



Seirbhís Sláinte
Níos Fearr
á Forbairt

Building a
Better Health
Service



Office of the
Nursing & Midwifery
Services Director

All-Ireland Nursing & Midwifery Digital Health Capability Framework





**Developed for the Republic of Ireland and Northern Ireland by:
Office of Nursing and Midwifery Services Director and
Northern Ireland Practice and Education Council for
Nursing and Midwifery**

**Adapted from the Australian National Nursing and
Midwifery Digital Health Capability Framework
developed by the Australian Institute of Digital Health (2020)**

Introduction

The World Health Organisation (WHO) defines digital health as the use of digital, mobile and wireless technologies to support the achievement of health objectives. Digital health includes the general use of information and communication technologies for health as well as advanced technologies for managing data and information such as artificial intelligence and genomics¹.

Digital health is a critical part of any modern healthcare industry and its adoption is fundamental to improving patient care outcomes, improving clinical utility, and increasing sustainability of the Republic of Ireland (ROI) and Northern Ireland (NI) healthcare systems. Implementing digital health is more than simply deploying new technologies or devices. The evolution of technology in healthcare also requires a specialised workforce who understand and realise the significance of socio-technical dimensions in digital health implementations

Republic of Ireland

The Republic of Ireland has an ambitious ten year plan to transform health and social care services. Putting in place a modern digital health infrastructure is a key enabling strategic action to realise this transformation.

A Digital Roadmap for Nursing and Midwifery (2019)² has been developed to facilitate national engagement on what actions need to happen for nursing and midwifery and to initiate and progress strategic and policy decisions about information and digital technology in nursing and midwifery.

One of the key goals of the Roadmap is to build a digital workplace. Recognising the changes in healthcare due to the advent of digital technologies and taking into account all aspects of professional practice, the development of digital health capabilities to support nurses and midwives was seen as a key enabling factor towards building a digital workplace.

To address this need for the nursing and midwifery workforce the Office of the Nursing and Midwifery Services Director (ONMSD) initiated the project to develop a Nursing and Midwifery Digital Health Capability Framework.

Northern Ireland

Northern Ireland (NI) has embarked on a ten-year transformation Programme to digitally enable Health and Social Care (HSC) services. The programme includes a number of major projects: the adoption of a citizen-focused Electronic Health Care Record (EHCR) across integrated, multi-professional services, taking into account the diverse range of health and social care needs of the population; digital shared services; development of technology enabled care services; and mobilisation of the workforce. The Programme of work supporting the digital future for Health and Social Care in NI seeks to ensure that the appropriate building blocks are in place to improve the health of the population; the quality and experience of care; the support given to the workforce; and the future sustainability of services. A component part of this work is focused on the digital capabilities of the HSC workforce as an enabler for change and driver to achieve improved outcomes.

In addition to this policy direction, the Chief Nursing Officer for Northern Ireland published the Nursing and Midwifery Task Group Report (NMTG) in March 2020³, with a chapter focused on maximising digital transformation, outlining the need for investment in both infrastructure and the skills of nurses and midwives.

Background to the Framework

Background to the Framework - Australia

The National Nursing and Midwifery Digital Health Capability Framework⁴ was led by the Australian Digital Health Agency, developed by the Australasian Institute of Digital Health and supported by Digital Health CRC, Queensland Government, Australian Nursing & Midwifery Federation, Australian College of Nursing, Australian College of Midwives, Australian Primary Health Care Nurses Association and Congress of Aboriginal and Torres Strait Islander Nurses and Midwives.

Work on development of the Framework commenced in 2019. A review and mapping of the following literature informed development of the initial domains:

- National Health Service (NHS) capability framework⁵
- Australia's Enrolled Nurse Standards⁶
- Registered Nurse⁷ and Midwife⁷ Standards
- Brunner's⁸ capability framework

A phased consultation process was undertaken. This involved development workshops, webinars, consultation sessions, written submissions, and a public survey during the period December 2019 to March 2020. Contributions were received from nurses, midwives, educational experts, and nursing and midwifery organisations at various stages throughout the consultation process. All feedback was collated and considered for inclusion in final document.

Framework – Ireland and Northern Ireland

The ONMSD identified an opportunity to leverage from the work completed by AIDH and subsequently approached AIDH to explore the possibility of adapting the Framework for the Irish healthcare setting. AIDH responded with a proposal which was approved by the ONMSD.

Alongside the AIDH proposal, colleagues in Northern Ireland were also exploring the requirement for a Digital Health Capabilities Framework. Following engagement with the ONMSD, a collaborative arrangement in the development an All-Ireland framework for nurses and midwives was agreed.

Again a phased consultation process was undertaken across ROI and NI. This involved the dissemination of a questionnaire, a series of consultation workshops and a national appraisal process on the document before final approval and sign-off.

Acknowledgements

This would not have been possible without the collaboration of the Australian Institute of Digital Health and their willingness to share the Framework and the learning from their journey. The ONMSD and NIPEC would like to extend particular gratitude to Louise Schaper, Greg Moran and Liz Cummings for your time, energy and commitment in progressing this work with ROI and NI.

In addition we would like to acknowledge the important contributions of the following:

- The Nursing and Midwifery Planning and Development Officers who facilitated a number of the consultation workshops and assisted with the initial analysis of the outputs from the workshops, namely Deirdre Feehily, Leonie Finnegan and Paula McGreal
- The contribution of Dr Diane Conrad and Dr Rosanne Burson, Fulbright Scholars, for their important input and support in guiding direction for this work and Dr Pamela Hussey for linking them with them with the ONMSD
- The many individuals and organisations that have contributed their expertise to the framework's development throughout the consultation process by completing the online survey attending the consultation workshops, and providing written feedback
- Members of the Advisory Group:

Clare Buchner	Assistant Director Digital Health and Nursing, Digital Health and Care NI/Public Health Agency NI
Prof. Rosanne Burson	Associate Professor, University of Detroit Mercy, Fulbright Scholar
Dr Dianne Conrad	Associate Professor, Kirkhof College of Nursing, Fulbright Scholar
Dr Síle Creedon	Senior Lecturer, UCC and Chair
Joan Donegan	Education Lead ONMSD
Deirdre Feeley	Nursing and Midwifery Planning and Development Officer, Cork/Kerry
Dr Richard Greene	National Chief Clinical Information Officer, HSE
Loretto Grogan	National Clinical Information Officer for Nursing and Midwifery and Project Lead
Richard Holmes	Lecturer, Galway Mayo Institute of Technology
Geraldine Kearney	Assistant Director of Public Health Nursing, HSE
Marie Kilduff	Director of National Clinical Leadership Centre, ONMSD
Fiona Lawlor	Assistant Director of Midwifery, Business Manager for MN-CMS, HSE
Prof. Paula Procter	International Advisor, Sheffield Hallam University, UK
Angela Reed	Senior Professional Officer, NIPEC and project co-lead
Dr Anne-Marie Ryan	Director of Professional Standards and Regulation, NMBI

Contents

Introduction	i	Domain 4 - Information-enabled Care	13
Acknowledgements	iii	4.1 Data Sharing	14
Contents	iv	4.2 Information Creation and Use	14
Context Statement	1	4.3 Extending Practice	14
Background Assumptions	3	Domain 5 - Technology	15
Intended Use	3	5.1 Appropriate Technologies	16
What the Framework means for person-centred care	4	5.2 Digital Health Governance	16
The Framework	5	5.3 Problem Solving	16
Capability Levels	6	Table 1. Descriptions of Domains and Sub-Domains	19
Domain 1 - Digital Professionalism	7	Table 2. Domain 1 Digital Professionalism – Capability Statements	21
1.1 Professional Development	8	Table 3. Domain 2 Leadership and Advocacy – Capability Statements	23
1.2 Procedural Knowledge	8	Table 4. Domain 3 Data and Information Quality – Capability Statements	25
1.3 Digital Identity	8	Table 5. Domain 4 Information-enabled Care – Capability Statements	27
Domain 2 - Leadership and Advocacy	9	Table 6. Domain 5 Technology – Capability Statements	31
2.1 Patient Technology Advocacy	10	References	33
2.2 Leadership Within Organisation	10	Glossary	35
2.3 Digital Leadership in Nursing and Midwifery Professions	10		
Domain 3 - Data and Information Quality	11		
3.1 Data Capture	12		
3.2 Data Management	12		
3.3 Data Lifecycle	12		

Context Statement

The Nursing and Midwifery professions collectively represent the Republic of Ireland's and Northern Ireland's largest professionally registered health workforce, with direct responsibility for collection, entry and use of clinical information. Recognising the changes in healthcare due to the COVID-19 pandemic, the growing adoption of digital technologies, and taking into account all aspects of professional practice, the National Nursing and Midwifery Digital Health Capability Framework (the Framework) has been created to:

- define the digital health knowledge, skills and attitudes required for professional practice
- complement existing individual knowledge, skill, and attitudinal frameworks
- provide a solid basis for tailored learning

Digital health when implemented appropriately can improve the quality, safety and efficiency of healthcare. A digital health capable workforce is key to ensuring safe, quality healthcare in the future. This Framework was developed for Australian nurses and midwives with a central theme of safety and quality in healthcare within the digital healthcare environment and there is a similar central theme for ROI and NI nurses and midwives.

