

Allied Health Professionals: the untapped potential in digital health

Position Statement

Health Informatics Society of Australia (HISA)



Produced in partnership with the

Victorian Allied Health Working Group

Allied Health Informatics Position Statement

Allied health professionals have a critical role to play in the planning and delivery of healthcare services. As healthcare enters the digital age, healthcare policy and digital reform efforts must harness the expertise, diversity and reach of the allied health sector to improve health outcomes through digital health technologies. To claim our place at the 'decision making table', allied health professions must lean in and invest in raising the digital health workforce capability across the sector – something we are primed to do.

For too long the unique value of allied health professionals in digital transformation and change leadership programs has been undervalued. It has been undervalued by those in digital health decision-making positions but also by those representing the allied health sector itself. However, after 15+ years of national, state and local digital health transformation efforts, change is afoot and the role for this vital sector is increasingly being recognised.

Much of Australia's digital health reform activity has been focused in the acute sector, with electronic medical records in hospitals; and in the primary care sector, digitalising clinical records of general practitioners. While this important activity continues, the future of reform in healthcare lies with truly patient-centred care, where the provision of health services and the collection of health information will increasingly be centred in non-traditional care settings – the home and the community. With allied health professionals' holistic focus on the individual in the context of their environment, it's time for allied health to have their seat at the decision-making table and on the front line of healthcare innovation through digital health.

Call to Action

Allied health professionals are an untapped potential in digital health. We are uniquely positioned to maximise the benefits achievable from digital health. The time for action is now.

This position statement outlines four recommendations for immediate action.

- 1. Leadership - Create leadership roles in allied health informatics at major hospitals, public and private health services across the healthcare sector**
- 2. Education - Develop informatics education for allied health**
- 3. Teams - Ensure clinical informatics teams include a strong allied health presence to spark further innovation**
- 4. Enable - Allied health informaticians to champion data quality standards, interoperability and information system governance**

Executive Summary

Allied health professionals are the system connectors of healthcare. We are an innovative and versatile group of professionals who help connect the system along each step of the care continuum, from emergency and acute care through to outpatient care, community health and primary prevention. Collectively, we represent up to 27 different disciplines (professions included can vary across States and countries) and 26% or 195,000 of the health workforce in Australia who deliver 200 million health services annually.¹ Despite our size and influence, allied health professionals have limited presence and influence in digital health initiatives.

Allied health professionals are uniquely positioned to maximise the benefits achievable from digital health. Electronic medical records (EMRs) in hospitals and electronic health records (EHRs) in primary care are revolutionising the flow of information within and across health services. Furthermore, wearables, implantable devices, remote health monitoring via mobile phones, big data, artificial intelligence (AI) and social media are providing options for the way in which individuals seek and interact with healthcare services. Adaptability, working in multi-disciplinary teams and a holistic perspective of the individual in the context of their environment are recognised traits of allied health that will give this group of professionals an increasing advantage as health responds to the digital age.

Allied health professionals are an untapped potential in digital health. We need to collectively take the necessary steps to operate within an informatics landscape if digital health is to significantly improve service delivery and ultimately, patient outcomes. As attention shifts from acute treatment and more towards community and prevention-based healthcare delivery, it is critical that the allied health workforce is informatics-ready.

Now is the time for Australia's highly skilled allied health workforce to adopt a coordinated approach to informatics and inspire the next wave of innovative, disruptive solutions. It will require a greater role in decision-making and demonstration of the creativity, knowledge and versatility allied health clinicians bring to healthcare delivery. This is a call to healthcare system administrators and allied health professionals at all levels nationwide. This position statement outlines four recommendations for immediate action.

Recommendations

- 1. Leadership - Create leadership roles in allied health informatics at major hospitals, public and private health services across the healthcare sector**
- 2. Education - Develop informatics education for allied health**
- 3. Teams - Ensure clinical informatics teams include a strong allied health presence to spark further innovation**
- 4. Enable - Allied health informaticians to champion data quality standards, interoperability and information system governance**

¹ Allied Health Professionals Australia <https://ahpa.com.au/allied-health-professions/>

Rationale for position

This position statement is a call to action for all allied health disciplines to advocate for allied health in the digitalisation of health. In order for allied health to have an influential voice in the digital space, we must understand the complexity of what is needed to be prepared. This will involve growing the identity of allied health informatics, investment in skills development and leadership in clinical informatics.

