



Australia's National Digital Health Strategy

Framework For Action

How Australia will deliver the benefits of digitally enabled health and care

July 2018 (v1.0)

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Introduction

Australia's National Digital Health Strategy – Safe, Seamless and Secure, evolving health and care to meet the needs of modern Australia – outlines a vision for 2022 focused on an evidence base of benefits prioritising national-level digital health activity which will result in:

- Hospital admissions avoided
- Fewer adverse drug events
- Reduced duplication of medical tests
- Better coordination of care for people with chronic and complex conditions, and
- Better informed treatment decisions.

Achievement of the outcomes in the strategy will depend on continued co-production with patients, consumers and carers – and the governments, healthcare professionals, organisations and industry innovators who serve them. As custodians of the strategy, the Australian Digital Health Agency has co-designed this first edition of the Framework for Action with all Australian governments, and a range of clinical, consumer and industry organisations, building on the findings of the strategy outcome national consultation.

This framework outlines 44 key activities prioritised for delivery between 2018 and 2022 that are necessary to implementing the National Digital Health Strategy and realising the benefits of digitally enabled health and care. Each activity was identified during the national strategy consultation, and further developed following consultation with the organisations and people who have a role in implementing the work over the life of the strategy.

The framework will be a living document that is regularly updated to reflect the continuing progress on the strategy's outcomes. The purpose of the Framework for Action is to:

- Articulate the activities required to deliver on the strategy outcomes, and the roles participants in the digital health ecosystem will play in order to deliver them;
- Promote collaboration and information sharing and provide a holistic view of the various projects, innovations, investments and new ways of working that progress the seven strategic priority areas in the strategy; and
- Be a guide for organisations that are recalibrating their strategies or forward work programs to align to national strategic priorities.

The framework details how the digital health ecosystem is working together to help empower people, and those who care for them, with modern digital services and products. Focusing on these national activities, together we will achieve the outcomes committed to in the strategy and realise the benefits for the healthcare system and the Australian community.

We hope the Framework for Action creates the basis for an ongoing dialogue and is a catalyst for organisations to align to the vision for digitally enabled health and care so that we have a truly national, cohesive and integrated digital health ecosystem.

Principles of the Framework for Action

- 01** The Framework for Action supports the vision, the outcomes and benefits committed to and outlined in the seven strategic priorities of the National Digital Health Strategy.
- 02** Activity choices and the roles of participants are drawn from what the Agency heard during the national strategy consultation, and supported by the Agency's further engagement with the digital health ecosystem – the very people and organisations who will support and help deliver them.
- 03** The framework aligns to strategic national health reform priorities and investments of the states and territories and the Australian Government.
- 04** Activities in the framework leverage national investment, including specifications and standards.
- 05** The framework highlights current and planned activities, and will be used to identify role gaps that will need to be addressed over the life of the strategy.
- 06** The framework will be iteratively developed over the life of the strategy in consultation with stakeholders to reflect the continuing progress in digital health innovation and investment.

Executive summary

Australia's National Digital Health Strategy details a vision, based on an evidence base of benefits, and outlines tangible outcomes that have been committed to by the health ministers from every Australian government. The Framework for Action supports this vision and the outcomes of the seven strategic priorities by articulating the actions and initiatives that are necessary to deliver the benefits of digitally enabled health and care to all Australians.

The framework focuses on the initiatives and programs prioritised for co-development over the life of the strategy, and those that are being implemented or planned by Australian governments, the innovation sector, peak medical bodies, consumer organisations, researchers and others. Subsequent editions of the framework will include updates to the existing content as the national digital health program evolves over time.

The Agency has developed this first edition of the framework through extensive consultation with the Australian community and comprehensive analysis of the evidence. Activity choices and the roles of participants are drawn from what the Agency heard during the national consultation, and supported by the Agency's further engagement with the people and organisations who will have a role in delivering them.

Key health information will be available whenever and wherever it is needed through the successful delivery of a My Health Record for every Australian, unless they choose not to have one, and by providing a data platform that supports clinicians and improves health outcomes by increasing available and relevant content, improving usability and supporting future developments.

Australian governments will invest in and operate in the technical infrastructure required to interact with and protect the integrity of the My Health Record system, and through delivery partners, including Primary Health Networks and local health services, will deliver awareness, education, readiness and change management support to healthcare providers across the healthcare system. Organisations will work together to secure My Health Record information enabling researchers to better understand and respond to public health trends, while preserving trust and respecting people's right to privacy.

Ensuring that health information can be exchanged securely will rely on healthcare providers being able to find each other through a trusted national provider addressing service, and having confidence their message is read at the other end, exactly as intended. Priority actions will include the technology and healthcare industry working towards the adoption of agreed tools, processes and standards to solve the interoperability problems across secure messaging and clinical information systems.

In managing and funding state-operated services, Australian governments will lead local strategies and programs which support national initiatives to enable secure messaging capability. The Agency will lead the development of a roadmap to leverage national infrastructure to improve the experiences of both consumers and clinicians in their daily interactions with the health system.

Enabling the exchange of high quality data with a commonly understood meaning that can be used with confidence will be guided by a national interoperability roadmap that will be co-developed with all participants in the digital health ecosystem and the broader Australian community. It will result in an agreed set of national interoperability specifications and standards, accreditation regimes and procurement requirements, and a range of initiatives needed as a result of engaging the broader population in a discussion about how best to access and benefit from health information.

Australian governments are working to clarify how existing digital health foundation infrastructure services and different streams of government technology relating to health integrate and align, as well as promoting improvements in data quality. In partnership with industry, they will co-design standards and specifications with a focus on ensuring that their clinical and business needs are being supported by their systems, including the need to communicate with other systems, and will conform to standards as part of the evaluation criteria used in procurement processes when upgrading or replacing existing systems.

Better availability and access to prescriptions and medicines information will be delivered through a commitment across all relevant organisations to drive improved quality along the medicine use cycle and reduce unnecessary harm to patients by helping practitioners make better decisions, providing them with patient medicine information and appropriate options and tools to reduce clinical variation. The framework prioritises the co-development of a digital medicines program blueprint to implement digital services and solutions to increase the safety, quality and efficiency of medicines use across health and care.

The software and technology sector is taking a lead role in developing technical solutions that provide paper-optional prescribing, and giving prescribers, pharmacists, care providers and consumers access to real time and best possible medicines information. Australian governments are investing in electronic medications management to support healthcare professionals to prescribe, order, check, reconcile, dispense and record the administration of medicines, and capture a patient's current medicines and allergy information in a structured, coded, standardised and shareable form.

Digitally enabled models of care that improve accessibility, quality, safety and efficiency will be tested through a number of pioneering initiatives addressing priority health reform areas, such as getting the best use of telehealth and improving chronic disease management. Test bed projects will be established assessing new digitally enabled models of care that are instigated and delivered through sustainable and viable partnerships between industry, government and other organisations.

State and territory governments have commenced leading digitally enabled models of care which are being tested at the local level, to support the harmonising and scaling of existing best-practice-based evidence about what works, and what can be integrated into existing clinical workflows.

A workforce confidently using digital health technologies to deliver health and care will be required to address the technology adoption challenge, reflected in the needs expressed during the National Digital Health Strategy consultation process, which calls for supporting the workforce to better adapt to, use and embrace the changes and opportunities created by digital health innovation. This is even more important for the next generation of healthcare providers and patients, who rightly expect digital solutions available in other industries to help improve health and care.

Peak organisations are holding workshops, seminars and training days to provide instruction and promote adoption of digital technology in care settings. Some organisations are using digital tools, including virtual reality, to directly train their workforce. Australian governments are working to design, deliver and evaluate education and training programs to embed digital health into routine clinical practice for clinical, corporate and support staff, including VET, vocational, undergraduate, professional entry and clinical trainees and new graduates.

A thriving digital health industry delivering world class innovation will be led by a digital industry working closely with healthcare practitioners, consumers and the research community. Research and development is a key priority for the technology sector who are focused on responding to the needs of healthcare consumers and the healthcare providers who serve them. Tracking patient journeys, using analytic algorithms to predict hospital service demand, and investing in research partnerships are just some of the ways Australian companies are identifying innovations to support new models of care, designing consumer products and services, and trialling digital interventions to improve personal healthcare and wellbeing.

Australian governments are fostering an environment that supports digital health innovation by creating spaces for exchanging ideas, gaining new insights, and demonstrating how digital technology is contributing to the health system, and looking at the innovations that are on the horizon. States and territories are also partnering with organisations, and supporting small businesses, that are designing products that have high potential for commercialisation.

Better health for all Australians

Safe, seamless, secure



1

Support me in making the right healthcare choices, and provide me with options



2

Help all the people who care for me to understand me, and together, provide safe and personalised care



3

Create an environment where my healthcare providers and I can use and benefit from innovative technologies



4

Preserve my trust in the healthcare system and protect my rights

Delivering the benefits of digitally enabled healthcare together






The framework promotes the ways organisations, including peak health organisations, researchers, healthcare providers, the industry and technology sector and government – the digital health ecosystem – are working together to help empower people, and those who care for them, with modern digital services and products. Some of the key roles of actors in this collaboration are outlined below.

Sector	Participant	Role
Healthcare consumers	<ul style="list-style-type: none"> Individual healthcare consumers, their families and carers Consumer organisations and advocacy groups, including those that represent Aboriginal and Torres Strait Islander communities, culturally and linguistically diverse communities and people with disability 	<ul style="list-style-type: none"> Drive change by expecting that information about their medical history, medications and allergies is recorded securely, accurately and comprehensively Be more empowered and active in their own health and care by engaging with and contributing to their My Health Record, including asking healthcare providers to contribute to sharing and using information in their record Request support from governments in their navigating of the health system and use of the rapidly growing set of digital health solutions, helping them to address the issues of choice, access and safety
Healthcare providers	<ul style="list-style-type: none"> Individual clinicians and health workers Private entities and organisations which provide healthcare Private health insurers Health information workforce and administrators 	<ul style="list-style-type: none"> Be registered and engaged with the My Health Record system, ensuring that viewing and sharing of their patient's health information is a part of standard everyday practice to benefit their patients Ensure that high-quality information is gathered at the point of care, recognising that safety, quality and efficiency have an increasing reliance upon accurate and complete health information Request support from government, industry and researchers through the provision of digital health solutions that can be trusted, and easily used
Industry and technology sector	<ul style="list-style-type: none"> Clinical Information System developers Software developers Secure messaging providers Standards community Health informatics community Entrepreneurs 	<ul style="list-style-type: none"> Integrate digital health products into their platforms, and drive innovation through making use of government-provided platforms, services and standards Ensure that user experience, safety and quality guidelines are considered and applied in partnership with end users Collaborate with governments, industry and healthcare providers to develop health information standards that are fit for purpose, striking the right balance between implementability and intellectual rigour

Sector	Participant	Role
<p>Peak organisations</p>	<ul style="list-style-type: none"> • Clinical peak bodies, health professional colleges and associations • Non-government organisations working for health system improvement 	<ul style="list-style-type: none"> • Co-develop clinical leadership and professional digital health standards and guidelines based on the needs of their members, and their experiences with digital health • Deliver engagement activities, such as face-to-face briefings and attending events to talk with their members about the evidenced-based benefits of digital solutions
<p>Australian Digital Health Agency</p>	<ul style="list-style-type: none"> • The Agency is a statutory authority in the form of a corporate Commonwealth entity. The Agency reports to state and territory health ministers through the COAG Health Council 	<ul style="list-style-type: none"> • Provide the leadership, coordination and delivery of a collaborative approach to utilising technology to support and enhance a clinically safe and connected national health system • Provide the digital health foundations and work with Australian governments to align service planning, policy, funding and digital health initiatives across primary care and private healthcare providers to enable sharing of health information in accordance with privacy principles • Provide open data platforms and services that support and enable innovation by industry, making the barrier to entry for innovators as low as possible. • Drive the development of health information standards and guidance, ensuring that the sharing of data with a common understand of its meaning is enabled
<p>Commonwealth Government</p>	<ul style="list-style-type: none"> • Department of Health • Other federal departments and bodies including the Department of Human Services, the Australian Commission on Safety and Quality in Health Care, Australian Institute of Health and Welfare, Healthdirect Australia and the Digital Transformation Agency 	<ul style="list-style-type: none"> • Promote the adoption and take up of national digital health capability in areas that it has policy, legislation and funding responsibility, such as in primary healthcare, private medical specialists, allied health services, the Pharmaceutical Benefits Scheme, aged care, veterans' care, and defence health services • Share funding commitments to support core national digital health services and maintain specifications and standards for digital health
<p>State and territory governments</p>	<ul style="list-style-type: none"> • State and territory health departments which provide public health and hospital services, manage and monitor state and territory health systems 	<ul style="list-style-type: none"> • Work with the Commonwealth Government and the Australian Digital Health Agency to align service planning, policy, funding and digital health initiatives across primary care and private healthcare providers, and implement policies to enable sharing of health information in accordance with privacy principles • Develop and implement ICT, and work in collaboration with other jurisdictions to leverage cross jurisdictional core ICT systems for seamless sharing of health information • Share funding commitments to support core national digital health services and maintain specifications and standards for digital health through the Intergovernmental Agreement on national digital health

The Roles of Participants Index

This Framework for Action provides a description of the role of participants and an index for each of the seven strategic priority areas of the strategy. The purpose of the index is to broadly assign the role each sector in the digital health ecosystem will need to take in order to deliver the benefits of the strategy and to achieve improved outcomes for consumers and clinicians. The index separates the key roles into five components, and these are defined as follows:

Sector	Participants
Lead 	Dedicate resources and take responsibility for activities by facilitating collaboration and co-design between all relevant stakeholders. Develop effective strategies that result in the practical delivery of improved outcomes for consumers and clinicians. Monitor, evaluate and continuously improve solutions to ensure consumer and clinician expectations are being met.
Partner 	Dedicate resources and play a key role in developing and implementing strategies, in partnership with other organisations, which results in the practical delivery of outcomes for consumers and clinicians.
Support 	Contribute to the co-design of planning and delivering activities and understand and execute their role in implementation to ensure practical delivery of outcomes for consumers and clinicians.
Advocate 	Contribute to the development and implementation of activities by ensuring that the interests of clinicians and consumers are being met. Encourage adoption of solutions that deliver improved outcomes for clinicians and consumers.
Engage 	Become involved where possible, in the planning, design and delivery of activities. Participate in using digital solutions that are designed to improve health outcomes.