Nurses and midwives have important roles that cross the domains of patient care, leadership, advocacy, education, and research. As the ROI and NI healthcare systems increases use of digital technologies to deliver patient care, digital health related roles and capabilities will become commonplace amongst this important workforce. This Framework seeks to recognise those roles and the unique digital health capabilities of nurses and midwives.

Consumer expectations are changing in line with the increased availability and use of affordable digital health technologies. People who use our services are more informed; they expect to be actively involved in managing their health and in decision making, and be provided with prompt, individualised care. The evolving role for nurses and midwives, which has been brought to the fore during the COVID-19 pandemic, has enabled opportunities for nurses and midwives to provide care via digital health technologies such as telehealth. It is expected that for many consumers telehealth consultations will become the preferred model of care due to its convenience and timeliness.

Whilst many nurses and midwives are familiar with competencies or competency statements this framework provides capability statements. The difference is described by Brunner and colleagues:⁸

“Although capability has been described as being similar to competence, it in fact encompasses competence and extends beyond the technical skills implied by competence to emphasize the components of adaptability to change, lifelong learning, and self-efficacy. As such, capability-informed frameworks address wider aspects of professionalism, focusing on supporting continuous development rather than assessment of a skill at a specific point in time”.

NOTE: there is a broad range of terminology used for those cared for by nurses and midwives. Throughout the framework the term used to describe the person receiving care is patient/consumer. This includes reference to women, men, people who identify as gender diverse, children, clients, residents and all other people receiving healthcare provided by nurses and midwives in ROI and NI.

Background Assumptions

The Framework is underpinned by the following assumptions:

- The Framework is a guide for individuals and employers on the skills and knowledge required to deliver healthcare in a digital world.
- Nurses and midwives have varying levels of digital literacy and access to digital technologies.ⁱ
- All nurses and midwives currently, and increasingly, work and live in a digital environment.
- It is essential that every nurse and midwife has the skills to use data, information, knowledge and technology to maximise health and societal outcomes, improve services, and extend their evidence-based practice.

Intended Use

The framework outlines the capabilities required to support individuals and organisations in extending their digital health development rather than providing a rigid set of competencies. It is intended to enable and inform and is not intended to be adopted as a professional standard, but should be used as a resource to guide individuals, employers and educators in their workforce and professional development planning and delivery.

Most importantly, the Framework intends to promote and encourage positive attitudes in relation to the increasing introduction and adoption of technology and innovation.

Effort has been made to ensure that every nurse and midwifeⁱⁱ can use the Framework to assess his/her own capability across a range of digital health specific domains and for employers to understand the digital health capability they should be supporting within their workforce.

In developing this resource we foresaw the following intended uses. The framework:

- is intended to be accessible and understandable across a broad range of healthcare contexts
- can be used by individual nurses and midwives to assess their own digital health capabilities and to identify learning and developmental needs or inform personal and professional development plans relevant to their current or future workplace or role
- can be used by health services as part of their continuous quality Improvement activities to assess organisational capacity and educational requirements
- can be used to develop tools to assist in extending the digital health capabilities
- will provide direction for career advancement planning in digital health or other nursing and midwifery specialties.

i. It is acknowledged that not all nurses and midwives have access to the technologies and tools they need; however, addressing this is outside of the scope of the Framework. Nurses and midwives should be given the opportunity to develop the necessary skills and knowledge as per this Framework, regardless of the stage of digital maturity of their organisation.

ii. Whilst the Framework was specifically designed for registered nurses and midwives, nursing and midwifery students and health care assistants are encouraged to use this Framework, recognising their current scope of practice, degree of autonomy and practice setting.

What the Framework Means for Person-Centred Care

As people live longer, with more long-term conditions, there is and will be an increasing demand for healthcare. The COVID-19 pandemic created a huge set of pressures on the health and social care system in addition to acting as a transformation catalyst, accelerating the implementation and adoption of digital health across healthcare.

Person-centred care is providing care that is respectful of and responsive to individual patient preferences, needs and values, ensuring that patient values guide all clinical decisions with a core element being the involvement of users of health and social services as equal partners in planning, developing and monitoring care.

Digital health can empower people who use our services to make better-informed decisions about their own health and provide new options for facilitating prevention, early diagnosis of diseases, management of chronic conditions and support treatment adherence outside of traditional health care settings. It also enables partnership in care processes, and mechanisms for improvement through the collection of real-time information generated by citizens. The use of technologies, such as smart phones, social networks, and internet applications, all of which many people now have access to, is not only changing the way we communicate, but also providing innovative ways for us to engage with our health and well-being and giving us greater access to information. It can help to:

- Reduce inefficiencies
- Improve access
- Reduce costs
- Increase quality
- Make care more personalized
- Improve the patient-nurse/midwife relationship
- Enable care closer to home
- Increase responsiveness

All nurses and midwives will need digital health capabilities to continue to advance person-centred care. Digital health capable nurses and midwives will be in a position to influence and shape the systems and solutions required for now and into the future and support the individualised person-centred and coordinated care we are trying to build.

The Framework and its intended uses will support and enable nurses and midwives to grow and strengthen the care they provide and be in a strong position to advocate on behalf of people who use our services to ensure optimum access to and use of digital technology to improve health and wellbeing.

The Framework

The Framework consists of five domains:

- Domain 1 – Digital Professionalism
- Domain 2 – Leadership and Advocacy
- Domain 3 – Data and Information Quality
- Domain 4 – Information-enabled Care
- Domain 5 – Technology

The five domains sit within the context of nurses and midwives' roles, workplace settings and the professional standards that apply to their practice (Figure 1). This recognises the breadth of the disciplines of nursing and midwifery and the fact that they operate within existing professional structures and rules.

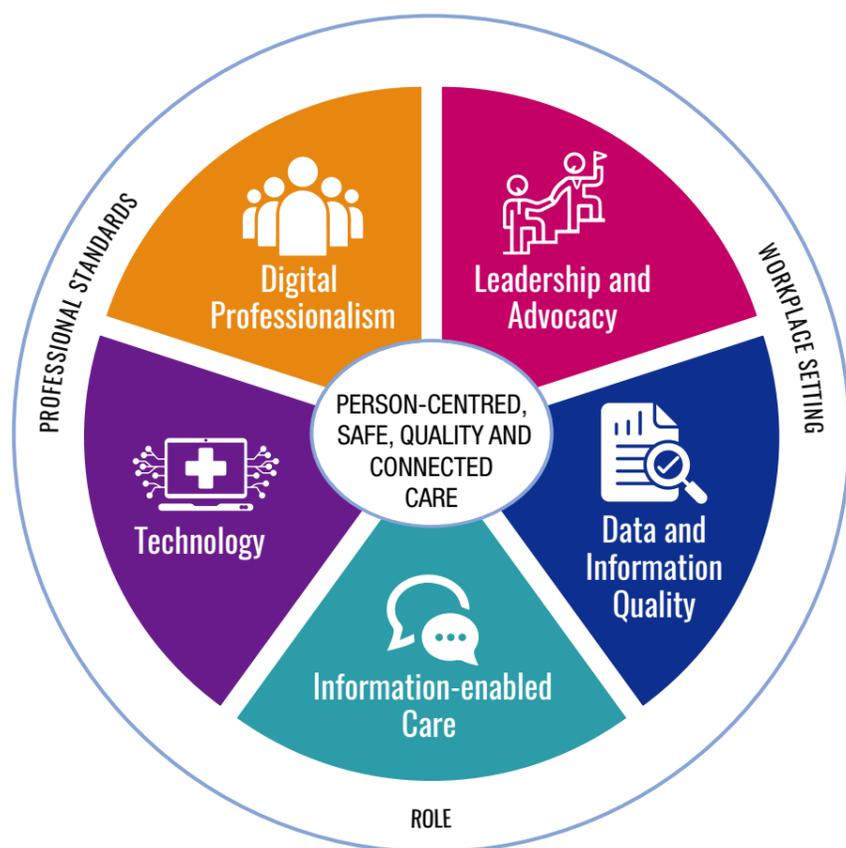


Figure 1. Framework Domains

Each domain has three sub-domains and each sub-domain has four related capability statements. The capability statements progress from formative to proficient levels.