Generally, allied health information captured in the primary care sector resides in separate systems, siloed from the broader health system. There is a limited focus on information requirements for allied health therapies when decisions are made to procure clinical information systems. For many allied health services, the majority of information continues to be collected on paper. Not keeping up with technology in healthcare poses a significant challenge for the timely sharing of information along the patient journey and making decisions based on a holistic view of the patient's medical history. Allied health must be involved in advancing healthcare by moving away from paper and document-centric health information capture, towards more data-driven and technology-enabled information capture and use.

Background

"Allied health" is the term to encompass a diverse range of disciplines. The workforce is typically described by discipline-specific activity which can vary between countries, governments, industry, healthcare setting and training institutions. Within Allied Health Professions Australia's banner (list below) 21 disciplines are included in their membership while the Department of Health Victoria counts 27 disciplines² in its workforce with further variations elsewhere. Notwithstanding the difference in counting, how this highly-skilled clinical resource is used to advance digital health is of greater importance.

Arts Therapy	Osteopathy
Audiology	Perfusion
Chiropractic	Pharmacy
Dietetics	Physiotherapy
Exercise Physiology	Podiatry
Genetic Counselling	Psychology
Music Therapy	Rehabilitation Counselling
Occupational Therapy	Social Work
Optometry	Sonography
Orthoptics	Speech Pathology
Orthotics/Prosthetics	

² <https://www2.health.vic.gov.au/health-workforce/allied-health-workforce/allied-health-professions>

Better use of allied health resources has not been considered as a pragmatic response to a healthcare system under significant strain and financial pressure. As the volume of health knowledge continues to grow and patients and consumers become more engaged and empowered in their own health, so too do the professionals working with them need to engage in digital health. A substantial proportion of healthcare demand is met by the allied health sector and yet their role is often poorly understood, under-utilised and largely overlooked in digital health reform.

Much of Australia's digital health reform activity has focused on the acute sector, with electronic medical records (EMRs) in hospitals; and in the primary care sector, digitalising clinical records in general practice. Consequently, this has given digital health primary focus on the clinical documentation of disease, its management and the information requirements of doctors and nurses within acute care settings. While this important activity needs to continue, other aspects of healthcare reform lie with actual individual-centred care, where the delivery of health services and the collection of health information is centred around the healthcare consumer, based in less traditional care settings – the home and the community.

Talking Mats is a social enterprise whose vision is to improve the lives of people with communication difficulties by increasing their capacity to communicate effectively about things that matter to them.

The innovative Talking Mats communication symbols tool is based on extensive research and designed by Speech and Language Therapists. It uses unique, specially designed picture communication symbols that are attractive to all ages and communication abilities and is used by clinical practitioners, carers and support workers in a wide range of health, social work, residential and education settings. **Why are you doing it?** We recognised the need to develop a tool that would help practitioners to capture the views of their patients/pupils and find out what matters to them. By increasing patient involvement in making the decisions that affect their lives we increase their motivation to succeed <https://www.ehealth.scot/case-studies/talking-mats-nhs-forth-valley/>

In 2011, McKinsey & Company examined the eHealth readiness of Australia's allied health sector. In their report, allied health practitioners were described as critical information and delivery hubs within the health ecosystem whose role and function had been largely overlooked by the eHealth transformation agenda. While this investigation was a number of years ago, the findings continue to be relevant (in itself telling). More recent research by Maunder et al focuses on eHealth readiness of dietitians. This research builds on the McKinsey analysis and other theories and models, providing a framework for assessing the eHealth readiness of dietitians (FeRD). Maunder's framework would be broadly

applicable to all allied health professions even though that has not yet been examined. The dimensions of the FeRD include aptitude, attitude, advocacy, access, and standards.³ The dimensions of Maunder's framework (FeRD) have informed the four recommendations for this position paper.

