



Australian Government
Australian Digital Health Agency



**AUSTRALASIAN INSTITUTE
OF DIGITAL HEALTH**

National Capability Action Plan Digital Health Workforce Priorities

Digital Health Career Pathways Model v1.0

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Executive Summary

A **Digital Health Career Pathways Model v1.0** has been developed to provide a structured approach to map and articulate digital health career pathways, particularly for individuals who wish to specialise in digital health and informatics.

Digital health specialist knowledge and skills are more and more in demand as health and care transforms to a system which is enabled by digital services and care models, as business as usual. Emerging digital technologies and medical technology advancements will place increasing pressure to create new job roles and attract skills to health and care in a highly competitive market.

The requirement to professionalise digital health roles, and to create career pathways to support attracting and retaining those skills, is a critical workforce requirement to support health and care now and into the future. The [National Digital Health Workforce Capability Action Plan \(CAP\)](#) identified a key action in developing and supporting specialist digital health career pathways. The Digital Health Career Pathways Model v1.0 (Model) forms part of the CAP, being delivered in partnership between the Australasian Institute of Digital Health (AIDH) and the Australian Digital Health Agency (Agency).

This is a complicated area of knowledge, skills, capabilities, and competencies, where health and care and ICT intersect. It is an area which is building as a recognised profession, has a wide range of invested stakeholders, and a variance between clinical vs ICT.

The Career Pathway Model provides a structured approach for working towards building career pathways for individuals wishing to specialise in digital health, and leverages off existing work available nationally and overseas, to frame career journeys and the broader professionalisation of digital health. It will:

- Formalise a digital health professional career matrix – leveraging off international work done in Canada.
- Include a focus on skills development and attraction which will in turn inform career pathways options.
- Identify career options and key roles in broad streams such as clinical and ICT, to provide individuals with options and choice.
- Map career journeys from different entry points such as school leavers, changing careers, other professionals working in digital health.
- Assess and determine pre-requisite or missing qualifications, internships, traineeships, and other associated programs.

Mapping career pathways and templated roles will bring a sharper focus to standardised approaches to digital health roles, and the associated expectations on skill requirements

and competencies that will support digital health professionalism and careers. It will also provide practical examples of career pathways and options, with associated training or education identified to support individuals in their own career journey.

These areas will be enabled online to allow access to both organisations and individuals as part of the digital health hub (**Workforce Capability +**) – a single reference site that is being designed to build confidence and capability in digital health for a future-fit health and care workforce.

Purpose of the Model

The purpose of the Career Pathways model is to provide a structured approach to map and articulate digital health career pathways, particularly specialist pathways in digital health and informatics.

The model will leverage existing career pathways and competency matrix work from overseas and Australia and bring together a single focus to unite industry efforts. It will support employers and educators to implement structured roles and training, enable greater mobility and succession planning, and provide clarity for individuals to pursue digital health interests.

It will be a key mechanism for stakeholder engagement and building profile within the broader Capability Action Plan program of work. It will seek to engage people at an individual level regarding career aspirations and professional development. It will bring life to an exciting new area of work with opportunities for industry growth and to attract new workers and skills, whilst supporting, developing, and retaining Australian expertise in digital health and informatics.

Context – Professionalising Digital Health

The **National Digital Health Workforce Capability Action Plan (CAP)**¹ identified 11 key action. Key action 6 is to “Develop and agree on the requirements and pathways for a core set of digital health careers”.

The action will:

- Identify and articulate a set of core specialist digital health roles (current and emerging).
- Outline career pathway descriptions, which will illustrate how individuals might develop within different digital health roles, including people from varying backgrounds, through articulating core requirements, relevant skills, and experience.
- Assist with formalising those digital health specialist key roles.

¹ <https://www.digitalhealth.gov.au/sites/default/files/documents/national-digital-health-capability-action-plan.pdf>

People working in and around digital health have a range of experience and backgrounds, including clinical, information technology (IT), health IT, research and education, engineering, statistics, health science, informatics, program, and project management, change management, and many others. People generally describe that they 'fell into digital health' rather than worked towards a specific career. This wide range of backgrounds and skills is a source of great potential and capability. However, without clear professional development and career pathways for key roles, there may also be skills gaps, or additional requirements for people to grow into their role.

As health and care increasingly digitises, we will need more digital health professionals to lead, deliver and manage the transition and ongoing support. We need ways to better outline these roles, market and highlight them, to attract new people and skills into an exciting area, where digital meets and merges with health and care.

Professionalisation of digital health is required to support career pathways and building of health sector skills and capability. There are qualifications, university degrees, education courses, and industry certifications which are available, but there is a lack of clarity about what is required for supporting career development, and matching skills and qualifications required for roles. This model will move towards building those professional career pathways out, to inform the industry, and act as a basis for maturing digital health as a recognised profession.

Working vs Specialising in Digital Health

When thinking about digital health specialist career pathways, we need to be conscious of the many different and varying roles, and how we define digital health. People working in this area have many different perspectives on these roles and what is required. We also have individuals with broad skills and competencies that can work in many sectors such as finance, banking, retail, as well as health and care, such as IT professionals in cyber security, IT infrastructure, IT communications, networking, and support, etc.

The proposed approach highlights possible digital health career entry points and streams of work, with separation of core transferable skills and specific digital health and/or informatics skill/knowledge requirements. Such an approach provides scope to enable a practical tool to support recruitment and career progression in the initial stages, as we mature the model.

So, when considering digital health careers, it is suggested that workers can be grouped into three categories: 1) working in health, 2) working in digital health, and 3) specialising in digital health, (as represented in Diagram 1).

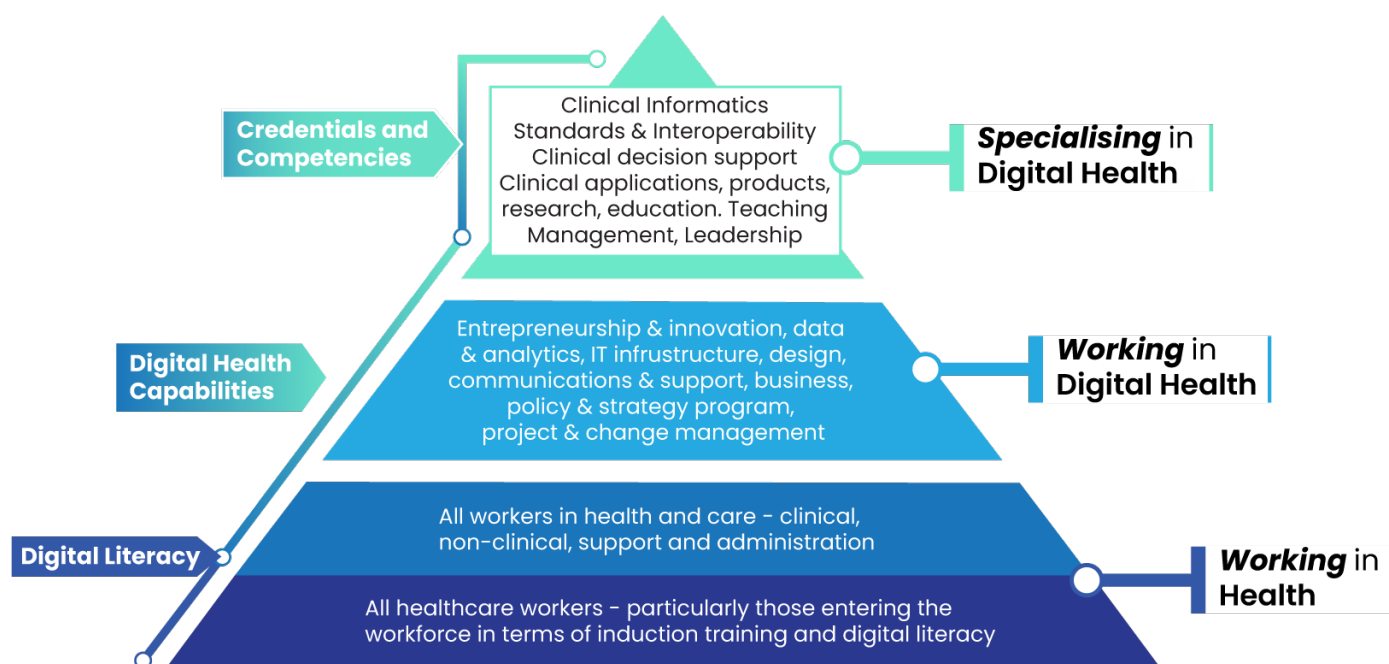


Diagram 1 – Conceptual view: digital literacy to digital health capability in health and care workers, to people who work in and specialise in digital health.

- **Working in Health** – Digital Health is a relevant topic for all health workers; however, these roles do not fall within the scope of a specific, digital health career pathway structure. The Australian Digital Health Capability Framework (ADHCF), which is being finalised as part of the CAP, describes broad capabilities for digital health that should be inherent in all workers in health and care (clinical and non-clinical).
- **Working in Digital Health** – workers in this category are those whose roles clearly translate across varied business areas or sectors (such as project managers, business analysts, etc.), but who are currently working on a digital health project or in a focussed digital health setting. Relevant key skills are transferable across sectors, and workers may enter these roles from a wide variety of backgrounds, with health sector experience not necessarily required.

Professional, generic ICT and management/administration roles which can work across many industries, are included in this area of working in digital health. Also, for the purposes of positioning, digital health broadly encompasses other areas often referred to, such as health IT, eHealth, and health informatics.

Roles in this category rely heavily on transferable core skillsets, however, also require workers to acquire specific digital health knowledge, to effectively apply their skills in this setting. While formal qualifications or credentials may not be required, these workers are likely to require digital health capabilities at the Intermediate or Proficient level, as per the ADHCF. Workers in these roles may move in and out of digital health.

