Australian
Medical Council Limited

Consultation Report
for the Capability Framework on

Digital Health
in Medicine
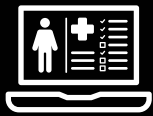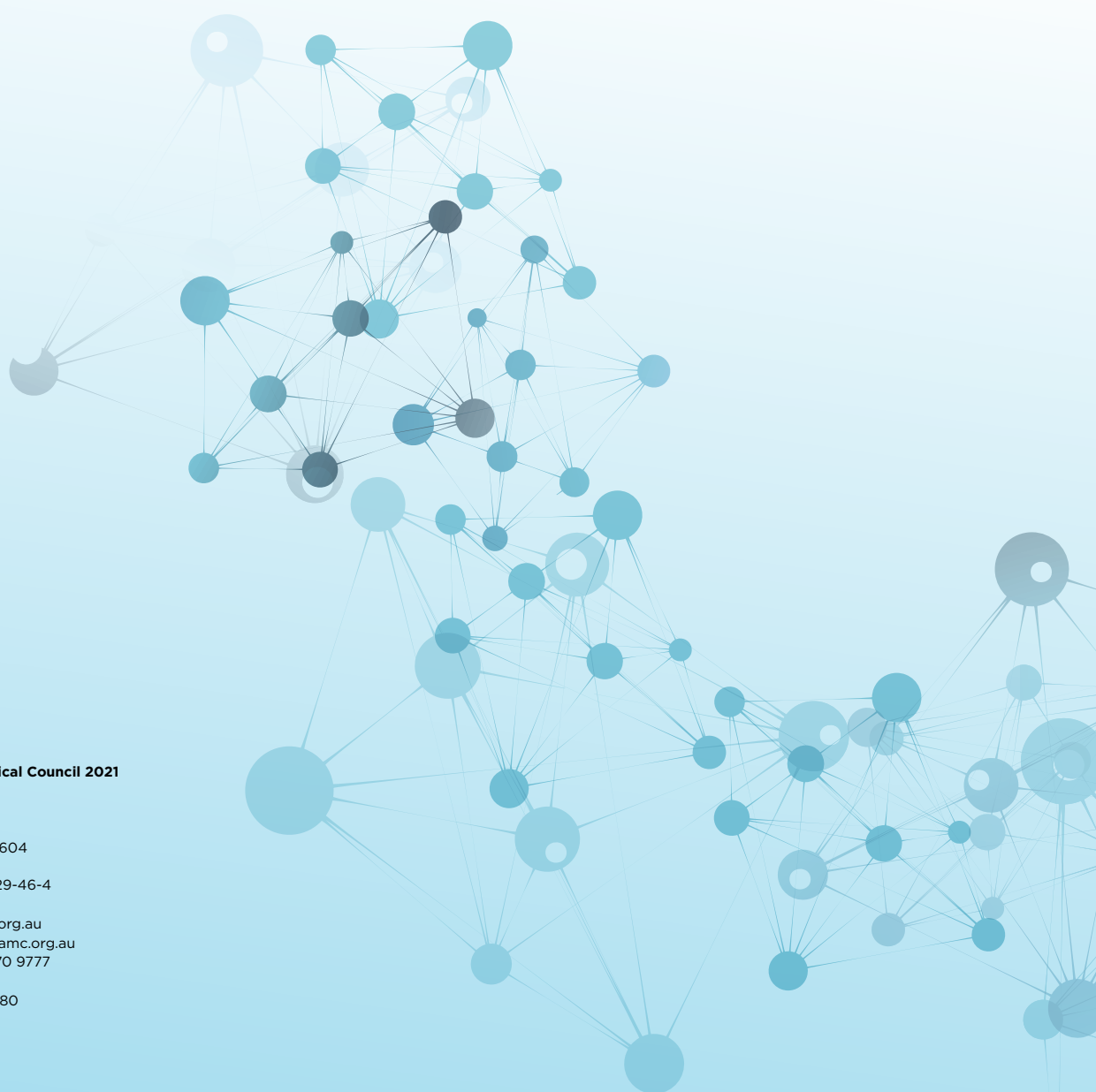
CONTENTS

Executive Summary

This document contains information about consultation undertaken in relation to the Capability Framework in Digital Health in Medicine ('Capability Framework' or 'Framework') a joint project of the Australian Digital Health Agency and the Australian Medical Council. This order of the content of this Report generally parallels that of the Framework.

Respondents expressed a range of views regarding the utility of the principles underpinning the Capability Framework, as a result of which the principles were streamlined and clearer emphasis was given to a number of topics. These included: system change and health reform; consumer expectations and needs; doctor's capability needs; cultural safety and inclusiveness; and importance of implementation. A section of the Framework was added that explored health reform and the needs of vulnerable health groups with a focus on the social determinants of health.

In general, respondents found that the advantages of a flexible model for the Capability Framework outweighed the disadvantages, especially in light of individual, institutional and system heterogeneity. However respondents also cited disadvantages of a system which was too flexible, such as unaddressed skill gaps and lack of specificity hampering implementation.

Respondents reported significant problems in the current state of digital healthcare delivery. Lack of user-friendliness and inter-operability of digital systems were slowing adoption and sapping energy from the efforts to widen their use. Respondents drew attention to a growing divide between the digital haves and the digital have nots, and the possibility that digital systems without the right settings and regulation could lead to lower standards of care.

In response to stakeholder suggestions, the Domains were revised and streamlined holistically. The total number was reduced by one, and the 'People and value based care' domain was reshaped into an overarching purpose statement aspiring to 'culturally safe, person and value-based care'.

The section on Tasks was also revised based on feedback about: differing roles in the profession; integration of elements of EPAs and domains; sequencing; cultural safety; limitations of technology; and the need for critical appraisal.

With regard to teaching, learning, assessment, and measurement of the impact of digital health, respondents expressed interest in finding the right balance between relevancy of skill sets and consistency across the workforce. Concerns were expressed about crowded curricula and the difficulty achieving integration of the Capability Framework with existing curricula. In response to these concerns a new section on Integration was added to illustrate how these challenges might be overcome.

Several respondents saw a need for a national or at least coordinated effort to integrate digital health into medical education. It was seen as particularly important that smaller services and teams receive support. Respondents also pointed to the benefits of coordination, knowledge exchange, bringing in the right expertise, and benefiting from those who are further down the learning curve.

Section 1: Introduction

Medical professional self-regulation is often justified with the assumption that expert knowledge allows superior judgment regarding medicine and its role in society.

The digital revolution poses a challenge to this assumption, in that new bodies of knowledge are being added through technological innovation, and the ownership of this new knowledge is by no means exclusively medical. This project is part of a wider effort by the Australian medical community to define the boundaries of the new knowledge about digital health, and determine which areas are the proper responsibility of the profession, and in consequence the responsibility of medical education.

In this endeavour we must be guided by the litmus test of stewardship for those parts of digital health knowledge which, through the agency of the profession, have a large influence on the well-being of the patient and the community. It is worth quoting the feedback from one of the online survey respondents, who, in their capacity as health consumer and carer, hoped that digital health would afford

- "quicker access to health care - in the right place at the right time

- seamless integrated health care delivered across a care team including allied health, primary & specialist

- increased communication between my health team (in the future I would hope to see online integrated health team meetings with me the health consumer/carer - how wonderful it would be not to have to repeat my health journey/patient experience over & over, fearful that I've missed important information out)."

Inevitably there will be an element of trial and error in this work. For this reason, the Capability Framework (for which this document is a companion Consultation Report) is agnostic about the means, but provides illustrative examples as to how the goal of integration of digital health and medical education might be achieved. The Australian Medical Council ('AMC') and Australian Digital Health Agency ('ADHA') hope the Capability Framework will be a useful guide and resource to support medical education providers in undertaking future innovation, with the ultimate aim of improved health outcomes for the Australian community.

Purpose and Consultation Methodology

This document is a Consultation Report. It contains information about the consultation process, feedback received, and changes made in response, in relation to the Capability Framework in Digital Health in Medicine ('Capability Framework' or 'Framework'), a joint project of the Australian Digital Health Agency and the Australian Medical Council. This consultation took place through three main channels:

1. The Advisory Group in Digital Health ('Advisory Group'). Comprising 32 members with broad representation from medical education continuum, peak bodies and other health stakeholders, the Advisory Group provided feedback on the digital health in medicine project including the Capability Framework.
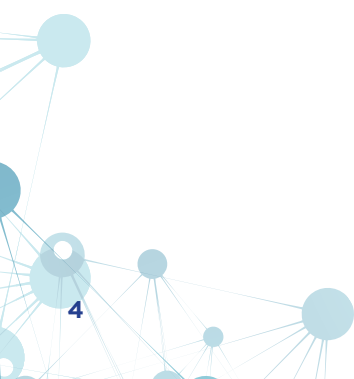
2. Online Survey ('Survey'). A survey to gather feedback on the Framework was conducted with the Advisory Group and other stakeholders and findings were incorporated into this paper. (See Attachment 1 for the survey instrument.) Online survey respondents included health consumers, students/trainees, educators, clinicians, health professionals (nurses, allied health, pharmacy), health system leaders, regulators and other peak bodies and stakeholders. Survey respondents were provided the opportunity to respond on behalf of their organisation or as an individual. Responses were anonymous. There were a total of 60 respondents, but not all completed the survey. The majority of the questions were answered by 34 respondents.

3. Forum and Focus Group. The AMC and the ADHA conducted a four part Online Forum ('Forum') on Digital Health and Workforce Development in Medicine, which included opportunities for discussion and feedback on the proposed Framework. A focus group to which Aboriginal and Torres Strait Islander and Māori organisations were invited was held in June 2021.

Formatting and other Conventions

The main body of this Consultation Report, including summaries of feedback and quotes, are printed in black font. Responses to feedback, including descriptions of what changes were made to the Capability Framework in response to feedback, are printed in blue font. Passages with double quotation marks ("for example") are direct quotes from stakeholder feedback. Passages or phrases with single quotation marks ('for example') are other types of quotes, such as quotes from the Capability Framework document.