³ Maunder K, Walton K, Williams P, Ferguson M, Beck E. eHealth readiness of dietitians. Journal of Human Nutrition and Dietetics, 2018 115:43-52, <http://dx.doi.org/10.1111/jhn.12542>

Recommendations

<p>Leadership - Create leadership roles in allied health informatics at major hospitals, public and private health services across the healthcare sector</p> <p><i>to ensure sufficient advocacy for the contributions of this highly skilled workforce</i></p>	<p>Education -Develop informatics education for allied health</p> <p><i>to ensure a sufficient level of aptitude for informatics is developed through investment in education, training and professional development</i></p>	<p>Teams - Ensure clinical informatics teams include a strong allied health presence to spark further innovation</p> <p><i>to ensure a positive attitude is fostered for the benefits of enhanced multidisciplinary collaboration, practice efficiency, continuity of care and quality outcomes</i></p>	<p>Enable - Allied health informaticians to champion data quality standards, interoperability and information system governance</p> <p><i>to ensure standards for data quality and compatibility across systems continue to be addressed together with governance and access to quality information and infrastructure.</i></p>
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1. Leadership -Create leadership roles in allied health informatics at major hospitals, public and private health services across the healthcare sector

Leadership roles in allied health informatics are needed across the healthcare system to ensure sufficient advocacy for the contributions of this highly skilled workforce. Allied health professionals are well placed to lead national digital health initiatives. The breadth and reach of allied health therapy across peoples' healthcare journey positions them to influence transformative change away from hospital-based care.⁴ Recognised as the point of contact and collaboration to advance strategy, allied health leaders can funnel the multitude of innovative ideas from an allied health perspective.

All disciplines of allied health are encouraged to pursue leadership roles in the digitalisation of health. For allied health, the opportunities from digital health extend beyond supporting the health care system. It is also more than joining the informatics leadership bandwagon. Assisted by technology and information, there are significant and unique contributions allied health can make towards health-related behaviour modification and removing barriers to access.

Beyond acceptance and adoption of technology, there is a strategic requirement for knowledge and skills in informatics⁵ that enables allied health professional leaders to influence investment decisions and information system design.⁶ Then operationally, promote innovation, share clinical notes securely, analyse and use data to improve clinical practice and engage with consumers using technology. Given allied health's specialised skills combined with clinical informatics capability,

⁴ NHS England. Allied Health Professions in Action: using allied health professionals to transform health, care and wellbeing. 2016/17-2020/21

⁵ Core principles and methods in health informatics for Australasia (CHIA) and Internationally (IMIA): CHIA - https://www.healthinformaticscertification.com/wp-content/uploads/2016/02/CHIA-competencies-Framework_FINAL.pdf - IMIA framework

<https://imia-medinfo.org/wp/imia-recommendations-bmhi-education/>

⁶ Kanry J, Sengstack P, Thyvalikakath T P, Poikonen, J et al. The Chief Clinical Informatics Officer (CCIO)AMIA Task Force Report on CCIO Knowledge, Education, and Skillset Requirements. Applied Clinical Informatics, March 2016, 7 (1) 143-176 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4817341/>

allied health leaders can advance the shift from cure and treatment to prevention, education, patient-centred, value-based care that targets health literacy, patient empowerment and healthcare outcomes. Allied health professionals are widely distributed across the healthcare sector and well placed to collaborate and support other healthcare professions in achieving this goal.

Allied Health professionals may draw inspiration from Dr Lesley Holdsworth, who is physiotherapy-trained and clinical lead for digital health and care, representing allied health professionals (AHPs), nurses and midwives in Scotland.: ⁷ *“it is important that AHPs have a strong voice in the digital agenda, to reflect the reality of service delivery and what’s right for patients”*. Under her leadership and Scotland’s Digital Health and Care Strategy, allied health professionals are benefiting from her advocacy *“for high-quality services that will focus on prevention, early intervention, supported self-management, day surgery as the norm, and – when hospital stays are required – for people to be discharged as swiftly as it is safe to do so”*.

iPads for secure discharge with amputees – NHS Grampian

Mary Duguid, Occupational Therapist, NHS Grampian tells us about using iPads with secure video conference for discharge planning exercises for amputees going from an acute hospital to their home or community. **Background – What is your project?**