- **Specialising in Digital Health** – workers choosing to specialise in Digital Health enter careers which have a specialty focus on this area, such as clinical informatics, standards, clinical application specialists, etc. While some transferable skills remain, the role requires more in-depth, specialised digital health knowledge and skills, and the role title is unlikely to transfer as easily to other sectors. Effective delivery of the role may require workers with specialised digital health competencies or credentials, such as tertiary education, informatics, including FHIR training or a CHIA certification, for example.

This approach highlights the progressive development of digital health skills as workers move toward more focussed or specialised positions with competencies and certifications. Digital health capabilities, as described in the ADHCF, are positioned to be relevant and applicable to all roles across health and care, though the level of capability and proficiency required increases for those working in digital health/health IT areas. Entry level digital literacy is accommodated for in the model.

As individuals transition from working in digital health to specialising in digital health, specialised competencies and/or credentials are required, over and above these base capabilities. The agreement of standardised terminology, including delineating between capabilities and competencies, will form part of this project.

Considerations in Career Mapping

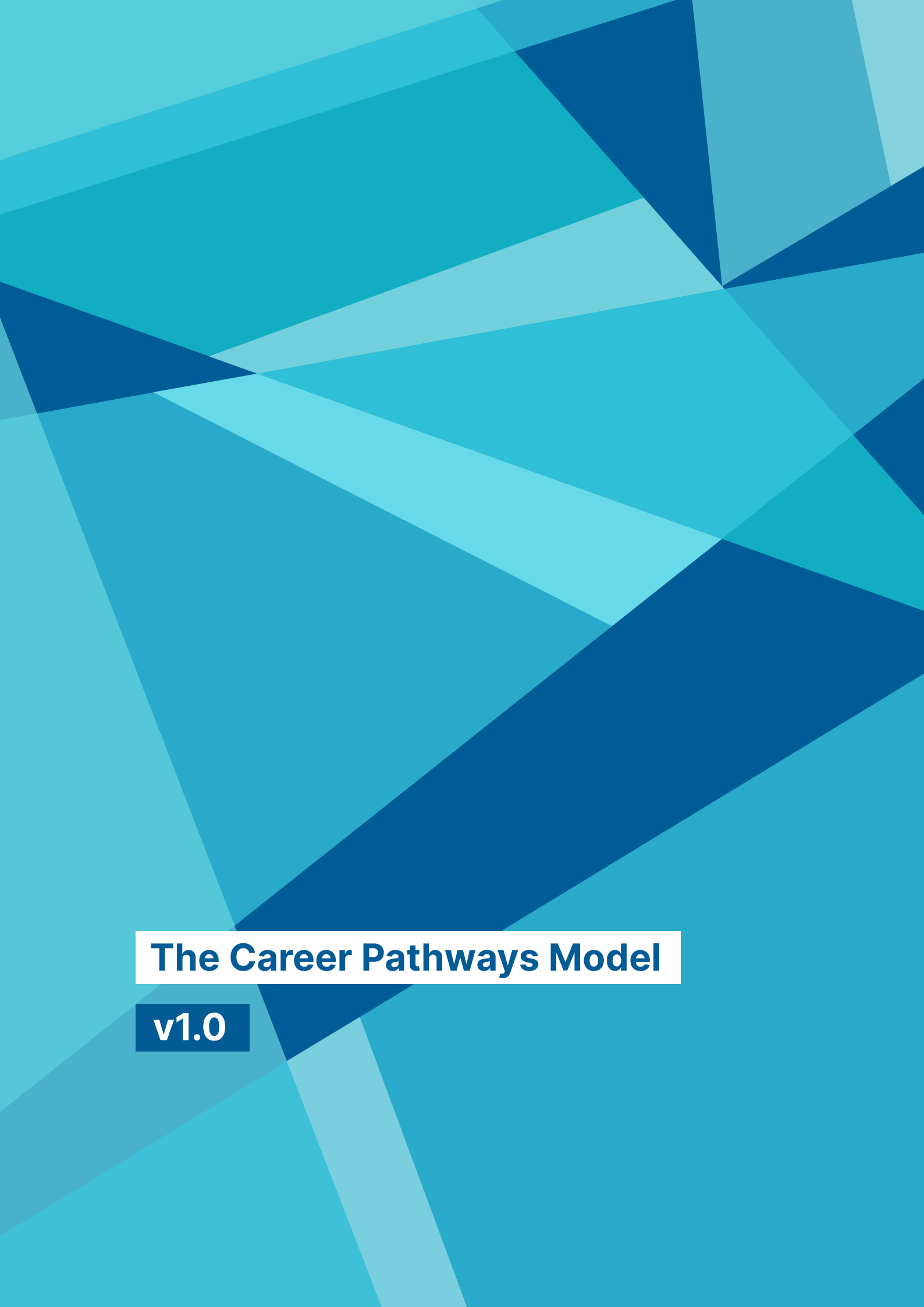
Working through consultation and feedback on the project, there are several considerations that need to be factored into the logic of the model and approach.

- **Flexibility and options** – individuals are wanting flexibility and options in roles. The model in career mapping and planning needs to recognise that people generally do not follow traditional and linear career pathways. People want choice and options, aligned to their professional interests but want to understand what qualifications and experience they need to achieve roles they may wish to have in the future.
- **Evolution of roles** – we are working in a dynamic environment where roles and responsibilities are changing as digital health matures. There may be roles that are not in existence, yet which may emerge, aligned to new technology innovations and advancements.
- **In-demand skills rather than roles** – it is important to focus on in-demand skills rather than roles and functions. Workforce skills being described as “skills developed through applied learning that strengthen and reinforce an individual’s academic knowledge, critical thinking, problem solving, and work ethic and, thereby, develop the employability, occupational skills, and management of home and work responsibilities...”². These in-demand skills can then be applied to roles and responsibilities, and associated applied learning, rather than just education or qualifications. Where possible, the model will refer to the Australian Skills Classification to advance digital health professionalism in the broader context of generic skills.³

² <https://www.lawinsider.com/dictionary/workforce-skills>

³ <https://www.nationalskillscommission.gov.au/topics/australian-skills-classification>

- **International professional recognition** – there are many people working in digital health that may also take opportunities to work in other countries. We know that people working in these areas can work in the United Kingdom, Europe, Middle East, Canada, USA, New Zealand, etc. There are efforts across Australia and other countries to align international industry certifications and qualifications to support cross border recognition of skills and provide individuals with avenues for new work in other parts of the world.
- **Career streams rather than pathways** – to reduce complexity it may be easier to focus on streams of career pathways, rather than separate career pathways. Given the nature of the changing environment and the emergence of new roles, etc., it would be more beneficial to focus on streams of careers, such as a clinical stream, understanding there may be different entry points and experiences for people.
- **Attraction and retention of skills** – attracting individuals to work in digital health, rather than other industries which may pay more money, is a challenge. Health and care needs to include digital health expertise in its workforce shortage priorities. Career pathways work will highlight areas where industry promotion and attraction of skills is important, and leverage programs which may already be in place to support i.e., school-based programs such as in NSW Health.
- **Consistency and standardisation of role descriptions** – because of a constantly changing professional area, digital health has many different and varied roles and position descriptions. Some roles with the same name may have completely different position descriptions and responsibilities between organisations (many CXIO's roles are examples of the differences). As the career mapping development progresses, gathering of role and position descriptions will inform the work and help line-up standard position descriptions. These can then be templated and shared for future use.
- **Identifying and understanding the gaps** – there will no doubt be identified gaps as we go through the process of mapping and building career pathways. These will be documented and highlighted to inform the broader digital health professionalisation approach. There will be evolving and emerging roles which may not be present now, but which could emerge. Areas such as virtual reality, genomics, and artificial intelligence, all lean towards potential future roles as these technologies become more mainstream and in use in health and care.



The Career Pathways Model

v1.0

Overview

The Career Pathways Model provides a structured approach for working towards building career pathways for individuals wishing to specialise in digital health. The model leverages off existing work available nationally and overseas, to frame career journeys and the broader professionalisation of digital health (as represented in Diagram 2).

The model includes:

1. Formalising a **Digital Health Professional Career Matrix** to map and gather information as career pathways are discussed and developed. The logic of the matrix provides an already validated structure being used internationally (in Canada). It defines career levels, domains of focus (i.e., clinical, IT, project management), relevant roles, role descriptions, and competencies aligned to the Skills for the Information Age (SFIA) framework. This matrix needs to be revised and updated to align to roles that are relevant in Australia in 2023, and allow for incorporation of other relevant competency frameworks such as the Australian Health Informatics Competency Framework (AHICF) 2nd Edition, developed by the AIDH.⁴ We will also refer to the Australian Public Service Career Pathfinder Tool to build out and support the matrix.⁵
2. **Incorporating skills** into the logic of the matrix. Incorporating skills rather than just roles, allows the opportunity for skills attraction aligned to career pathways. Individuals are wanting flexibility in career options and choices. Gone are the days of traditional and linear careers – most now are wanting flexibility and choice. By incorporating skills into the matrix model, we can call out in-demand skills, to attract individuals to a variety of roles, as well as inform education and qualification requirements for industry standards, on skills required in certain areas to support the professionalisation of digital health.
3. **Career streams** – matched to addressing flexibility and options for individuals as they work through their career choices, is the notion of career streams, which can reduce complexity and acknowledge broader professional backgrounds and interest areas. Career streams will be beneficial in the early and formative stages of using the model and building career pathways. Thinking of a clinician or an IT professional and what skills and experience is required to take their next steps in a digital health career, rather than having many career pathways which may be too detailed to map and provide minimal benefit.
4. **Entry points** – identifying key entry points into digital health and the next steps individuals are required to take in the journey, will provide the basis for detailing the model. Understanding the aspirations and motivations of individuals at different stages of their career journey, will help align people to roles and the associated skills and qualifications needed, as well as any support that can be provided such as traineeships, internships, mentoring, tailored training, etc.