Capability Levels

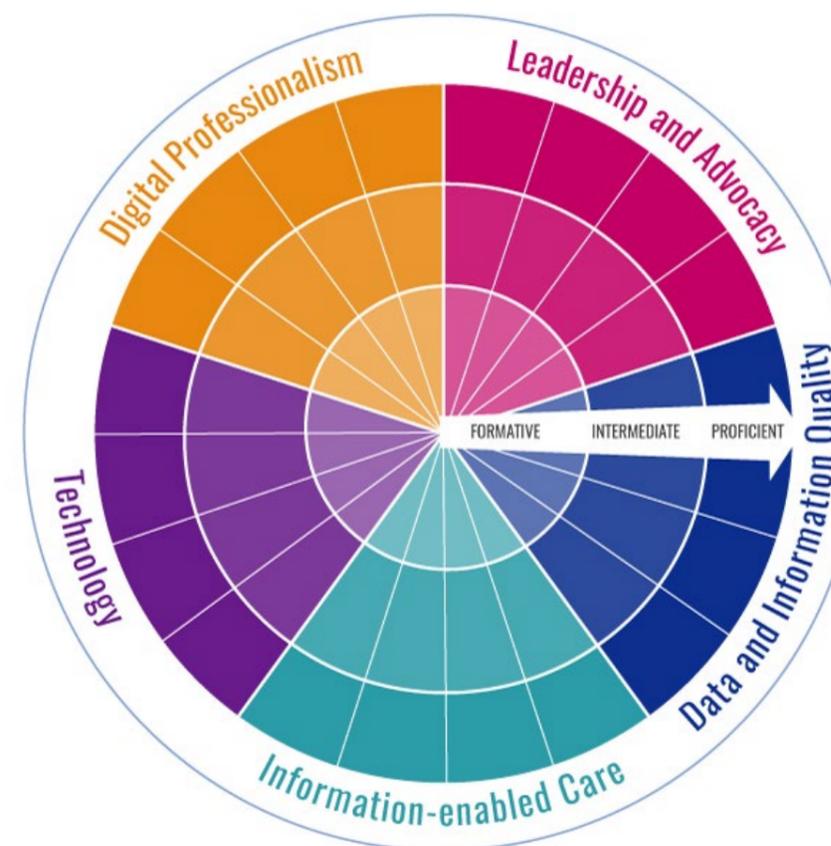


Figure 2. Capability Levels

Each capability statement has three levels which depict the anticipated growth of knowledge, skills and abilities in the capability area. The degree of capability at each level is illustrated by the level indicator statements. These statements are not intended to be an exhaustive list, and every indicator is not necessarily relevant to every role or practice setting.

The three levels do not correspond to employment grade or position as different roles and settings may require and support capabilities at different levels. Most nurses and midwives should aspire to achieving the highest level of capability possible relating to their role and practice setting.

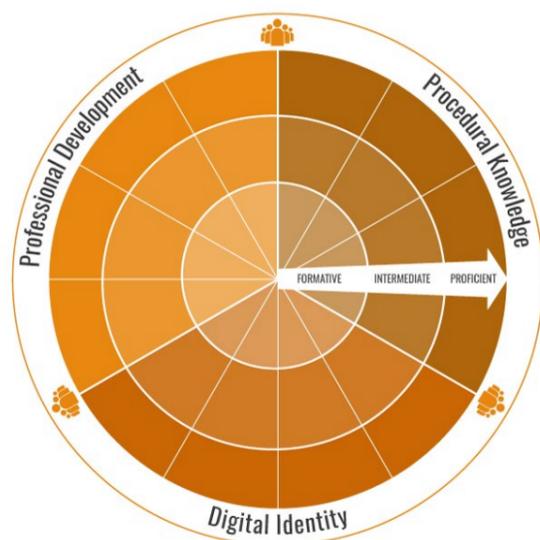
Formative level – This level reflects nurses and midwives who are beginning to use and understand digital health and the implications for practice.

Intermediate level – This level reflects nurses and midwives who are developing increased confidence, knowledge, skill and capacity in the use of digital health in their practice.

Proficient level – This level reflects nurses and midwives who are assuming leadership in the use and championing of digital health within both practice and the broader nursing/midwifery professions.

The capability statements and levels are presented in Tables 2 to 6 (pages 21 to 30).

Domain 1 Digital Professionalism



Professional standards are maintained in the digital environment

Nurses and midwives demonstrate attitudes and behaviours reflecting recognised professional standards when utilising digital tools both professionally and personally.

Figure 3. Domain 1 - Digital Professionalism

Digital professionalism has been defined as “the attitudes and behaviours (some of which may occur in private settings) reflecting traditional professionalism paradigms that are manifested through digital media”⁹

In healthcare digital professionalism has emerged in response to the requirement for clinical workers to understand, develop and demonstrate appropriate behaviour when using digital media. As digital technologies become more embedded in healthcare environments, there is a focus on the development of the capability of healthcare professionals in digital professionalism as part of their professional identity¹⁰. This links with the professional standards described within the Nursing and Midwifery Board of Ireland (NMBI) standards for Registered Nurses and Midwives¹¹ and the Nursing and Midwifery Council (NMC) Future Nurse: Standards of proficiency for registered nurses¹² and Standards of proficiency for midwives¹³.

The three sub-domains within Domain 1, Digital Professionalism, are:

1.1 Professional Development

Nurses and midwives use digital tools to achieve and maintain professional development requirements

1.2 Procedural Knowledge

Nurses and midwives use of digital tools in healthcare aligns with procedural, policy, legal, ethical, security and privacy requirements

1.3 Digital Identity

Nurses and midwives use digital tools to develop and maintain their online identity and reputation

The capability statements for each of the sub-domains are listed below:

1.1 Professional Development

- Employs digital technologies in personal learning and professional development
- Maintains currency with tools and innovations, and in relation to the changing nature of digital health
- Uses technologies to improve practice and monitor continuing professional development (CPD) and NMBI's and NMC's registration standards
- Demonstrates and champions appropriate and innovative digital technologies to enhance learning and patient/consumer care

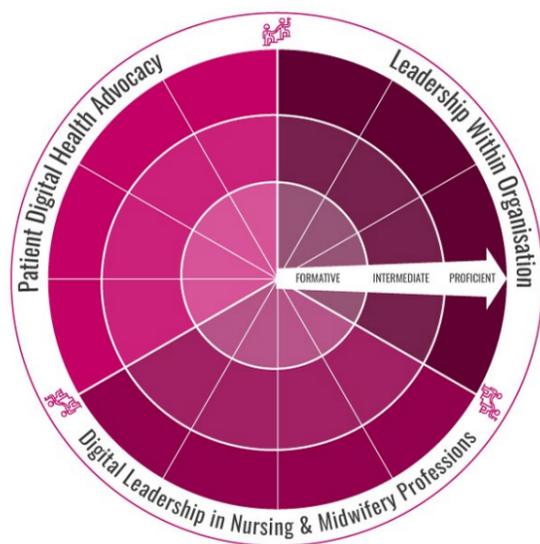
1.2 Procedural Knowledge

- Ensures professional responsibilities, through understanding and adhering to digital health legislation, policy and ethics, including privacy and security, and professional conduct
- Recognises and acts upon digital situations and events, including illegal practices or unprofessional conduct, that might compromise personal, professional or organisational security or reputation
- Maintains awareness of cultural, ethical, and socioeconomic issues when accessing and using digitally held health information
- Recognises and acts upon cultural, ethical, and socioeconomic inequity related to access to, and use of, health information

1.3 Digital Identity

- Maintains a professional development record demonstrating innovation, reflecting upon skills and experience to help monitor professional identity
- Understands the benefits and risks of different ways of presenting oneself online, both professionally and personally and adheres to organisational and professional social media policies
- Understands that online posts can stay in the public domain and contribute to an individual's digital footprint
- Recognises that their professional digital footprint, where it exists, should showcase their skills, education, and professional experience

Domain 2 Leadership and Advocacy



Digital health leadership and advocacy supported by clear policy

Nurses and midwives are the largest health professional group in all contexts of health, education and care. It is important for nurses and midwives to be actively involved in the leadership, policy development and advocacy for digital health at individual, local and national levels.

Figure 4. Domain 2 - Leadership and Advocacy

The Digital Roadmap for Nursing and Midwifery (2019)² and the Nursing and Midwifery Task Group Report³ recognises the importance of nurses and midwives having active leadership roles in all aspects of digital health including vision and strategy, governance, design, delivery, implementation and operations. The leadership roles are referenced throughout the documents to include developing future digital leaders in nursing and midwifery.