Respondent anonymity is preserved, except in the case where organisations self-identified in the text of the feedback. In the latter case it is assumed that the organisation is comfortable being associated with its feedback, at least for the purposes of this Consultation Report.

The order of sections in this report follows the order of the questions as they were asked in the online survey, which in turn parallels the order of content in the Capability Framework. Much of the information recorded here is derived from the online survey, although comments by Advisory Group members, Forum participants and Focus Group participants are also included where relevant.

Section 2: Principles

Respondents nominated 'Flexible and Future Proofed', 'Aligned with System Change' and 'Simple and Agile' as the top three principles guiding the development of the Capability Framework. The advantages and disadvantages of flexibility are explored in greater detail in the Flexibility section of this document on pages 11-14.

Summary of Text Comments on Principles[1]

General Comments

Respondents expressed a range of views regarding the utility of the principles underpinning the Capability Framework.

The Postgraduate Medical Council of Victoria ('PMCV') found the principles to cover the relevant concepts, stating: "The focus on consumer expectations, innovation in workforce development, and ensuring the approach is flexible, agile and simple are good guiding principles." Forum participants considered there should be fewer principles, written as key point not as narrative. The Royal Australasian College of Physicians ('RACP') said: "The principles are very general and could be applied to any number of educational developments... it is not overly clear how this framework fits into the context of broader change or even to the AMC's own standards for assessment of primary and specialist medical programs."

Figure 1: Average Rating of Likert Scale for Relevance of Principles Guiding the Development of a Capability Framework in Digital Health in Medicine[2]

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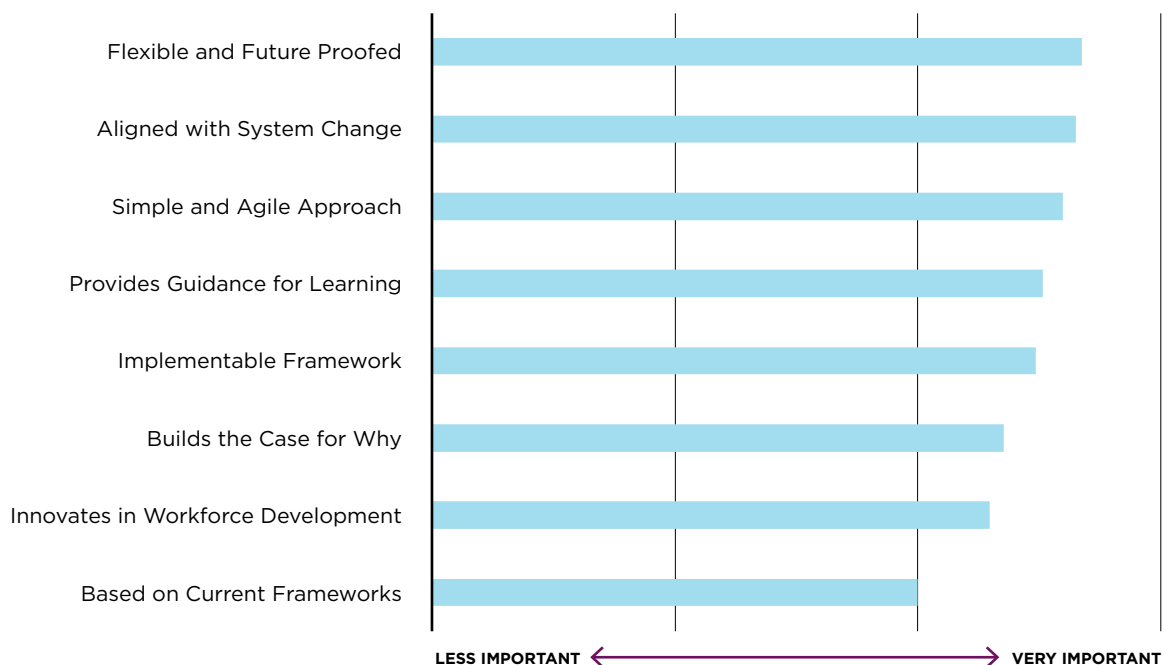
1   Mainly based on online survey comments in response to the question: Reviewing this list is there anything you would wish to Add or Change? Please list with your reasoning.

2   Average of three point Likert scale answer to the question: How relevant do you think these principles are to guiding the development of a capability framework in digital health in medicine?

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Response to Feedback

As a result of Forum feedback the number of principles was reduced from eight to five, and the format for Principle content was changed to dot point. With regard to the RACP feedback that principles were 'broad and could describe any curricula change in medical education', this was to some degree intentional as digital health is one of several health reforms impacting curricula in medicine and the key principles which guide good practice for these reforms tend to be similar. The RACP comment that the Framework does not clearly align with AMC standards may reflect the fact that those standards do not currently provide significant guidance on digital health in medicine, and this is an identified gap. The AMC is currently consulting on medical school accreditation standards, and digital capability and literacy is in scope as one of the possible areas of change. This is also the case for prevocational and specialist college accreditation standards reviews planned for late 2022.

Criterion 1: Align the Framework with Broader System Change, Strategic Goals with a Focus on Consumer Expectations and Needs

The Advisory Group considered that content for the first principle was useful in that it focused on consumers. However other aspects caused some debate. Some saw the lack of explicit reference to the needs of Aboriginal and Torres Strait Islander and Māori peoples as a significant omission. Different stakeholders argued for different first principles as the key priority, be it 'cultural safety' or 'consumer needs'. Yet others called for more clarity regarding the strategies with which the Framework aligned.

One College considered that Criterion 1 refers to the importance of lived experience, participation and consumer engagement in the project, and provided the following suggestions to combat potential inequity arising from digital health:

- That the phrase "design a meaningful life" be replaced with wording such as "an individual may live meaningfully, beyond the limitations of illness"

- That the following point be added: "Empowerment, education and autonomy to ensure that the needs of the individual are being met and that they are enabled to guide their own healing journey"

A number of respondents considered that the concepts of health equity and equitable access to health services should be added to Criterion 1. One respondent said:

"When it comes to artificial intelligence we need to ensure it is leveraged to overcome rather than compound racism and inequity in healthcare. In dermatology for example, we are keenly aware that AI algorithms need to reflect the significant diversity in skin types here in Australia. Teaching algorithms with a diverse set of images that are representative of the diversity of the Australian population is critical."

The Australian Indigenous Doctors' Association ('AIDA') said that it was "very supportive of the list of principles", however was concerned about the lack of mention of Aboriginal and Torres Strait Islander Peoples health and/or cultural safety. "AIDA perceives this as a major omission, particularly as the third principle explicitly mentions that the development of the capability framework is and should be guided by 'current good practice innovations in medical education' which must and do include cultural safety and considerations regarding Indigenous health."

Response to Feedback

To incorporate the diverse feedback received, the title of the first principle was renamed 'Fit for purpose' with five subsets of principles of equal value and importance. This captured the key areas of system change and health reform; consumer expectations and needs; doctor's capability needs; the need to close the gaps on current inequities in health; cultural safety and inclusiveness; and importance of implementation.

The emphasis on health equity and social justice was strengthened throughout the Framework as a result of feedback about the Principles. A new section was added to the Report following the Principles section entitled 'A National Platform for Change in Digital Health Workforce Development and Education' (see pp 7-9 of the Framework). This explored health reform and the needs of vulnerable health groups with a focus on the social determinants of health. For example, the new section notes that 'Value based care focuses on fair and equitable allocation of resources to areas of need to improve the health and wellbeing of all Australians... Value based care recognises that the healthcare experiences and outcomes of all Australians are not equal. Generally, Australians can expect to enjoy long and relatively healthy lives, however, there are disparities across some population groups.' These points were backed up by Australian Institute of Health and Welfare data.

Following the feedback from Aboriginal and Torres Strait Islander stakeholders, cultural safety has also been given greater prominence throughout the document, as has the concept of the need to adopt a strength based approach to dealing with the challenges of closing the gap in health outcomes for this group. Furthermore, feedback about addressing inequity prompted consideration in the new section of 'how digital technologies can be used to link to the agenda of cultural safety, people-centred and value-based care linking with experts and good practice to improve rather than further widen the gap between the 'haves' and 'have nots' across the Australian population.'

Criterion 3: Build the Capability Framework based on Current Frameworks

With regard to Criterion 3, one College considered that it was important that the Framework aligns with work occurring nationally to develop a National Digital Health Capability Action Plan (NDHCAP) to support the National Digital Health Workforce and Education Roadmap.

During a consultation with Aboriginal and Torres Strait Islander stakeholders, including a range of key organisations in Indigenous Health, the point was made that current frameworks do not always contain good practice, or that there may be gaps. Consultation participants also noted that reflection should figure more prominently in the principles.

Response to Feedback

From publicly available sources regarding the National Digital Health Capability Action Plan (NDHCAP), it can be affirmed that the former is closely aligned with the scope and core components of the Capability Framework.

As a result of the advice from Aboriginal and Torres Strait Islander stakeholders, content of this principle was changed to include: 'Acknowledges and references good practice that exists and ensures that where evidence base is limited, inappropriate or non-existent, approaches to culturally safe digital medicine must build reflection to promote new assumptions and ways of working.'

Criterion 5: Ensure the Approach is Flexible and Future Proofed

A number of respondents expressed concern about the wording 'Future Proofed' in Criterion 5. For example, one College stated that, "'future proofing' remains a challenging paradigm for anyone person or organisation. We suggest the use of language which communicates flexibility, agility, responsiveness and adaptability."

Response to Feedback

The concern for the terminology of future proofed was acknowledged and this term was deleted from the final draft of the principles.