⁴ <https://digitalhealth.org.au/wp-content/uploads/2022/06/AHICFCompetencyFramework.pdf>

⁵ <https://www.digitalprofession.gov.au/career-development/aps-career-pathfinder-tool>

5. **Qualifications | Education** – supporting the professionalisation of digital health, appropriate education, and qualifications for specialising in digital health need to be identified. There is no consistent industry standard, and therefore there is a mix of skills and capability in the sector. At this point in time, individuals can label themselves a specialist in digital health with no clear qualifications or industry experience. Part of career mapping, matching, roles, skills, and competencies will highlight areas that can be formally used, as well as gaps to be addressed.

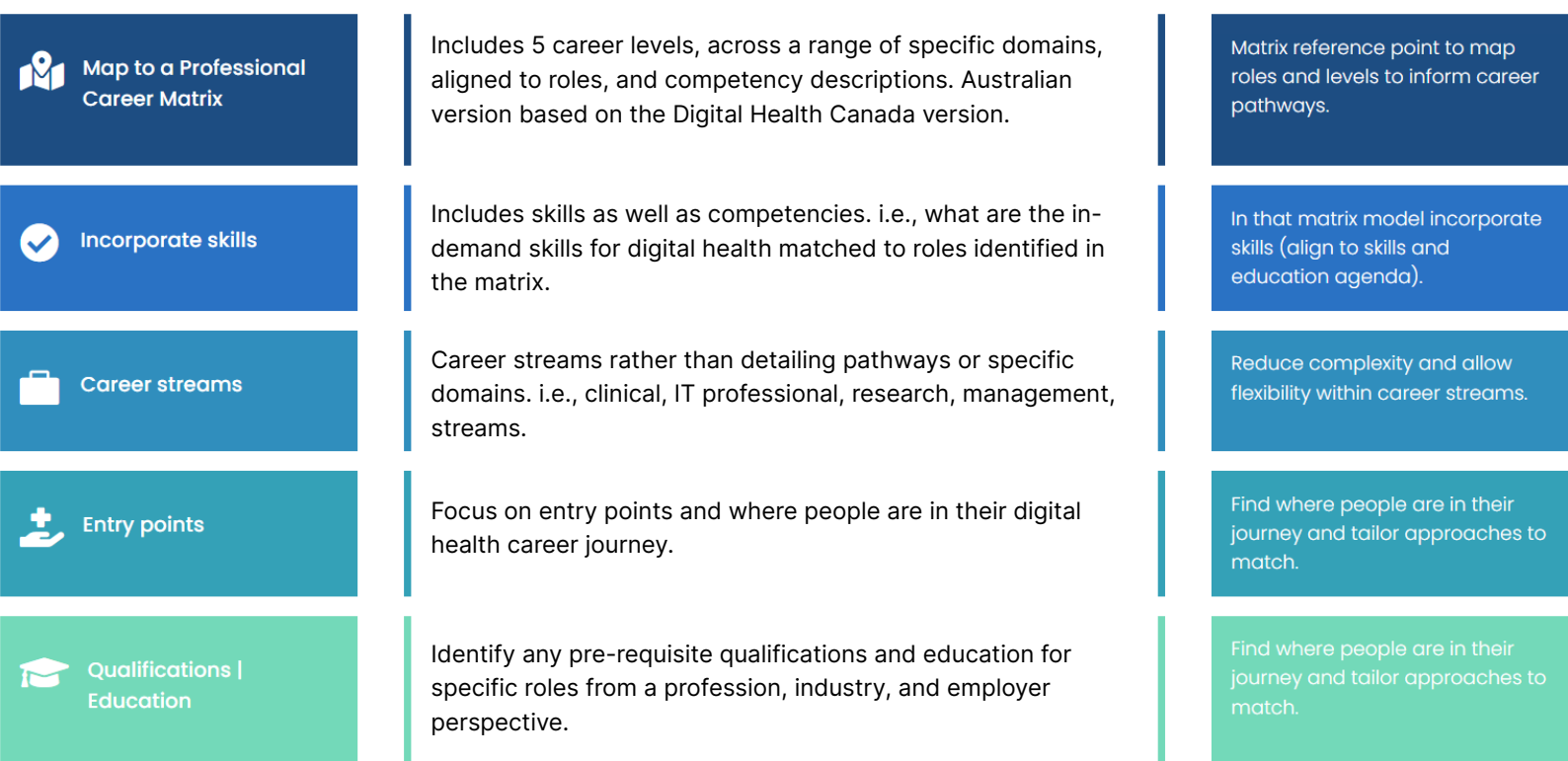


Diagram 2 – Digital Health Career Pathways Model v1.0.

Digital Health Career Matrix

The development of a Digital Health Professional Career Matrix will leverage existing work that has been done internationally to structure roles and professional development in digital health and informatics. Over ten years ago, Canada's Health Informatics Association (then known as COACH, now [Digital Health Canada](https://digitalhealthcanada.com)) created a Professional Career Matrix⁶ (as represented in Diagram 3) in which digital health and informatics roles were mapped to Canada's 'Health Informatics Professional Core Competencies'. This work resulted in an extensive matrix of over 65 roles with associated role descriptions and competency levels. Similar work was done in the National Health Service (NHS) in the UK, which has also informed this work.

⁶ <https://digitalhealthcanada.com/wp-content/uploads/2020/01/Career-Matrix-Multi-Page.pdf>

The matrix will support the development of digital health career pathways in Australia by providing a structure to map roles, levels, and domains of interest areas, as well as providing templates for roles and competencies. The project will seek to align the roles described to the Australian Health Informatics Competency Framework and other relevant frameworks, as identified. Through this process, consideration will be given to:

1. the currency of the roles and competencies described.
2. applicability in Australian work settings.
3. alignment between the Canadian and Australian competency frameworks.

Digital Health Canada Professional Career Matrix

DOMAINS	Clinical & Health Services	Canadian Health System	Project Management	Healthcare Transformation	Analysis & Evaluation	Information Management	Information Technology	NEW Product Management/ Emerging Technology ¹	NEW Patient Related
MASTER LEVEL CAREERS	Chief Clinical Information Officer	Chief Information Officer	Vice President Project Services	Chief Transformation Officer	Chief Knowledge Officer	Chief Privacy Officer	Chief Technology Officer	Product Owner	Chief Innovation & Engagement Officer
	Chief Medical Information Officer	Chief Medical Information Officer	Chief Information Officer	Chief Operations Officer	Chief Information Officer	Chief Data Officer	Chief Digital Officer	Chief Innovation & Engagement Officer	Chief Patient Experience Officer
	Chief Nursing Information Officer	Chief Nursing Information Officer	Chief Operations Officer ²	Chief Innovation Officer		Chief Information Officer	Chief Information Security Officer	Vice President Product Management	
				Chief Innovation & Engagement Officer		Chief Medical Information Officer	Chief Digital Operations Officer	Chief Quality Officer	
						Chief Nursing Information Officer	Chief Artificial Intelligence Officer		
						VP HIM			
						Chief Risk Officer			
						Chief Compliance Officer			
						Chief Data Officer			

¹ Roles in this domain can help vendor organizations understand and respond to the needs of the market

² Most common in large regional authorities

Diagram 3 – A view of the Digital Health Canada Professional Career Matrix: Master Level.

A pragmatic and practical approach to the matrix development will be applied in the initial stages to accommodate the dynamics of a changing industry, roles, and skills; individuals wanting flexibility and less traditional pathways, and requirements from industry and employers regarding qualifications, credentials, and experience of people to fill in-demand roles. This can be mapped against individual's experience, aligned to capability levels (as represented in Diagram 4).

MASTER LEVEL	EXPERT LEVEL	PROFICIENT LEVEL	COMPETENT LEVEL	EMERGING PROFESSIONAL (EP) LEVEL
10+ years of professional experience*	10+ years of professional experience	5+ years of professional experience	3+ years of professional experience	1+ years of professional experience
Mastery is about designing the future and leading change	Optimal performance becomes second nature	Understanding of skill or domain is an instinct or intuition	Sees patterns and principles rather than a discrete set of rules	Rules-based, but able to selectively apply different rules as needed
Tend to be senior leadership positions in organizations	Draws on experience to immediately produce an intuitively appropriate action to any situation	Perceives a complete system instead of a set of different parts	Decisions are based on experience and active decision-making	Can follow instructions containing decision points
Leadership ability and other personal characteristics differentiate between Master and Expert		Understands that multiple competing solutions exist for each problem	Accountable for decisions	Limited experience, especially in the health informatics sector
		Can make correct decisions based on instinct	Considerable experience coping with real situations	

Diagram 4 – Digital Health Canada Professional Career Matrix – Experience aligned to levels.

This mapping exercise, combined with other activities, will continue to inform the thinking behind the proposed approach for Australian digital health career pathways. Mapping against the framework and roles will continue as part of the project, whilst looking at practical approaches to address current need in attracting and retaining skills, particularly for popular and in-demand roles.

Skills and Roles

It is clear through consultation that we need to focus on skills – skills attraction, skills recognition, skills development, and skills retention. There is a broader, national agenda about workforce skills shortages, skills attraction, and skills retention.

As health and care increasingly digitises, these skills will become more and more in demand. As part of professionalisation of digital health, we need these skills and roles to be more identifiable in the market.

Articulation of the skills and professional requirements of individuals specialising and working within digital health is important, in lifting awareness and opportunities for individuals to work and build a career. We need to be solving an industry problem. When it comes to digital health, it is a mix of technical skills, clinical knowledge, health domain knowledge, data analysis and information, and other complementary and cross-industry skills, relevant to roles such as project management, etc.

Professional qualifications (e.g., university degree)	Personal background	Ongoing Professional development	Industry certifications	What digital health experience is required	What are the skills and knowledge required	In-demand jobs
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Diagram 5 – What employers are looking for: in-demand job, skills, experience, qualifications.

When looking at skills and roles, we will take an initial focus on in-demand jobs, with employers looking for key things in their employees, matching to roles. We will take these inputs into thinking about role position descriptions and the skills and experience required. Employers have stated what they look for in an individual applying for a role. As represented in Diagram 5, this includes:

- What are the skills and knowledge required for the role?
- What digital health experience is required?
- What industry qualifications do they have?
- What ongoing professional development do they do?
- What is their personal and professional background?
- What other professional qualifications do they have? University degrees, certificates, etc.