National Digital Health Strategy

Priority Activities 2018 - 2022



**MY HEALTH
RECORD**



**SECURE
MESSAGING**



**INTEROPERABILITY
AND DATA
QUALITY**



**MEDICINES
SAFETY**



**ENHANCED MODELS
OF CARE**



**WORKFORCE AND
EDUCATION**



**DRIVING
INNOVATION**

Health information that is available whenever and wherever it is needed

Health information that can be exchanged securely

High-quality data with a commonly understood meaning that can be used with confidence

Better availability and access to prescriptions and medicines information

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

A workforce confidently using digital health technologies to deliver health and care

A thriving digital health industry delivering world-class innovation

My Health Record	Secure Messaging	Interoperability and Data Quality	Medicines Safety	Enhanced Models of Care	Workforce and Education	Driving Innovation
1.1 Realising the benefits of the My Health Record system	2.1 Enable secure exchange of clinical information	3.1. Clinical information exchange through interoperability	4.1 Nationally coordinated digital medicines program	5.1 Test bed and scaling up environments	6.1 Develop capabilities to deliver better health and care outcomes	7.1 Promote inclusiveness and equality of experience
1.1.1 My Health Record Expansion Program	2.1.1 National provider addressing service	3.1.1. National interoperability strategy	4.1.1 Digital medicines program blueprint	5.1.1 Digital health test bed framework	6.1.1 Supporting adoption by the health workforce	7.1.1 Addressing barriers to digital inclusion
1.1.2 Future use of the My Health Record	2.1.2 Standards-based secure messaging capability	3.1.2 Co-design standards and specifications	4.1.2 Electronic prescriptions	5.1.2 Embedding telehealth	6.1.2 Digital health embedded in training	7.1.2 Reliable and affordable connectivity for all Australians
1.1.3 Medical devices in the My Health Record	2.1.3 Nationally coordinated programs	3.1.3 Conformance, compliance and accreditation framework	4.1.3 Bests possible medicines list	5.1.3 End-of-life care	6.1.3 Digital health in national standards and accreditation	7.2 Fuel and accelerate healthcare innovation
1.2 Enable the safe and secure use of My Health Record system data	2.1.4 Improving experience by leveraging national infrastructure	3.1.4 Increasing digital maturity	4.1.4 National medicines data service	5.1.4 Chronic disease management		7.2.1 Innovation showcase
1.2.1 Secure use of My Health Record data	2.2 Make it easy for providers to participate	3.2 National health technology strategy	4.1.5 Medicines information for consumers	5.1.5 Residential aged care		7.2.2 Developer partner program
	2.2.1 National authentication and identification services	3.2.1 National health technology strategy	4.1.6 Medicines decision support tools	5.1.6 Children's Health Record		7.2.3 Digital health services endorsement framework
		3.3 Promote data quality	4.1.7 Enhance incident reporting capabilities	5.1.7 Emergency care		7.2.4 Health innovation exchange
		3.3.1 Enhance national data services	4.1.8 National Allergy Strategy			7.2.5 Partnerships with accelerators and incubators
		3.3.2 National health data governance	4.1.9 Real-time prescription monitoring			7.2.6 Development of design principles
						7.2.7 Support for app enablement

1. My Health Record

Health information that is available whenever and wherever it is needed

01 Every Australian will have a My Health Record, unless they choose not to have one, by the end of 2018.

02 All healthcare providers will be able to contribute to and use health information in the My Health Record on behalf of their patients, providing potentially lifesaving access to reports on their medications, allergies, laboratory tests and chronic conditions, and supporting significant improvements in the safety, quality and efficiency of healthcare for the benefit of individuals, the healthcare system and the economy.

03 All Australians will be able to access their information at any time online and through mobile apps.

**WHAT
WILL BE
DELIVERED
BY 2022**

Health information that is available whenever and wherever it is needed

My Health Record is an electronic summary of an individual's key health information, drawn from their existing records and designed to be integrated into the systems of the healthcare practitioners who are treating them. In May 2017, the Australian Government announced that the My Health Record would transition to an opt-out participation model. The decision means that by the end of 2018, every Australian will have a My Health Record unless they choose not to.

The National Digital Health Strategy details evidence of the economic and health benefits that will be accelerated under the new participation model.

To achieve the outcomes of this priority area, and to ensure the My Health Record becomes an unprecedented platform for innovation, a high degree of coordination and integration will need to be achieved across the digital health ecosystem, ensuring:

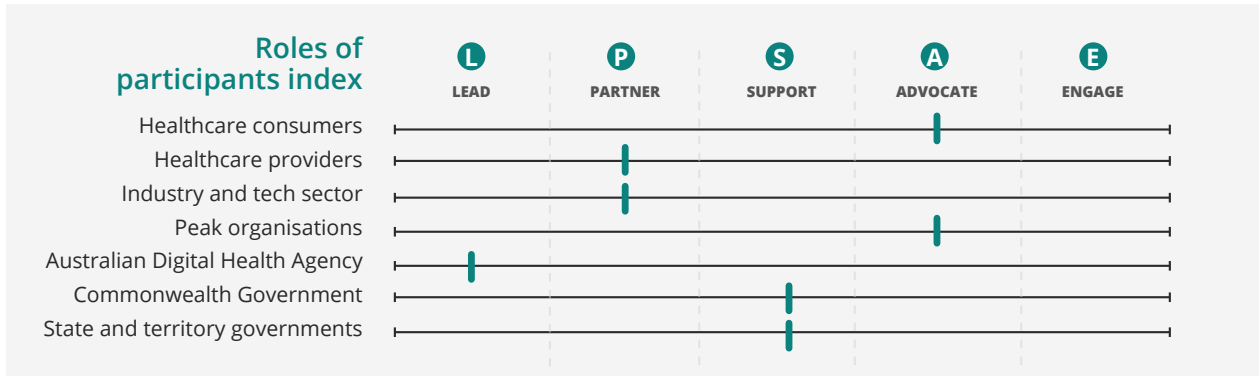
- Consumers can opt-out efficiently or have a record created
- Consumers can participate with a high quality of service
- Healthcare providers have the required My Health Record functionality and are adequately educated and trained to meet consumer expectations
- National infrastructure is robust, stable and scalable.

The benefits for Australians and the Australian healthcare system are:

- ✓ National opt-out will provide a transformative opportunity to support healthcare integration and deliver significant improvements in both the quality and efficiency of healthcare.
- ✓ Lives and money will be saved, with safer medicines management, better coordinated care and informed treatment decisions.
- ✓ There will be a more efficient health system (e.g. less time searching for patient data, reduced avoidable hospitalisations and tests).
- ✓ Patients will be put at the centre of their healthcare, so they can take greater responsibility for their own health.
- ✓ Data analytics will enable innovation and health service planning that will lead to more sustainable resourcing and new evidence-based clinical approaches.

Health information that is available whenever and wherever it is needed

Roles of participants in order to achieve benefits



Healthcare consumers	Drive provider adoption by discussing the My Health Record with their healthcare providers. Be empowered and active in their own health and care by engaging with and contributing to their My Health Record.
Healthcare providers	View and contribute to the My Health Record on behalf of their patients. Ensure they have the technical functionality and adequate training required to meet consumer expectations of use. Operate and invest in the technical infrastructure required to interact with the My Health Record system.
Industry and technology sector	Deliver connectivity to the My Health Record, and operate and enhance the technical infrastructure required to support its use. Ensure healthcare providers have the required My Health Record technical functionality to enable adoption and usage. Design innovative products and digital solutions which are intuitive and easy to use, ensuring consumers and clinicians are able to access their benefits.
Peak organisations	Participate in provider readiness activities to develop clinical policies and guidelines, education and training and communications collateral for members aimed at driving adoption of the My Health Record to benefit healthcare consumers.
Australian Digital Health Agency	Lead the My Health Record Expansion Program, including developing communications material and facilitating provider readiness activities. Operate and continue to enhance core services to support the My Health Record system, and ensure it supports the delivery of safe, efficient, and better quality healthcare as new technologies emerge. Responsible for the security and privacy of the My Health Record system, ensuring the system complies with the Australian Government requirements for storing and processing protected information.
Commonwealth Government	Provide the funding and regulatory framework for operation and evolution of the My Health Record system. Primary Health Networks to engage with healthcare consumers, healthcare providers, industry and tech sector, and peak organisations to increase awareness of the My Health Record. Engage, co-design, deliver and support National opt-out solutions for hard to service groups, and lead the work to implement a secondary use framework for My Health Record system data.
State and territory governments	View and contribute to the My Health Record on behalf of their patients. Provide awareness materials to support frontline staff in the public healthcare system. Operate the technical infrastructure required to interact with the My Health Record system.

Health information that is available whenever and wherever it is needed

My Health Record

Priority actions for co-development 2018-2022

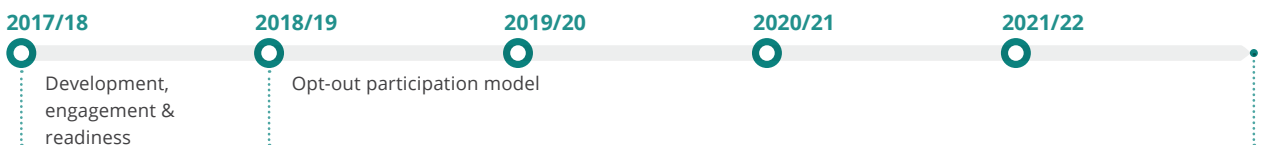
1.1

Realising the benefits of the My Health Record system

Accelerate the realisation of benefits of the My Health Record system through the delivery of an opt-out participation model that is actively supported and adopted by the community and those that care for them

1.1.1. My Health Record Expansion Program

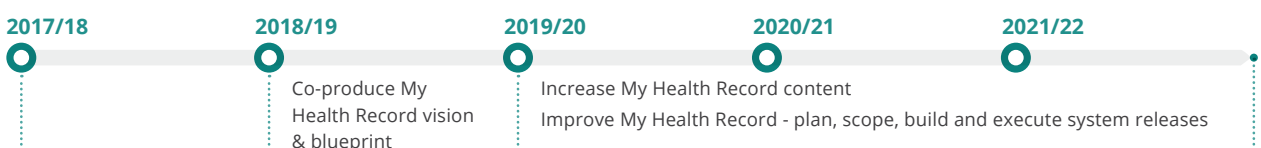
Deliver opt-out participation arrangements nationally for the My Health Record system



By December 2018, the Australian Government will provide a My Health Record for every Australian unless they choose not to have one. The My Health Record Expansion Program will accelerate the realisation of benefits of the My Health Record system through the delivery of a national opt-out model that is actively supported and adopted by the community and those that care for them. The program will include the Agency coordinating a national communications strategy to inform individuals and healthcare providers of the automatic creation of the My Health Record, partnering with delivery partners such as Primary Health Networks (PHNs) and consumer peak organisations that will distribute communication materials and resources to the communities they represent.

1.1.2. Future use of the My Health Record

Making the My Health Record an unprecedented platform for innovation



The My Health Record provides a data platform that will foster and support digital innovation, assisting consumers to self manage their own health and well being, as well as leading to the development of digital health solutions that support clinicians to care for patients and improve

Health information that is available whenever and wherever it is needed

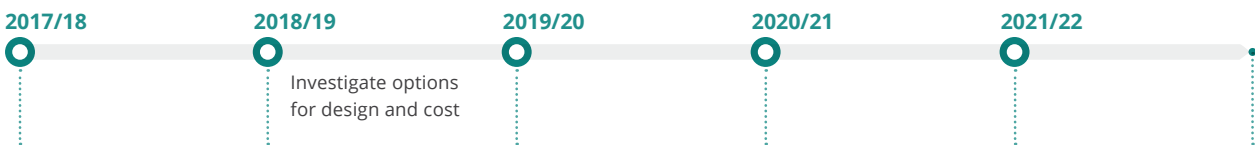
patient safety. The My Health Record will be continuously improved, with scoping, building, testing and executing system releases planned over the life of the strategy to provide additional functionality and health information that benefits clinicians and consumers. Key actions to support innovation include:

- Co-production with the broader sector of a My Health Record vision and blueprint
- Increasing the capture of available and relevant information in the system, including pathology and diagnostic imaging results, medicines profile, and medical device information, as well as improving the consistency and usability of medical reports
- Improving the usability of Clinical Information Systems to ensure the My Health Record integrates more intuitively, based on the development of an evidence-based design research framework.

These actions will be key enablers for new digital apps and tools that support Australians to improve their health, as well as support advances in precision medicine, supported by developments in genomics and other technologies that allow diseases to be treated, predicted or prevented more effectively.