We are using iPads with secure video conference (VC) (Cisco jabber system) for discharge planning exercises to provide both ‘live’ link ups between a patient in hospital and therapist’s in patients’ home to allow discussion on requirements for their discharge and, multi-professional handovers to community hospital therapists to discuss future rehabilitation needs, demonstration of transfers and when appropriate prosthesis or early walking aids. **Why are you doing it?** We are doing it to improve the efficiency and communication associated with the discharge of amputees from an acute hospital to their home or community. <https://www.ehealth.scot/case-studies/ipads-for-secure-discharge-with-amputees-nhs-grampian/>

In Australia, executive level allied health informatics positions are emerging although coverage of the healthcare system is yet to develop. Examples of emergent executive roles include:

- Chief Allied Health Information Officer (CAHIO), Parkville Precinct Melbourne. Part-time role created (0.5 FTE) for the Connecting Care EMR Program to engage all allied health therapy staff across four health services to optimise the design and implementation success of the EMR and associated technologies
- Chief Allied Health Information Officer combined with Executive Director Allied Health role (1 FTE). Provides leadership and governance for Allied Health professionals within Sydney Local Health District (SLHD) including strategic planning and advice on allied health clinical practice, policy and workforce. The CAHIO role provides clinical leadership to allied health and leads allied health SLHD in the strategy, development and implementation of Information and Communication Technology (ICT) and clinical informatics that support Allied Health staff, clinical practice, decision making and clinical applications.
- District Director of Pharmacy and Chief Pharmacy Information Officer (CPIO), strategic leadership and governance for pharmacy across the district, with a dedicated focus on clinical informatics, along with other core pharmacy aspects.

After many years of national, state and local digital health transformation efforts, change is required now to recognise the contributing role of allied health. This is a call for leadership roles in allied health informatics. With executive leadership, a focus on allied health informatics can be driven throughout the healthcare sector.

⁷<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4817341/><https://www.csp.org.uk/news/2018-03-09-lesley-holdsworth-wins-award-pioneering-digital-leadership-scotland>

2. Education - Develop informatics education for allied health

Allied health education programs must equip the future workforce with knowledge and skills to confidently use and harness the power of a digitally-enabled healthcare system. In order for allied health professionals to demonstrate an aptitude for clinical informatics and be regarded as leaders in this domain, we require education, training, and professional development^{8,9}. Equally, position descriptions must explicitly express clinical informatics capabilities as core to working effectively as an allied health professional in a digitally-enabled healthcare system.

From as far back as 2005, a gap between current and required informatics skills for allied health professionals was identified.^{10,11} Fast forward to today (2019) and the literature continues to call for earlier preparation and inclusion of health informatics content and competency across all entry-level clinical health professional university programs. However, tensions currently exist in trying to achieve this. For example, most health and medical tertiary programs are hamstrung to focus on curricula required to satisfy course accreditation requirements. Until peak accrediting bodies for allied health education accreditation and professional registration bodies address clinical informatics as a required area, not a desired one, this will be slow to change.¹² Unfortunately, this leads to what is currently seen in many academic programs, which is a siloed approach to the integration of clinical information competencies (i.e. single modules, ad-hoc demonstration, and sporadic learning activities). Only a few healthcare professional degrees have adopted a systematic approach to including and assessing health informatics.^{13,14} This can be further aided through the promotion of authentic learning activities using actual clinical technologies seen in practice. For instance, developing learning outcomes in clinical informatics through simulation practice, clinical placements and rotations of clinical informaticians and health information management departments. Furthermore, co-designing curricula with industry partners and clinical information system vendors to enable seamless transition from coursework to clinical practice.

This extends to embedding clinical informatics content, skills, and competency assessment into formal continuing professional development requirements. This will help maintain professional registration within the existing workforce, formal and informal workplace training and education, and accelerate micro-credentialing courses in clinical informatics.

⁸ Gray K, Dattakuma A, Maeder A, Butler-Henderson K, Chenery H. Advancing Ehealth education for the clinical health professions. Final Report 2014. Office for Learning and Teaching, Australian Government.