Career streams

In mapping career pathways, we will be working towards roles and skills working in or specialising in digital health, that fall into several streams. These streams represent collections of related roles with similarities across key responsibilities and core skillsets. We will also look to align with matrix domains for consistency, where possible.

The overall outcome is to increase individuals who specialise and wish to work in digital health as a career, to simplify the approach and provide meaning and clarity, rather than complexity. Initial streams identified, as represented in Diagram 6 are:

Working in digital health / health IT

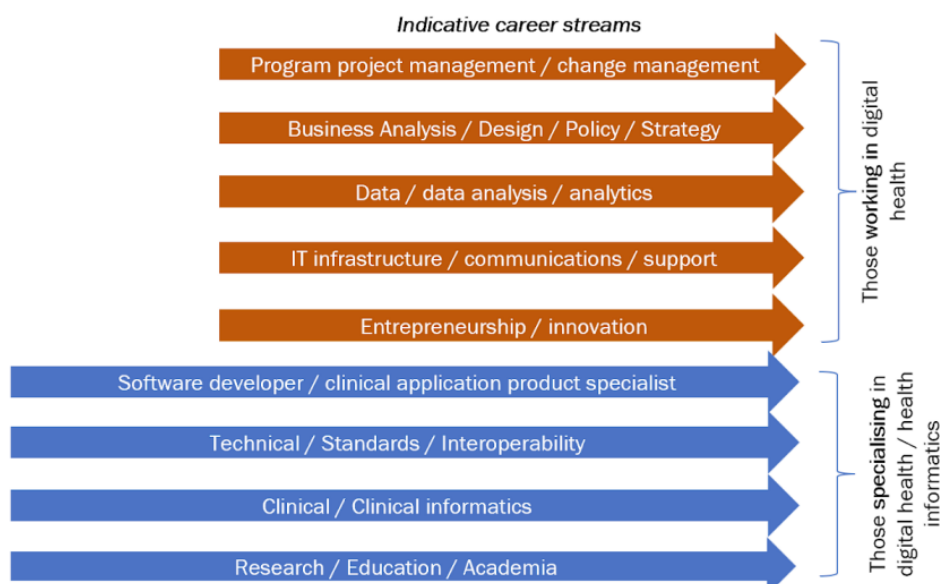
- Program, project, and change management
- Business analysis
- Data and data analytics
- IT infrastructure and networking support
- Innovation / entrepreneurship

Specialising in digital health

- Clinical software developer / clinical application specialist / product specialist
- Technical / standards / interoperability
- Clinical leadership / clinical informatics
- Research / education / teaching

Digital Health Career Pathways

- Map career pathways for digital health to attract and retain skills and knowledge
- Note – lots of people come to digital health from a range of backgrounds
- Initial mapping based against existing international frameworks
- Individuals are looking for flexibility and less traditional career paths
- Looking towards career path streams
- Entry points into careers
- In demand jobs and market analytics to inform approach



 I am 'new' and interested in digital health as a career

 I wish to move from my current role into digital health

 I have been asked to be on a digital health project

 I wish to further my digital health career

Diagram 6 – Career entry points: role opportunities, pathways, required qualifications/education.

Interpretation of these streams and aligned roles will include this approach, as depicted in Table 1.

Table 1 – Indicative roles against career streams.

Category	Stream	Indicative roles
Specialising in Digital Health	Standards and Interoperability	- FHIR Developer - Interoperability Lead - Standards and terminology Lead - Product and services lead - interoperability
	Clinical Informatics	- Clinical Analyst - Health informatician - Clinical Informatics Manager - Chief Medical Information Officer (CMIO), Chief Nursing and Midwifery Information Officer (CNMIO), etc.
	Research, Education and Academia	- Senior Researcher Health Informatics - Digital Health Informatics Professor Lecturer - Research Fellow – Informatics Digital Health
	Clinical Software and Applications	- Clinical Application Solution Architect - Clinical Application Specialist - Clinical Product Specialist
Digital technologies	Program, Project, and Change Management	- Project Coordinator - Program Project Manager - Transition and Change Management Lead - Program Director
	Business Analytics, design, Policy, and Strategy	- Lead Policy Strategist Policy Officer - Business Analyst - Risk Analyst Manager - Strategy Lead – Digital Health
	IT Infrastructure, Communications and Support	- IT Service Desk Coordinator - Chief Security Information Officer (CSIO) - Security Specialist - Chief Technology Officer (CTO)
	Data and Analytics	- Data modeller - Data Integrity Analyst - Business Intelligence Lead - Data Scientist
	Entrepreneurship and Innovation	- Founder and CEO - Chief Technology Officer (CTO) - Innovation Lead

Career entry points

In combination with highlighting career streams (with associated skill/knowledge requirements and sample roles), the career pathway structure will highlight the various entry points which may apply to those seeking to commence or progress a career in digital health. An initial view of these entry points (as depicted in Diagram 7) includes:

"I am new and interested in digital health as a career"

This entry point is largely relevant to students beginning a career who may be:

- Studying or finalising a non-health qualification or broad-focus course, such as commerce, business, or IT.
- Seeking guidance to inform choice of study paths.
- Seeking guidance to inform decisions about further study.

"I wish to move from my current role into digital health"

This entry point encompasses a wide range of early or mid-career professionals seeking to either change career paths (e.g., a clinician wishing to move from clinical practice into a digital health role) or transition of a transferable skillset to a new setting (e.g., a project manager wishing to move from insurance to digital health).

"I have been asked to participate in a digital health project"

This entry point is relevant for clinicians, IT professionals and other business roles who might engage with one or more digital health projects, possibly in a time-limited or part-time capacity. These workers may wish to return to their existing roles once the project ends or may use the project as a starting point for a career transition.

"I wish to further my digital health career"

This entry point applies to those already specialising in digital health who aspire to a different or more senior role, as well as those currently working in digital health who now wish to specialise.

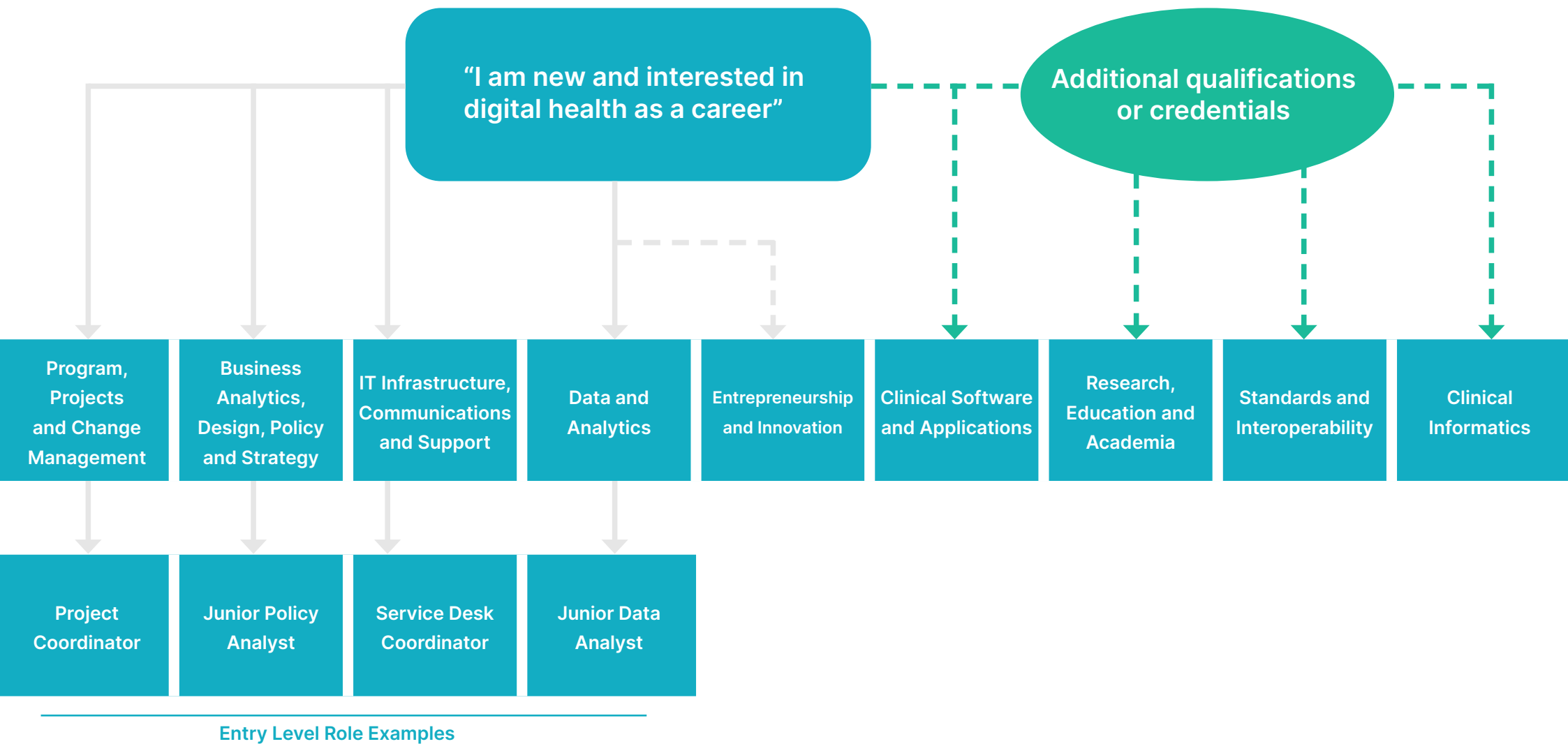


Diagram 7: Career entry points – role opportunities, pathways, required qualifications/education.

These entry points may be mapped against the career streams to identify which streams are accessible from each entry point, and any requirements for formal qualifications or credentialing to achieve these progressions. Sample entry-level roles can be identified and the core skillsets, combined with specific digital health requirements, identified. Roles specialising in digital health may be supported by more prescriptive competency and skill requirements, aligned with industry requirements.

