoing process. Becoming more confident and proficient over time, digital literacy becomes simply about efficient and effective use of technologies in everyday life so that being digitally literate is an intrinsic part of who we are in both our personal and professional lives.

Whether we are a patient, a carer, someone needing care, a currently well person or a member of the health or social care workforce, we are far more likely to lead healthier, happier, more productive and satisfying lives if we are truly digital citizens who are confident and competent in those digital capabilities.



## A definition of digital literacy for all Our definition and domains

The term ‘digital literacy’ is in widespread use but there hasn’t been an agreed definition that could be used throughout the health and social care landscape.

A stakeholder group, with wide representation from across the healthcare landscape, was asked to establish an agreed definition and capability framework.

**Definition: Digital literacies are the capabilities which fit someone for living, learning, working, participating and thriving in a digital society.**

Digital literacy domains: Becoming a digitally-literate person involves developing those function skills, plus attitudes, values and behaviours that can be categorised under the following domains:

- Digital identity, wellbeing, safety and security
- Communication, collaboration and participation
- Teaching, learning and personal/professional development
- Technical proficiency
- Information, data and media literacies
- Creation, innovation and scholarship.

**Digital literacies are the capabilities which fit someone for living, learning, working, participating and thriving in a digital society.**





## Health Education England's digital capabilities

### The six domains

Health Education England encourages all organisations, professional bodies and individuals across health and social care to endorse and use this definition and the domains.



Adapted from Jisc Digital Capacity Framework (2015) Jisc/Helen Beetham

## Improving digital capabilities

### The challenges

We all know there are challenges and obstacles that can prevent individuals from accessing technological resources, devices and applications. Research led by the University of Dundee, JISC, the TEL Programme team and other partners into the barriers that prevent health and social care staff from accessing technology in the workplace identified three key areas of challenge:

- Human behaviours and attitudes around digital literacy
- Technical factors
- Collaboration and information exchange.

Of the human factors, a lack of confidence and unwillingness by individuals can sometimes prevent use of technology. Also, staff have difficulty securing time during work to undertake online learning or explore the use of emerging workplace technologies.

Sometimes, the barriers are artificial and created by organisational policy or lack of investment in technology. The report identifies that there is unwillingness on the part of some employers to accept the use of personal smartphones and tablets at work to support learning, while access to Wi-Fi and the internet at appropriate speeds continue to cause difficulties. Access to Wi-Fi for all is still 'patchy' and bandwidth can also be a real problem and it is standard practice in many health and social care settings for access to specific websites and online facilities to be blocked.

Cloud-based solutions have traditionally been discouraged leaving little solution for collaborative work, resource development or file sharing. Poor collaboration and information exchange policies and facilities are the key reason for the lack of uptake and use of these collaborative tools. In a learning context, the lack of appropriate physical spaces for accessing digital facilities can also act as a barrier.

We have identified good practice solutions to barriers to accessing technology and learning with case studies to resolve Wi-Fi, bandwidth, information governance issues and more, which are presented in the accompanying barriers paper.



## Potential solutions to improving digital capabilities

### Key findings

Our research into ways in which employers/organisations, across sectors, are meeting the challenge of improving the digital literacy of their workforce has revealed some key ways in which this can be done. The following approaches have been identified as significant factors contributing to success in improving the digital capabilities of staff.

Leadership is vital. Leaders need to clearly express the importance of digital literacy, to encourage all staff to develop their digital capabilities and to ensure that there is appropriate access and resources to support that development. Leaders and organisations must also build digital literacy into their vision and strategies. They need to actively work to encourage an organisational culture that is open and trusting with an ethos of information sharing and control over digital working needs to be decentralised and staff entrusted to a far greater degree.

Organisations need to learn from the ways in which informal and social learning happen in today's digital

world and employ these in the work environment. In addition to recognising and utilising existing skills, organisations need to be identifying skills gaps and to be recruiting for digital skills.

Improving access to digital, allowing time for the development and improvement of digital capabilities, ensuring access to digital resources and tools and rewarding learning are all essential to improving digital literacy within a workforce. A partnership learning approach which recognises the role of both individuals and employers was also found to be significant to success.

The most significant success factor identified across all sectors is the role of digital champions. There can be different approaches towards this type of role, formal roles, informal or simply recognising and rewarding those who offer spontaneous, ad hoc championing of digital, but all appear significant in seeing higher levels of digital literacy developed.

*Leadership is vital.*



## What is an e-nurse and why are they needed?

### Introduction

We are living at a time when digital tools are commonplace. We use them to help us connect with people, organise tasks and manage information. Healthcare has been slow to adopt these tools and unleash their potential and use in our professional lives. This potential can transform the care environment and offer the type of care people want and deserve.

But technologies can also fail to solve some problems for patients and citizens or address the things that really matter to them. Technology can frustrate nurses or hinder them from doing the jobs that nurses need to do. The pace of change is accelerating. We see new ways of working emerging and new roles defined. We can see the relationship change between informed citizens or empowered patients and healthcare professionals.

Nursing needs to be prepared to meet these challenges. We need nurses and midwives that are properly informed, trained and equipped. We need a workforce that is involved in the design, development and deployment of technology in healthcare.

We need e-nurses.