⁹ Fridsma D. Health informatics: a required skill for 21st century clinicians. *British Medical Journal*. July 2018; 362 <https://doi.org/10.1136/bmj.k3043>

¹⁰ Gray K, Dattakuma A, Maeder A, Butler-Henderson K, Chenery H. Advancing Ehealth education for the clinical health professions. Final Report 2014. Office for Learning and Teaching, Australian Government.

¹¹ Williamson D, Toth A and Grain H. Building Health Informatics Capacity for the Allied Health Professional Workforce - Case Studies from the University Sector [online]. In: Wise, Marcus (Editor); Grain, Heather (Editor); Chu, Stephen (Editor). *HIC 2005 and HINZ 2005: Proceedings*. Brunswick East, Vic.: Health Informatics Society of Australia, 2005: [175-180]. Availability: <<https://search.informit-com-au.ezproxy.library.uq.edu.au/documentSummary;dn=993980944706317;res=IELHEA>> ISBN: 0975101358. [cited 18 Oct 18].

¹² Ediripullige S, Brook P, Carati C, Wade VA, Smith AC, Wickramasinghe, Armfield NR. It's important, but not important enough: eHealth as a curriculum priority in medical education in Australia. *Journal Telemedicine and Telecare*, Dec 2018; 24(10):697-702 <https://www.ncbi.nlm.nih.gov/pubmed/30343657>

¹³ Cummings E, Whetto, S and Mather C. Integrating health informatics into Australian higher education health profession curricula. In *Health Professionals Education in the age of clinical information systems, mobile computing and social networks*. 2017. Elsevier pp323-343 DOI: <http://dx.doi.org/10.1016/B978-0-12-805362-1.00016-4>

¹⁴ Gray K, Choo D, Butler-Henderson K, Whetton S, Maeder A. Health informatics and E-health curriculum for clinical health profession degrees. 2015. In *Driving Reform: Digital Health is Everyone's Business*. A. Georgious et al (eds)

A list of academic institutions and training providers currently offering formal education in health informatics, certification, short courses and other resources are available through the Health Informatics Society of Australia (HISA) and Australasian College of Health Informatics (ACHI) websites^{15 16}. An example of a recognised and well-established credentialing program is the 'Certified Health Informatician Australasia (CHIA), a collaboration between HISA, ACHI, and the Health Information Management Association of Australia (HIMAA).

This is a call to action for universities, training providers, healthcare organisations, peak discipline-specific associations, accreditation and registration bodies, and employers of allied health professionals, to incorporate clinical informatics alongside clinical domain areas to underpin allied health informatics leadership in the workforce.

3. Teams - Ensure clinical informatics teams include a strong allied health presence to spark further innovation

Allied health must have a role in the redesign of healthcare enabled by digital health. While the digitalisation of allied healthcare across the care continuum has been achieved in pockets, on the whole, it has been overlooked. We must be involved in digital health initiatives to ensure our insights into innovation and creativity are considered. In our absence, decisions made on our behalf may not be the most effective clinical option or at worst, create a source of potential clinical risk.^{17 18} Digital health builds teamwork, collaboration and shared decision-making. This is already the model within which allied health operate and so the transition to digitally-enabled platforms of care will not be difficult. A positive attitude, inclusiveness and willingness to use digital solutions is necessary to progress advances in allied health practice for the benefit of patient care.

Allied health professionals in Australia have not yet claimed their stake in digital health and risk not being well-prepared for the future of healthcare and miss out on resources to invest in digitally-enabled practice. In part, the issue lies in the lack of measurement that describes the complexities of what allied health does, how care is delivered and what is achieved. Greater involvement in digital health initiatives will help grow allied health's identity and track record in clinical informatics.