Approach to applying the model

In applying the model, we will work through the following steps:

1. Workshops and interviews with organisations and individuals to gather career pathway insights, aspirations, challenges, perspectives on skills and requirements of roles, qualifications, education, and experience required to:

- Focus on in-demand and key roles referred to in the sector and at these workshops.
- Gather understanding of common areas of knowledge and skills across roles.
- Identify new and emerging roles.

2. Collate position descriptions of similar roles from different organisations to:

- See where there is commonality across roles and their requirements.
- Match and compare against matrix templates as a baseline comparison.

3. Create Digital Health Career personas to commence career pathway mapping as:

- Individualised examples of career journeys including career aspirations.
- Starting or entry points in the digital health career journey.
- Identification of capability (against the ADHCF) and any other competency requirements for the roles in a standard template.
- Inclusion of skills required for the role.
- A key tool to personalise and describe individuals career journeys.

4. Against those personas, take a broader view to align to matrix and other relevant skills and competency frameworks (AHICF, SFIA, others) including:

- Identifying and exploring any existing discipline-specific skills frameworks for those roles.
- Determining the roles typically existing across the sector.
- Identifying the level on the matrix for each role.
- Identifying the knowledge requirements typical of each role.
- Identifying the professional skills typically needed for each role.
- Identifying additional information relevant to understanding a role – qualifications, etc.
- Highlighting generic and common skills for that role.

5. **Map back to Matrix** to populate and create standard role template, including:

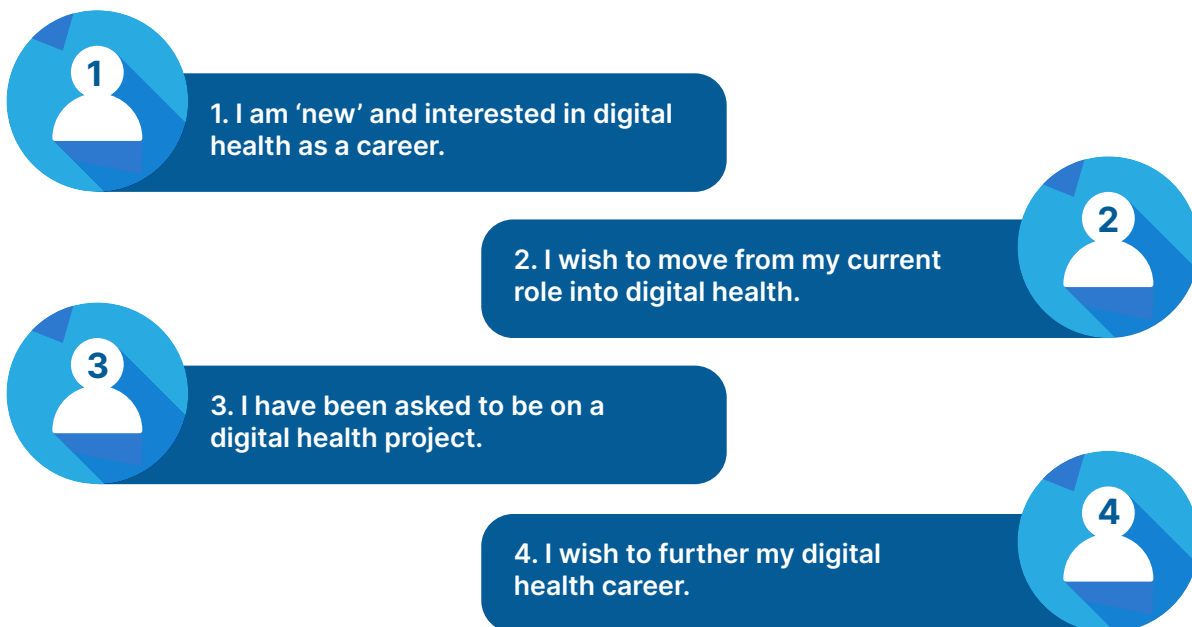
- Highlighting skills within the template.
- Populating the matrix over time, which can be used to group common skillsets across different roles and streams.
- Common skillset areas can be highlighted to inform career journeys and options for individuals.
- Matrix can be used as a 'heat map' where in-demand skills and jobs can be highlighted.

6. **Map career pathways** and skills requirements to:

- Identify career pathways and options for individuals aligned to skill requirements.
- Inform commonality of skills for professional education and training requirements to specialise.
- Inform career journeys used to advise digital health hub personalisation in design.

Digital health career personas – examples

There are four (4) different digital health career pathway personas, which highlight examples of relevant, in-practice activities – matched to levels of digital health capability, described as follows:



Noting that a “a **competency** is the specification of knowledge and skill, and the application of that knowledge and skill, to the standard of performance expected in the workplace. A competency is the smallest unit that can be assessed and recognised.”⁷

⁷ Australian Skills Quality Authority. 2020. *Definitions*.

Knowledge and skills, when applied in context, support the demonstration of competence. Where emerging competency requirements can then be met through “supportive organizational systems and structure, aligned education and training offerings ... [including] professional credentialing, postgraduate curricula, and industry certifications”. This is then supported by embedding performance of competency assessment into the competency development processes.⁸

Further, “Although **capability** has been described as 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.”⁹

The knowledge and in-demand skills required to be demonstrated in practice, can then be applied to **roles and responsibilities** to attract individuals to a variety of roles, as well as inform education and qualification requirements in industry standards, for skills required in emerging areas to support the professionalisation of digital health.

This mix of knowledge and skills for roles and responsibilities, is matched against core digital health capabilities as outlined in the Australian Digital Health Capabilities Framework (ADHCF) as a basis, and includes any competencies identified from other frameworks specific to a role, e.g., from the Australian Health Informatics Competency Framework (AHICF), Skills for Information Age (SFIA) or others. They are indicative of the work that will continue, and not meant to be definitive as final examples. Four personas include:

Isla

Background, Capability and Context

Isla has completed a Certificate IV in business management, is ‘new’ to health and care, and interested in digital health as a

Gabriel

Background, Capability and Context

Gabriel has been working as an Information Technology Solution Architect for 5 years in a State Education Department and wishes to **move** from his current role into digital health.

Amara

Background, Capability and Context

Amara is an Occupational Therapist with 10 years of experience and works in the management team of a community and aged care service in a metropolitan setting and has been asked to be on a digital health **project**.

Leigh

Background, Capability and Context

Leigh is a Registered Nurse and Midwife with 20 years of experience and works in a tertiary referral Women’s and Children’s Hospital and wishes to **further** her digital health career.

8 Brommeyer, M. and Liang, Z. 2022. A Systematic Approach in Developing Management Workforce Readiness for Digital Health Transformation in Health and care. *International Journal of Environmental Research and Public Health*, 19:21, p.9.
9. Brunner, M. et al. 2018. An eHealth Capabilities Framework for Graduates and Health Professionals: Mixed-Methods Study. *Journal of Medical Internet Research*, 20:5.



Persona 1 Isla

I am **new** and interested in digital health as a career.

Isla has completed a Certificate IV in business management, is 'new' to health and care and interested in digital health as a career.

At a minimum, Isla would need to consider developing these **initial knowledge** and **skills** to be able to work safely, in the digitally enabled health and care environment:

- **Health business knowledge** – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles.
- **Digital technologies** – including understanding information system types, the digital divide, participatory health informatics, information structure and design, data and information attributes, and emerging digital concepts.
- **Health data quality** – including capturing, creating, recording, and using quality data, data integrity and information analysis and visualisation, and data governance principles.
- **Information enabled care** – including analysing complex data in the provision of health and care services, and effective use of digital health to inform health service delivery and development.
- **Clinical risk** – including understanding risk to patients when using health information/ data sources available, and how and why this information may be linked and analysed.

The capability assessment, below, is based on Isla's current level of knowledge and skills, being 'new' to health and care, and reflects the following levels matched initially against ADHCF in capabilities, before looking at specific domain competencies:

- **Formative level** – This level reflects health and care workers who are beginning to use and understand digital health and the implications for their work and the health sector
- **Intermediate level** – This level reflects health and care workers who are developing increased confidence, knowledge, skill, and capacity in the use of digital health in their role
- **Proficient level** – This level reflects health and care workers who are assuming leadership in the use and championing of digital health within their own work setting and the broader health sector.

Skills required	Sub-domain Capability Statement	Formative	Intermediate	Proficient
Health business knowledge	Health concepts and language. I understand the concepts of health and health and care	✓		
	Health decision making, care delivery models. I understand health and care decision making approaches and different care delivery models	✓		
	Health sector structures and roles. I understand the different structures and roles in health and care	✓		
Digital technologies	2.1.2 Digital Health Advocacy I understand the benefits and possible risks of different digital health applications when working with individuals accessing health services	✓		
	3.2.1 Understanding how health information may be used and applying this as relevant to own role. I understand common terminology used in digital health, including in relation to emerging technologies and data sources	✓		
	5.1.1 Understanding the variety of digital health technologies available and identifying appropriate options. I recognise the right technology for the needs of both patient/consumer and worker, or identify when better alternatives may be available	✓		
Health data quality	4.1.4 Recognising the range of health information/data sources available and how and why these may be linked and analysed. I understand the various data sources available and how to judge their quality	✓		
	4.1.3 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand the importance of data analysis and how this can influence decision making and the delivery of health and care and services	✓		
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements	✓		
Information enabled care	4.1.3 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand the importance of data analysis and how this can influence decision making and the delivery of health and care and services	✓		
	4.2.4 Evaluation of data and use of critical reasoning to support decision making and informed use of digital health applications. I use digital technologies to facilitate patient/consumer engagement, education, and self-management	✓		
	4.3.3 Promoting the evaluation of current and emerging digital health approaches to support service development and improvement. I recognise the potential of digital health to support current practice/services and enable new services and models of care	✓		
Clinical risk	2.1.2 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I understand the benefits and possible risks of different digital health applications when working with individuals accessing health services	✓		
	3.1.4 Understanding own role in data capture and ensuring the collection of accurate information. I understand the benefits and risks of using patient/consumer generated data in delivering health services	✓		
	4.1.2 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand the purpose, benefits, and risks of aggregating clinical data from multiple sources	✓		



Persona 2 Gabriel

I wish to **move** from my current role into digital health.