1.1.3. Medical devices in the My Health Record

Use the My Health Record to improve medical device information for patients and healthcare practitioners



To improve the nature of information for patients with regard to medical devices, from 1 December 2018 the Therapeutic Goods Administration is requiring that manufacturers of new permanently implantable devices will need to provide an implant card and an information leaflet to patients. However, there are concerns that these cards could be misplaced or damaged over time. To address this issue, there is an option for the My Health Record to be used to store medical device information digitally to ensure this important information is not lost. Storing a minimum set of information (brand, model, serial number) will also support the function to be able to identify patients with a particular device in the event that a recall is needed.

Health information that is available whenever and wherever it is needed

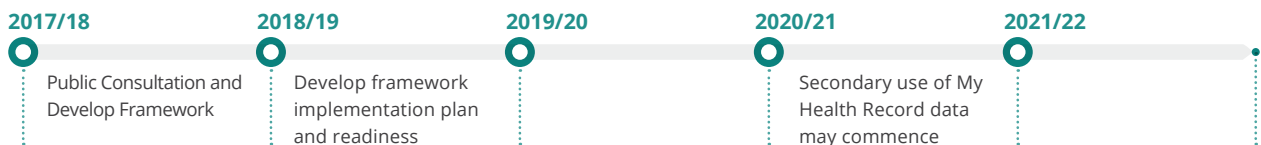
1.2

Enable the safe and secure use of My Health Record system data

Enable use of My Health Record system data to improve population health outcomes, health service planning, and research

1.2.1. Secure use of My Health Record data

Implement a framework to enable the safe and secure use of My Health Record system data



The use of My Health Record system data for research, policy and planning purposes can improve the Australian health system by making it more efficient, effective and sustainable. A framework to guide the secondary use of My Health Record system data has been developed that reflects Australians’ expectations about how the system information should, or could, be used. An implementation working group will be established to oversee the development of an implementation plan. Data will not immediately flow from My Health Record; the Australian Institute of Health and Welfare will consult with stakeholders on planned ethics and approvals processes to ensure protection of individuals’ privacy. The release of data is expected to commence from 2020, subject to the finalisation of an implementation plan and establishment of the framework’s governance arrangements.



Health information that is available whenever and wherever it is needed

My Health Record

Actions across Australia

As part of co-producing the Framework for Action, the Australian Digital Health Agency asked organisations across the digital health ecosystem to tell us the projects, innovations, investments and new ways of working they are working on that will progress the seven strategic priorities in the strategy. Below is a summary of some of the actions organisations told us are already underway to ensure **health information is available whenever and wherever it is needed**.

▶ YOUR HEALTH IN YOUR HANDS



Every Australian will be given a My Health Record, unless they choose not to have one, by the end of 2018. Healthcare organisations, governments, and industry are working together to ensure all Australians have the opportunity to benefit from the My Health Record.

The expansion of the My Health Record is supported by states and territories across Australia, and all states and territories are driving to increase connections to My Health Record across their healthcare facilities. Acute care coverage in My Health Record is a particular focus, as well as uploading pathology and diagnostic imaging reports, which will considerably enhance the clinical value of My Health Record.

ACT Health is developing a communication and engagement strategy to drive awareness and knowledge of the My Health Record and increase viewing by health practitioners across all ACT Health facilities, and **NSW Health** is continuing its program of further integrations, enhancements and information sharing. **Queensland Health** has ensured its hospitals can send discharge summaries to a patient's My Health Record if the patient has registered with the national system. Queensland Health's Viewer application, which provides healthcare providers with read-only web-based access to consolidated clinical information, sources its information from a number of systems, including the My Health Record system.

The **Northern Territory Department of Health** is funding the Core Clinical Systems Renewal Program (CCSRP) to replace four existing clinical information systems that are between 15 and 25 years old and are beyond end-of-life. The CCSRP will create a jurisdiction-wide single integrated client-centric health electronic record system for NT Health, allowing better connectivity between NT Health records and the My Health Record system. **WA Health** is continuing to connect metropolitan and country regions to the My Health Record system, which



→ YOUR HEALTH IN YOUR HANDS

has seen all of their healthcare services that have inpatient beds connected, as well as a number of remote clinics, community health sites and nursing posts.

SA Health is finalising the strategy for viewing the My Health Record across healthcare facilities in the state, and the **Victorian Department of Health and Human Services** is committing to increase the number of hospitals contributing to the My Health Record. **The Tasmanian Department of Health and Human Services** is expanding connectivity to include all public hospitals by late 2018. The Tasmanian Health Service is introducing My Health Record viewing through the state-wide Digital Medical Record solution and increasing uploading capability to support pathology and diagnostic reports.

Leading healthcare companies and peak organisations are also taking action to prepare for the expansion of the My Health Record system. **Primary Health Care's** pathology division is heavily engaged with the Agency, having signed a contract to deliver connectivity to My Health record of reports from their laboratories. Pathology teams have formulated draft education plans for all personnel within the businesses who will be affected and a national program to revise their many request forms to accommodate the opt-out notice requirement is well advanced.

The **Pharmacy Guild of Australia** is also working with the Australian Digital Health Agency to increase clinical use of the My Health Record System through building community pharmacy capabilities. This initiative will mean consumers will be able to use their My Health Record when processing their prescriptions, giving pharmacists more options to use their expertise and provide an extra layer of medications safety and remove paper from the process.

The **Aboriginal Health Council of SA (AHCSA)** will be working with the Australian Digital Health Agency on preparing SA Aboriginal Community Controlled Health Services (ACCHSs) and their Communities for the expansion and opt-out process.

In order for clinicians to make use of My Health Record in their daily workflows, the **Royal Australian College of General Practitioners** and the **Australian Association of Practice Management** have education packages and information to increase awareness of the My Health Record, expansion. This information will help practice managers registering patients for My Health Record and GPs to understand how the My Health Record will enhance their day-to-day work.

Australia's **Primary Health Networks** are also strong advocates of My Health Record, working with their stakeholders to increase My Health Record awareness by developing communication and engagement strategies to drive awareness and knowledge of the My Health Record. The **Australian Primary Health Care Nurses Association** is encouraging uptake of My Health Record for patients to assist with chronic disease management.

The **Pharmaceutical Society of Australia** has e-learning modules focusing on the My Health Record for pharmacists. These modules outline the role of the My Health Record system in e-medication management and how My Health Record will be incorporated in the workplace, including a module on responding to patient privacy concerns with My Health Record and medicines reconciliation. It also includes the workplace dispensing information functionality and clinical implications of inaccuracies in dispensing records uploaded to a patient's My Health Record.

▶ BETTER HEALTH OUTCOMES THROUGH MY HEALTH RECORD



The My Health Record system will deliver better health outcomes for patients and their treating doctors and specialists. My Health Record data will support health policy experts to better forecast emerging health trends and develop better health strategies to benefit Australians patients.

My Health Record data is stored in Australia, and protected by high grade security protocols to detect and mitigate against external threats. The system is tested frequently to ensure that these mechanisms are robust and working as designed.

To inform how My Health Record data can be used and protected for public health and research purposes, the **Australian Government** has developed a framework in consultation with consumers, clinicians, medical researchers, industry experts, privacy advocates and the Office of the Australian Information Commissioner. To respect people's rights to privacy, individual consumers who have a My Health Record will be able to opt out of the use of their My Health record system data for secondary purposes.

The **Australian Institute of Health and Welfare (AIHW)** will be appointed as the organisation to manage and release datasets for the My Health Record. This role for the AIHW aligns with their strategic goals and their 30 years of experience as a leader in health and welfare data and experts in value-added analyses.

▶ FURTHERING CONSUMER ENGAGEMENT WITH MY HEALTH RECORD



The My Health Record will be an unprecedented platform for innovation in the provision of digital apps and tools that will support Australians and their health providers to improve health and wellbeing. Technology companies are delivering consumer friendly devices, apps and services to help consumers to manage their health and care needs.

Technology company **Haulta** has developed Wanngi, a mobile app for consumers that connects to My Health Record. **iDataMap Pty Ltd** is integrating My Health Record into their RadCard HealthCare System, which securely carries and displays personal health data and records including diagnostic quality medical images. **Backbeach Software** is developing an easy-to-use medical record viewer for consumers and clinicians.

Best Practice's patient app Best Health will provide consumers with timely access to their health information, and provide a secure communication mechanism between them and healthcare provider. The app will also offer access to current and relevant healthcare education materials.



→ FURTHERING CONSUMER ENGAGEMENT WITH MY HEALTH RECORD

Australia leads the world in research of the eye disease macular degeneration that affects a significant number of Australians over 50. IT company **Toukanlabs** has developed an ophthalmology specific system that monitors and analyses patient trials to help reduce or prevent macular degeneration blindness in Australians and is exploring having the data collected integrated with the My Health Record.

Technology companies are working towards systems to assist in privacy and consent of data collected. **Axonium's** Anonymous Patient Consent allows ethical secondary use of health information by offering patient's the opportunity to consent for the non-primary use of their data, available for research and development and other interests like Health Data Consumers for secondary use.

Digital healthcare startup **TYDE**, which has an app that connects with the My Health Record, also has an initiative to preserve trust, privacy and enabling the secure use of My Health Record and health information more broadly by implementing UMA 2.0 and Open ID Connect, as well as running an promotional and educational campaign regarding privacy and consent to help raise awareness.

Public advocacy organisation **Future Wise** addresses the privacy implications of health technology, and runs an ongoing program of advocating for digital health technology that will support clinicians while maintaining the highest standards of patient confidentiality.

2. Secure Messaging

Health information that can be exchanged securely

01

Every healthcare provider will have the ability to communicate with other professionals and their patients via secure digital channels if they so choose. This will end dependence on paper-based correspondence and the fax machine or post.

02

From within their chosen system, healthcare providers will be able to search for other healthcare providers in a single directory, and easily and securely share clinical correspondence.

03

Patients will be able to communicate with their healthcare providers using these digital channels.

04

Patients' health data will be safeguarded and able to be shared securely at their discretion. They will spend less time having to retell their story, and their healthcare providers will be able to work together more effectively to provide coordinated care.

**WHAT
WILL BE
DELIVERED
BY 2022**

Health information that can be exchanged securely

The purpose of the activities under this priority area is to enable health and care providers across primary, community, secondary care, aged care, and ancillary services to easily find each other online and securely exchange clinical information.

Reliable, secure provider-to-provider communication is a key component of digitally enabled integrated and coordinated care across the Australian health sector.

Secure messaging is a foundational capability enabling interoperability and safe, seamless, secure information sharing between healthcare providers.

Healthcare providers want confidence that their electronic message will be sent securely, then received, viewed and acted upon.

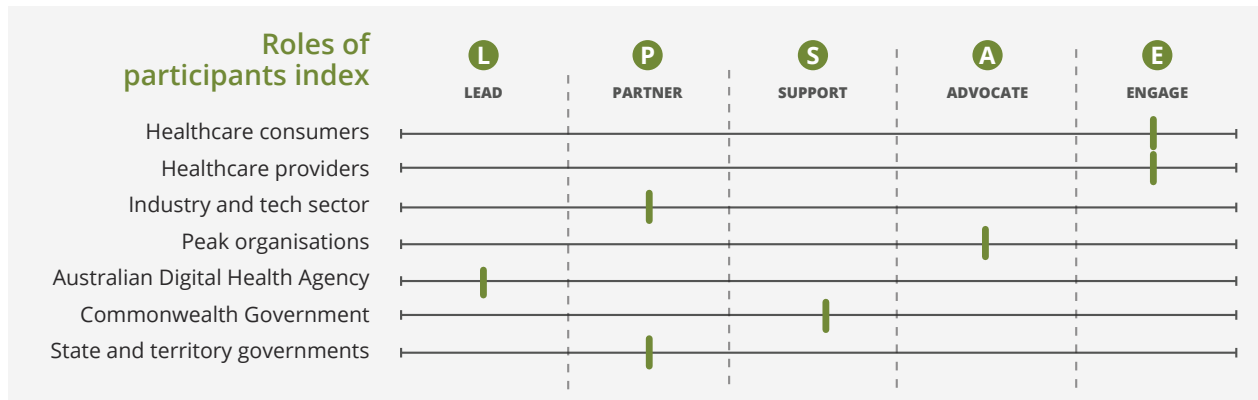
The Australian Digital Health Agency's Secure Messaging Program is working collaboratively with industry, state and territory governments, suppliers of secure messaging solutions and clinical software vendors to reduce existing barriers to adoption and provide pragmatic and implementable solutions.

The benefits for Australians and the Australian healthcare system are:

- ✓ Providers will have access to more complete patient information that will improve clinical decision making.
- ✓ Consumers will have increased confidence that clinicians are informed when making clinical decisions.
- ✓ There will be reductions in administration and processing time as well as a reduction in paper handling.
- ✓ There will be savings from reduced costs.