Given allied health professionals' holistic focus on individuals in their environments, it's time for allied health to have equal influence at the decision-making table and visible at the front-line of digitally-enabled healthcare innovation. Compared to the NHS, Australia is behind in relation to programs that support all healthcare professionals, including allied health, to innovate using technology. Some examples of allied health led initiatives are displayed as vignettes throughout this paper, with a more extensive list of initiatives available online.¹⁹

While there is some involvement by allied health professionals in clinical system implementations and redesign of clinical workflow, our input can be limited to providing guidance based on policy and the gold standard of practice. Deeper consideration of real-world practice, time pressures and the appropriateness of change by allied health is required. Without sufficient depth and breadth of

¹⁵ <https://www.hisa.org.au/courses/>

¹⁶ <https://www.achi.org.au/education-directory/short-course-providers/>

¹⁷ For instance, consider the impact of food allergy information not visible at the time a dietitian prepares diet plans or meals are delivered to at-risk patients

¹⁸ Maunder K, Walton K, Williams P, Ferguson M, Beck E. Strategic leadership will be essential for dietitian eHealth readiness: A qualitative study exploring dietitian perspectives of eHealth readiness. Nutrition and Dietetics, 2018 DOI: <https://dx.doi.org/10.1111/1747-0080.12434>

¹⁹ <https://www.ehealth.scot/case-studies/>

allied health involvement, those 'hard and fast' rules of a system may be built inappropriately, limit the option to exercise clinical judgement and furthermore, preclude negotiation on the tools and data required to manage the change impact. Establishing multi-disciplinary teams, that include allied health professionals as equal partners allows advanced foresight and reduces the risk of making compromising decisions.

The following example describes an allied health informatics initiative to build a data analytics platform in order to provide insights in allied health practice. Through this insight, the importance of foot health and the role of podiatry was highlighted:

South Eastern Sydney Local Health District, NSW:

1. Developed an interactive, monthly refreshed dashboard linking Allied Health datasets with admission data sets; allowing a visual representation of population pyramids and diagnosis-related groups, along with performance data, time to first treatment, and length of time on allied health caseload. Other districts have since worked collaboratively with SESLHD to enhance this dashboard further, such as nightly extracts, paediatric diagnoses, timeliness of referrals, and heatmap by patient postcode.
2. An enhancement to the dashboard was to develop an interactive, nightly refreshed dashboard connecting patients admitted with a diagnosis relevant to High-Risk Foot disease, and scored appropriately. Matching against all podiatry non-admitted patient units to identify any patients currently known to podiatry anywhere in the district, and noting recency of consultation. This allowed patients to be prioritised, for clinical review and consultation by podiatry services either during their admission or post discharge in the community by. This resulted in an additional 1.0 FTE senior podiatrist being appointed across two sites, providing consultation and discharge referrals. This work underpinned the development of a Diabetes dashboard for endocrinology services, including the addition of pathology and medication data.

As a result of some of these initiatives across Australia, non-executive level allied health informatics positions are beginning to emerge. Examples include:

- Allied Health Performance and Data Analyst, forming part of a district's performance analysis and management team.²⁰
- Allied Health e-Clinician, forming part of a hospital-based health informatics team²¹
- Clinical Informatics Pharmacist, forming part of the ongoing support team for electronic medication management systems

In this next example, an allied health Informatics initiative with a focus on leveraging insights on medications to deliver value to departments, clinicians, and their patients:

eHealth NSW, Innovation Award winner, 2016²²:

As hospital pharmacy information systems were independently managed, the Statewide Hospital Pharmacy Product List (HPPL) was developed. This provided the foundation to allow insights into a yearly volume of 3.6 million dispensing, the value of \$650 million, for 25,000 medications. The analytics system QlikView was leveraged to develop the PharmaLytix solution, which provided the ability to ²³:

²⁰ SESLHD [2014], NSLHD [2017], SLHD [2018], ISLHD [2018/19], NSW Health, have implemented this role

²¹ Royal Prince Alfred, SLHD has implemented this role.

²² eHealth NSW. Honouring our best and brightest with Service Awards. eHealth News. July/August 2016:12.