Gabriel has been working as an Information Technology Solutions Architect for 5 years in a State Education Department and wishes to move from his current role into digital health.

Gabriel is interested in moving into a **Solutions Architect** role in digital health.

At a minimum, Gabriel would need to consider developing these **initial knowledge** and **skills** to be able to work safely, in the digitally enabled health and care environment:

- **Health business knowledge** – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles.
- **Information quality** – including capturing, creating, recording, and using quality data, data and information analysis and visualisation, and data governance principles.
- **Digital health security** – including understanding the principles of data and information privacy and security requirements, and relevant legislation, professional codes of conduct, and policy and ethics, as they relate to digital health.
- **Information governance** – including understanding the principles of data and information governance, including the link to clinical and corporate governance.
- **Emerging technologies** – including understanding digital health system types, appraisal of emerging and innovative technologies and data sources, and emerging digital concepts to support health service delivery and improvement.

The capability assessment, below, is based on Gabriel's current level of knowledge and skills, looking to **move** from his current role into digital health, and reflects the following levels in the ADHCF before looking at domain specific competencies:

- **Formative level** – This level reflects health and care workers who are beginning to use and understand digital health and the implications for their work and the health sector
- **Intermediate level** – This level reflects health and care workers who are developing increased confidence, knowledge, skill, and capacity in the use of digital health in their role
- **Proficient level** – This level reflects health and care workers who are assuming leadership in the use and championing of digital health within their own work setting and the broader health sector.

Skills required	Sub-domain Capability Statement	Formative	Intermediate	Proficient
Health business knowledge	Health concepts and language. I understand the concepts of health and health and care	✓		
	Health decision making, care delivery models. I understand health and care decision making approaches and different care delivery models	✓		
	Health sector structures and roles. I understand the different structures and roles in health and care	✓		
Information quality	4.1.4 Recognising the range of health information/data sources available and how and why these may be linked and analysed. I understand the various data sources available and how to judge their quality		✓	
	4.1.3 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand the importance of data analysis and how this can influence decision making and the delivery of health and care and services	✓		
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements		✓	
Digital health security	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements	✓		
	1.2.1 Use of digital tools in health and care in a way that aligns with procedural, policy, legal and ethical requirements. I understand the relevant legislation, professional codes of conduct, and policy and ethics, including privacy and security requirements, as they relate to digital health	✓		
	1.2.2 Use of digital tools in health and care in a way that aligns with procedural, policy, legal and ethical requirements. I recognise digital situations and events that might compromise personal, professional, or organisational security or reputation	✓		
Information governance	5.2.1 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the policies and procedures that govern the management, adoption, and use of digital health technologies	✓		
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements	✓		
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the advantages and challenges of using the right digital health technologies in the right place and at the right time	✓		
Emerging technologies	5.1.1 Understanding the variety of digital health technologies available and identifying appropriate options. I recognise the right technology for the needs of both patient/consumer and worker, or identify when better alternatives may be available	✓		
	4.1.1 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand concepts related to linking different sources of health information and data	✓		
	4.3.1 Promoting the evaluation of current and emerging digital health approaches to support service development and improvement. I advocate for the use of digital health technologies and data to support innovation, quality improvement and consumer experience	✓		



Persona 3 Amara

I have been asked to be on a digital health project.

Amara is an Occupational Therapist with 10 years of experience and works in the management team of a community and aged care service in a metropolitan setting and has been asked to be on a digital health project, in a **Clinical Analyst** role.

At a minimum, Amara would need to consider further developing these **initial knowledge** and **skills** to be able to work safely, in the digitally enabled health and care environment:

- **Health business knowledge** – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles.
- **Data informed decision making** – including accurate collection and recording of health information that is complete, timely and accurate, using digital health technologies, to aid culturally appropriate, informed decision making.
- **Information quality** – including capturing, creating, recording, and using quality data, data and information analysis and visualisation, and data governance principles.
- **Digital health security** – including understanding the principles of data and information privacy and security requirements, and relevant legislation, professional codes of conduct, and policy and ethics, as they relate to digital health.
- **Project management** – including employing appropriate, effective, and efficient project management methodologies.
- **Change management** – including understanding the importance of data integrity to inform health and care delivery and change, and employing appropriate, effective, and efficient change management methodologies.

The capability assessment, below, is based on Amara's current level of knowledge and skills, having been asked to be on a digital health **project**, and reflects the following levels in the ADHCF before looking at domain specific competencies:

- **Formative level** – This level reflects health and care workers who are beginning to use and understand digital health and the implications for their work and the health sector
- **Intermediate level** – This level reflects health and care workers who are developing increased confidence, knowledge, skill, and capacity in the use of digital health in their role
- **Proficient level** – This level reflects health and care workers who are assuming

Skills required	Sub-domain Capability Statement	Formative	Intermediate	Proficient
Health business knowledge	Health concepts and language. I understand the concepts of health and health and care			✓
	Health decision making, care delivery models. I understand health and care decision making approaches and different care delivery models			✓
	Health sector structures and roles. I understand the different structures and roles in health and care			✓
Data informed decision making	2.1.3 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I use digital health in partnership with patients/consumers to aid culturally appropriate, informed decision making and health literacy		✓	
	3.1.3 Understanding own role in data capture and ensuring the collection of accurate information. I ensure accurate collection and recording of health information relevant to role and workplace setting		✓	
	3.3.3 Understanding the importance of data integrity and how data and information translate to real-world action and change. I recognise the role of data integrity in health and care and the importance of complete, timely and accurate information		✓	
Information quality	4.1.4 Recognising the range of health information/data sources available and how and why these may be linked and analysed. I understand the various data sources available and how to judge their quality		✓	
	4.1.3 Understanding the range of health information/data sources available and how and why these may be linked and analysed. I understand the importance of data analysis and how this can influence decision making and the delivery of health and care and services			✓
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements			✓
Project management	2.3.1 Embracing the future of digital health through engaging with emerging technologies and participating in decision making. I promote cross-sector collaboration in design, implementation, and evaluation of emerging and innovative digital health technologies		✓	
	Project planning and resourcing I understand project management methodologies and the relationship between cost, quality, and time to deliver project outcomes	✓		
	Project implementation and evaluation I understand issues involved in implementing new digital health solutions and recognise different evaluation methods that can be used	✓		
Change management	Change planning and analysis I understand the current and future states of change, and the clinical and business process impacts		✓	
	Change implementation and evaluation I understand how change and project management activities align to deliver the required benefits and outcomes	✓		
	Organisational change capability I understand individual, team, project and organisational change management capabilities, and maturity models	✓		



Persona 4 Leigh

I wish to **further** my digital health career.

Leigh is a Registered Nurse and Midwife with 20 years of experience and works in a tertiary referral Women's and Children's Hospital.

Leigh wishes to further her digital health career, by seeking a **Clinical Informatics Director** role.

At a minimum, Leigh would need to consider further developing these **initial knowledge** and **skills** to be able to work safely, in the digitally enabled health and care environment:

- **Information governance** – including understanding the principles of data and information governance, including the link to clinical and corporate governance.
- **Digital health safety** – including evaluating the impact of digital health on the role of the health worker and health and care service, appraising clinical safety risks associated with quality of service and patient/consumer safety and experience.
- **Digital health leadership** – including providing leadership and guidance to others in understanding the benefits and risks of digital health and participating as an active and visible player in digital health decision making in the workplace and health and care sector.
- **Digital health advocacy** – including understanding the partnership with patients/consumers to advocate for access to information and use of digital health technologies to support health service delivery in the workplace and health and care sector.
- **Digital health transformation** – including understanding the importance of employing appropriate, effective, and efficient change management methodologies, and the requirements to facilitate clinical, business, and organisational transformation.

The capability assessment, below, is based on Leigh's current level of knowledge and skills, as she wishes to **further** her digital health career, and reflects the following levels in the ADHCF, before looking at domain specific competencies:

- **Formative level** – This level reflects health and care workers who are beginning to use and understand digital health and the implications for their work and the health sector
- **Intermediate level** – This level reflects health and care workers who are developing increased confidence, knowledge, skill, and capacity in the use of digital health in their role
- **Proficient level** – This level reflects health and care workers who are assuming leadership in the use and championing of digital health within their own work setting and the broader health sector.

Skills required	Sub-domain Capability Statement	Formative	Intermediate	Proficient
Information governance	5.2.1 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the policies and procedures that govern the management, adoption, and use of digital health technologies		✓	
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the principles of data and information governance, including privacy and security requirements			✓
	5.2.2 Understanding and demonstrating the use of effective controls to ensure safe and appropriate application of digital health. I understand the advantages and challenges of using the right digital health technologies in the right place and at the right time			✓
Digital health safety	2.1.2 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I understand the benefits and possible risks of different digital health applications when working with individuals accessing health services		✓	
	3.1.4 Understanding own role in data capture and ensuring the collection of accurate information. I understand the benefits and risks of using patient/consumer generated data in delivering health services			✓
	4.3.4 Promoting the evaluation of current and emerging digital health approaches to support service development and improvement. I understand and evaluate the impact of digital health on the role of the health worker and health and care service, quality of service and patient/consumer safety and experience		✓	
Digital health leadership	1.3.4 Use of digital tools to develop and maintain appropriate online identity and reputation. I understand the potential impact of online posts on public confidence and trust in health services			✓
	2.2.1 Participation as an active and visible player in digital health decision making in the workplace. I champion the use of digital health technologies and data in the workplace and with peers			✓
	2.3.4 Embracing the future of digital health through engaging with emerging technologies and participating in decision making. I engage with processes of digital health strategy and policy development		✓	
Digital health advocacy	2.1.1 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I advocate for all individuals' access to their own health data and information, including via digital channels			✓
	2.1.3 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I use digital health in partnership with patients/consumers to aid culturally appropriate, informed decision making and health literacy			✓
	2.1.4 Working in partnership with patients/consumers to advocate for access to information and use of digital health technologies. I assist individuals to use, and build confidence in, a range of communication technologies in their health interactions, such as telehealth consultations		✓	
Digital health transformation	2.3.1 Embracing the future of digital health through engaging with emerging technologies and participating in decision making. I promote cross-sector collaboration in design, implementation, and evaluation of emerging and innovative digital health technologies	✓		
	2.3.2 Embracing the future of digital health through engaging with emerging technologies and participating in decision making. I explore, promote, and contribute to the potential of emerging digital data sources and systems to transform health and health and care		✓	
	2.3.3 Embracing the future of digital health through engaging with emerging technologies and participating in decision making. I actively participate in exploring options and making decisions regarding future digital health technologies		✓	