## Rethinking nursing

We must change a common perception about nursing before digital technologies offer benefits. Professor Dame June Clark has called this a shift from a "nursing is doing" model to a "nursing is knowing" model<sup>1</sup>. The "nursing is doing" model sees nursing as a collection of tasks or activities. Negative consequences result from this way of thinking. We have systems that reflect the task based approach. We have nurses only rarely involved in the design and development of technology. Nurses might be trained in how to use systems but not educated in how or why the systems support care.

The "nursing is doing" model limits the development of nursing knowledge. The "nursing is knowing" model should be the core of all professional practice. It is the use of clinical judgement in the provision of care. This principle should underpin the development of digital tools and systems. In the "nursing as knowing" model the standardisation of nursing terms is a key goal. It promotes structure and the ability to link elements within the record to one another. It enhances communication and sharing of information. The digital capabilities framework promotes "nursing is knowing".

Positive consequences can flow from this. Nurses appreciate the digital record when it supports them in decision-making. Nurses finally using systems that reflect the real complexities of care processes.

Health and social care are becoming more complex. Population trends and the reliance on care at home are two factors driving this pattern. Nurses will be co-ordinating care and supporting people navigating this environment. They ensure that services are patient-centred by collaborating with people about their preferences. They will alert people to new options like accessing social networks within their community.

These and many other emerging roles, will be examples of the "nursing is knowing" model in action.

<sup>1</sup>Clark, J (2007). The impact of ICT on health, healthcare and nursing in the next 20 years. Nursing informatics 2020: towards defining our own future. P.J. Murray et al eds. IOS Press. <http://tinyurl.com/gmvlhtf>

## Why capabilities before competencies?

Competence-based education has usually focused on what a professional is able to do. Competencies describe current practices in known roles. Capabilities describe new, and emerging challenges. They prepare us for these rather than our ability to meet existing ones.

We need new approaches to learning and development. We need ways to prepare nurses and midwives for the disruptive innovations ahead.



## How can the digital capabilities be applied?

Modern health and social care environments need lifelong, self-directed learners. They also need capable digital users and knowledge workers. We need to know which learning and teaching approaches fit with future practice and support better learning outcomes.

The framework sets the direction for a different approach. It gives an overview of activities at a broad level that applies across the profession. It also provides a shared language and common definitions for key areas of digital practice.

## Who are the digital capabilities designed for?

The framework applies to all registered nurses and midwives. We can map the capabilities to the NMC code. So the framework supports the revalidation process.

Employers can prioritise areas for organisational development. We encourage the development of resources that help prepare nurses in these areas.

Educators and policy makers are an audience too. They have a stake in developing the future nursing workforce and the evolution of the health and social care system.

## Rethinking the nurse-patient, nurse-citizen relationship

Every nurse should be confident in their understanding and use of digital tools. The framework provides a profile for what digital professionalism should be.

Digital capabilities are not only about the individual nurse. They open up the possibility of a new healthcare paradigm. The promise is for a true partnership. Patients and citizens engaged and involved in their health and healthcare management.

The acid test will be whether these capabilities create long-term benefit for citizens and patients.



## Conclusion

Improving digital literacy across the health and social care landscape needs to be embedded in organisations and individuals. Our work encourages that embedding of digital literacy into everyday practice for all working in health and social care. It is not intended to be an additional responsibility or burden for the workforce. Improving digital literacy should be an enabler and supporter to providing improved individual care, reducing the administrative burden, helping give people more control over their own health and wellbeing and exploiting the potential of technologies to close gaps in funding and efficiency as well as care and quality.



## Health Education England's digital literacy project

We intend to:

- Improve the speed and uptake of new technologies to realise their potential in health and care
- Build digital capabilities that enable confident use and adoption of new technologies
- Develop skills, attitudes and behaviours that utilise technologies to improve outcomes, improve safety and provide more efficient and effective care
- Improve communication and collaboration between individuals and those that care for them
- Reduce and remove some of the barriers to accessing and implementing technology in the healthcare environment
- Build digital capabilities that enhance personal development and satisfaction at work, in learning and in life.



## The Royal College of Nursing

We intend to:

- Support the nursing profession in meeting the challenges of:
  - realising the potential of new technologies,
  - leading on the development of new care relationships with informed and empowered citizens and
  - leading on the design, development and deployment of technologies in health and social care.
- Promote nursing based on 'knowing' rather than 'doing'. The digital capabilities framework promotes the model of 'nursing is knowing'.
- Promote nursing being at the forefront of new roles and models of care in a digital society.
- Promote and develop capabilities that describe new and emerging challenges rather than competencies focusing only on current skills in known roles.
- Support the HEE digital literacy definition and framework which applies to all registered nurses and midwives with capabilities that can be mapped to the NMC code.
- Develop digital capabilities throughout nursing to open up the potential for a true partnership that encourages individuals to be fully engaged in their health and healthcare management.

We are working with many different professional groups in the field of digital literacy. If you are interested in contributing to our work in any way, please get in touch with us at: [hee.tel@nhs.uk](mailto:hee.tel@nhs.uk)



For access to the full research papers informing some of this document, please go to the TEL Programme Digital Literacy pages on the [HEE website](#).

For further information on the RCN's "Every nurse an e-nurse" work stream, please go to the [RCN website](#).



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