²³ Tan Manh Do, Penny Webb, Actioning statewide insights into medication usage eHealth NSW https://www.hisa.org.au/wp-content/uploads/sites/11/2016/08/Do_Tan.pdf

- Monitor HIV, hepatitis B and C treatment uptake to ensure policy targets were met, allowing measurement of appropriate use of medicines
- Provide near-real-time stock levels and geographic tracking of medications on the “Life-Saving Drugs Register” (LSDR), allowing clinicians to rapidly locate antivenom and antidotes.
- Monitor purchasing trends to identify cost-savings through substitution of generic medicines and to optimise contract negotiations

Since initial publication, the following enhancements have been implemented:

- Monitoring medication usage trends focused on chemical restraints in mental health patients
 - Centralised stock level management to aid in medication recalls and shortages
- Enabling physician access to monitor rates of opioid prescribing in real time to facilitate the discovery, discussion and modification of excessive and/or inappropriate prescribing. A 60% reduction in inappropriate prescribing was observed after 3 years²⁴

This is a call to action for allied health professionals to be involved in all facets of digital health design including enhancements in workflow to ensure the value of multidisciplinary healthcare is preserved.

4. Enable - Allied health informaticians to champion data quality standards, interoperability and information system governance

There is an opportunity to redesign and scale up the role of allied health professionals to champion data quality standards, interoperability and system governance. Governance groups must include a multidisciplinary team, including allied health, when decisions about functional changes to a clinical system or when future investments are made. The diversity and reach of the allied health sector positions them strongly to guide information system governance.

The specialised nature of each allied health discipline has led to considerable variation in the way allied health is structured, practised and subsequently how vendor solutions have been designed to support them. This fragmentation of vendor solutions limits interoperability and adds insufficient coverage of allied health specialities, interdisciplinary collaboration is made more difficult and; a concern for standards compliance. A case in point is the findings from a 2018 product feature survey of practice management software commonly used by Australian physiotherapists in private practice.²⁵ In that study, 27 software vendors were surveyed, and in relation to interoperability and standards, 36% were Fast Healthcare Interoperability Resources (FHIR) enabled, 57% were MyHealthRecord compliant and 50% had the ability to identify a client’s indigenous status in a way that was compatible with national data standards. These results suggest there continues to be a need to promote the importance of standards for quality data and system interoperability if the goal of integrated care is to be achieved.

While allied health practitioners have widely differing needs for both data access and interface design, integration into coordinated healthcare system-wide initiatives relies on a minimum level of interoperability. Health information systems need to be able to “talk” to each other within and across organisational boundaries and allied health are required to advocate and influence future developments in information systems design in order to play an active role in the future of

²⁴Stevens J, Trimboli A, Samios P, Steele N, Welch S, Thompson P, et al. A sustainable method to reduce postoperative oxycodone discharge prescribing in a metropolitan tertiary referral hospital. *Anaesthesia*. 2019;74(3):292–9.

²⁵ Australian Physiotherapy Association. *Practice Management Software Insight* 2018.

healthcare. A more integrated and holistic approach to system design that aligns to the patient journey across the continuum of care is encouraged.

In time, digital services will not only be the first point of contact with health services, for many consumers, this will be how they choose to engage with healthcare on an ongoing basis.

As in other areas of healthcare, the work of allied health is yet to be well defined or seriously considered in the digital health and informatics governance agenda. Therein lies an opportunity for the advancement of digital health and the future of the allied health professions, as a clinical resource that is yet to be tapped.²⁶

This is a call to action for allied health professionals to insist on the systematic use of agreed standards and the practice of good governance so that the downstream benefits of digital health are optimised and the community can feel secure in a healthcare system that is safe, efficient and of high quality.

Call to Action

Allied health professionals are an untapped potential in digital health. We are uniquely positioned to maximise the benefits achievable from digital health and help individuals and families navigate the complex clinical informatics landscape. The time for action is now:

- 1. Leadership - Create leadership roles in allied health informatics at major hospitals, public and private health services across the healthcare sector**
- 2. Education - Develop informatics education for allied health**
- 3. Teams - Ensure clinical informatics teams include a strong allied health presence to spark further innovation**
- 4. Enable- Allied health informaticians to champion data quality standards, interoperability and information system governance**

²⁶ Philip K. Allied Health: untapped potential in the Australian health system. Australian Health Review, 2015, 39, 244-247
<https://www.publish.csiro.au/ah/pdf/AH14194>