Industry collaboration

Looking across other industry groups and member organisations, we have consulted and started discussions with other groups who have a focus on digital health, skills, and education requirements. As we look to professionalise digital health, it is important that we have a common understanding across the various professional and industry groups that make up the technical side of sector, and their alignment or not to the clinical/health and care professional. These include:

- Australian Computer Society (ACS) – that have members who work throughout the health sector and have a focus on digital health.
- Australian Information Industries Association (AIIA) – IT industry advocacy and membership body which promotes and advocates for the IT industry. They have commenced work in digital health and attraction and retention of skills.
- Technology Council of Australia (TCA) – policy on skills and education requirements of professionals working in and across health and care and digital health.
- Aged Care Industries and Information Technology Council (ACIITC) – advocating and championing for the need of digital health specialists working in aged and community care. These are desperately needed to lift capability and maturity in the sector.
- Health Information Managers Association of Australia (HIMAA) – representing health information managers and clinical coders, alignment of professional development, education, and certification requirements.
- Health Information and Management Systems Society (HIMSS) – international certification programs for health IT at various levels.
- CHiME – College of Health Information Executives who have international professional and certification programs for health leaders.
- Medical Software Industry of Australia (MSIA) – health vendor industry advocacy body, with programs highlighting skills shortages and requirements in digital health and digital health software developers.
- Relevant health and care and clinical professional bodies and groups as it relates to digital health expertise.

The AIDH has its own AHICF and Certified Health Informatician of Australasia (CHIA), Fellowship program, and a draft Clinical Informatics Fellowship to include in the professional development and career mapping planning and work.

Subject matter expert advisory group

The project will establish an advisory group to move to the next phase of work. Now that a model and approach has been defined, we will formally engage a group of diverse digital health experts and educators to support and help lead discussions and identify current and emerging careers that should be documented (as outlined in the Capability Action Plan). It will incorporate and leverage a Health Informatics Professionalisation Committee that the AIDH will commence hosting.

The project to date has engaged several senior digital health subject matter experts to advise on the approach and model. These include digital health educators and academics, eHealth industry educators and trainers, key workforce representatives from large employers, large technology companies, etc. The advisory group will include several digital health educators, employers, digital health subject matter experts, clinical and industry representatives as required. This group will also link with the AIDH Health Informatics Professionalism Committee which is charged with working on AIDH activity in driving digital health and informatics professionalisation for the AIDH.

Organisational employer engagement

Included in our approach to the next phase of work will be working with employer groups, to align this work to recruitment and staff retention processes. These models will only become valuable if they can be used at scale. We will also be able to gather position descriptions for mapping and review, hold workshops to work through career pathways, and seek to align the broader CAP with those organisations.

Alignment of digital health hub – personalisation – individual career pathways

Alignment to Action Item 11 in the Capability Action Plan – digital health hub (Workforce Capability+) is critical. The Career Pathways model will provide the framework for supporting personalised journeys on the Workforce Capability+ website. This is an important design piece, so the projects are closely linked. We will manage the dependencies between the projects and align our activities under the program to take the best advantage of the outputs of the project and career planning.

An initial approach can be used to identify high-level role descriptions on the Workforce Capability+ website, particularly those roles which are in demand. This can be used to personalise journey mapping and gather additional feedback on the perception and value of roles and supporting information.

Internationalisation

All countries are dealing with similar issues, with the AIDH recognised as leading a range of activities which are of great interest. There are opportunities to collaborate, leverage and share work across borders to fast track each other's work. The approach is to promote consistency and standards as much as possible, to accommodate a health and care and digital health specialist workforce that can migrate and professionally work across different countries.

Summary

The Digital Health Career Planning Model v1.0 provides a structured approach to map and articulate digital health career pathways, particularly specialist pathways in digital health and informatics.

It seeks to leverage existing work and Frameworks such as the Digital Health Canada Professional Career Matrix, Australian Public Service Career Pathfinder Tool, etc., and to bring cross sector parties (health, clinical, and ICT) together to harmonise an approach to digital health professionalisation, and attraction and retention of specialist skills. This includes aligning to national education and skills agendas to mainstream digital health profession and skill requirements. The Model and career journeys, and in-demand and aspired-to roles, will be key inputs on the Workforce Capability+ website.



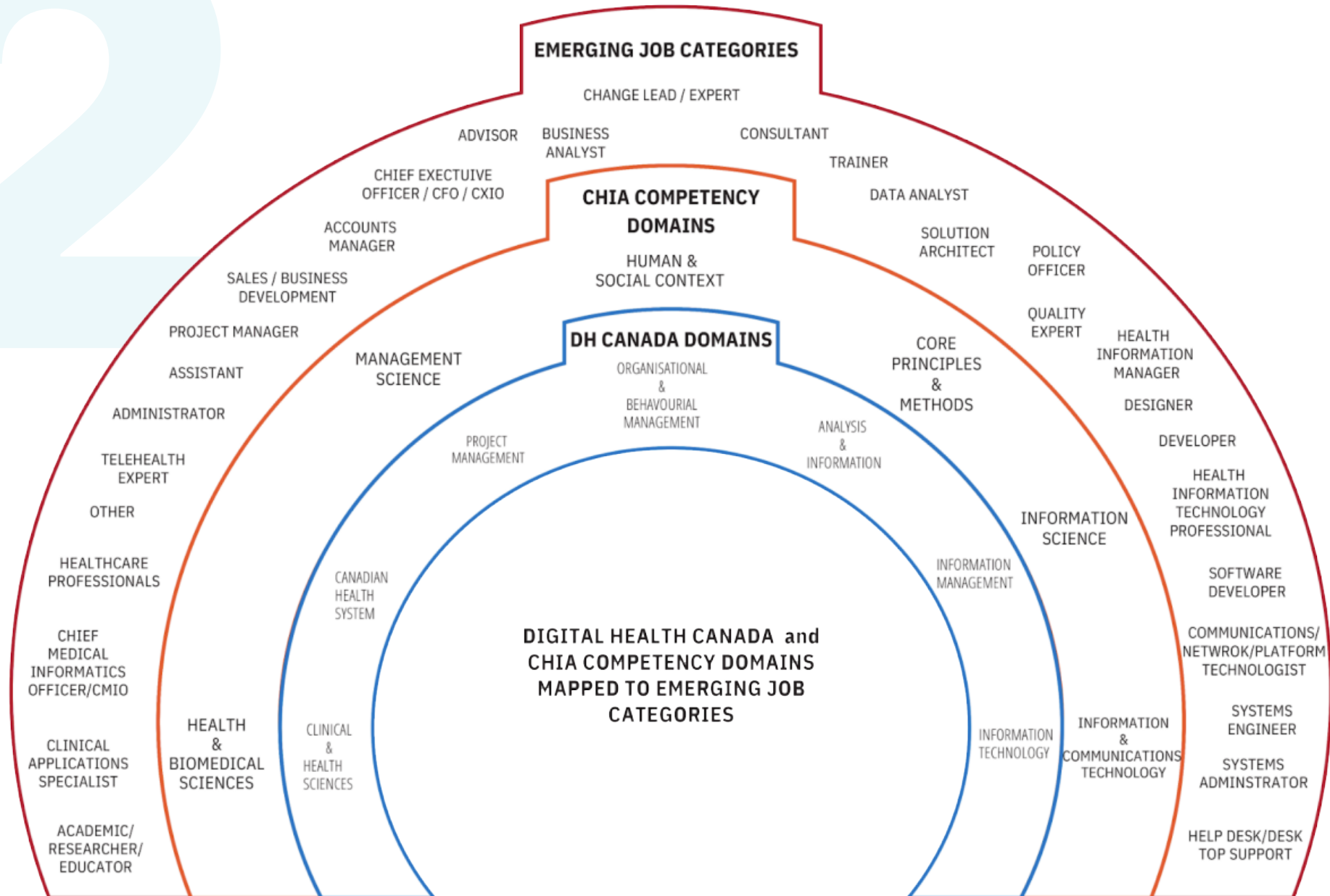
Appendices

Appendix 1

Australian Digital Health Professional Career Matrix

DOMAINS	Patient Related	Australian Health System	Project Management	Health and care Transformation	Analysis and Evaluation	Information Management	Information Technology	Product Management / Emerging Technology
MASTER LEVEL								
EXPERT LEVEL	Clinical Informatics Director							
PROFICIENT LEVEL								
COMPETENT LEVEL	Clinical Analyst						Solutions Architect	

Appendix 2 Matrix: aligning job categories and emerging roles



Appendix 3

Role template - Data Coordinator

Role	Data Coordinator
Role Description	The Data Coordinator works as part of a team to collect, interpret, and record data, in accordance with organisational guidelines and standards. They are responsible for organising and processing health data to support clinical and business data analysts. The aim of this role is to maintain data integrity and support data-driven insights to make better, more informed, clinical, and business decisions. Working with a variety of stakeholders, the Data Coordinator performs data validation and stores personal health information, project, and organisational data, in a confidential and secure manner, and makes this available to the right person, with the right permissions, at the right time, in the right form.
Knowledge and skills	
A Data Coordinator would need the following knowledge and skills to be able to work safely, in the digitally enabled health and care environment: • Health business knowledge – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles. • Digital technologies – including understanding information system types, the digital divide, participatory health informatics, information structure and design, data and information attributes, and emerging digital concepts. • Health data quality – including capturing, creating, recording, and using quality data, data integrity and information analysis and visualisation, and data governance principles. • Information enabled care – including analysing complex data in the provision of health and care services, and effective use of digital health to inform health service delivery and development. • Clinical risk – including understanding risk to patients when using health information/data sources available, and how and why this information may be linked and analysed.	