Health information that can be exchanged securely

Roles of participants in order to achieve benefits



Healthcare consumers	Drive market interest by expecting their healthcare providers to be able to communicate with their care providers securely and seamlessly. Be engaged to identify where digital communications could add most value to their health and care experiences.
Healthcare providers	Inform and validate user requirements and experience to ensure the development of a fit-for-purpose secure messaging infrastructure that supports local healthcare provider needs. Participate in implementation activity as senders and receivers of clinical correspondence and continue to inform their priorities and requirements for electronic clinical information.
Industry and technology sector	Co-design and co-develop national infrastructure ensuring adoption of technical standards, governance, data lifecycle management and operations. Co-development of profiles and specifications and partnering in implementation projects as suppliers of electronic medical record, clinical information and secure messaging solutions used by clinical care providers across the sector.
Peak organisations	Participate in providing clinical expertise and leadership on behalf of their members to support the development and adoption of standards and guidelines.
Australian Digital Health Agency	Lead the secure messaging project in collaboration with industry and the health sector which is overseen by a steering committee with wide representation, including clinical leadership, ensuring the development of appropriate development standards and adoption guidelines.
Commonwealth Government	Review policies and legislation to support the appropriate use of national infrastructure and the provision of health provider information appropriately and securely through that infrastructure. Lead the development of national identification and authentication to provide streamlined channels for government-provided services, addressing legislative and policy changes as required.
State and territory governments	Co-design and co-develop national infrastructure ensuring adoption of technical standards, governance, data lifecycle management and operations. In managing and funding services, lead local strategies and programs that leverage and support national initiatives to enable secure messaging capability. Inform and validate technical and business requirements and ensure the availability of fit-for-purpose and usable infrastructure in line with jurisdictional needs.

Secure Messaging

Priority actions for co-development 2018-2022

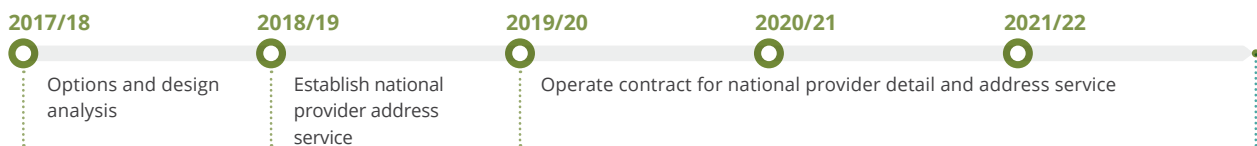
2.1

Enable secure exchange of clinical information

Enable health and care providers across primary, community, secondary care, aged care, and ancillary services to easily find each other and securely exchange clinical information.

2.1.1. National provider addressing service

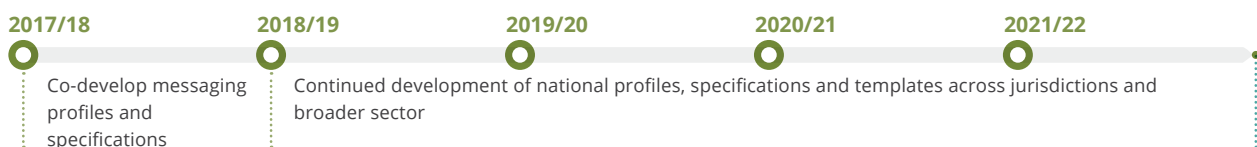
Establish a national provider addressing service



A key challenge to achieving a standardised approach to secure messaging is the existence of multiple health service directories and the lack of confidence in completeness and currency of data in these directories and addressing services. That is why a national provider addressing service will be established, building on the design work already undertaken. A key first step is progressing requirements and options analysis, and confirming the scope of this service co-designed with states and territories and industry stakeholders.

2.1.2. Standards-based secure messaging capability

Integrating standards-based secure messaging capability

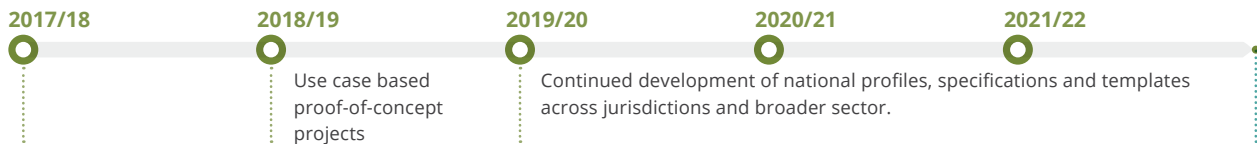


In Australia, there is established use of secure messaging using a range of different electronic communication methods. These different methods are generally not compatible – meaning that these proprietary secure messaging approaches do not work with each other. There is a need to seamlessly integrate standards-based secure messaging capability using national infrastructure services, facilitating a co-design approach within primary, specialist, and allied health clinical information systems, and jurisdiction clinical and administrative systems.

Health information that can be exchanged securely

2.1.3. Nationally coordinated programs

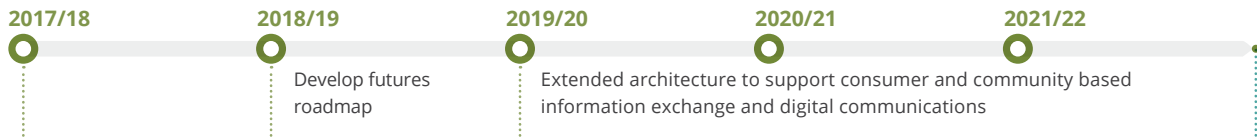
Continuing nationally coordinated adoption and implementation



The set of information in a message, and how it is displayed, is not currently standardised, hindering confidence in the reliability of secure messaging capability. Nationally coordinated programs will continue to develop and refine specifications and national reference architectures, co-produce implementation profiles with vendors and demonstrator health services, and drive national adoption and use for priority usage patterns, including discharge summary, referrals, specialist and allied health reports (e.g. including specialist to specialist and psychologist to general practitioner correspondence).

2.1.4. Improving experience by leveraging national infrastructure

Improving the consumer and clinician experience by co-producing a roadmap for leveraging national infrastructure



The digital health national infrastructure has the potential to support a number of usage patterns that benefit the healthcare experiences of consumers and clinicians. To achieve this, there needs to be a comprehensive market scan of available solutions and co-production of a roadmap outlining how national infrastructure services will be further enhanced and leveraged to support potential new usage patterns. For example:

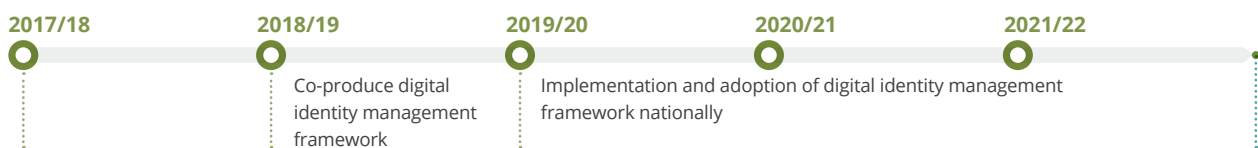
- National protocol for transferring diagnostic images, and accessing historic images
- Electronic prescribing [see Medicines Safety priority area 4.1.2]
- Unstructured secure email
- Healthcare provider-to-provider record transfer
- Enabling consumer and community access to clinical information
- Providing consumers health information and transparent information on comparative costs of treatment and service provider quality
- Online consultations supported by smart forms
- Healthcare provider-to-consumer messaging
- Healthcare provider-to-provider instant messaging
- E-requesting for diagnostics
- Enabling consumers who receive a referral to choose their health service provider and book an appointment
- Ensuring freely available, accurate and up-to-date health service and provider information for the public and healthcare providers by enhancing the National Health Services Directory

2.2 Make it easy for providers to participate

Streamlined registration processes and user friendly national infrastructure services

2.2.1. National Authentication and Identification Services

Enhancing authentication and identification services to support secure messaging



Throughout the consultation, healthcare providers raised the difficulty they have using existing national foundations, including registration, renewal of Public Key Infrastructure (PKI) certificates, and identifier match rates. Existing national authentication and identification services will be enhanced, and existing specifications developed to support secure messaging and future usage patterns. This will involve the co-production of an integrated digital identity framework, using the Digital Transformation Agency identity and authentication framework and services, for health and care provider individuals and organisations that can be used to access a variety of private sector and government sector digital services. This will include clinical services, Medicare services, secure messaging services and the My Health Record system.

Secure Messaging

Actions across Australia

Below is a summary of some of the actions government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway to ensure **health information can be exchanged securely**.

▶ ENSURING HEALTH CARE PROFESSIONALS CAN EASILY FIND EACH OTHER



Healthcare professionals should be able to seamlessly search for other healthcare professionals in a single directory, within their chosen system, so they can work together more effectively to provide coordinated care.

ACT Health is working on improving the ACT Provider Index, which aims to be a single source of health provider information for the ACT. **The Department of Health in Western Australia** is establishing a contract panel of vendors able to provide secure messaging services across the health system to support the exchange of patient information in a secure manner within the WA health system and enable comprehensive coverage of health providers with which the WA health system wishes to interact.

eHealth NSW operates HealtheNet, which is a central clinical repository providing a statewide view of clinical history and seamless information sharing between hospitals, community health, GPs, patients and private clinicians. HealtheNet information includes patient demographics and identifiers, e-discharge summaries from local health districts (including alerts, allergies and adverse reactions), inpatient and outpatient encounter listings and more.

Queensland Health is implementing the initiatives outlined in the Specialist Outpatient Strategy, including a statewide service directory to provide GPs access to an online statewide directory of public hospital services to better inform and direct their referrals, and online booking to provide patients the ability to manage their specialist appointments online through the establishment of a patient portal.

Healthdirect's service finder provides consumer access to the health service providers listed in the National Health Services Directory (NHSD) and provides detailed information about the services provided.



→ ENSURING HEALTH CARE PROFESSIONALS CAN EASILY FIND EACH OTHER

To bring it all together to ensure healthcare providers can find each other using a single directory, the **Australian Digital Health Agency** is developing an addressing service with input from industry and state and territory stakeholders. This service has been designed in accordance with the National Digital Health Strategy to ensure that a seamless capability is available for users to find the provider they want to send information to, and their electronic address, regardless of the software used at the facility. This will provide a trusted view of provider details and their electronic address to send information to.

▶ STANDARDS-BASED SECURE MESSAGING CAPABILITY USING NATIONAL INFRASTRUCTURE SERVICES

In Australia, there is established use of secure messaging using a range of different electronic communication methods, but these different methods are generally not compatible.

The technology industry is working towards adoption of agreed compliant messaging standards, conformance at the receiving ends, and a federated approach to directories. This will make health communications more seamless and safe. It will also make it easier for industry to innovate in this area, as digital foundations will be in place, and will ensure that clinical messages are able to traverse different underlying networks and arrive intact at the intended destination, reading exactly as the sender intended.

In a move to provide secure messaging in real world projects, the Agency is working with two major industry consortia. The **Telstra Health** consortium includes clinical software providers **CorePlus**, **Genie Solutions** and **Zedmed**, along with secure messaging vendors **Global Health** and **HealthLink** who are testing the delivery of discharge summaries from Royal Melbourne Hospital to a number of GPs. The HealthLink consortium includes **MedicalDirector**, **Best Practice** and **Genie**, supported by Global Health and Telstra Health who are testing the delivery of referrals from GPs to specialists.

In addition, the consortia have developed a federated search capability that will enable transparent searching of provider directories and care provider electronic addresses on different underlying networks. As a result, clinicians will be able to look up and contact other clinicians across Australia from a single search, greatly improving convenience and efficiency.



→ STANDARDS-BASED SECURE MESSAGING CAPABILITY USING NATIONAL INFRASTRUCTURE SERVICES

The Australian Digital Health Agency will continue the secure messaging project, which is being run in collaboration with industry and overseen by a steering committee with wide representation, including clinical leadership. A range of clinical professions are represented on the steering committee, including the **Australian Dental Association**.

The **Victorian Department of Health and Human Services** and the Australian Digital Health Agency have jointly funded the Victorian eReferral Program to implement a solution that enables the exchange of electronic referrals between different healthcare service providers within the Eastern Melbourne region, regardless of the primary clinical information system currently in use. This project will help general practice and health services streamline their referral processes. The **Hunter, New England and Central Coast PHN** has implemented e-referrals underpinned by agreed care pathways that support community practice. This solution supports e-referrals from hospitals to GPs and across regional care providers. In addition, **Queensland Health** have established an e-referrals program to enable electronic health information exchange to support the transfer of patients from one service to another.

MedConnects' Clinical Contextual Display provides current patient information, including real time data into a whole-of-patient context in a single expandable screen. The system allows all healthcare participants, including all nurses, doctors, patients to contribute to the clinical data and context and the handing over of all aspects of patient care in a concise manner.

Royal Australian and New Zealand College of Radiologists has a roadmap towards developing and deploying the architecture and platform to support image sharing by clinicians across different health providers.

Complementary to the Agency's focus on a standardised secure messaging capability, the **Health Informatics Society of Australia (HISA)** will tackle socio-technical aspects. Outputs include driving communication and exchange of information using secure digital channels through a highly engaged cybersecurity community of practice developing case scenarios of cybersecurity practice, as well as a 2018 snapshot of cybersecurity in the Australian healthcare system (compared to 2017 findings), and the release of an update to HISA's publication *Australian Guidelines for the Protection of Health Information*.

The Australian Government is investing in key platforms and technology to improve people's experiences of government services online. The **Digital Transformation Agency** has oversight of Govpass, a digital identity system that will provide a simple, safe and secure choice for people to verify who they are and to access government services online. Over 2018 and 2019, 8 high-volume government services will be piloted using a digital identity, giving more than 500,000 people the opportunity to test the system. The Australian Government is also investigating opportunities where blockchain could add value and make the access and exchange of information across service providers more transparent, trusted, reliable, and easy to use. This could provide a beneficial digital identifications solution, underpinned by common standards, for both public and private healthcare providers.