As advocates for patients, their families and the community, nurses and midwives campaign for health care reforms that improve quality and access. The importance of leadership in digital health is heightened because nurses and midwives are responsible for the planning, implementation and evaluation of a broad range of initiatives to improve health outcomes, patient satisfaction and the utilisation of resources. The domain of leadership and advocacy therefore bridges the current gap between policy and procedures and patient/consumer centred care.

The three sub-domains within Domain 2, Leadership and Advocacy, are:

2.1 Patient Digital Health Advocacy

Nurses and midwives work in partnership with patients/consumers regarding education and advocacy about information collection, access and use.

2.2 Leadership Within Organisation

Nurses and midwives are visible and active players in digital health decision making within their organisations.

2.3 Digital Leadership in Nursing and Midwifery Professions

Nurses and midwives provide active leadership to ensure the professions have input into national digital health decisions.

The capability statements for each of the sub-domains are listed below:

2.1 Patient Technology Advocacy

- Advocates for patient/consumer access to digital health technologies
- Understands the benefits and possible risks of different digital health applications when assisting patients/consumers
- Uses digital health in partnership with patients/consumers to aid culturally appropriate, informed decision making and health literacy
- Assists patients/consumers to use a range of communication technologies in their care, such as telehealth consultations

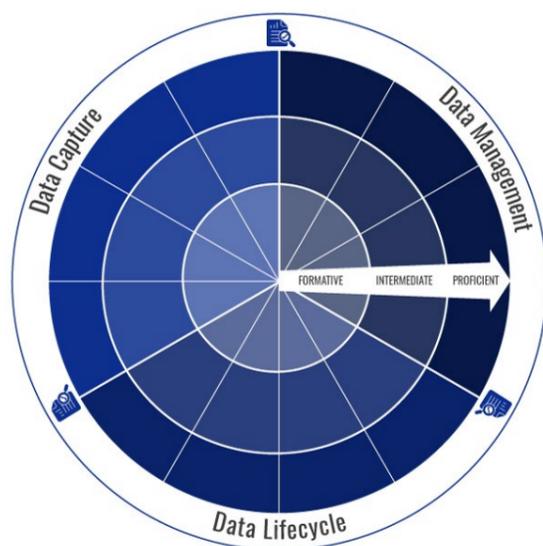
2.2 Leadership Within Organisation

- Champions the use of digital health technologies in the organisation and with peers
- Understands and contributes to the development of digital health policies and procedures within local organisation
- Uses digital health to support communication within the organisation
- Ensures appropriate digital health education is available within the organisation
- Promotes and encourages innovation in digital health for nursing and midwifery practice and understands the factors for successful innovation and its adoption

2.3 Digital Leadership in Nursing and Midwifery Professions

- Promotes nurses' and midwives' leadership in design, implementation and evaluation of digital health technologies that support nursing and midwifery practice
- Explores, promotes, and contributes to the potential of emerging digital data sources and data systems to transform health and healthcare
- Actively participates in making decisions regarding digital health technologies
- Engages with the processes of digital health strategy and policy development within the profession

Domain 3 Data and Information Quality



Data quality must be present

Digital health relies on quality data for information management; nurses and midwives have a critical role in the capture, creation, recording and use of increasingly large quantities of clinical and healthcare data.

Figure 5. Domain 3 - Data and Information Quality

Digital health relies on quality data for information management. This means that nurses and midwives have a critical role in the capture, creation and recording of increasingly large quantities of clinical and healthcare data. Additionally, all services are expected to develop a culture of and drive improvement in healthcare quality and increasingly are focussed on patient experiences¹⁴.

The Digital Roadmap for Nursing and Midwifery², the Nursing and Midwifery Task Group Report³ and the Transforming Nursing and Midwifery Data programme of work in Northern Ireland¹⁵, highlights the importance of data standards and interoperability. Supported by data standards, nurses and midwives can be confident that the information they are using and sharing is accurate, timely and complete. Quality data gathered by nurses and midwives can be used for multiple purposes across healthcare and enable improved health outcomes.

The three sub-domains within Domain 3, Data and Information Quality, are:

3.1 Data Capture

Nurses and midwives play a crucial role in the capture of complete, timely and accurate data

3.2 Data Management

Nurses and midwives play a pivotal role in ensuring the accessibility, reliability, privacy, security and timeliness of data within healthcare environments

3.3 Data Lifecycle

Nurses and midwives are able to recognise that data have different uses or usefulness at various points within healthcare

The capability statements for each of the sub-domains are listed below:

3.1 Data Capture

- Understands that nurses and midwives are crucial in the capture of data and advises on their use within the healthcare system
- Understands how data is stored and used throughout the healthcare system
- Systematically and accurately collects and records relevant data in a structured form
- Understands the benefits and risks of using patient/consumer generated data in delivering care

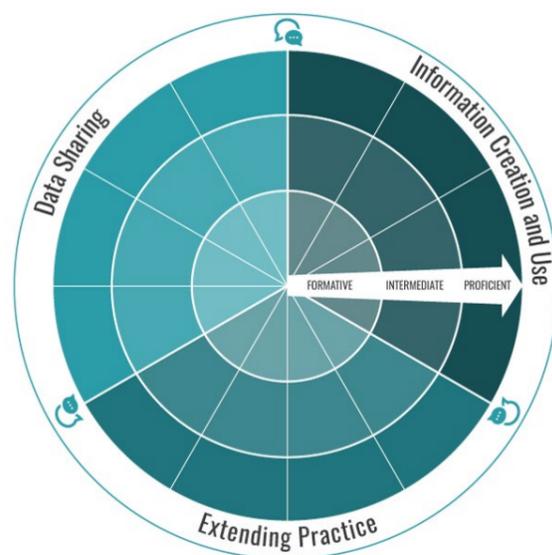
3.2 Data Management

- Understands informatics and digital health terminology
- Understands the purpose, structure, use, and storage of electronic health records
- Manages and applies information within the relevant scope of practice and the healthcare context
- Understands who uses health data and how, for the benefit of the patient/consumer, for research and the healthcare system

3.3 Data Lifecycle

- Understands data structures and their importance in healthcare
- Maintains a degree of understanding about structured languages used in nursing and midwifery in relation to data capture, aggregation, storage and use within digital health systems
- Recognises the role of data integrity in healthcare and the importance of complete, timely and accurate data
- Understands the transition from data, through information and knowledge, to wisdom and decision making.

Domain 4 Information-enabled Care



Care must be supported by rigorous data analysis and critical appraisal

The evidence-based actions and behaviours of nurses and midwives increasingly rely on the appropriate use of complex data. Information-enabled care is central to modern practice. It requires the development of a validated knowledge-base, through rigorous data analysis, to inform quality clinical decision making and extend nursing and midwifery knowledge.

Figure 6. Domain 4 - Information Enabled Care

Increasingly, nurses and midwives are required to use their critical thinking to analyse complex data in the provision of care. This extends more broadly than any individual setting as we move towards ensuring continuity of care across healthcare settings and providing patients/consumers with connected care. These changes are enabled by the information exchanges that occur with the implementation and use of digital health tools. Information provides the key to safe, quality healthcare delivery and supports evidence based activities.

The three sub-domains within Domain 4, Information Enabled Care, are:

4.1 Data Sharing

Nurses and midwives appropriately use and share digital data with other healthcare professionals and patients/consumers.

4.2 Information Creation and Use

Nurses and midwives use data from a wide range of sources to create information for themselves, their patients/consumers and other healthcare providers and users to implement, support and evaluate care.

4.3 Extending Practice

Nurses and midwives use information to develop, extend and support evidence-based care in critical decision making.