Criterion 8: Ensure that the Framework is Implementable across the Continuum of Learning and across a Range of Contexts

The Postgraduate Medical Council of Victoria (PMCV) recommended that Criterion 8 should be expanded to reflect the importance of the supervisor framework including training and resourcing. They supported this suggestion with the following rationale:

"…medical education in health services, including the training of medical students and junior medical officers, must be valued, in terms of support and resourcing, in the same way that occurs with nursing and allied health education. Current medical education structures are already under pressure. Protected teaching time and supervisor training are essential to the implementation of medical training frameworks such as this."

Another respondent also emphasised the importance of appropriate resourcing in order that, "health professionals at all stages of their career are aware of, and can appropriately assess, the benefits and limitations of emerging digital technologies and the datasets underpinning them."

Response to Feedback

In line with the PMCV recommendation, 'supervision' is emphasised in principle 5.1. The comments regarding resourcing are taken up in Principle 5.3 which emphasises 'implementation', and is also further reinforced in Next Steps, where resourcing is outlined as a key dependency.

Proposed Additional Criteria

The Australian College of Rural and Remote Medicine ('ACRRM') considered that community should be the basis of a separate criterion, because capabilities should be directed towards "the ultimate goal of enhanced patient care rather than to facilitate business models". In particular such a principle would state:

"…that it supports and strengthens the patient's engagement with continuous, comprehensive care that is locally available or able to be physically accessed as/when needed in-person and is appropriate and fit-for-purpose across the country's cultural and geographic diversity including cultural safety and appropriateness for Aboriginal and Torres Strait Islander communities."

ACRRM also raised a number of other points that might be able to be accommodated under the principles, such as:

- The principles should recognise the benefits of managing and maintaining good health
- While comprehensiveness was desirable, "assessment and learning will need to be fit for purpose for each specialty Fellowship program"
- Standards and guidelines, such as the ACRRM telehealth guidelines, benefit the workforce and the organisations that employ them
- The principles need to accommodate breadth of experience, particularly for International Medical Graduates.

PMCV similarly raised a number of areas where additional principles might add value, including:

- Adequate resourcing
- Focus on value adding to medical trainee learning and patient-centred care
- Evaluation of implementation

Other respondents saw the need for additional principles in a number of areas, some of the themes of which included: outcome focus; governance monitoring; collaboration across the continuum; and feedback into education systems for the software developers and other key stakeholders.

Response to Feedback

In line with ACRRM's feedback that 'community should be separate' Principle 1 includes a separate subpoint regarding consumer needs. Other redrafted principles reflect other points raised by ACRRM including the concept of 'geographic diversity' and 'cultural safety' and 'needs of Aboriginal and Torres Strait Islander and Māori peoples as the original custodians of their lands'.

The ACRRM telehealth guidelines were referenced within the EPAs in appendix 1-3. They are also included in the ACRRM case study in the current state analysis which informs the framework. As a result of ACRRM feedback the scope of the Framework was amended to include IMGs. The section on Specialist Colleges – current state analysis was also amended to refer to IMG training and assessment.

The points made by the PMCV were addressed as follows:

• Adequate resourcing – although implicit in references to implementation such as Principle 5.3, it was seen as out of the Framework's remit to make explicit references to resourcing

• Focus on value adding to medical trainee learning and patient-centred care was consistent with the new Principle 1.3 regarding future doctor capability needs

• Evaluation of implementation was included in Principle 5.1 and a section of the Framework on impact evaluation.
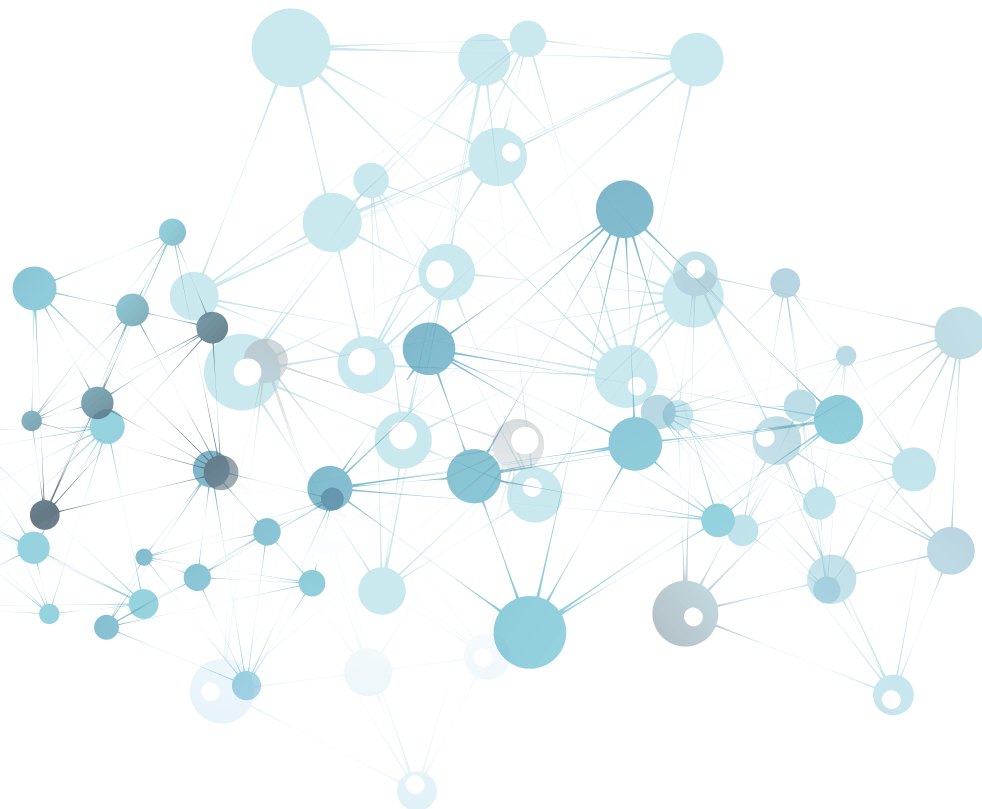
Section 3: Flexibility

Over 90% of respondents felt that model flexibility was important or very important, and a similar proportion felt the same about the importance of developing digital health capabilities across generations. Respondents had an opportunity to express their views on the advantages and disadvantages of a flexible model in a text question, answers to which are summarised below.

Summary of Text Comments on Advantages and Disadvantages of a Flexible Model[3]

In general, respondents found that the advantages of a flexible model outweighed the disadvantages, especially in light of heterogeneity in a number of areas such as: curricula and learning models; practitioner skill levels; medical specialisation; and differences in IT systems (compounded by the issue of rapid technological change). However respondents also cited disadvantages of a system which was too flexible, such as unaddressed skill gaps and lack of specificity hampering implementation. The following reviews some of these arguments from the point of view of the system, the education provider, and the practitioner.

Figure 2: **Proportion of respondents selecting different levels of importance of:**
a) Having a flexible model that focuses on assisting education providers
b) Developing capabilities in digital health across the generations in medicine[4]

	VERY IMPORTANT	IMPORTANT	LESS IMPORTANT
Flexible Model	54%	40%	6%
Capabilities Across Generations	56%	36%	8%

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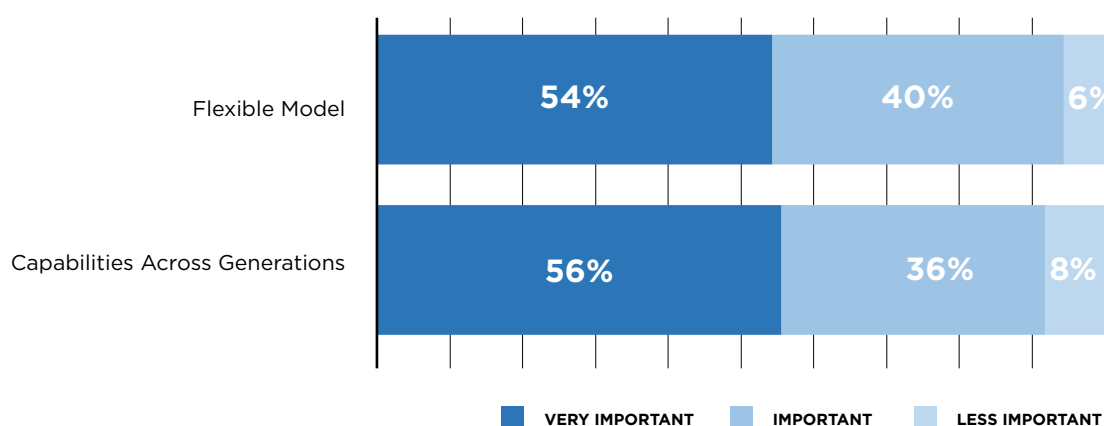
3   Mainly based on online survey comments in response to the question: What do you see to be the advantages and disadvantages of a flexible model?

4   Proportion of respondents selecting options in a three point Likert scale answer to the question: How important is it to: a. To develop capabilities in digital health across the generations in medicine? b. To have a flexible model that focuses on assisting education providers who have identified a gap in digital health and supports more advanced programs to continue as they are?

System Perspective

The technology underlying digital healthcare delivery is heterogeneous, evolving and often mutually incompatible, implying that a degree of flexibility will be required to allow tailoring of training to circumstance. As one respondent pointed out, "…each State and Territory vary considerably in the number of different clinical information systems that a doctor may encounter when moving between different hospital settings… Even when varying levels of digital maturity are taken into consideration, different ecosystems will require different levels of routine induction and training for new personnel."

Response to Feedback

Technologies in health are undergoing a high rate of change, with differences between jurisdictions and within jurisdictions, and varying levels of digital maturity. Care has been taken in the design of the Framework to support capabilities in terms of broad technology functions rather than specific IT solutions or software.

Education Provider Perspective

A number of respondents stressed the need for education providers to design digital health education and training in line with the requirements of differing student cohorts, choosing appropriate content and modes of delivery. One College summarised some of the issues as follows:

"It's important to recognise that the capability requirements are different at different levels of the profession. At the specialist level, the Specialist Medical Colleges and Health Services play a major role in digital health education. This education is specific to needs… [for example] development and implementation skillsets are more specialised and not required as extensively across the workforce. At the medical student level, this level of specificity is not available because graduates will be going in different directions. Telehealth consultation, and general security principles, data handling and statistics knowledge would be applicable more broadly."