3. Interoperability and Data Quality

High-quality data with a commonly understood meaning that can be used with confidence

- 01** A public consultation on draft interoperability standards, leading to an agreed vision and roadmap for implementation of interoperability between all public and private health and care services in Australia will be completed in 2018.
- 02** Base-level requirements for using digital technology when providing care in Australia agreed with governments, peak clinical bodies and other key stakeholders.
- 03** Health services will be able to assess their level of digital maturity (the extent to which they are supported by the effective use of digital technology) and be supported in improving their level of digital maturity.
- 04** Improvements in data quality and interoperability through the adoption of clinical terminologies, unique identifiers and data standards.
- 05** The first regions in Australia will showcase comprehensive interoperability across health service provision, community and hospital sectors, public and private.
- 06** The safety and the quality of patient care will be improved by ensuring we have a connected health system that seamlessly shares high-quality data with the right people at the right time.

**WHAT
WILL BE
DELIVERED
BY 2022**

High-quality data with a commonly understood meaning that can be used with confidence

Supported by local and international evidence, the National Digital Health Strategy demonstrates that a digitally interoperable environment is a pre-condition for team-based, coordinated care, continuity of care, efficiency, data analytics, and positive patient experiences.

The activities outlined under this priority area seek to enable integrated care, equity of access and preventive care by connecting different sectors of the health system and enabling seamless flow of information.

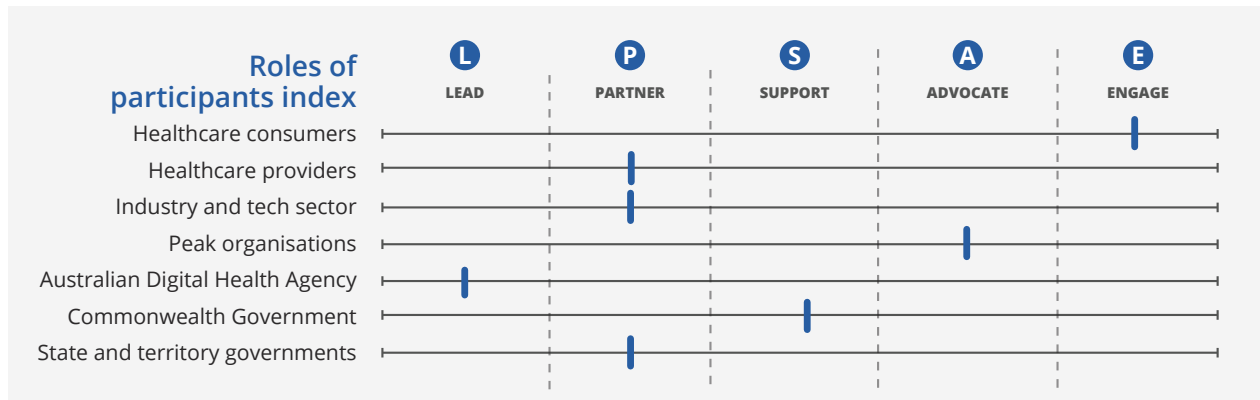
This is a substantial undertaking for Australia, which will require close collaboration, and will need to be nationally led. As existing systems are upgraded or replaced over time, greater conformance to standards will be possible. Adoption requires supporting policy, procurement, and conformance assessment frameworks.

The benefits for Australians and the Australian healthcare system are:

- ✓ There will be improved coordination of care, leading to reduced medical errors and avoided hospitalisations.
- ✓ There will be reduced demand for services through improved self-care.
- ✓ Duplication and operating costs will be reduced through alignment of government health gateways and infrastructure.
- ✓ Patient and healthcare provider experiences will improve through a better connected health system.

High-quality data with a commonly understood meaning that can be used with confidence

Roles of participants in order to achieve benefits



Healthcare consumers	Drive market interest in interoperability by expecting their healthcare providers to be able to communicate with their other providers seamlessly. Key informants in helping to define the design of future states that contribute to self care and personalised care resulting in better health outcomes.
Healthcare providers	Essential information-providing role to ensure their clinical and business needs are being supported by their systems, including the need to communicate with other systems. Contribute to developing, and conform to standards in the evaluation criteria used in procurement processes when upgrading or replacing existing systems.
Industry and technology sector	An essential partner in developing implementable solutions that enable technology companies to innovate. Provide real world expertise in the development of implementable conformance, compliance and accreditation framework and processes.
Peak organisations	Provide clinical leadership and professional advice on behalf of the needs of their members, ensuring that standards development falls in line with usability outcomes.
Australian Digital Health Agency	Lead the co-design of standards and specifications, and facilitate coordination of the consultation process, ensuring the development of standards which are implementable. Work with industry and healthcare providers to look at a timeframe for introducing a minimum set of requirements for medical software. Provide leadership for global standards, which includes clinical terminologies as well as the unique identification of products and locations required to support the digitisation of systems and processes.
Commonwealth Government	Ensure that conformance, compliance and accreditation framework and processes are implementable within the broader health system. Provide advice on potentially including alignment of My Aged Care, Mental Health Gateway, Govpass, MyGov, NDIS, National Cancer Screening Registry and claims and payments processes. Implementation of a new data sharing and release framework.
State and territory governments	Co-design standards with a focus on ensuring the needs of health and care facilities and patients are met. Contribute to developing, and conform to, standards in the evaluation conform to the standards criteria used in procurement processes when upgrading or replacing existing systems.

High-quality data with a commonly understood meaning that can be used with confidence

Interoperability and Data Quality

Priority actions for co-development 2018-2022

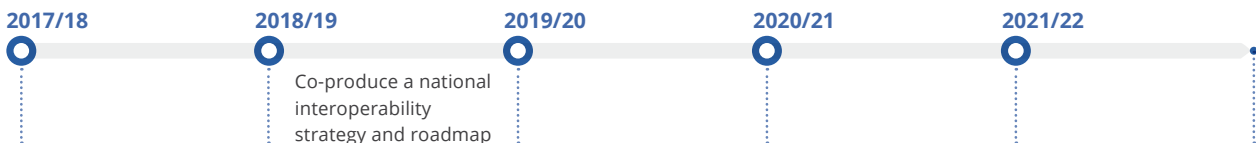
3.1

Clinical information exchange through interoperability

Enable the meaningful exchange of clinical information between health and care providers, the systems they use, and the people they care for through interoperability

3.1.1. National interoperability strategy

Co-produce and publish a national interoperability strategy



To address the risk of uncoordinated investment in technology that does not meet a common set of standards and will exacerbate siloing in the health system, Australian governments, industry and the health sector will co-produce a national interoperability strategy which will include agreed vision and blueprint for interoperability in Australia, agreed base-level requirements for using digital technology when providing care in Australia with governments and colleges, an agreed set of national interoperability specifications and standards, accreditation regimes, and procurement requirements.

3.1.2. Co-design standards and specifications

Enhance existing standards and specifications

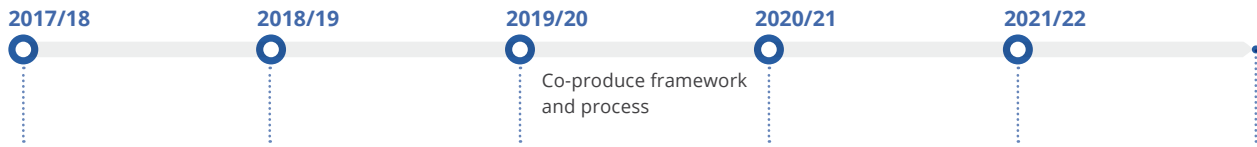


Current standards and specifications need to be continually enhanced, and new ones need to be co-produced as the need arises in order to provide simple, clear rules and guidance on standards across the sector, and to give clinicians access to complete, accurate health information. Standards will address types of data, clinical terminologies and classification schemes, document specifications, interface standards (e.g. FHIR), and integration and building.

High-quality data with a commonly understood meaning that can be used with confidence

3.1.3. Conformance, compliance and accreditation framework

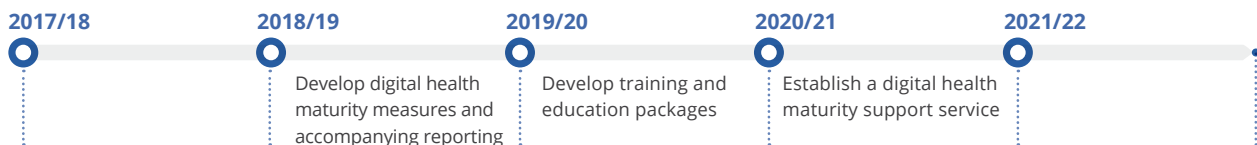
Co-produce a conformance, compliance and accreditation framework and process



In Australia, meaningful progress has been made in establishing foundations for interoperability, including clinical terminologies and standards. However, adoption has been limited. Adherence to standards will be promoted to address lack of adoption and ensure widespread implementation of agreed standards and specifications by co-producing a conformance, compliance and accreditation framework and process, building on existing schemes.

3.1.4. Increasing digital maturity

Helping health services increase their digital maturity



Digital maturity is the extent to which health services are supported by the effective use of digital technologies; many healthcare services currently have limited maturity. Measures of digital maturity will be developed, accompanying a benchmarking and reporting scheme, leveraging international examples, aligned with jurisdictional initiatives, to establish a digital maturity support service to help health services increase their digital health maturity.

3.2

National health technology strategy

Co-produce a national health technology strategy to align existing digital health foundation infrastructure services and different streams of government technology relating to health

High-quality data with a commonly understood meaning that can be used with confidence

3.2.1. National health technology strategy

Co-produce a national health technology strategy



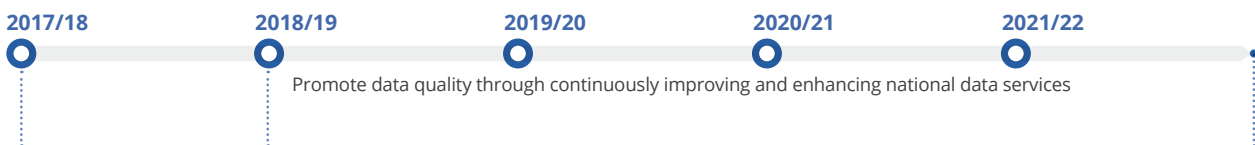
There is an ecosystem of digital initiatives that are relevant to managing people's health and wellbeing with discrete governance and management processes, including My Aged Care, Mental Health Gateway, Govpass, MyGov, the NDIS, the National Cancer Screening Registry and claims and payment processes. To address the risk of fragmentation and duplication, and to ensure the consumers of these services receive coordinated and efficient care that is simple to navigate, a national health technology strategy will be co-produced. The technology strategy will be a high-level, whole-of-government strategy that will identify upcoming requirements and ensure that existing investment is optimally leveraged, describe how existing digital health foundation infrastructure services and different streams of government technology relating to health will integrate and align, and identify opportunities that will help provide a seamless experience for users.

3.3 Promote data quality

Enhance national data services to support interoperability and improve data quality

3.3.1. Enhance national data services

Enhance national data services to support interoperability and improve data quality

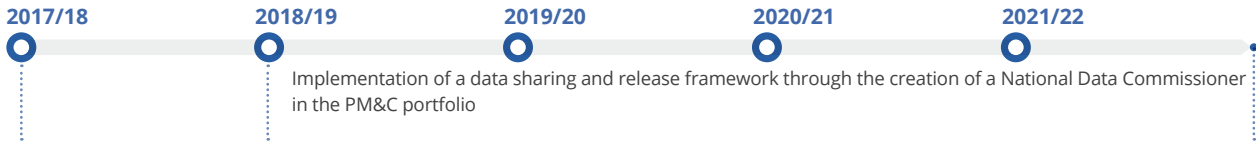


High-quality data requires both strong data governance and agreement on standards for terminology, and will enable future developments, including precision medicine and genomics, and the tracking of the efficacy of medical devices. Working with industry participants, national data services will be continuously improved and enhanced, including the National Clinical Terminology Service, GS1 standards (including GTIN, GLN, barcoding) and supply chain solutions - the National Product Catalogue, Locatenet, Recall Health and eProcurement. The Australian Institute of Health and Welfare will lead in improving primary health care data, with a particular focus on the development of a national primary care data set. Education and engagement programs will be developed to advance adoption of national foundations, and improve data quality and health information governance across the health and care system.