The capability statements for each of the sub-domains are listed below:

4.1 Data Sharing

- Understands the concepts relating to data linkage
- Identifies the purposes, benefits and risks of aggregating clinical data from multiple sources
- Understands the importance of data analytics and how they influence decision making and care delivery
- Recognises the various data sources available and judges their quality, including patient/consumer generated data

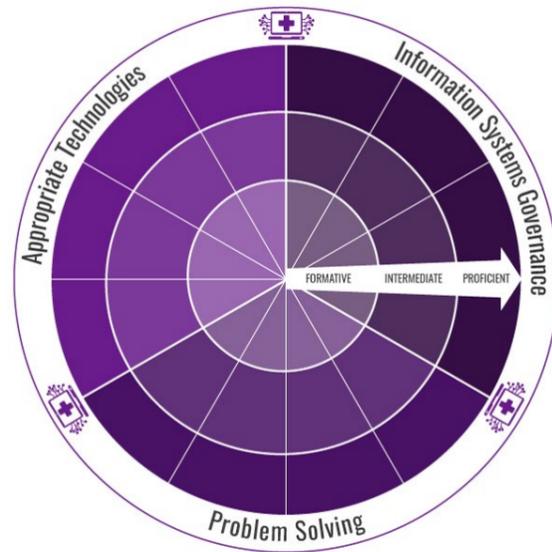
4.2 Information Creation and Use

- Sources and critically evaluates information to support evidence-based decision making for practice, education and research
- Uses their skills to assist patients/consumers to access and evaluate electronic health information
- Understands that using accurate data to assess nursing and midwifery care and health outcomes provides the opportunity to influence health service management, planning, policy, resourcing, practice, research, education, and continuous improvement
- Recognises the potential of digital health to support current practice and enable new models of care

4.3 Extending Practice

- Advocates for the use of digital health technologies to support innovation, quality improvement, research and evidence-based practice
- Uses research to guide practice in the use of digital health to support nursing and midwifery practice
- Uses digital technologies to facilitate patient/consumer engagement, education, and self-management
- Understands and evaluates the impact of digital health on the role of the nurse/midwife, healthcare practice, patient/consumer safety, patient/consumer interaction, and the quality of care

Domain 5 Technology



Care must be supported by rigorous data analysis and critical appraisal

The evidence-based actions and behaviours of nurses and midwives increasingly rely on the appropriate use of complex data. Information-enabled care is central to modern practice. It requires the development of a validated knowledge-base, through rigorous data analysis, to inform quality clinical decision making and extend nursing and midwifery knowledge.

Figure 7. Domain 5 - Technology

The introduction of technology has changed the way nurses and midwives practice across the full spectrum of practice settings. Nurses and midwives have always adapted to the introduction of technologies that improve patient outcomes by allowing faster diagnosis, more precise therapies, and increasing their time for hands-on patient care. Digital health technologies are increasingly providing improved recording of care and sharing of patient/consumer information, linked with continuity of care and decreased replication of data across the healthcare system. It is recognised that not all nurses and midwives have the same level of access to digital health technologies, but it must also be recognised that there is a focus on the digitisation of health across the Republic of Ireland and Northern Ireland as key to improving service delivery and health outcomes and supporting national policy implementation.^{2,3, 16, 17} Technology is therefore an important domain in the delivery of a digitally capable nursing and midwifery workforce.

The three sub-domains within Domain 5, Technology, are:

5.1 Appropriate Technologies

Nurses and midwives are able to identify and recommend appropriate digital technologies for their environment and for patients/consumers, and use these where available.

5.2 Digital Health Governance

Nurses and midwives are able to implement policy and procedures that govern digital health use in their workplace.

5.3 Problem Solving

Nurses and midwives are able to use digital technologies to support problem solving in practice.

The capability statements for each of the sub-domains are listed below:

5.1 Appropriate Technologies

- Recognises the right technology for the clinical or professional situation, or identifies when the wrong one is being used
- Maintains knowledge currency in relation to digital health innovations and their uses, relevant to their area of practice
- Maintains the ability to communicate appropriately with other healthcare professionals and patients/consumers using a range of electronic means
- Recognises the advantages and challenges of digital health in practice
- Understands the principles of digital clinical safety to keep patients/consumers safe

5.2 Digital Health Governance

- Understands policies and procedures that govern the management, adoption and use of digital health technologies
- Understands the principles of data and information governance, including privacy and security requirements
- Uses a range of devices, applications and software for undertaking nursing and midwifery responsibilities
- Ensures timely reporting of errors and near misses and monitors outcomes

5.3 Problem Solving

- Provides appropriate and informed feedback on the digital health technologies in use and participates in their improvement or customisation
- Demonstrates the ability to solve problems when using digital health technologies
- Understands and knows how to action the back-up processes in the event of a system failure
- Demonstrates an ability to detect, report and action technology related errors



Figure 8. Framework Domains and Sub-Domains

Table 1. Descriptions of Domains and Sub-Domains

Domain Description	Sub-domain 1	Sub-domain 2	Sub-domain 3
Domain 1 - Digital Professionalism			
Professional standards are maintained in the digital environment	1.1 Professional development	1.2 Procedural knowledge	1.3 Digital identity
Nurses and midwives demonstrate attitudes and behaviours reflecting recognised professional standards when utilising digital tools both professionally and personally	Nurses and midwives use digital tools to achieve and maintain professional development requirements	Nurses and midwives use of digital tools in healthcare aligns with procedural, policy, legal, ethical, security and privacy requirements	Nurses and midwives use digital tools to develop and maintain their online identity and reputation
Domain 2 - Leadership and Advocacy			
Digital health leadership and advocacy supported by clear policy	2.1 Patient Technology Advocacy	2.2 Leadership within organisation	2.3 Digital leadership in Nursing and Midwifery professions
Nurses and midwives are the largest health professional group in all contexts of health, education and care. It is important for nurses and midwives to be actively involved in the leadership, policy development and advocacy for digital health at individual, local and national levels	Nurses and midwives work in partnership with patients/consumers regarding education and advocacy about information collection, access and use	Nurses and midwives are visible and active players in the digital health decision making within their organisations	Nurses and midwives provide active leadership to ensure the professions have input into national digital health decisions
Domain 3 - Data and Information Quality			
Data quality must be present	3.1 Data capture	3.2 Data management	3.3 Data lifecycle
Digital health relies on quality data for information management; nurses and midwives have a critical role in the capture, creation, recording and use of increasingly large quantities of clinical and healthcare data	Nurses and midwives play a crucial role in the capture of complete, timely and accurate data	Nurses and midwives play a pivotal role in ensuring the accessibility, reliability, privacy, security and timeliness of data within healthcare environments	Nurses and midwives are able to recognise that data have different uses or usefulness at various points within healthcare

Domain 4 Information-enabled Care			
Care must be supported by rigorous data analysis and critical appraisal	4.1 Data sharing	4.2 Information creation and use	4.3 Extending practice
The evidence-based actions and behaviours of nurses and midwives increasingly rely on the appropriate use of complex data. Information-enabled care is central to modern practice and requires the development of a validated knowledge-base through rigorous data analysis, to inform quality clinical decision making and extend nursing and midwifery knowledge	Nurses and midwives appropriately use and share digital data with other healthcare professionals and patients/consumers	Nurses and midwives use data from a wide range of sources to create information for themselves, their patients/consumers and other healthcare providers and users to support care	Nurses and midwives use information to develop, extend and support evidence based care in critical decision making
Domain 5 - Technology			
Technology needs to be understood and used appropriately	5.1 Appropriate technologies	5.2 Digital health governance	5.3 Problem solving
Nurses and midwives access and use available technologies appropriately to deliver safe and quality care, and to ensure information availability	Nurses and midwives are able to identify and recommend appropriate digital technologies for their environment and for patients/consumers, and use these where available	Nurses and midwives are able to implement policy and procedures that govern digital health use in their workplace	Nurses and midwives are able to use digital technologies to support problem solving in practice

Table 2. Domain 1 Digital Professionalism – Capability Statements

Domain 1 - Digital Professionalism	<i>Professional standards are maintained in the digital environment - Nurses and midwives demonstrate attitudes and behaviours reflecting recognised professional standards when utilising digital tools both professionally and personally.</i>		
Sub-Domain Description	Levels		
	Formative	Intermediate	Proficient
1.1 Professional Development Nurses and midwives use digital tools to achieve and maintain professional development requirements			
Employs digital technologies in personal learning and professional development	I am learning to use digital technologies in my personal learning and professional development	I confidently use digital technologies in my personal learning and professional development	I am an expert in my use of digital technologies in my personal learning and professional development
Maintains currency with tools and innovations, and in relation to the changing nature of digital health	I am learning about the tools available in digital health	I am confident in my knowledge about digital health tools and innovations	I have expert knowledge about tools and innovations, and in relation to the changing nature of digital health
Uses technologies to improve practice and monitor continuing professional development (CPD) and relevant regulatory bodies registration standards	I am learning to use technologies to improve practice and monitor mandatory requirements	I confidently use technology to improve practice and monitor mandatory requirements	I lead in the use of technologies to improve practice and monitor mandatory requirements
Demonstrates and champions appropriate and innovative digital technologies to enhance learning and patient / consumer care	I am learning about digital technologies to enhance learning and patient care	I confidently use appropriate and innovative digital technologies to enhance learning and patient care	I lead and champion the adoption and use of appropriate and innovative digital technologies to enhance learning and patient/consumer care
1.2 Procedural Knowledge Nurses and midwives use of digital tools in healthcare aligns with procedural, policy, legal, ethical, security and privacy requirements			
Ensures professional responsibilities, through understanding and adhering to digital health legislation, policy and ethics, including privacy and security, and professional conduct	I understand and adhere to digital health legislation, policy and ethics, including privacy and security, and professional conduct	I confidently recognise professional responsibilities, through understanding and adhering to digital health legislation, policy and ethics, including privacy and security, and professional conduct	I lead through demonstrating my professional responsibilities, through understanding and adhering to digital health legislation, policy and ethics, including privacy and security, and professional conduct