Other respondents pointed out that the heterogeneity not only applied to the educated, but also to the educators. Thus flexibility in implementation would "acknowledge medical educators will have strengths and weaknesses in their knowledge… A model whereby digital champions are available to each workplace, be that via PHN's or local training organisations, would be valuable." Flexibility also recognised that there are capability gaps between institutions, so that there "… is clear advantage in supporting more advanced programs to continue to innovate and lead…"

Response to Feedback

In recognition of the need to provide guidance on the different stages of learning, a new section on 'Integrating Digital Health in Medicine' was added (see pages 32-34 of the Framework). One of the approaches in particular 'Integrating bite sized learning' takes into account the feedback set out in the educator provider perspective above, however a menu of options are available to the education provider and each approach will depend on curricula, capabilities and institutional settings.

The Framework seeks to emphasise the importance of supervision in a number of ways. In the new Integration section, supervisors are identified as important target groups (see in particular the approach entitled 'Create local learning set in digital health in medicine'). Supervision is also identified as a key dependency in 'Next Steps' where reference is made to the role played by System Leaders, Medical Education Leaders, Medical Education Supervisors, Digital Experts in Jurisdictions, Health Workers, Community Support and Technical Support (see pages 36-39).

Also contained within 'Next Steps' is an initiative to foster a Community of Practice as part of the follow-up to this project. This recognizes that advanced and well-resourced providers can assist smaller providers, and that knowledge diffusion can occur through networks that share the same purpose.

Practitioner Perspective

The Australian Medical Association (AMA) listed the following arguments for flexibility from a practitioner perspective, recognising diversity in work environments, career pathways and digital health needs:

- "rapid change in digital health technologies means all healthcare providers will be on a constant learning curve as new digital systems/tools are adopted in a healthcare workplace

- not all clinical workplaces are at the same level of digital maturity. As clinicians move from one clinical setting to another, the required level of individual clinician competency will need to adapt accordingly. It is especially important registrars in rural/regional healthcare sites have equal access to digital health education. The potential for remote learning supervision should be explored

- clinicians that have graduated some time ago will still need to move up the learning/competency curve to work safely and effectively in a digitally enabled clinical setting."

ACRRM also stressed the need for flexibility in accommodating rural practitioner learning needs, as well as sharing their plans for building digital capabilities through Continuing Professional Development ('CPD'). "Our vision for the CPD planning function is for members to be able to identify learning gaps and interests to form a CPD plan that is bespoke and tailored to their individual scope of practice. Learning should be flexible enough to cater to the wide variety of member situations, and provide a useful, practical level of detail."

Response to Feedback

The question of rapid changing technology and the doctor's need adapt to different systems and settings was raised consistently throughout the project and in Forum discussions. The Framework is technology system agnostic and the Domains recognise the need for familiarity with different levels of digital maturity. The new Integration section also recognises that different approaches to communication and education will be necessary with different cohorts. For example, it is commonly recognised that senior colleagues might have particular challenges adapting to new technology, so integration of digital health into CPD provision and College frameworks will be an important next step. For more information about CPD see pages 17-18 for updated sections of the Framework.

The Argument for Consistency

While many comments endorsed flexibility, it was not seen as a panacea. Respondents pointed out that high levels of discretion may reinforce heterogeneity and could also lead to weak implementation. For example one respondent considered that "different specialist medical colleges may go in very different directions. As a whole, the medical profession ends up with different levels of knowledge and digital health literacy." Another respondent pointed out that a "flexible model will likely come at a higher cost and risks not addressing the learning needs where one does not know what they do not know. Where a lack of proactivity exists in identifying knowledge gaps, a learning opportunity may be missed."

Response to Feedback

Some of the downsides of flexibility outlined in the feedback related to consistency were considered in the design of the Framework. One of the reasons for designing the learning interventions as common across the continuum was to address the issue of building common skills across the continuum, sharing resources and reducing heterogeneity (see, for example, 'A Model for Dealing with Disruption' in the Integration Section, Page 33)

Section 4: The Current State

Summary of Text Comments on current state in digital health in medicine[5]

In this section respondents tended to raised problems in the current state of digital healthcare, whether or not these were of direct relevance to the Capability Framework. These deficiencies are worth recording, as they provide background on what digital health education must assist doctors to contend with, mitigate, and in the long run overcome.

Systems Lacking in User-Friendly Design and Inter-operability

A number of respondents pointed out that digital systems were slowing adoption and sapping energy from the efforts to widen their use. "Digital systems that are clunky, time-consuming, or inhibit the ease of sharing a patient's information with other clinicians/healthcare professionals involved in the patient's care, will hinder healthcare providers' enthusiasm and use of digital health - irrespective of the clinical setting or how well the doctor is trained."

The Royal Australian College of General Practitioners (RACGP) said, "some GPs, many of whom were early adopters of the My Health Record system, are now disillusioned with the system due to the lack of useable information to be found in the system after years of use." The College also raised the fact that secure messaging has not been adopted in many jurisdictions because of inter-operability issues, and stated, "creating opportunities to better share information across healthcare settings about the consumer, for their benefit, is essential."

The tenor of many of these comments seemed to be summed up by one respondent who said, "I am so gutted every day that I spend 6 hours on a phone, requesting a fax, waiting on a fax, reading a fax, faxing information. It's embarrassing. It's terrible patient care and it's enabled by extremely poor governance and accountability. If you don't fix this in Victoria - and every health organisation with their own health board - there are 83 - gets to go their own way on this - it won't matter how good your framework is. We will remain siloed and in competition with each other with the patient falling through yet more cracks."

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5   Mainly based on online survey comments in response to the question: Are there any further key points to consider in thinking about the current state in digital health in medicine across the continuum?

Economics, Regulation and Digital Systems

Some respondents drew attention to the role of digital healthcare plays in other social and economic contexts. The RACGP said, "As new digital technologies are introduced, there cannot be a growing divide between the digital haves and the digital have nots, whereby those with internet access benefit from advancements, and those without operate in a digital vacuum. Improved patient digital literacy, while not the remit of GPs, will have many benefits for patients, but in the absence of digital literacy and access the system must ensure their healthcare needs are equally met."

ACRRM pointed out that digital systems without the right settings and regulation can lead to lower standards of care, in particular:

- "business models (both commercial and within public health facilities) that promote low value care and loss of in-person services in favour of cheaper phone based services

- fragmented care replaces care which is centred around continuous, comprehensive primary care (i.e. lack of coordination of specialist/allied health/EM care with overall healthcare plan)

- patients may be encouraged to opt for low-value care (i.e. less hassle to use the phone) when this may not in their best health interest"

Some respondents raised the role of regulation and accreditation in addressing problems such as those mentioned in the above sections. One respondent said, "…accreditation standards are critically important for education providers to include digital health as a key component in the curriculum," a point that was raised at various points in the survey feedback.

Response to Feedback

The current state analysis in the Report and, the feedback above elicited about the current state, both help to build the case for why a framework in digital health in medicine is needed. In general, the current state of technology creates a dependency for successful implementation i.e. the benefits of digital health capabilities will be limited while IT systems are unable to deliver advanced functionality and inter-operability. Furthermore there are future technology developments upon which each of the horizons were dependent e.g. more widespread use of artificial intelligence is a prerequisite for Horizon 2 (see page 37 of the Framework for a list of technologies and related dependencies). Equitable access to those emerging technologies by medical practitioners is another important prerequisite for realisation of benefits envisaged under each Horizon.

The limitations of digital technologies relate not only to functionality, but also arise when technology interposes itself between doctor and patient, or creates business models and system pressures that lower standards of care. The Report discusses the need to recognise 'the limits of technology and when it is important that patients have access to in-person physical care'. This point is integrated into the description of Horizon 1 on page 11 and also appears in the description of each of the EPAs in Appendix 1-3.

Section 5: Proposed Capability Framework

The following section of the document sets out the feedback and responses to the proposed framework for digital health in medicine, with a focus on the following educational components shown in bold:

- **Domains**: eight domains of digital health in medicine each with three sub-domains and key outcomes of learning.

- **Tasks**: The domains, subdomains and associated learning outcomes are aligned to and integrated into the three EPAs.

- **Teaching Learning and Assessment**: teaching, learning and assessment at the four levels of performance for each EPA – knowledge, routinised practice, problem solving and leadership.

- **Implementation Considerations**: key measures for ensuring the effectiveness of the digital health learning and assessment at a program level

Survey respondents were given an opportunity to take a progress check on their level of agreement when the Consultation Version of the Draft Framework was circulated. At that point 58% of respondents agreed that the Draft Framework was useful as a sample approach to identify and support the development of foundational digital health capabilities across the medical education and practice continuum.

Figure 3: **Proportion of respondents expressing different levels of agreement with the statement that 'the draft framework is useful as a sample approach to identify and support the development of foundational digital health capabilities across the medical education and practice continuum'[6]**

| 58% | 24% | 15% | 3% |

STRONGLY AGREE   AGREE   NEUTRAL   DISAGREE   STRONGLY DISAGREE

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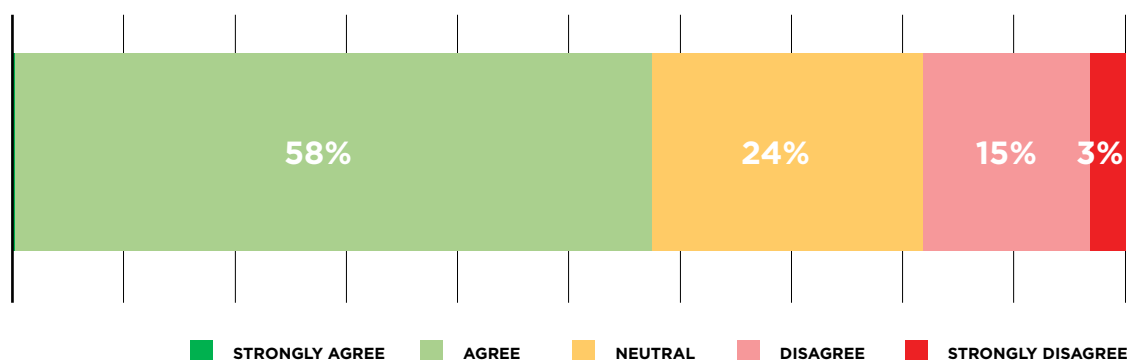
6   Proportion of respondents selecting options on a five point Likert scale answer indicating degree of agreement with the following statement: 'The draft framework is useful as a sample approach to identify and support the development of foundational digital health capabilities across the medical education and practice continuum.'