Appendix 3

Role template - Data Coordinator

KEY COMPETENCIES

Digital Health Canada Competency	Ref #	AHICF Competency	Ref #
Determines appropriate data sources and gaps in data sources in relation to identified business needs	A1.4	Distinguishes the key attributes of any type of data and information in relation to their intended or potential uses in health	E7
Reviews and maintains data quality and usefulness in data collection, storage, management, and disposal		Applies principles of data governance to achieve quality data and information	B6
Manages data from known sources and organises data into a format that can be shared and reported		Distinguishes the key attributes of any type of data and information in relation to their intended or potential uses in health	F7
Understands knowledge of how people, resources, and information flow through the health system	B4.5	Differentiates the roles and responsibilities of health professionals within operational, organisational, and regulatory structures	A9
Works collaboratively and contributes to project planning, implementation, monitoring and evaluation	C6.2	Employs appropriate, effective, and efficient program and project management methodologies	D5
Identifies and frames information questions in collaboration with stakeholders to meet their needs	C7.1	Appraises the structure and design of health information in different use settings	F6

ADDITIONAL

Qualifications	New Entrant Role
Career Matrix Domain	Analysis and Evaluation
Career Matrix Level	Emerging Professional

Appendix 4

Role template - Solutions Architect

Role	Solutions Architect
Role Description	The Solutions Architect provides technical (specifically architectural) expertise to a project. Within an established architectural framework, they create the application architecture and design, and work on the construction and deployment of systems. In addition, the Solutions Architect participates in the technology assessment and selection process, and development of implementation roadmaps. Their health informatics experience and expertise enable them to understand and interpret clinical/business requirements and how they should be incorporated into the architecture.
Knowledge and skills	
A Solutions Architect would need the following knowledge and skills to be able to work safely, in the digitally enabled health and care environment: • Health business knowledge – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles. • Information quality – including capturing, creating, recording, and using quality data, data and information analysis and visualisation, and data governance principles. • Digital health security – including understanding the principles of data and information privacy and security requirements, and relevant legislation, professional codes of conduct, and policy and ethics, as they relate to digital health. • Information governance – including understanding the principles of data and information governance, including the link to clinical and corporate governance. • Emerging technologies – including understanding digital health system types, appraisal of emerging and innovative technologies and data sources, and emerging digital concepts to support health service delivery and improvement.	

Appendix 4

Role template - Solutions Architect

KEY COMPETENCIES

Digital Health Canada Competency	Ref #	AHICF Competency	Ref #
Assesses the key attributes of data and information and their limitations within the context of intended use	A1.3	Distinguishes the key attributes of any type of data and information in relation to their intended or potential uses in health	E7
Applies knowledge of different standards and enterprise models to facilitate the interoperability and assimilation of data and information from multiple sources	A2.5	Differentiates enterprise and information systems architecture components	F11
Applies knowledge of basic clinical and biomedical concepts, clinical care processes, technologies, and workflow methods for purposes of analysis, design, development and implementation of health information systems and applications	B3.1	Explains the nature, importance, and decision-making process for continuity of care, shared care, and other models of health and care delivery	A6
Demonstrates knowledge of how people, resources, and information flow through the health system	B4.5	Differentiates the roles and responsibilities of health professionals within operational, organisational, and regulatory structures	A9
Promotes an information culture by encouraging and facilitating appropriate uses of information and knowledge	C5.3	Develops their organisation's culture to contribute to a learning health system	D11
Works collaboratively and contributes to project planning, implementation, monitoring and evaluation	C6.2	Employs appropriate, effective, and efficient program and project management methodologies	D5
Contributes to quality analysis by organising and transforming data into reliable and meaningful information for diverse audiences	C7.5	Identifies effective visualisation methods for knowledge discovery and the representation of information	B3

ADDITIONAL

Qualifications	CPHIMS-CA
Career Matrix Domain	Information Technology
Career Matrix Level	Competent

Appendix 5

Role template - Clinical Analyst

Role	Clinical Analyst
Role Description	The Clinical Analyst plays a central role in “translating” clinical business needs into technical terms. They leverage their strong research skills as well as a deep understanding of health and care clinical and business process, information management and analytical methodologies, to support the successful integration of clinical, business and technology solutions. The Clinical Analyst accomplishes this by working closely with external and internal customers, to translate user needs into product definitions, define new business processes and procedures, and support user acceptance testing, implementation, and deployment activities. They maintain close contact with the business areas once the system is operational – constantly evolving and enhancing the client relationship through frequent contact and communication.
Knowledge and skills	
A Clinical Analyst would need the following knowledge and skills to be able to work safely, in the digitally enabled health and care environment: • Health business knowledge – including understanding health concepts, language, decision making, care delivery models, health sector structures and roles. • Data informed decision making – including accurate collection and recording of health information that is complete, timely and accurate, using digital health technologies, to aid culturally appropriate, informed decision making. • Information quality – including capturing, creating, recording, and using quality data, data and information analysis and visualisation, and data governance principles. • Digital health security – including understanding the principles of data and information privacy and security requirements, and relevant legislation, professional codes of conduct, and policy and ethics, as they relate to digital health. • Project management – including employing appropriate, effective, and efficient project management methodologies. • Change management – including understanding the importance of data integrity to inform health and care delivery and change, and employing appropriate, effective, and efficient change management methodologies.	

Appendix 5

Role template - Clinical Analyst

KEY COMPETENCIES

Digital Health Canada Competency	Ref #	AHICF Competency	Ref #
Assesses the key attributes of data and information and their limitations within the context of intended use	A1.3	Distinguishes the key attributes of any type of data and information in relation to their intended or potential uses in health	E7
Applies appropriate methods of identifying information, business, and technical requirements to meet the full range of stakeholders' information needs	A2.3	Applies information science theories in the design and development of information systems	B4
Applies knowledge of basic clinical and biomedical concepts, clinical care processes, technologies, and workflow methods for purposes of analysis, design, development and implementation of health information systems and applications	B3.1	Explains the nature, importance, and decision-making process for continuity of care, shared care, and other models of health and care delivery	A6
Demonstrates knowledge of how people, resources, and information flow through the health system	B4.5	Differentiates the roles and responsibilities of health professionals within operational, organisational, and regulatory structures	A9
Promotes an information culture by encouraging and facilitating appropriate uses of information and knowledge	C5.3	Develops their organisation's culture to contribute to a learning health system	D11
Works collaboratively and contributes to project planning, implementation, monitoring and evaluation	C6.2	Employs appropriate, effective, and efficient program and project management methodologies	D5
Identifies and frames information questions in collaboration with stakeholders to meet their needs	C7.1	Appraises the structure and design of health information in different use settings	F6

ADDITIONAL

Qualifications	Business Analysis Certification CPHIMS-CA
Career Matrix Domain	Australian Health System
Career Matrix Level	Competent

Role template - Clinical Informatics Director

Role	Clinical Informatics Director
Role Description	The Clinical Informatics Director assists in developing information systems strategic and tactical plans, including project proposals, budgets, and implementation strategies. They set the direction for teams of clinical informatics personnel to ensure that the function is adequately represented and resourced within the organisational framework. The Clinical Informatics Director is knowledgeable in aspects of patient care as well as information technology, documentation and record keeping throughout the organisation. They actively participate in groups internal and external to the organisation to build knowledge of successful clinical informatics practices.
Knowledge and skills	
A Clinical Informatics Director would need the following knowledge and skills to be able to work safely, in the digitally enabled health and care environment: • Information governance – including understanding the principles of data and information governance, including the link to clinical and corporate governance. • Digital health safety – including evaluating the impact of digital health on the role of the health worker and health and care service, appraising clinical safety risks associated with quality of service and patient/consumer safety and experience. • Digital health leadership – including providing leadership and guidance to others in understanding the benefits and risks of digital health and participating as an active and visible player in digital health decision making in the workplace and health and care sector. • Digital health advocacy – including understanding the partnership with patients/consumers to advocate for access to information and use of digital health technologies to support health service delivery in the workplace and health and care sector. • Digital health transformation – including understanding the importance of employing appropriate, effective, and efficient change management methodologies, and the requirements to facilitate clinical, business, and organisational transformation.	

Appendix 6

Role template - Clinical Informatics Director

KEY COMPETENCIES

Digital Health Canada Competency	Ref #	AHICF Competency	Ref #
Assesses the key attributes of data and information and their limitations within the context of intended use	A1.3	Distinguishes the key attributes of any type of data and information in relation to their intended or potential uses in health	E7
Participates in the selection and utilisation of appropriate information technology tools to locate, store, retrieve, analyse, and present data and information	A2.4	Appraises and compares the major types of information systems used in health	F12
Facilitates the adoption and use of health information systems in clinical settings	B3.4	Employs appropriate, effective, and efficient change management methodologies	D6
Promotes the appropriate use and benefits of HI	B4.3	Selects appropriate value management and benefit realisation strategies to support delivery of successful outcomes	D9
Promotes an information culture by encouraging and facilitating appropriate uses of information and knowledge	C5.3	Develops their organisation's culture to contribute to a learning health system	D11
Works collaboratively and contributes to project planning, implementation, monitoring and evaluation	C6.2	Employs appropriate, effective, and efficient program and project management methodologies	D5
Identifies and frames information questions in collaboration with stakeholders to meet their needs	C7.1	Appraises the structure and design of health information in different use settings	F6

ADDITIONAL

Qualifications	Typically has clinical background. Post-graduate certificate/education in HI/nursing CPHIMS-CA
Career Matrix Domain	Clinical and Health Sciences
Career Matrix Level	Expert



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