Recognises and acts upon digital situations and events, including illegal practices or unprofessional conduct, that might compromise personal, professional or organisational security or reputation	I understand and can recognise digital situations and events, including illegal practices or unprofessional conduct, that might compromise personal, professional or organisational security or reputation	I confidently recognise and act upon digital situations and events, including illegal practices or unprofessional conduct, that might compromise personal, professional or organisational security or reputation	I lead others in recognising and acting upon digital situations and events, including illegal practices or unprofessional conduct, that might compromise personal, professional or organisational security or reputation
Maintains awareness of cultural, ethical, and socioeconomic issues when accessing and using digitally held health information	I understand and am developing awareness of cultural, ethical, and socioeconomic issues when accessing and using digitally held health information	I am confidently aware of cultural, ethical, and socioeconomic issues when accessing and using digitally held health information	I lead others through my awareness of cultural, ethical, and socioeconomic issues when accessing and using digitally held health information
Recognises and acts upon cultural, ethical, and socioeconomic inequity related to access to, and use of, health information	I am learning to recognise and act upon cultural, ethical, and socioeconomic issues related to access to, and use of, information	I confidently recognise and act upon cultural, ethical, and socioeconomic issues related to access to, and use of, information	I lead in recognising and acting upon cultural, ethical, and socioeconomic issues related to access to, and use of, information

1.3 Digital Identity Nurses and midwives use digital tools to develop and maintain their online identity and reputation			
Maintains a professional development record demonstrating innovation, reflecting upon skills and experience to help monitor professional identity	I am learning about the use of digital professional development record	I confidently use a digital professional development record to demonstrate innovation, reflect on skills and experience to help monitor	I champion the use of digital professional development record to demonstrate innovation, reflect on skills and experience to help monitor
Understanding of the benefits and risks of different ways of presenting oneself online both professionally and personally	I am learning about the different ways of presenting myself online and about the inherent risks	I confidently understand the benefits and risks of different ways of presenting oneself online both professionally and personally	I provide leadership and guidance to others in understanding the benefits and risks of different ways of presenting oneself online both professionally and personally
Understands that online posts can stay in the public domain and contribute to an individual's digital footprint	I am learning about the contribution of all online posts to my digital footprint	I confidently understand that online posts can stay in the public domain and contribute to an individual's digital footprint	I am proactive in ensuring that others understand that online posts can stay in the public domain and contribute to an individual's digital footprint
Recognises that their professional digital footprint, where it exists, should showcase their skills, education, and professional experience	I am learning about my digital footprint and its importance to my professional life	I confidently use my digital footprint to showcase skills, education, and professional experience	I am proactive in supporting others in the development and use of their digital footprint to showcase skills, education, and professional experience

Table 3. Domain 2 Leadership and Advocacy – Capability Statements

Sub-Domain Description	Levels		
	Formative	Intermediate	Proficient
<p>2.1 Patient Digital Health Advocacy Nurses and midwives work in partnership with patients/consumers regarding education and advocacy about information collection, access and use</p>			
Advocates for patient/consumer access to digital health technologies	I understand the importance of patient/consumer access to digital health technologies	I confidently advocate for patient/consumer access to digital health technologies	I champion the right for patient/consumer access to digital health technologies
Understands the benefits and possible risks of different digital health applications when assisting patients/consumers	I am aware of the benefits and possible risks of different digital health applications for patients/consumers	I confidently assist patients/consumers in understanding the benefits and possible risks of different digital health applications	I champion the use of and support others in assisting patients/consumers in understanding the benefits and possible risks of different digital health applications
Uses digital health in partnership with patients/consumers to aid culturally appropriate, informed decision making and health literacy	I am learning to use my digital health skills in patient/consumer education	I confidently use my digital health skills in patient/consumer education and assist them in informed decision making	I lead in use of the digital health skills in patient/consumer education, assisting them in informed decision making and enhancing health literacy
Assist patients/consumers to use a range of communication technologies in their care, such as telehealth consultations	I am learning about how communication tools can be used with patients/consumers in my scope of practice	I confidently assist patients/consumers to use a range of communication technologies in their care	I champion the use of and support others in assisting patients/consumers to use a range of communication technologies in their care

<p>2.2 Leadership within organisation Nurses and midwives are visible and active players in the digital health decision making within their organisations</p>			
Champions the use of digital health technologies in the organisation and with peers	I am learning to encourage others to use of digital health technologies in the organisation and with peers	I confidently discuss the use of digital health technologies in the organisation and with my peers	I champion the use of digital health technologies in the organisation and with my peers
Understands and contributes to the development of digital health policies and procedures within local organisation	I adhere to digital health policies and procedures within my local organisation	I confidently understand the digital health policies and procedures within local organisation	I lead and contribute to digital health policies and procedures within my organisation
Uses digital health to support communication within the organisation	I am learning how to use digital health tools to support communication in my organisation	I confidently use digital health to support communication within the organisation	As an expert , I provide leadership , advocacy, guidance and support on the use digital health to support communication within the organisation
Ensures appropriate digital health education is available within the organisation	I attend digital health education that is available within the organisation	I attend, engage with and provide feedback on digital health education available within the organisation	I lead and conduct digital health education within the organisation
Leads and promotes innovation in digital health for nursing and midwifery practice and understands the factors for successful innovation and its adoption	I am learning about innovation in digital health for nursing and midwifery practice and the factors for successful adoption	I confidently promote innovation in digital health for nursing and midwifery practice and enable the factors for successful adoption	I lead innovation in digital health for nursing and midwifery practice and build enabling supports for successful adoption

<p>2.3 Digital Leadership in Nursing and Midwifery professions Nurses and midwives provide active leadership to ensure the professions have input into national digital health decisions</p>			
Promotes nurses' and midwives' leadership in design, implementation and evaluation of digital health technologies that support nursing and midwifery practice	I am learning about the importance of nurses' and midwives' leadership in design, implementation and evaluation of digital health technologies that support nursing and midwifery practice	I confidently promote the need for nurses' and midwives' leadership in design, implementation and evaluation of digital health technologies that support nursing and midwifery practice	I contribute to advancing nurses' and midwives' leadership in design, implementation and evaluation of digital health technologies that support nursing and midwifery practice
Explores, promotes, and contributes to the potential of emerging digital data sources and data systems to transform health and healthcare	I am learning about the potential of emerging digital data sources and data systems to transform health and healthcare	I confidently explore the potential of emerging digital data sources and data systems to transform health and healthcare	I champion the potential of emerging digital data sources and data systems to transform health and healthcare
Actively participates in making decisions regarding digital health technology	I am developing confidence in making decisions regarding digital health technology	I am actively involved in decisions regarding digital health technology	I lead decisions regarding digital health technology
Engages with the processes of digital health strategy and policy development within the profession	I am learning about digital health strategy and policy development within the profession	I confidently contribute to the processes of digital health strategy and policy development within the profession	I lead in digital health strategy and policy development within the profession

Table 4. Domain 3 Data and Information Quality – Capability Statements

Domain 3 - Data and Information Quality	<i>Data quality must be present</i> - Digital health relies on quality data for information management; nurses and midwives have a critical role in the capture, creation, recording and use of increasingly large quantities of clinical and healthcare data.		
Sub-Domain Description	Levels		
	Formative	Intermediate	Proficient
3.1 Data Capture Nurses and midwives play a crucial role in the capture of complete, timely and accurate data			
Understands that nurses and midwives are crucial in the capture of data and advises on their use within the healthcare system	I understand what data must be collected and their use within the healthcare system	I confidently understand what data must be collected and their use within the healthcare system	I lead in data collection and use
Understands how data is stored and used throughout the healthcare system	I am learning about how data is stored and used throughout the healthcare system	I am confident that I understand how data is stored and used throughout the healthcare system	I have expert understanding of how data is stored and used throughout the healthcare system
Systematically and accurately collects and records relevant data in a structured form	I can collect and record relevant data in a structured form	I confidently collect and record relevant data in a structured form	I systematically and accurately collect, record and review relevant data in a structured form
Understands the benefits and risks of using patient/consumer generated data in delivering care	I am aware of the benefits and risks of using patient generated data in delivering care	I am confident that I understand the benefits and risks of using patient/consumer generated data in delivering care	I provide leadership and guidance to others to understand the benefits and risks of using patient generated data in delivering care