Section 6: Domains

For the top three domains in the Consultation Version of the Framework, survey respondents prioritised 'People and Value Based Care', 'Data and Information Quality' and 'Workforce'. The domains were later reworked to improve relevance and reduce overlap.

74% of survey respondents either strongly agreed or agreed that the draft domains focused on what matters in digital health in medicine. Respondents also identified a number of areas for improvement which are set out below.

Figure 4: **Average Likert Scale Rating for Importance of the Domains[7]**

- People and Value Based Care
- Data and Information Quality
- Workforce
- Cliniical Practices
- Technology
- Health Context
- Health Systems
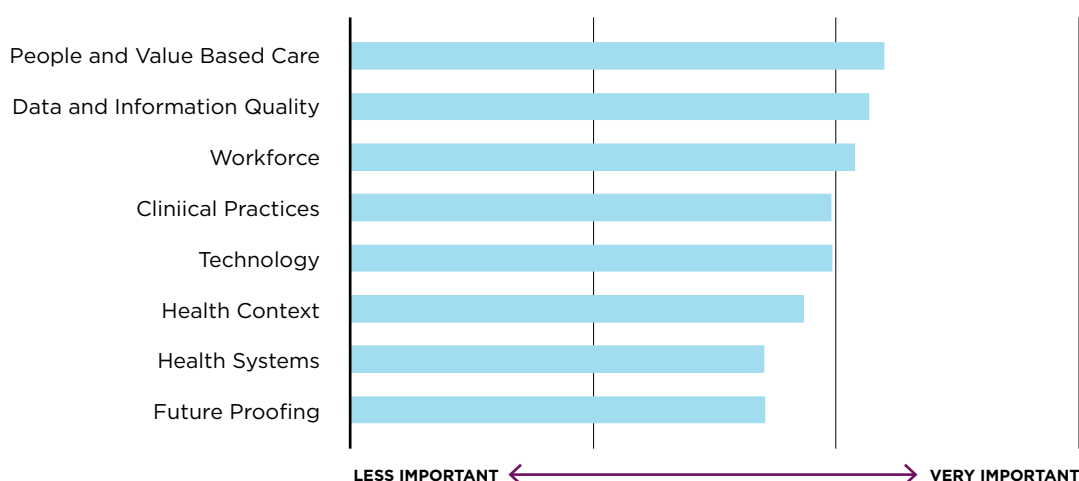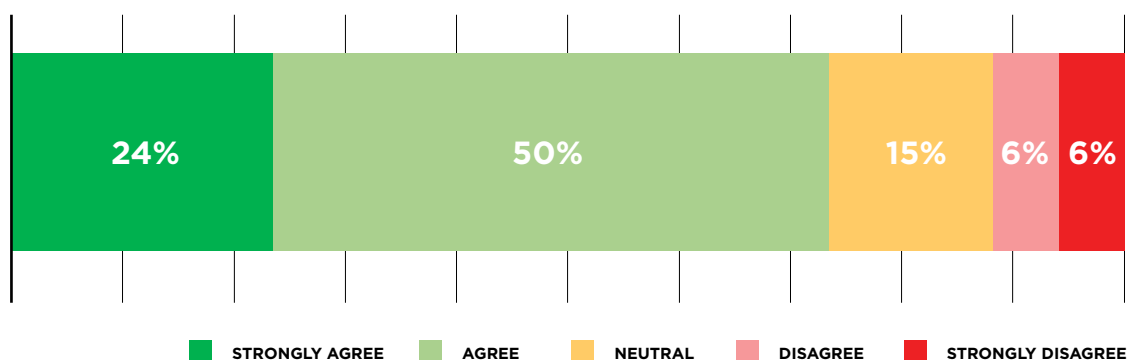- Future Proofing

LESS IMPORTANT ⟷ VERY IMPORTANT

Figure 5: **Proportion of respondents selecting options in expressing level of agreement with the question 'Do these domains focus on what matters in digital health in medicine?'[8]**

| 24% | 50% | 15% | 6% | 6% |

■ STRONGLY AGREE ■ AGREE ■ NEUTRAL ■ DISAGREE ■ STRONGLY DISAGREE

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7   Average of three point Likert scale answer to the question: Please review and rate the importance of the domains in the proposed capability framework.

8   Proportion of respondents selecting an option in a five point Likert scale answer indicating degree of agreement in response to the following question: 'Do these domains focus on what matters in digital health in medicine?'

Summary of Text Comments regarding Domains[9]

The Domains Collectively

Several respondents considered there were too many domains with overlap in domain constructs, and a number of suggestions were made to subsume one or more domains under other headings. In particular, a number of respondents considered that 'Future proofing' should either be removed, be subsumed in other domains, or else modified to refer more to flexibility or preparedness for change. Some participants considered that the 'Health System' and 'Health Context' domains could be merged. One respondent said that the domains might be more appropriate for developing digital health content than for learning, and that Technology and Data Information Quality were more relevant for knowledge acquisition.

AIDA agreed with the patient-centric aspects of the domains, and emphasised the need "…to integrate cultural safety and/or the delivery of culturally safe care across all 8 digital learning capabilities…"

Additional Domains

A respondent proposed that 'digital capability governance' should be added as a domain, to ensure collaboration, continuum alignment, and value measurement. "Framework adoption is predicated on effective collaboration and alignment across the learning continuum, and a controlling mechanism to ensure improved patient and value based outcomes are being achieved." In a similar vein, another respondent said, "A responsibility in healthcare governance to define the goals of healthcare, and simply and integrate systems towards that. I worry that this does not hold anyone to account for the end product…"

The addition of the importance of teamwork was advanced as another possible domain, not just among different medical specialists but among different health care professionals (i.e. nurses, allied health professionals, doctors etc.)

Another respondent advocated a "…domain that looks at 'multidisciplinary' software development as it relates to system theory (complex adaptive systems), human factors, workflow and practice that are allied with digital health to ensure that outcomes derived from the development of software actually result in workplace efficiency/ quality improvement."

Specific Content Suggestions

Other comments did not go as far as proposing additional domains, but identified areas which might be added or expanded within the domains, including:

- critical appraisal of representativeness of data sets, data usability and ability to recall and sort data
- use of an electronic surveys using appropriate technology
- learning about statistics and the use of statistical software
- hospital electronic medical record systems
- software security encompassing password security, phishing, handling confidential patient data
- types of data (identified, de-identified, and so on), overview of institution hosted databases
- ethics, ethical review, as well as legislative underpinnings of research, audit and patient information privacy
- methodology of research especially in guidance on how to conduct research and implement digital tool research findings in practice
- an understanding of both advantages and risks of digital health

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9   Text responses to the question: 'Are there any domains that you believe should be: Added? Deleted? Changed?   Please list with your reasoning.'

ACRRM Comments

ACRRM provided a more lengthy comment on the domains. In particular the College considered that certain definitions and revisions of scope would be valuable, such as:

- The workforce that supports patients to remain well and manage their health can include professions and organisations outside of the medical profession

- In the health context, community should include those that are well in addition to those that are unwell and the role of prevention

- Technologies should include digital devices such as a otoscopes (to create digital images and video) and stethoscopes (creating audio output files) for telehealth and those used for remote patient monitoring

- The need for appropriate clinical risk assessment and recognition of when a patient needs in person care, particularly in emergencies, should be an identified competency area.

Response to Feedback

Rather than address stakeholder concerns one by one, the Domains were revised and streamlined holistically. The total number was reduced by one, and the 'People and value based care' domain was reshaped into an overarching purpose statement aspiring to 'culturally safe, person and valuebased care'. This process was assisted by AIDA and other Aboriginal and Torres Strait Islander stakeholders who brought to bear the perspectives of First Nations peoples, as well as strengthening the focus on cultural safety throughout the remaining seven domains. The new purpose statement also achieved greater alignment with the National Digital health Workforce and Education Roadmap and its emphasis on people and value based care.

In response to a perceived overlap, the domains of 'Health System' and 'Health Context' were revised. 'Health system' became 'Health System Innovation', the themes were more clearly defined, and outcome statements were strengthened with an emphasis on research (in response to a perceived gap in the framework in this area). 'Health Context' evolved into the more specific 'Integrated Health Settings and Access' with new outcomes to emphasise how the health ecosystem might be better integrated through effective use of technology. These changes responded to the longstanding challenges of improving integration of services and widening access to care.

The 'Workforce' domain was changed to 'Professionalism and Inter-agency Action' to capture collaborative aspects of digital healthcare. This reflected feedback from a number of sources (both inside and outside the profession) that improved digital capability that does not encompass inter-professional learning and cooperation will not deliver the needed improvements healthcare outcomes.

In response to feedback that the 'Technology' domain was too broad and that critical appraisal and risk needed greater emphasis, the domain was renamed 'Appraisal and Risk'. The themes remained the same but the learning outcomes for the themes were fleshed out and became more nuanced. In particular, a number of respondents sought to clarify in these outcomes some of the technology implementation barriers and the risks associated with technology failure or lack of availability. Critical appraisal was also more fully explained drawing on data concepts from evaluation and management, including representativeness of the data sets, data useability, cultural safety, unintended consequences and ease of use.