High-quality data with a commonly understood meaning that can be used with confidence

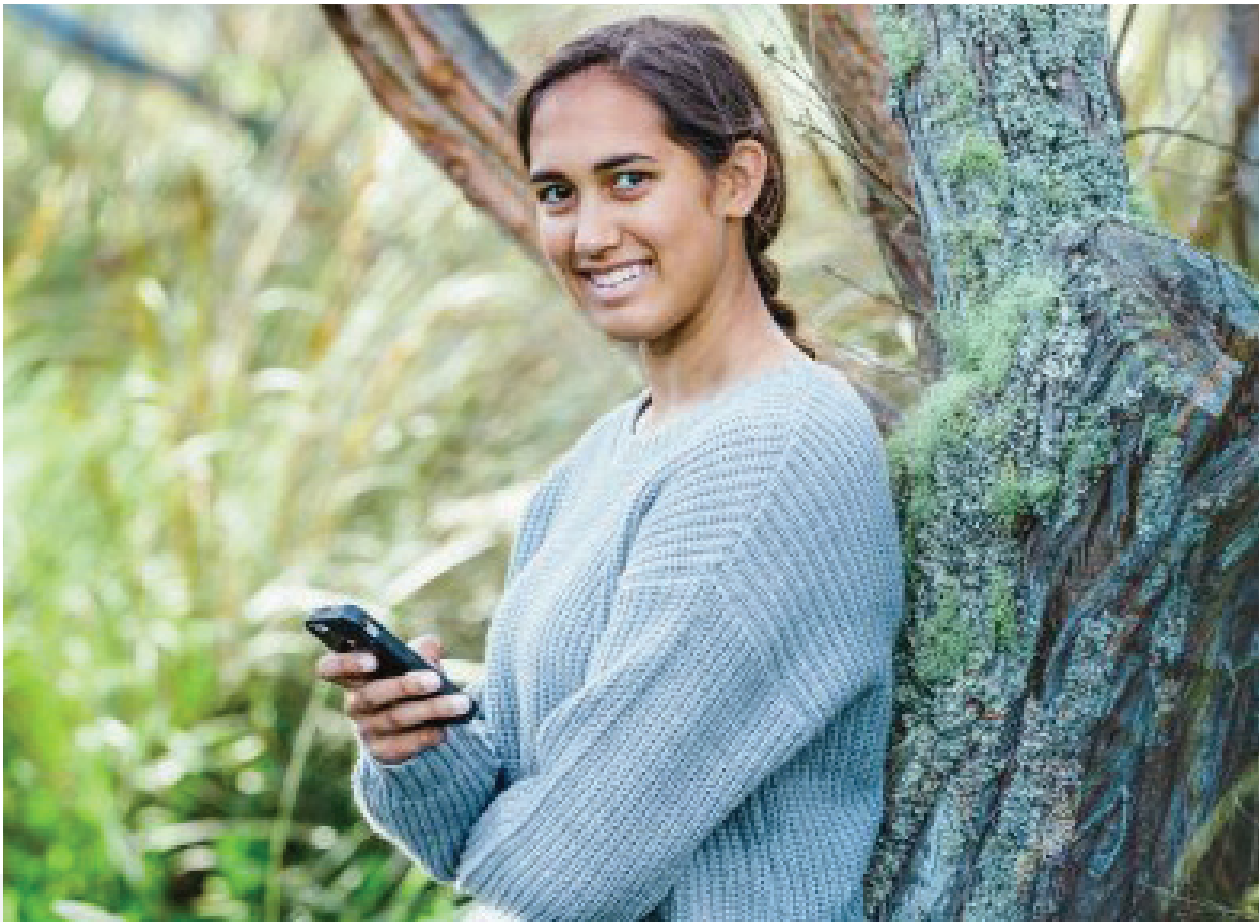
3.3.2. National health data governance

Build and maintain trust in the quality, confidentiality and value of health data



The Productivity Commission has found that, despite vast amounts of health data being collected in Australia, current policy settings and IT platforms result in inefficient data flows that affect both the provision of healthcare and the ability of researchers to understand and respond to public health trends. Innovative methods for data management and analytics are being actively investigated and developed across both public and private health organisations, including machine learning, text mining, artificial intelligence and rule-based engines. The Australian Government has announced reforms to harness the potential of data, including a new Consumer Data Right to give citizens greater transparency and control over their own data, a National Data Commissioner to implement more efficient data sharing and release framework and oversee the public data system, and new governance arrangements to ensure appropriate safeguards are in place to protect sensitive information.

National health data access and transfer standards will be developed in collaboration with all Australian governments, the industry and technology sector, the health research community, the health sector and the health consumer groups and privacy advocates.



High-quality data with a commonly understood meaning that can be used with confidence

Interoperability and Data Quality

Actions across Australia

Below is a summary of some of the actions that government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway to ensure the health system is producing **high-quality data with a commonly understood meaning that can be used with confidence.**

▶ ENSURING CLINICAL SYSTEMS TALK TO EACH OTHER



Healthcare providers and health organisations want their systems to communicate more easily with other systems outside their organisation's boundaries. State and territory health departments are facilitating and capitalising on interoperability through programs of work to update clinical information systems.

Queensland Health has established the Interoperability Project which aims to implement new systems and services as foundations for interoperability across the state. Examples of these foundations include a new integration platform and the creation of standards-based foundational information services that will underpin corporate, administrative and clinical applications. Queensland Health aims to use its considerable experience in data standardisation and data analytics leading to clinical quality improvement to provide a scalable solution for other jurisdictions.

NSW Health will continue the implementation of enhancements to its foundation electronic Medical Record (eMR) system, which has already been implemented across the state. The eMR2 program provides additional functionality to the foundation eMR and has been implemented in 154 hospitals in NSW, supporting clinicians with direct and timely access to the information and tools they need to provide safer and more coordinated patient care.

The **Northern Territory Government** is investigating the feasibility of a change in medical record modality with the conversion of all paper-based medical records into digital format to facilitate installing an up-to-date, accessible and highly available single authoritative source of client identifying data to be accessed by all the Department's clinical information systems.

The **Victorian Government** is defining and endorsing a maturity model and baseline for the Victorian Public Health Sector health services, adapted from HIMSS. This will define funding



→ ENSURING CLINICAL SYSTEMS TALK TO EACH OTHER

and adoption of clinical capability for the sector, including interaction with national initiatives. **WA Health** is trialling mechanisms to assess the level of digital maturity (the extent to which they are supported by the effective use of digital technology) of WA health service providers to inform strategic and investment decisions.

There is a layer of complexity in exchanging information in the healthcare sector that is not experienced in other sectors. To leverage the significant investment in information systems and technology across the health sector, the **Australian Digital Health Agency** will lead a national interoperability strategy consultation that will help determine agreed interoperability standards, an implementation roadmap, a conformance scheme and digital maturity measures to be developed using a consultation and co-production process.

Interoperability is a key priority for the **Australian Medical Association** which has developed *10 Minimum Standards for Communication between Health Services and General Practitioners and other Treating Doctors*. This outlines guidelines to ensure that a patient's care is safe, effective and efficient when communication is required between all medical and health professionals who provide care to the patient. The guidelines state that health services should have secure and reliable electronic systems to send and receive information to and from the health service and general practitioners and other treating doctors.

▶ GENERATING HIGH QUALITY HEALTH DATA

The issue of image sharing by clinicians across different health providers is being tackled by the **Australian Diagnostic Imaging Association** and the **Royal Australian and New Zealand College of Radiologists**. In partnership they are to put together a roadmap towards developing and deploying the architecture and platform to support image sharing.

There is an underlying need for efficient use of high-quality data to enable future developments, including precision medicine and genomics and the tracking of the efficacy of medical devices.

Clinical terminologies, especially SNOMED CT-AU, Logical Observation Identifiers Names and Codes (LOINC) and the Australian Medicines Terminology (AMT) will continue to play a key role in Australian healthcare, ensuring that medicines and clinical concepts are identified consistently across disparate clinical systems. These terminologies have been implemented and deployed in Australian healthcare sites and clinical applications, including public and private hospitals within Victoria, Northern Territory, New South Wales, Queensland, Tasmania and Western Australia, and various systems managed by **ACT Health**.



→ GENERATING HIGH QUALITY HEALTH DATA

Queensland Health has established a statewide clinically led data and analytics committee covering the entire state that will drive a culture of sharing and innovation. It will ensure that Queensland is flexible to change in a digitally enabled environment, providing localised population health data to inform preventative action and planning through user-friendly, interactive, visual online delivery. Queensland Health is also continuing to work towards applying supply chain international standard product descriptors (GS1 Global Trade Item Number—GTIN) to enable future tracking of medical consumable products through to the patient if needed. **ACT Health** is also implementing GS1 Standards for positive patient identification for pathology ordering and collections.

NSW Health will continue to progress the NSW Health Analytics Framework, which will drive broader and more sophisticated analytics use to better support evidence-based decision making and analysis across the NSW health system. This work will contribute to the achievement of better health outcomes and underpin improved health system planning and performance.

Primary Health Networks in Australia have the ability to build a shared information platform to assist all parts of the health sector to make timely and well-informed decisions. These platforms will increase data linkage and analytic capacity in concert with fostering the demand across the sector. It will also give a more complete picture of population outcomes, patient experience, service utilisation and system performance. This data could be integrated into the My Health Record, for example or through other technologies.

Research Australia is partnering with **HealthConsult** and **iDataMap Pty Ltd** to create a consumer-driven lake of health data with the objectives of delivering real-time health information to consumers, and promoting consumer understanding of the value of sharing health data with health and medical research workforce. The project will involve the use of devices such as wearables and apps to capture health and wellbeing data directly from consumers. The project is in proof-of-concept stage with a view to a fully scaled project in 2020.

Ten **Australian Government** agencies will spend about \$20.5m from their existing allocations for implementation of the new data governance arrangements over the forward estimates. The **Data Integration Partnership for Australia** is already bringing together high-value data assets from across the public sector, including those developed by the departments of Health, Education and Social Services, to support analysis of a range of difficult policy problems. Four analytical units within the Australian Public Service are now established and undertaking projects to make best use of such data.

The Australian Government has also allocated \$65.1m over four years to fund the new data sharing and release arrangements, including the establishment of a National Data Commissioner and efforts to create a new consumer right to access personal records from private sector companies. \$20.2m is allocated to the **Australian Competition and Consumer Commission** to assist in determining the costs and benefits of designating sectors that will be subject to the Consumer Data Right, and to develop and implement rules to govern the data right and the content of data standards.

The **MDS Validator** has been developed by **Strategic Data Pty Ltd** and is an extensible, web-based application for determining the validity of large data sets. It has been developed for the



High-quality data with a commonly understood meaning that can be used with confidence

→ GENERATING HIGH QUALITY HEALTH DATA

Department of Health, and its current users include the **AIHW** and the Australian Mental Health Outcomes and Classification Network (AMHOCN).

Patient information is needed for research to help improve the delivery of health services and increase our understanding of diseases, their treatments and side effects. To enable better access to patient information, **Queensland Health** has established the **Giving InFormation To Research** (GIFTR) initiative, which gives patients admitted to certain Queensland public hospitals the option to consent for their medical information to be used in GIFTR health research. The information will only be used for GIFTR approved research projects considered to be low risk and non-interventional. No information that could identify an individual is made public, and no physical participation is required.

▶ HIGH QUALITY DATA READY FOR USE



Organisations that represent Australians with chronic illnesses and other health conditions recognise the value of using data to improve the lives of the people they represent. The use of historic data could mean clinicians can provide consumers with tailored healthcare pathways and a better understanding of medication use.

Western NSW Local Health District's Health Intelligence Unit provides a central hub of expertise to coordinate and provide analysis of data and interpretation of information to inform clinical and operational decision making and support a collaborative approach to health and social care planning, delivery and evaluation in Western NSW. Similarly the **Australian Primary Health Care Nurses Association** works closely with the clinics to improve the quality of practice data and its interpretation of local population data to maximise the potential information and data to better manage patients with chronic disease.

Hospitals and health facilities are also looking for digital solutions to help them better predict emergency department patient arrivals, their medical urgency and specialty, admissions and likely discharge times. A partnership between **Austin Health** in Victoria, **CSIRO** and **Health IQ** (now part of **Telstra Health**) has developed a Patient Admission Prediction Tool (PAPT), which uses data analytic algorithms to predict demand for hospital services.

Effective delivery of genomic medicine relies heavily on good data management and sharing. The **Joint Committee on Genomics and Digital Health** was formed in 2017 by the **Australian Digital Health Agency** and the **Australian Genomics Health Alliance** to provide advice on the future development of Australia's digital health foundations to support the advancement of precision medicine. As part of this ongoing program, the Joint Committee has established a National Genomics Data Infrastructure Sub-Committee which is charged with developing recommendations for a network and data storage model for a nationwide clinical



→ HIGH QUALITY DATA READY FOR USE

genomics data repository. The sub-committee will consider the integration of genomic data and test results into the My Health Record system.

The **CSIRO's Australian e-Health Research Centre (AEHRC)** runs a health and biomedical informatics program that includes high-throughput genomic data analysis and computational genome engineering, as well as high performance computer systems. The AEHRC health informatics research includes using artificial intelligence and machine learning to support the integration of genomic information into healthcare systems. Key to this is ensuring interoperability with existing patient management systems. AEHRC is part of CSIRO's Health and Biosecurity business unit, which includes research into epigenetics, nutritional genomics and wellbeing.

Over 650 general practices and 3,500 general practitioners Australia-wide are currently participating in MedicinesInsight, a general practice quality improvement program developed and managed by **NPS MedicineWise**. MedicinesInsight is the only data system in Australia of its scale that extracts complete, all-of-practice, clinical data into a dataset of longitudinal records, enabling powerful analytics and insights. MedicinesInsight is being used as part of the Hunter Alliance Diabetes program to help GPs identify complex patients, monitor their patients over time and see how their practice compares with other practices regionally and nationally

Multiple Sclerosis Australia is in the early development stages working with PHNs to provide gold standard care pathways for multiple sclerosis to ensure early diagnosis and early treatment to minimise the impact of the disease. They are using the recommendations in the *Brain Health: Time Matters* report which references using data to help monitor disease activity to become central to the management of MS.

Australasian Sleep Association are endeavouring to introduce a universal request form and national sleep data repository. This data is to be utilised in the design of the optimal health care models that deliver the maximum healthcare outcomes in an affordable and accessible way for consumer

Stage, Treatment and Recurrence (STaR) is an initiative of **Cancer Australia** in partnership with **AIHW** and jurisdiction registries. This initiative will improve the collection, access, analysis and reporting of national cancer data that will then provide clinicians information on patterns of cancer care and can further their understanding on unwarranted variations in cancer outcomes.

The **Australian Cystic Fibrosis Data Registry** has been collecting patient health outcomes for 20 years and provides easy access to data and reports for research and statistical analysis. This ensures critical data is collected and analysed and helps review trends, track clinical activity and better monitor patient care.