3.2 Data Management Nurses and midwives play a pivotal role in ensuring the accessibility, reliability, privacy, security and timeliness of data within healthcare environments			
Understands informatics and digital health terminology	I am learning about informatics and digital health terminology	I confidently understand informatics and digital health terminology	I have advanced understanding of informatics and digital health terminology
Understands the purpose, structure, use, and storage of electronic health records	I am aware of the purpose, structure, use, and storage of electronic health records	I confidently understand the purpose, structure, use, and storage of electronic health records	I lead in design, implementation and evaluation of electronic health records
Manages and applies information within the relevant scope of practice and the healthcare context.	I can manage and apply information within my relevant scope of practice and the healthcare context.	I confidently manage and apply information within my relevant scope of practice and the healthcare context.	I lead and guide others to manage and apply information within my scope of practice and the healthcare context.
Understands who uses health data and how, for the benefit of the patient/consumer, research and the healthcare system	I understand about different uses for health data	I am confident that I understand the different uses for health data	I lead in using health data

3.3 Data Lifecycle Nurses and midwives are able to recognise that data have different uses or usefulness at various points within healthcare			
Understands data structures and their importance in healthcare	I am learning about data structures and their importance in healthcare	I am confident that I understand data structures and their importance in healthcare	I lead in my understanding of data structures and their importance in healthcare
Maintains a degree of understanding about structured languages used in nursing and midwifery in relation to data capture, aggregation, storage and use	I am learning about nursing and midwifery languages	I confidently use nursing and midwifery languages	I lead others with my understanding of nursing and midwifery languages
Recognises the role of data integrity in healthcare and the importance of complete, timely and accurate data	I am learning about data integrity in healthcare and the importance of complete, timely and accurate data	I confidently recognise the role of data integrity in healthcare and understand the importance of complete, timely and accurate data	I lead in promoting the role of data integrity in healthcare and ensure complete, timely and accurate data is available
Understands the transition from data, through information and knowledge, to wisdom and decision making	I am learning about the transition from data, through information and knowledge, to wisdom and decision making	I am confident that I understand the transition from data, through information and knowledge, to wisdom and decision making	I am confident and proficient in my understanding of the transition from data, through information and knowledge, to wisdom and decision making

Table 5. Domain 4 Information-enabled Care – Capability Statements

Domain 4 - Information-enabled Care	<i>Care must be supported by rigorous data analysis and critical appraisal - The evidence-based actions and behaviours of nurses and midwives increasingly rely on the appropriate use of complex data. Information-enabled care is central to modern practice. It requires the development of a validated knowledge-base through rigorous data analysis to inform quality clinical decision making and extend nursing and midwifery knowledge.</i>		
Sub-Domain Description	Levels		
	Formative	Intermediate	Proficient
4.1 Data Sharing			
Nurses and midwives appropriately use and share digital data with other healthcare professionals and patients/consumers			
Understands the concepts relating to data linkage	I am learning the concepts relating to data linkage	I am confident that I understand the concepts relating to data linkage	I lead in my use of linked data
Identifies the purposes, benefits and risks of aggregating clinical data from multiple sources	I am learning about the purposes, benefits and risks of aggregating clinical data from multiple sources	I confidently identify the purposes, benefits and risks of aggregating clinical data from multiple sources	I provide leadership and guidance to others in identifying and understanding the purposes, benefits and risks of aggregating clinical data from multiple sources
Understands the importance of data analytics and how they influence decision making and care delivery	I am learning about data analytics	I confidently understand the importance of data analytics	I lead in the development, implementation and use of data analytics to influence healthcare delivery
Recognises the various data sources available and judges their quality, including patient/consumer generated data	I am learning about the various data sources available and how to judge their quality	I confidently recognise the various data sources available and judge their quality, including patient/consumer generated data	I am proficient and proactive in recognising available data sources and evaluating quality
4.2 Information Creation and Use			
Nurses and midwives use data from a wide range of sources to create information for themselves, their patients/consumers and other healthcare providers and users to support care			
Sources and critically evaluates information to support evidence-based decision making for practice, education and research	I can source information to support evidence-based practice	I confidently source and critically evaluate information to support evidence-based practice	I lead others in sourcing and critically evaluating information to support evidence-based practice
Uses their skills to assist patients/consumers to access and evaluate electronic health information	I can assist patients/consumers to access and evaluate electronic health information	I confidently assist patients/consumers to access and evaluate electronic health information	I am confident and proficient in assisting patients/consumers to access and evaluate electronic health information

Understands that using accurate data to assess nursing and midwifery care and health outcomes provides the opportunity to influence health service management, planning, policy, resourcing, practice, research, education, and continuous improvement	I understand the relationship between assessment of nursing and midwifery care, health outcomes, health service management, planning, policy, resourcing, practice, research, education, and continuous improvement	I confidently understand the relationship between assessment and health outcomes, health service management, planning, policy, resourcing, practice, research, education, and continuous improvement	I lead others in developing their understanding of the relationship between data analysis and health outcomes, health service management, planning, policy, resourcing, education, and continuous improvement
Recognises the potential of digital health to support current practice and enable new models of care	I recognise the potential of digital health to support current practice	I confidently recognise the potential of digital health to support current and future practice	I proactively use digital health to support current practice and inform new models of health care

4.3 Extending Practice			
Nurses and midwives use information to develop, extend and support evidence based care in critical decision making			
Advocates for the use of digital health technologies to support innovation, quality improvement, research and evidence based practice	I am learning how the use of digital health technologies can support quality improvement, research and evidence based practice	I confidently use digital health technologies to support quality improvement and evidence based practice	I lead in the use of digital health technologies to support innovation, quality improvement, research and evidence based practice
Uses research to guide practice in the use of digital health to support nursing and midwifery practice	I am learning to use research to assist my use of digital health to support my practice	I confidently use research to guide practice in the use of digital health to support nursing and midwifery practice	I lead research to guide the use of digital health to support nursing and midwifery practice
Uses digital technologies to facilitate patient/consumer engagement, education, and self-management	I am learning to use digital technologies to facilitate patient/consumer engagement	I confidently use digital technologies to facilitate patient/consumer engagement and education	I lead in using digital technologies to facilitate patient/consumer engagement, education, and self-management
Understands and evaluates the impact of digital health on the role of the nurse and midwife, healthcare practice, patient/consumer safety, patient/consumer interaction, and the quality of care	I am learning to understand and evaluate the impact of digital health on the role of the nurse/midwife and patient/consumer safety	I confidently understand and evaluate the impact of digital health on the role of the nurse/midwife, healthcare practice, patient/consumer safety, patient/consumer interaction, and the quality of care	I provide leadership and guidance to others to understand and evaluate the impact of digital health on the role of the nurse/midwife, healthcare practice, patient/consumer safety, and interaction, and the quality of care

Table 6. Domain 5 Technology – Capability Statements

Domain 5 - Technology	<i>Technology needs to be understood and used appropriately</i> - Nurses and midwives access and use available technologies appropriately to deliver safe and quality care, and to ensure information availability.		
Sub-Domain Description	Levels		
	Formative	Intermediate	Proficient
5.1 Appropriate Technologies			
Nurses and midwives are able to identify and recommend appropriate digital technologies for their environment and for patients/consumers, and use these where available			
Recognises the right technology for the clinical or professional situation, or identifies when the wrong one is being used	I am learning to recognise the right technology for different situations	I confidently recognise the right technology for the clinical or professional situation	As an expert , I provide leadership, guidance and support for others in recognising the right technology for the clinical or professional situation
Maintains knowledge currency in relation to digital health innovations and their uses, relevant to their area of practice	I am learning about digital health innovations and their uses	I confidently keep up to date with digital health innovations and their uses	I am proficient and proactive in my up to date knowledge of digital health innovations and their uses
Maintains the ability to communicate appropriately with other healthcare professionals and patients/consumers using a range of electronic means	I am able to communicate appropriately using electronic means	I am confident in my ability to communicate appropriately using electronic means with other health care professionals	I lead in my ability to communicate appropriately using electronic means with other health care professionals and patients/consumers
Recognises the advantages and challenges of digital health in practice (e.g. infection control)	I can recognise the advantages and challenges of digital health in practice	I confidently recognise the advantages and challenges of digital health in practice	I provide leadership and guidance to others in recognising the advantages and challenges of digital health in practice
Understands the principles of digital clinical safety to keep patients/consumers safe	I am learning about clinical digital safety	I confidently understand digital clinical safety	I have an advanced understanding of digital clinical safety and provide leadership and guidance in ensuring digital clinical safety for patients/consumers