Data and Information Quality remained unchanged but various terms were more clearly defined. Aboriginal and Torres Strait Islander stakeholders advocated for 'data sovereignty', a term that was unfamiliar to some stakeholders. Links were added to *Maiam nayri Wingara* (Aboriginal and Torres Strait Islander Data Sovereignty - 2018) as well as to *Te Mana Raraunga* - the Māori Data Sovereignty network. Indigenous data sovereignty is related to a global movement concerned with the right of Indigenous peoples to govern the creation, collection, ownership and application of their data, and is outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), for which Australia has declared its support.

Medicine, Ethics and the Law was introduced as a new title for the domain previously named 'Clinical practice' and the theme of ethics was given greater prominence in its content.

Finally the domain title 'Future Proofing' was replaced with the more pragmatic goal of 'Future Preparedness', although the content was largely unchanged.
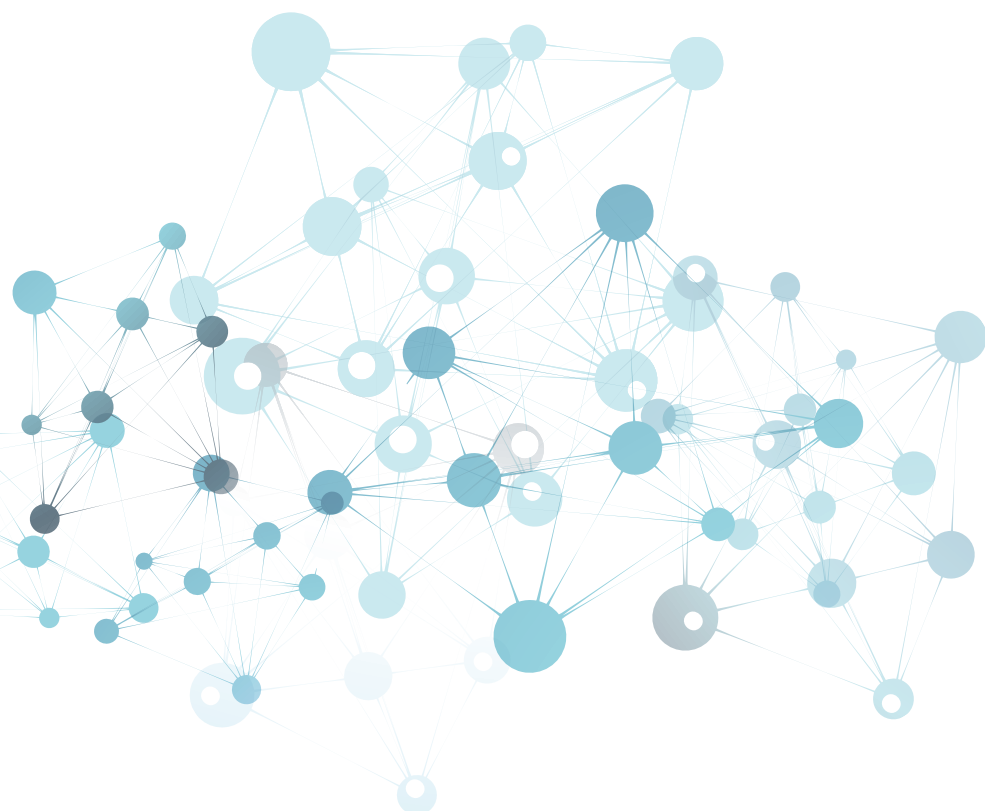
Section 7: Tasks

76% of survey respondents either strongly agreed or agreed that the draft tasks focused on what matters in digital health. Summarised below are text comments on the scope and content of the tasks.

## Summary of Text Comments regarding Domains[10]

The Tasks Collectively

One College considered that the tasks should distinguish more clearly between roles with differing levels of system involvement or geographic context: "The tasks listed are important for practitioners in the digital health / health context. There are a myriad of other tasks that are equally important, depending on the specific role and context, of the differing types of medical practitioners. For example, medical leader/manager's vs that of a clinician to patient, or Rural vs Metropolitan settings will have differing tasks, as rural health due to geography has a high dependence on digital technologies such as telehealth and telemedicine."

RACP commented that the EPAs were not consistent with the College's criteria for EPAs. "While these three activities are important activities underpinning doctor's ability to deliver patient care, they do not need to be standalone EPAs and would not meet the criteria for inclusion in RACP EPAs… The EPAs take a small part of the work of health professionals and compartmentalises the digital components… What might be more helpful is to list digital-related skills that others could include in their EPAs that describe core and meaningful work."

One respondent requested that it should be clearer the degree to which the tasks were sequential or concurrent. For example, it could be argued that "…elements of Task 3 can be achieved with extension of Task 1 digital capabilities without an extension critique of Task 2 emerging technologies." The Royal Australian and New Zealand College of Psychiatrists ('RANZCP') commented "Horizon 2 may be more difficult to achieve or demonstrate in psychiatry than horizon 3 in the short term, due to the relative lack of emerging technologies such as decision support, although there may be some progress with medication management systems."

Figure 6: Proportion of respondents expressing different levels of agreement with the question 'Do you believe that these tasks focus on what matters in digital health in medicine workforce capability development?'[11]

STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
19%	56%	16%	3%	6%

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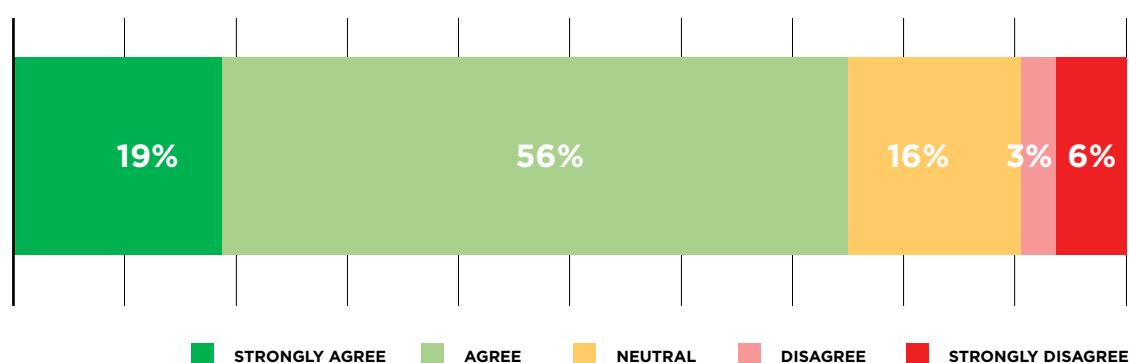
10   Text responses to the question: 'Are there any tasks that you believe should be: Added? Deleted? Changed? Please list with your reasoning.'

11   Proportion of respondents selecting an option in a five point Likert scale answer indicating degree of agreement in response to the following question: 'Do you believe that these tasks focus on what matters in digital health in medicine workforce capability development?'

One respondent suggested that the tasks should connect with and build on a multidisciplinary approach, "as part of the community of providers and the patient central to them all". Another respondent considered that research capacity needs to be included "…as this provides the evidence that underpins decision making and treatment strategies. Moreover, the development of a sophisticated evidence-based approach would enable machine learning and artificial intelligence algorithms to support clinician decision making."

AIDA said that it is supportive of the three tasks and agrees that they are well aligned with the Digital Roadmap. However, it added, "… all three tasks require a cross-cutting integration of cultural safety and Aboriginal and Torres Strait Islander health."

Specific Suggestions: Task 1

Specific suggestions regarding Task 1 focused mainly on telehealth. ACRRM suggested that it would be useful to provide a definition for telehealth, as remote consultations can take on a variety of scenarios. "Three-way consults with the Patient, Specialist and GP (or Nurse or AHW), Telehealth consults with all family members which in particular supports the needs of ATSI families where group decisions are made about a person's healthcare."

The AMA stated that the wording "'Effectively Conducts Telehealth Consultations and Uses Digital Records for Safe and Quality Practice' did not seem to ensure that the practitioner is skilled in determining when telehealth consultations are and are not appropriate". Alternative wording was suggested such as: 'effectively conducts consultations, including telehealth consultations where clinically appropriate'.

ACRRM recommended "the inclusion of information in medical records being coded and following the principles of good data quality and how to manage the capture and storage in a medical record of digital media such as photos and video."

Specific Suggestions: Task 2

Comments regarding Task 2 focused on the role of critical appraisal and analysis. One respondent suggested that Task 2 requires strong research and analytical skills which "are already incorporated into the scholarship component of medical training curricula. Although teaching of this component currently tends to focus on areas like new drugs, emerging technologies could also be incorporated here." Another respondent suggested, given the load on health care practitioners, whether it would "be more effective to focus on accessing reliable data/information that critically appraises the technology. Context such as health care system may restrict practitioners to specific technologies."

Response to Feedback

Revising the section on Tasks was a complex process which responded to feedback on a wide variety of issues including: differing roles in the profession, integration of elements of EPAs and domains, sequencing, cultural safety, limitations of technology, and the need for critical appraisal.

- Reflecting on feedback for each EPA a distinction was made between roles involved with the clinical care and those involved with system change, and the learning outcomes for these different tasks were elaborated in Appendix 1-3.

- In response to the RACP's interest in a list of "digital-related skills that others could include in their EPAs that describe core and meaningful work", digital health outcomes were created for each of the seven domains (see pp 22-27 of the Framework). With regard to the College's concerns about how integration of existing and digital EPAs might occur, some approaches were outlined in a new section of the Framework on 'Flexible approaches to integrating this framework into your medical education program' (see Framework pages 3234)

- The order of Horizon 2 and 3 were reversed to reflect the likely access to and roll out of emerging technologies across Australian healthcare settings. However technological progress will have different impact depending on clinical settings and specialities, so the Framework also includes stand-alone activities which can be customised according to need, in the sequence that they become relevant

- Patient digital health and literacy was added to the framework with the following explanation: 'Central to the framework is the concept that patients are on a health journey whereby they too are developing their digital and health literacy. This learning is best achieved in partnership with their doctors and other healthcare professionals within a culturally safe environment of integrated care.'