4. Medicines Safety

Better availability and access to prescriptions and medicines information

01 By the end of 2018, all consumers and their healthcare providers will have access to comprehensive views of their prescribed and dispensed medications through the My Health Record system, irrespective of who prescribed and dispensed the medicine.

02 By 2022, there will be digitally enabled paper-free options for all medication management in Australia. People will be able to digitally request their medications online, and all prescribers and pharmacists will have access to electronic prescribing and dispensing, increasing convenience for people filling prescriptions and improving overall safety.

**WHAT
WILL BE
DELIVERED
BY 2022**

Better availability and access to prescriptions and medicines information

The National Digital Health Strategy outlines the case for why better availability and access to prescriptions and medicines information will reduce the incidence of medication errors and adverse drug events, and minimise harm to patients and create significant cost savings.

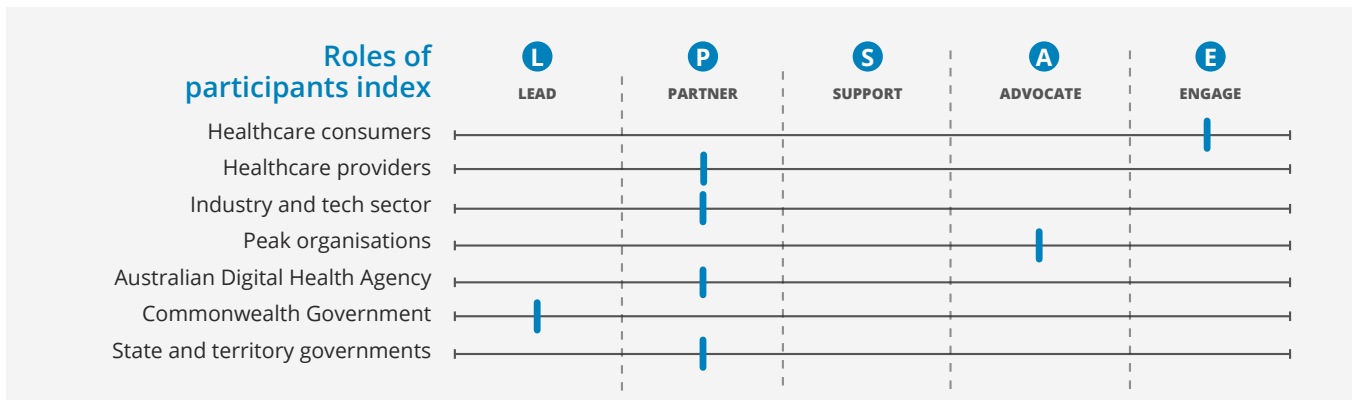
Capturing a patient's current medicines and allergy information in a structured, coded, standardised and shareable form will support improved sharing of accurate and complete information across care boundaries, support quality use of medicines, prevent avoidable injuries and deaths, reduce hospital admissions and give consumers the opportunity to take more control of their own health and care.

This priority area aims at establishing a nationally coordinated digital medicines program to implement the digital services and solutions that will increase the safety and quality of medicines use across health and care.

The benefits for Australians and the Australian healthcare system are:

- ✓ Risk and harm to health consumers will be minimised through reduced adverse drug events.
- ✓ Prescription misuse will be reduced through real-time monitoring.
- ✓ The cost of hospital admissions for adverse drug events will be reduced (reduced drug–drug interactions, allergic reactions and inadequate dosing, either due to inadequate prescription or dispensing errors).
- ✓ Health system capacity will be increased due to more efficient and accountable administration of medication, improved consumer self-management and reduced hospital admissions.
- ✓ Complications and disease progression will be reduced for patients due to higher medication adherence.

Roles of participants in order to achieve benefits



Healthcare consumers	Driving change by expecting that governments and healthcare providers are working together to implement measures that support the safe and efficient prescribing and dispensing of medicines. Use the My Health Record as a means to share information with their treating healthcare professionals about their medicines and allergies.
Healthcare providers	Use the My Health Record as a means to minimise the burden of medication errors by ensuring adequate communication between treating professionals, and on transition from one care setting to another. Implement measures that improve medications management, including capturing a patient’s current medicines and allergy information in a structured, coded, standardised and shareable form.
Industry and technology sector	Provide technical platforms that are user friendly and co-designed and developed closely with healthcare providers so they are able to extract the medication profile information to upload to their conformant repositories for use in cross facility, cross care setting and multidisciplinary team based scenarios. Design innovative approaches to build new linkages between a patient’s medicines information and CMLs, recalls and alerts to help consumers manage their own health and care needs.
Peak organisations	Provide leadership to develop and use professional standards and guidelines to drive improvements in clinical decision support. Work collaboratively with industry to develop more user-friendly systems, providing consistent and standardised collection and presentation of information.
Australian Digital Health Agency	Provide expert advice in the development of conformance requirements and standards to support the electronic prescribing, dispensing and claiming. Drive standardised decision support for prescribing, and administer Australian Medicines Terminology, which identifies all commonly used medicines in Australia in a structured and coded format supporting the automation of drug-allergy, drug-drug and dose-range checking.
Commonwealth Government	Lead the review of regulatory frameworks to support national objectives for electronic prescribing, and facilitate collaboration between states and territories to ensure national agreement of approval processes to enable electronic prescribing, dispensing and claiming to occur.
State and territory governments	Implement measures that improve medications management, including capturing a patient’s current medicines and allergy information in a structured, coded, standardised and shareable form. Review and, if required, amend regulatory frameworks to support national objectives for electronic prescribing. Provide technical platforms which are user friendly and co-designed and developed closely with healthcare providers so they are able to extract the medication profile information to upload to their conformant repositories.

Medicines Safety

Priority actions for co-development 2018-2022

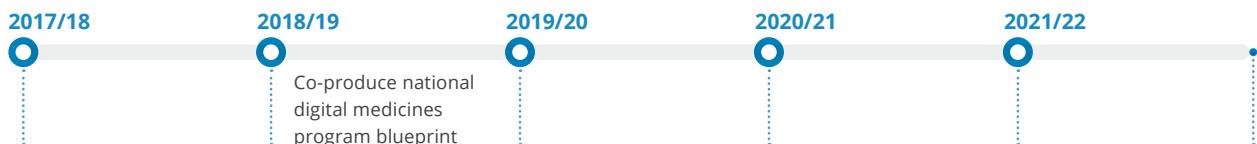
4.1

Establish and implement a nationally coordinated digital medicines program

Improve access to information about medicines, allergies and adverse reactions, to support safe and efficient medicines use and reduce adverse medication events by implementing a nationally coordinated digital medicines program to increase the safety and quality of medicines use across health and care.

4.1.1. Digital medicines program blueprint

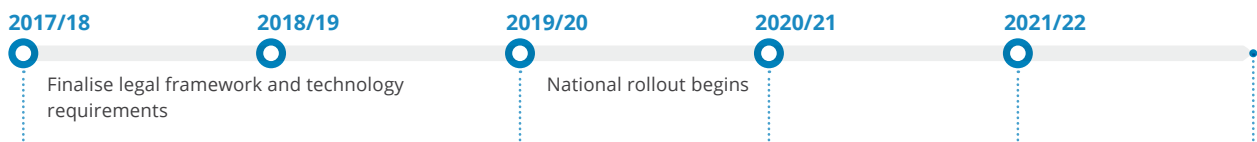
Co-design and publish a digital medicines program blueprint



Australian governments and industry will work in collaboration to improve medications management for both healthcare consumers and providers by co-producing and publishing a national digital medicines management blueprint, which will include development of the infrastructure, specifications, policies, legislation and change, adoption and training activities for clinicians. The program blueprint will cover sequencing of current and planned digital medicines management related projects and programs outlined below.

4.1.2. Electronic prescriptions

Give all prescribers and pharmacists access to electronic prescribing and dispensing

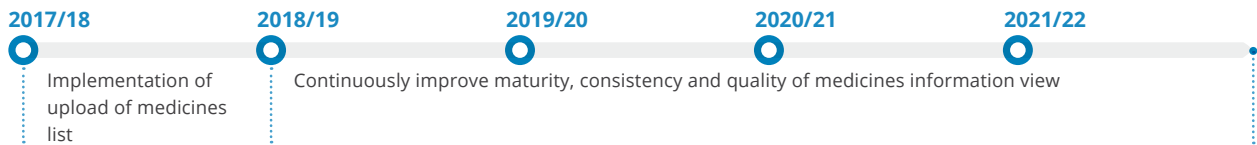


The Australian Government will provide \$28.2 million over five years to support a national electronic prescribing system. This will contribute to an electronic prescribing framework that will provide an option for prescribers and their patients to have a fully electronic prescription as an alternative to paper-based PBS prescriptions. National infrastructure will be leveraged, and the specifications and regulatory framework required will be developed, to enable consumers, prescribers and pharmacists to have access to electronic prescribing and dispensing, including alignment of the existing prescription exchange services, and dispensing capability.

Better availability and access to prescriptions and medicines information

4.1.3. Best possible medicines list

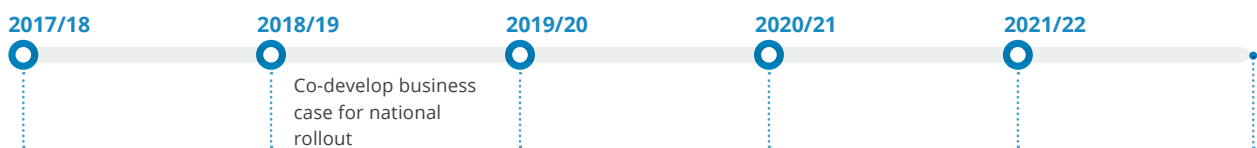
Deliver a best possible medicines list via the My Health Record system



In Australia, health consumers' medication histories are stored across a variety of paper-based and electronic systems that are often inconsistent, making consolidation into a single view highly problematic. Healthcare providers and consumers will be able to access a best possible medicines list in a structured data format via the My Health Record system through an improved Available Medicines View, including pharmacy-curated medicines list and consumer-uploaded medicines (including over-the-counter medicines), to support medicines reconciliation, and enable providers to upload the reconciled medicines profile.

4.1.4. National medicines data service

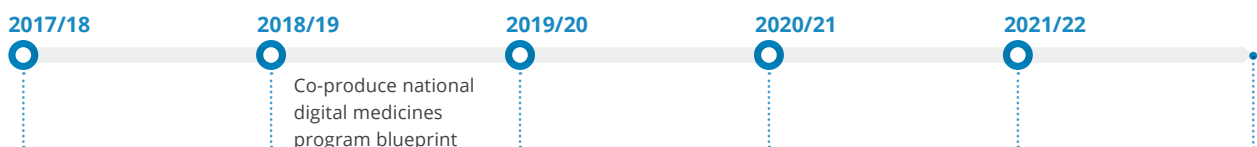
Establish a national medicines data service building on existing programs



Medicines data is managed differently across all state and territory health systems, which are not aligned to a standard code set. A national medicines data service will be established, building on existing programs (e.g. NSW scoping and pilots) and infrastructure, enabling jurisdictions and health service organisations to maintain their own tailored medicines master data of all medicines suitable for use, or receive a managed service.

4.1.5. Medicines information for consumers

Provide consumers with targeted medicines information via the My Health Record system

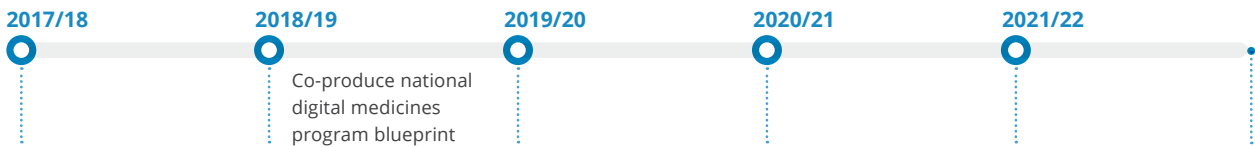


There is an opportunity to make reader-friendly medicines information more easily available to consumers to provide information on the safe and effective use of prescription and over-the-counter medicines. There will be targeted consumer information via the My Health Record system which includes consumer medicines information (CMIs), consumer entered over-the-counter medicines information, as well as information on recalls and warnings targeted on the basis of a consumer's current medicines list.

Better availability and access to prescriptions and medicines information

4.1.6. Medicines decision support tools

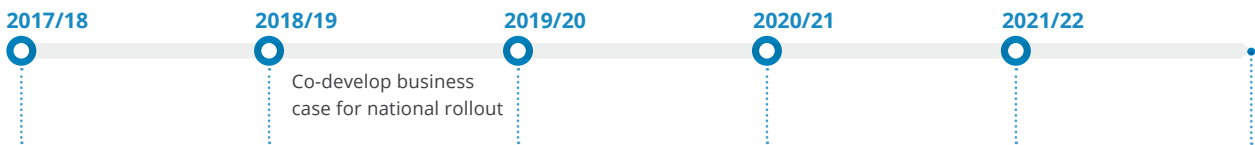
Enable the development and expanded use of medicines decision support tools



Clinical decision support at appropriate interactions (e.g. meaningful alerts and warnings about a consumer's medicine allergies, any contraindications with current medicines, and identification of 'at risk' patients and most appropriate medication) improves the quality of medicine management and safety of consumers. Through co-production with relevant agencies and peak bodies, a minimum set of functional guidelines and conformance requirements will be developed to provide consistent and standardised collection and presentation of information in clinical decisions support systems.