5.2 Digital Health Governance - Nurses and midwives are able to implement policy and procedures that govern digital health use in their workplace			
Understands policies and procedures that govern the management, adoption and use of digital health technologies	I am aware of the policies and procedures around the use of information systems in my organisation	I confidently understand and use the policies and procedures that govern change management, adoption and use of information systems	I am involved in developing policies and procedures that govern change management, adoption and use of information systems
Understands the principles of data and information governance, including privacy and security requirements	I am learning about the principles of data and information governance	I confidently understand the principles of data and information governance	I lead in ensuring appropriate data and information governance
Uses a range of devices, applications and software for undertaking nursing and midwifery responsibilities	I am learning to use a range of devices, applications and software for undertaking nursing/midwifery responsibilities	I confidently use a range of devices, applications and software for undertaking nursing/midwifery responsibilities	I provide leadership and guidance to others on the use of devices, applications and software for undertaking nursing/midwifery responsibilities
Ensures timely reporting of errors and near misses and monitors outcomes	I understand how to report errors and near misses	I confidently ensure timely reporting of errors, near misses and monitors outcomes	I champion the timely reporting of errors, near misses and monitors outcomes

5.3 Problem Solving - Nurses and midwives are able to use digital technologies to support problem solving in practice			
Provides appropriate and informed feedback on the digital health technologies in use and participates in their improvement or customisation	I am learning about the systems in use	I confidently provide appropriate and informed feedback on the systems in use	As an expert user, I lead on and champion the effective, appropriate and informed feedback on the systems in use
Demonstrates the ability to solve problems when using digital health technologies	I am learning to solve problems when using systems	I confidently solve problems when using systems	I lead on and assist others to solve problems when using systems
Understands and knows how to action the back-up processes in the event of a system failure	I am learning to work with others to resolve or report technology issues	I confidently assist others to resolve or report technology issues	I lead in assisting others to resolve or report technology issues
Demonstrated ability to detect, report and action system generated errors	I am learning to detect and action system generated errors	I confidently detect and action system generated errors	I am proactive in supporting others to detect and action system generated errors

References

1. World Health Organization (WHO). (2019). WHO guideline: recommendations on digital interventions for health system strengthening, Geneva. Retrieved from <https://apps.who.int/iris/bitstream/handle/10665/324998/WHO-RHR-19.7-eng.pdf>
2. Office of the Nursing and Midwifery Services Director. (2019). Digital Roadmap for Nursing and Midwifery 2019 - 2024. Retrieved from <https://healthservice.hse.ie/filelibrary/onmsd/digital-roadmap-for-nursing-midwifery-2019-2024.pdf>
3. Department of Health. (2020). Nursing and Midwifery Task Group (NMTG) Report and Recommendations. Belfast, DoH
4. Australian Digital Health Agency (2020). National Nursing and Midwifery Digital Health Capability Framework. Australian Government: Sydney. Retrieved from <https://www.digitalhealth.gov.au/healthcare-providers/initiatives-and-programs/workforce-and-education>
5. National Health Service (NHS). (2018). A Health and Care Digital Capabilities Framework. Health Education England's Technology Enhanced Learning Programme, UK. Retrieved from <https://www.hee.nhs.uk/sites/default/files/documents/Digital%20Literacy%20Capability%20Framework%202018.pdf>
6. Nursing and Midwifery Board of Australia (NMBA). (2016). Enrolled nurse standards for practice. Retrieved from <https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professionalstandards/enrolled-nurse-standards-for-practice.aspx>
5. Nursing and Midwifery Board of Australia (NMBA). (2016). Registered nurse standards for practice. Retrieved from <https://www.nursingmidwiferyboard.gov.au/codes-guidelines-statements/professionalstandards/registered-nurse-standards-for-practice.aspx>
7. Nursing and Midwifery Board of Australia (NMBA). (2018). Midwife standards for practice. Retrieved from <https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards/Midwife-standards-for-practice.aspx>
8. Brunner, M. et al. (2018). An eHealth Capabilities Framework for Graduates and Health Professionals: Mixed-Methods Study, 28 February, Journal of Medical Internet Research, 20(5): p. e10229. Retrieved from <https://www.jmir.org/2018/5/e10229/pdf>
9. Wholey, D.R. et al. (2018). Developing Workforce Capacity in Public Health Informatics: Core Competencies and Curriculum Design. Frontiers in Public Health, 2 May, 6: 124. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5940737/>
10. Mather, C.A. and Cummings, E. (2019). Developing and sustaining digital professionalism: a model for assessing readiness of healthcare environments and capability of nurses. BMJ Health & Care Informatics, 26(1): p. e100062. Retrieved from <https://informatics.bmj.com/content/26/1/e10006211>
11. Nursing and Midwifery Board of Australia (NMBA). (2014). Nurse practitioner standards for practice (updated 2018), Melbourne. Retrieved from <https://www.nursingmidwiferyboard.gov.au/Codes-Guidelines-Statements/Professional-standards/nurse-practitioner-standards-of-practice.aspx>
11. Nursing and Midwifery Board of Ireland (NMBI). (2014). Code of Professional Conduct and Ethics for Registered Nurses and Registered Midwives. Retrieved from <https://www.nmbi.ie/Standards-Guidance/Code>
12. Nursing and Midwifery Council. (2018). Future Nurse: Standards of proficiency for registered nurses. London, NMC
13. Nursing and Midwifery Council. (2019). Standards of proficiency for midwives. London, NMC
14. By all, with all, for all: a Strategic Approach to Improving Quality 2020 -2024. (2020) Retrieved from <https://www.hse.ie/eng/about/who/qid/strategic-plan-2019-2024/strategic-approach-2020-2024.pdf>
15. Department of Health, Social Services and Public Safety. (2011). Quality 2020: a 10-year strategy to protect and improve quality health and social care in Northern Ireland. Belfast, DHSSPS. Available at: Quality 2020 - a ten year strategy to protect and improve quality in health and social care in Northern Ireland | Department of Health (health-ni.gov.uk)
15. Northern Ireland Practice and Education Council (NIPEC) (2020). Transforming Nursing and Midwifery Data (2018 – 2020) Retrieved from: Recording Care | NIPEC (hscni.net)
16. Health and Social Care Board. (2013). eHealth and Care Strategy for Northern Ireland. Belfast, HSCB. Retrieved from <http://www.hscboard.hscni.net/digital-hcni/>
17. Department of Health. (2017). Sláintecare Report. Retrieved https://data.oireachtas.ie/ie/oireachtas/committee/dail/32/committee_on_the_future_of_healthcare/reports/2017/2017-05-30_slaintecare-report_en.pdf

Glossary

Data - facts that can be interpreted or analysed to gain knowledge or aid decision making

Data standards - rules used to standardise the way data are collected and recorded

Digital health - use of information and communication technologies to improve health, healthcare services, and facilitate wellness

Digital health literacy - the ability to search, retrieve, understand, and judge electronically held health information and use the knowledge gained to address a health problem

Digital footprint - the stream of data you create when you use the Internet. It includes a record of the websites you visit, emails you send, and information you provide to online services

Digital literacy - the ability to interpret and develop appropriate communication across changing digital forms

Digital technologies - broad term for a variety of technologies that use computers and computerisation

Interoperability - the ability to exchange and use information across different networks and applications

Information - processed or analysed data that now has relevance for a specific purpose or context

Media - refers to various means of communication. The term can also refer to different types of data storage options

Nursing languages – standardised sets of terms that describe the clinical judgments involved in assessments (nursing diagnoses), along with the interventions, and outcomes related to the documentation of nursing care

Social media - websites and applications that enable users to participate in social networking and create and share content

Telehealth - using information and communications technologies for long-distance clinical healthcare, health-related education, public health, and health administration



 Office of the
Nursing & Midwifery
Services Director

Office of the Chief Clinical Officer
HSE
Room 250 Dr Steevens' Hospital
Dublin DO8 W2A8
Ireland

Tel: 01 635 2471
Email: nursing.services@hse.ie
Web: <https://healthservice.hse.ie/about-us/onmsd/>



Seirbhís Sláinte
Níos Fearr
á Forbairt | Building a
Better Health
Service


NIPEC

NIPEC
Centre House
79 Chichester Street
Belfast BT1 4JE
Tel: 0300 300 0066
Email: enquiries@nipec.hscni.net
Web: <https://nipec.hscni.net/>