- Cultural safety outcomes were added to all the EPA outcomes in Appendix 13, in response to AIDA's advice

- References to ACRRM telehealth standards were included

- To address AMA concerns the following was added to EPA descriptions: 'Ethical approaches to digitally enabled practice means that practitioners recognize the limits of technology and when it is important that patients have access to in-person physical care.'

- Responding to ACRRM feedback, the following new outcome was added to EPA 1: 'Understands principles of good data quality – coding of medical data, and storage in medical systems including videos and photos observing privacy and security'

- Concurring with the respondent who raised Critical Appraisal as a core capability for medical practitioners, the following description was developed in the learning outcomes: 'Critically appraises the utility and sources of current, emerging and future technologies in relation to good medical practice (representativeness of the data sets, data useability, unintended consequences and ease of use), and is able to recommend appropriate digital technologies for their environment and the specific needs of their patients, families and communities.'

- Critical appraisal will also acquire an ethical dimension as doctors are called upon to scrutinise how data sets interact with different technologies which in turn support decision making, leading to potentially different outcomes for patients.

- Consideration of ethics and possible bias in decision making have therefore been integrated as learning outcomes in the three EPAs. Equally, ethics, medicine and the law has been created as a new domain and references to research undertaken by the National Centre for Indigenous Genomics have been included (https://ncig.anu.edu.au/about/ethics)

Section 8: Teaching, Learning, Assessment and Measurement of Impact

61% of survey respondents either strongly agreed or agreed that teaching and learning strategies outlined in the Framework aligned with good practice in medical education.
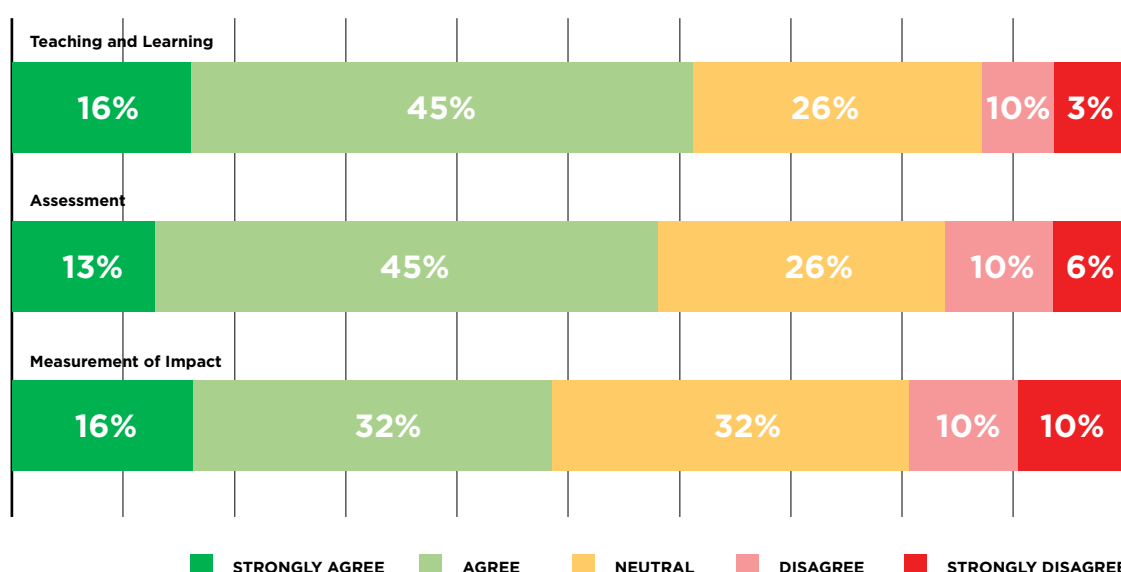
The corresponding statistics for assessment and measurement of impact strategies were 58% and 48% respectively. A section on 'Evaluation of Impact' was added to the Framework (see page 35), partly to address the gap implied by the lower rating given for this area.

Summary of Text Comments regarding Teaching, Learning, Assessment and Measurement of Impact[12]

Diverse Learning Requirements

In this section many of the questions raised related to the diverse needs of different learning groups. ACRRM commented that, "… different practitioners will have different training pathways/ experiences that will need to be accommodated, especially IMGs that may enter the framework laterally… The risk with this approach will be finding the balance between relevant skill sets and skills development and consistency across the workforce."

Figure 7: Proportion of respondents expressing different levels of agreement with the question 'Do you believe the teaching and learning, assessment and measurement of impact strategies in this framework align with good practice in medical education?'[13]

Teaching and Learning: Strongly Agree 16%, Agree 45%, Neutral 26%, Disagree 10%, Strongly Disagree 3%

Assessment: Strongly Agree 13%, Agree 45%, Neutral 26%, Disagree 10%, Strongly Disagree 6%

Measurement of Impact: Strongly Agree 16%, Agree 32%, Neutral 32%, Disagree 10%, Strongly Disagree 10%

STRONGLY AGREE | AGREE | NEUTRAL | DISAGREE | STRONGLY DISAGREE

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12   Text responses to the question: 'We welcome a more detailed comment about teaching and learning, assessment, and measurement of the impact of digital health in medical education programs.'

13   Proportion of respondents selecting an option in a five point Likert scale answer indicating degree of agreement in response to the following question: 'Do you believe the teaching and learning, assessment and measurement of impact strategies in this framework align with good practice in medical education?'

The RACGP considered that adult learning models which emphasise self-directed learning might be more appropriate for digital health. "In the context of developing a digital health curriculum, the RACGP reflects on educator Malcolm Knowles' theory of adult learning and believes that key drivers of success will include two of Knowles' five assumptions, that being that learning must be relevant to one's role and that the student must be motivated to learn."

Crowded Curricula and the Continuum

On the related issue of different requirements at different parts of the continuum, respondents commented that the Capability Framework might be of greater relevance to those involved in post-basic medical training. For example, "I work in undergrad medical education and the curriculum is already very crowded. Seeing the volume of content re digital health is a bit daunting. Often the use of technology is easy to learn, what is difficult is acquiring the underlying medical knowledge and clinical reasoning skills to come to the right conclusions and make good decisions… I'd be happy if med students learned to remember to look at the patient more than the screen, and learn the technologies used in the hospitals in which they have placements. Students with a particular interest should be given opportunities to explore the area more...."

There was a general concern that there was little space in existing curricula for the additional information required. RANZCP said, "It is important that the capacity of the already crowded curriculum for specialist training is not exceeded, as this runs the risk of burning out trainees." Another concern was difficulty achieving integration of the Capability Framework with existing curricula. The RACP commented that, "… any additional curriculum content should be reviewed by the training providers within the context of their training program... If this is intended as guidance only, then the suggested teaching and learning, assessment, and measurements of impact could be useful as a resource for a training provider seeking ideas on how to embed digital health into their training program."

Response to Feedback

Reviews of national and international health reform show that digital health in medicine is a consistent area of change in most areas of health reform. Given the lack of integration of digital health in most formal medical education, this is points to an emerging skills gap. So while concern that the medical school curriculum is overcrowded was raised on numerous occasions throughout the consultation as a possible barrier to change, capability development in digital health was reaffirmed as relevant for all generations of doctors.

Advisory Group members expressed the sentiment that 'soon it will not be seen as eHealth – medicine enabled through technology will just be the way that we do medicine'. Much of the content of the framework positions technology as a component of current, emerging and future practice in medicine, rather than as a curricular afterthought, and a new section on Integration has been added to assist education providers to illustrate how technology can be integrated with good practice in medicine.

Other issues

Several respondents raised the issue of knowledge and skill levels of supervisors. The following quotes were typical: "Assessment of EPAs is also difficult if supervisors also don't have the required skill and knowledge in this area." "Our own experience is that medical students are in general far more digitally literate than many of their teachers…"

ACRMM had the following comments regarding its approach to teaching and assessment: "We think it would be advisable to see a combination of minimal summative assessment and maximal incentive for skill enhancement…. ACRRM online courses and workshops can support training anywhere in the training continuum from medical school to CPD and this would all be mapped to the ACRRM Fellowship curriculum standards. The College would have the capacity to provide structured assessments of capability in association with this for doctors anywhere in their career trajectory."

One respondent pointed out that most specialist medical colleges are bi-national. "The strategy needs to recognise that requirements must also have the capacity to be met in both Australia and New Zealand to avoid fragmentation of the existing and future training programs. Increasing country specific requirements to training at the vocational level will increase the costs of administering what may become two training programs rather than one cohesive program. This will not benefit either the Australian or New Zealand communities."

Response to Feedback

Supervisors are a key to effective curriculum change in medical education. In response to feedback on this topic, the Framework emphasises that they must be 'well supported to undertake professional development opportunities in digital health so that they can best support other more junior staff and navigate change to workflows impacting their own work practices effectively.' In addition, supervisor engagement and training is identified as a dependency in the Next Steps section of the Report. Because supervisors also play an important assessment role, the Report points out that 'For supervisors and at a system level there is a growing acknowledgement that we need better systems to ascertain what doctors can be entrusted to perform in the workplace through more rigorous programs of assessment.'

While acknowledging comments which saw self-directed learning as a key tenet of adult learning, the Framework also recognises the fact that in 2016 the Medical Board of Australia introduced a new registration standard that considerably tightened the requirements for continuing professional development (CPD). Medical practitioners will need to ensure that they are in compliance with the new standard with regard to digital health as much as is the case for other priority areas in order to ensure that they deliver appropriate and safe care.

The Framework reaffirms the binational character of this initiative. Whilst funded by the Australian Commonwealth Government the evidence supporting this framework has drawn on New Zealand experience and policy. Furthermore, an expert in digital health from Otago University, Associate Professor Rebecca Grainger was a member of the Digital Health in Medicine Advisory Group. Associate Professor Rebecca Grainger will be presenting this Framework at the HiNZ – Health Informatics Conference in New Zealand in November 2021 on behalf of the AMC.

Section 9: Implementation Considerations

Respondents nominated 'People Training, 'Implementation Plans' and 'Communication as the top three most important elements of implementation. Implementation issues are considered in detail on pages 36–39 of the Framework.

Summary of Text Comments regarding Collaboration in the Medical Education Sector[14]

Centralisation, Coordination and Collaboration

Several respondents saw a need for a national or at least coordinated effort to integrate digital health into medical education. The RACGP said, "...a well-funded, well resourced, phased, and central approach is critical to improving the digital health curriculum in medicine. While any training must consider local environmental factors, the overarching curriculum should be relevant for all clinicians." Another respondent said, "Ensure providers aren't left trying to work it out on their own - help with a centralised coordinated approach to implementation so smaller services / teams don't feel overwhelmed".

Figure 8: Average Rating of Importance of Different Implementation Strategies for Digital Health[15]

LESS IMPORTANT ← → VERY IMPORTANT

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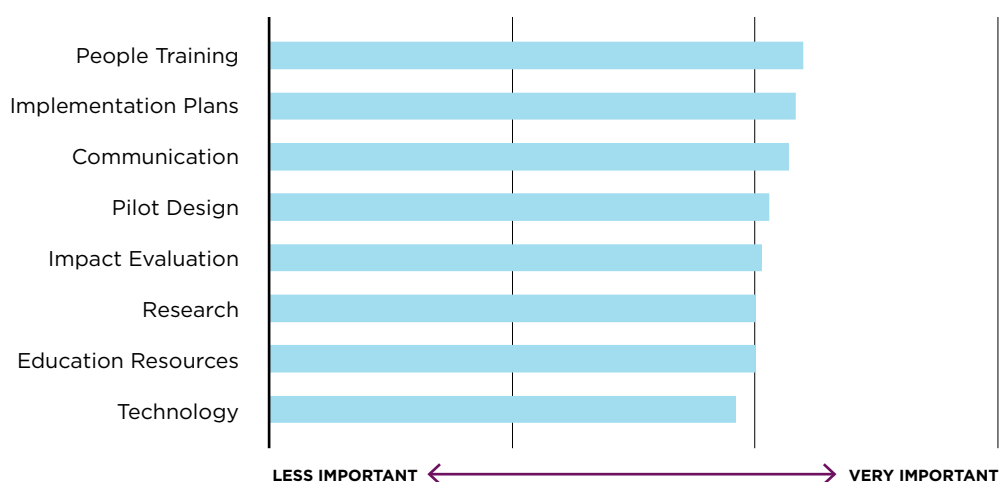
14   Text responses to the question: 'How could the medical education sector work together to improve digital health curriculum development in medicine?'

15   Average of three point Likert scale answer to the question: 'How important are the implementation strategies below for digital health?'

A large number of respondents saw a need for coordination and knowledge exchange. For example: "It would be nice to see a collaborative (and continuous) approach between universities in the medical student phase, with the hospitals/local health networks in the junior doctor phase, with the colleges in the registrar/senior doctor phases to integrate the transition from knowledge to experience to leadership." "Through workshops or other Forums to share learnings and tools- this could be facilitated by organisations such as AMC?"

The Learning Curve

Respondents saw the importance of bringing in the right expertise, and benefiting from those who are further down the learning curve. Typical comments included: "Learn from those that are ahead and / or those that are well resourced to manage the change." "When it comes to People Training, we strongly support the concept of digital experts who can provide input both into curricula and education and on the ground at the point of care."

The College Point of View

ACRRM, which is relatively advanced in considering impact of digital technologies on healthcare delivery, pointed out some of the challenges for education providers including:

- access to appropriate funding
- the difficulty of providing options for Continuing Professional Development (CPD) for digital health that are attractive for a diverse range of users, given that rural doctors choose what education activities they engage in and hence digital health will be competing with other areas of clinical interest

- alignment of digital health CPD with the Curriculum and current CPD framework. ACRRM raised a number of possible initiatives including: setting up a case-based discussion group, specifically for Digital Health, and incorporating digital health capabilities in planned quality improvement modules on performance review and outcome measurement that the College is currently working on
- challenges in consistency when practitioners had access to different IT systems and have different procedures and processes to follow. The College suggested there could be benefit in establishing some standards across the healthcare sector in system design, access, use and terminology
- the College also raised the issue of lack of either access to technology or tech support on the part of members of the Community (patients and carers as well as people who are well)

One College considered that it might be in a position to assist others, given its relatively advanced work in this area. "A working party was formed to develop strengthened Digital Health Competencies for our Curriculum. The strengthened Digital Health Competencies have been approved by the Board and will be incorporated into the Curriculum… We would welcome the opportunity to contribute further to this work and to work collaboratively with other education providers."

Response to Feedback

The challenges cited by ACRRM in improving digital health education for its members and communities were mapped to the Next Steps section to ensure all points were covered. CPD is a particular challenge, and a detailed evidence paper within the Report includes a review of CPD and its role in digital health education.

Digital health is a national health reform supported by the Commonwealth Government, with jurisdictions and education providers across the continuum playing a part. This is because a coordinated national approach reform makes sense, as does proper support and resourcing for change programs.

Some of the experts who work in advanced programs identified as part of this project agreed to undertake case studies. These are included in the current state analysis supporting the framework. The online fora associated with this project provided opportunities for experts to share good practice examples of how to integrate digital health across the continuum of learning in medicine. The AMC will continue to be active in this space, and seeks partners to work on the next stage, in areas such as research and communities of practice. This will afford opportunities to extend connections digital health innovators of varying backgrounds and levels of experience across the medical education continuum. The AMC is also connecting with other organisations such as the NHS in the UK and will seek to leverage lessons learnt internationally which are appropriate to the Australian context.

Appendix 1:
Stakeholder Consultation

As part of this project, a draft of the *Digital Health in Medicine Capability Framework* was available for feedback from various stakeholder groups. Groups invited to participate in this consultation include:

ACT Health

Australasian College for Emergency Medicine

Australasian College of Dermatologists

Australasian College of Sport and Exercise Physicians

Australian & New Zealand Association for Health Professional Educators

Australian and New Zealand College of Anaesthetists

Australian College of Rural and Remote Medicine

Australian Commission on Safety and Quality in Health Care

Australian Government Department of Health

Australian Health Practitioner Regulation Agency

Australian Healthcare & Hospitals Association

Australian Indigenous Doctors' Association

Australian Institute of Digital Health

Australian Medical Association

Australian Medical Association Council of Doctors in Training

Australian Medical Students Association

Australian Nursing & Midwifery Accreditation Council

Australian Private Hospitals Association

Australian Salaried Medical Officers Federation

Bond University, Faculty of Health Sciences and Medicine

Canberra Region Medical Education Council

Coalition of Peaks

College of Intensive Care Medicine of Australia and New Zealand

Confederation of Postgraduate Medical Education Councils

Consumers Health Forum of Australia

COTA Australia

Council of Presidents of Medical Colleges

Curtin University, Faculty of Health Sciences, Curtin School of Medicine

Deakin University, Faculty of Health, School of Medicine

Department for Health and Wellbeing South Australia

Department of Health and Human Services Tasmania

Department of Health and Human Services Victoria

Department of Health Northern Territory Faculty of Pain Medicine ANZCA

Flinders University

Griffith University

Health & Community Services Complaints Commission, NT

Health & Community Services Complaints Commissioner, SA

Health and Disability Services Complaints Office, WA

Health Care Complaints Commission NSW

Health Complaints Commissioner, TAS

Health Complaints Commissioner, VIC

Health Consumer Council Western Australia

Health Consumers Alliance of South Australia

Health Consumers NSW

Health Consumers Queensland

Health Department of Western Australia

Health Issues Centre Victoria

Health Professions Accreditation Collaborative Forum

Health Services Commission, ACT

Healthcare Consumers Association of the ACT Inc.

James Cook University

Leaders in Indigenous Medical Educators

Macquarie University, Faculty of Medicine, Health and Human Sciences

Medical Board of Australia

Medical Deans of Australia and New Zealand

Monash University, Faculty of Medicine, Nursing and Health Sciences

National Aboriginal Community Controlled Health Organisation

National Health Leadership Forum

NSW Health Education and Training Institute

NSW Ministry of Health

NT Prevocational Medical Assurance Services

Office of the Health Ombudsman, QLD

Postgraduate Medical Council of Tasmania

Postgraduate Medical Council of Victoria

Postgraduate Medical Council of Western Australia

Prevocational Medical Accreditation Qld

Queensland Health

Royal Australasian College of Dental Surgeons

Royal Australasian College of Medical Administrators

Royal Australasian College of Physicians

Royal Australasian College of Surgeons

Royal Australian & New Zealand College of Obstetricians & Gynaecologists

Royal Australian and New Zealand College of Psychiatrists

Royal Australian College of General Practitioners

Royal College of Pathologists of Australasia

SA Medical Education & Training

Te Ohu Rata o Aotearoa

The Australian National University

The Congress of Aboriginal and Torres Strait Islander Nurses and Midwives

The Joint Medical Program, The Universities of Newcastle and of New England

The National Association of Aboriginal and Torres Strait Islander Health Workers and Practitioners

The Royal Australian and New Zealand College of Ophthalmologists

The Royal Australian and New Zealand College of Radiologists

The University of Adelaide

The University of Auckland

The University of Melbourne

The University of New South Wales

The University of Notre Dame Australia (Fremantle)

The University of Notre Dame Australia (Sydney)

The University of Queensland

The University of Sydney, Faculty of Medicine and Health, Sydney Medical School

The University of Western Australia

University of Otago

University of Tasmania

University of Wollongong

Western Sydney University