4.1.7. Enhance incident reporting capabilities

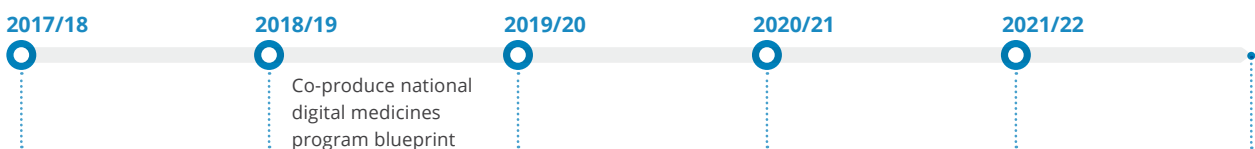
Enhance incident and adverse event reporting capabilities through digital solutions



Currently, information about medications safety incidents is collected on paper or in unstructured electronic forms. There is evidence that 230,000 adverse drug events lead to hospitalisation every year, most of which are not officially reported. There is an opportunity to investigate ways to enhance incident and adverse event reporting capabilities through digital solutions, including the development of a dedicated national framework for medicines adverse event reporting.

4.1.8. National Allergy Strategy

Align National Digital Health Strategy priorities to the National Allergy Strategy

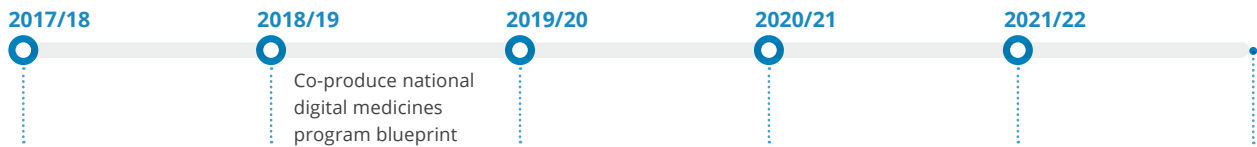


Ensure alignment to the National Allergy Strategy which seeks to ensure consumers' allergy information is easily accessible for healthcare providers in the My Health Record. The National Allergy Strategy aims to improve the health and quality of life of Australians with allergic diseases and minimise the burden of allergic diseases on individuals, their carers, healthcare services and the community.

Better availability and access to prescriptions and medicines information

4.1.9. Real time prescription monitoring

Implement national capability for real-time prescription monitoring



Real-time prescription monitoring will provide an instant alert to pharmacists and authorised prescribers if patients received multiple supplies of prescription-only medicines, helping to identify patients who are at risk of harm due to dependency, misuse or abuse of controlled medicines. National capability for real-time prescription monitoring will be established, building on existing programs and specifications, and utilising national infrastructure.



Medicines Safety

Actions across Australia

Below is a summary of some of the actions that government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway to ensure **better availability and access to prescriptions and medicines information.**

▶ DIGITALLY ENABLED PAPER-FREE OPTIONS FOR MEDICATION MANAGEMENT



The aim to increase convenience for people filling prescriptions and improving overall medicines safety will be achieved through providing digitally enabled paper-free options for all medication management in Australia.

The **Australian Government** has allocated funding in the 2018 budget to support a national electronic prescribing system that will contribute to Pharmaceutical Benefits Scheme (PBS) efficiency, compliance, drug safety and data collection. It will also create an electronic prescribing framework that will provide an option for prescribers and their patients to have a fully electronic PBS prescription as an alternative to paper-based PBS prescriptions. The upgrades will make the system more user friendly and enable prescribers to better identify prescribing options that best meet the needs of their patients, with doctors to retain the final say in advising patients on which medicines to use.

Paper free prescribing is being advanced by **Fred IT Group** who have invested heavily over the last 10 years in the creation of a national prescription exchange infrastructure that connects over 22,000 prescribers and 4,900 pharmacies across Australia. This existing infrastructure has transacted in excess of 2.1 billion prescribed and dispensed records and continues to transact over 300 million records per year.

Telstra Health, Fred IT and the **Pharmacy Guild of Australia** will take a lead role in industry consultation on implementation of paper-optional prescribing. Consultation should identify user workflows for prescribing, dispensing and ordering workflows to be supported by technical solutions. This will contribute to understanding of changes required to implement an effective, inclusive solution for paper-optional prescriptions, and will complement government-led consultation.

► USING TECHNOLOGY TO MAKE PRESCRIBING EFFECTIVE AND EFFICIENT



The digital management of medications promises to significantly improve patient safety, reducing avoidable hospitalisations and other adverse events.

State and territory governments continue to invest in electronic medications management solutions. **eHealth NSW** eMeds program, which provides support for doctors, nurses and pharmacists to prescribe, order, check, reconcile, dispense and record the administration of medicines, will be expanded from 25 to 178 hospitals. **WA Health** has invested in pharmacy automation systems at the Perth Children's Hospital which provide an automated drug inventory management system. These systems enable staff to access real-time information relating to drug inventory.

The **Australian Digital Health Agency** has developed the Medicines Information View in the My Health Record that collects patient medicines information from multiple sources (such as prescription and dispense records, shared health summaries and e-referral notes) into a single view, which can be sorted by date or alphabetically, showing the patient's most recent (and up to two years') prescription and dispense records and other Pharmaceutical Benefits Scheme claims information.

Healthdirect has developed a database, currently being used by Australians approximately 296,000 times per month, of over 7,000 medications to provide consumer-oriented information drawn from multiple sources. The database already supports advice on recalls, warnings for elderly patients ("Beers List") and is being enhanced with addition of multi-platform electronic consumer medication information.

Powered by **eRx Script Exchange, MedView** is the national cloud-based platform that gives health professionals a full picture of their patient's medication history, as well as tools to manage their care. It connects over 22,000 prescribers and 4,900 pharmacies annually. Patients who give permission will have their records stored securely in the MedView repository. Healthcare professionals can then access this information on their desktop PC and mobile devices.

MIMS is working with various partners to design and develop enhanced models of medication management and adherence to ensure patients are remotely monitored to improve their health outcomes, and to drive cost efficiencies within the healthcare ecosystems.

NPS MedicineWise has developed an app which has been downloaded more than 80,000 times since it was launched in 2014. The MedicineWise App enables consumers to build, edit and share a list of their medicines, set the dose and appointment alerts, view rich media content and record important health information. In the future this app will link with the My Health record to download a list of medicines.

Working closely with the Australian Digital Health Agency, **EBOS Group** companies **Zest** and **MedAdvisor** are helping to define new innovative digital solutions that aim to reduce the need for hospital admissions or re-admission where possible. They provide innovative patient-specific drug compliance management programs that will allow early appraisal of at-risk patients to be flagged before they enter the hospital system, while also helping to manage patient program compliance after leaving hospital.

► USING TECHNOLOGY TO REDUCE HARM AND INCREASE PATIENT SAFETY



Electronic recording and reporting of controlled drugs supports medicine safety for consumers by helping health practitioners to meet their clinical professional practice obligations to reduce error and harm associated with the misuse of drugs of addiction. Australian Health Ministers have agreed to progress national real time prescription monitoring as a federated model with jurisdictions committed to progressing development and adaptation of systems to connect to and interface with Commonwealth systems to achieve a national solution.

The **Victorian Department of Health and Human Services** is taking action to reduce the growing harms, including deaths, from high-risk prescription medicines by implementing **SafeScript**, Victoria's real-time prescription monitoring system developed by **Fred IT Group** supported by **Microsoft**. SafeScript will provide health professionals with real time alerting to their clinical desktop and access to their patients' prescription histories for certain high-risk medicines to enable safer clinical decisions on whether to prescribe or dispense a medicine. A comprehensive change management and training program to support the deployment of SafeScript is being delivered by **Western Victoria Primary Health Network** as the lead agency for a consortium comprising the **Victorian PHN Alliance**, **NPS MedicineWise** and other partners.

The **Tasmania's Department of Health and Human Services** has developed Drugs and Poisons Information System Online Remote Access (DORA), a webpage-based information system providing clinicians with timely and secure access to a DHHS database to view clinical information and dispensing data relating to Schedule 4 and 8 opioids and all other Schedule 8 drugs. **Queensland Health** is developing a business case to examine how real time reporting of controlled drugs could be implemented in Queensland, and **Western Australia** has also commenced planning for a real time prescription monitoring service solution for controlled drugs.

Supporting better health outcomes for those affected by allergies has been advanced by the formation of the **National Allergy Strategy**. Allergic diseases have become an increasingly important chronic disease and public health issue in Australia, contributing to increased demand for medical services, significant economic cost of care and reduced quality of life of people with allergic diseases and their carers. Currently affecting more than 4 million Australians, the rapid and continuing rise of allergic diseases is therefore a serious public health issue that requires action by all levels of government and the community.

The National Allergy Strategy has engaged with the Australian Digital Health Agency and the **Australian Commission for Safety and Quality in Health Care** to identify key issues in drug allergy management in terms of clinical education requirements and potential improvements to My Health Record to increase patient safety for drug allergy. **NPS MedicineWise** has been working with the National Allergy Strategy group with a view to building standardised coding and presentation of allergy and adverse reactions in clinical systems, including in the MedicineWise app.

A hub for the 250,000 young Australians living with severe allergies - **www.250K.org.au** - aims to provide age-appropriate information and resources to assist young people who are living with severe allergies, and to help them to feel more connected with other teens and young adults going through similar experiences in a fun but informative way. **MIMS** is working to incorporate SNOMED CT-AU substance terms into their allergy alert product, which they believe is key to the successful, deeper integration of allergy recording and alerting within medicines management systems.

5. Enhanced Models of Care

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

01 A number of pioneering initiatives – co-produced between consumers, governments, providers and entrepreneurs – to test evidence-based digital empowerment of key health priorities and then, where appropriate, to promote them nationally.

02 Priority health reform areas such as Health Care Homes chronic disease management, telehealth, babies' and children's health, residential aged care, end of life care, and emergency care will be a focus. The test beds will run for two years to inform the national rollout of innovations across Australia, ensuring that all Australians can benefit.

03 By 2022, six test bed projects will have been launched, each of two years' duration. Four of these test bed projects will have been evaluated and the learning from two test bed projects will have been rolled out across Australia.

**WHAT
WILL BE
DELIVERED
BY 2022**

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

The National Digital Health Strategy is more than a plan for digital technology. It is about how technology can work for us in the real world. This means rigorously testing and proving how technology supports clinical care, and then scaling up what works to the whole of the Australian health system.

Six test beds will be developed over the period of the National Digital Health Strategy, with each having a formal evaluation, examining the degree to which target benefits have been achieved and lessons learnt from implementation and rollout.

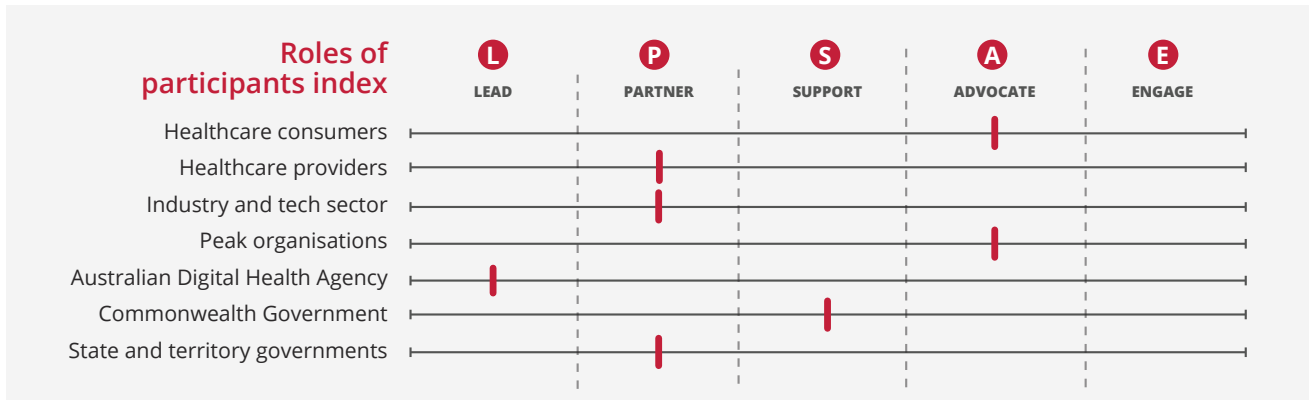
The clinical priority areas for the test beds have been identified by state and territory health systems as key health priority reform areas, and include:

- supporting integrated management of chronic illness
- development of new digital services to support the health of babies and young children
- improvement of digital services for advance care planning
- improvement of information sharing for the aged care sector and urgent and emergency care, and
- widening access to telehealth services, especially in rural and remote Australia.

The benefits for Australians and the Australian healthcare system are:

- ✓ Chronic disease management (Health Care Homes) will deliver reduced MBS, PBS and hospital expenditure due to reduced complications and hospital admissions.
- ✓ Telehealth will lead to a reduction in hospitalisations, reduced patient transport costs, and shorter waiting lists.
- ✓ Residential aged care will have fewer adverse drug events.
- ✓ End of life care will lead to reduced avoidable hospitalisations and shorter stays in hospitals.
- ✓ Child health records will lead to improved vaccination rates.
- ✓ Emergency care will provide improved quality and handover.

Roles of participants in order to achieve benefits



Healthcare consumers	Participate in partnership with their healthcare providers in respect to their health and care. Expect that governments and health care providers are delivering health services evidence-based based solutions.
Healthcare providers	Participate in partnerships between industry, government and other organisations to test new digitally enabled models of care, and contribute to evaluating and helping to refine care models. Be digitally enabled to provide consumers with ongoing coordination, management and support of their healthcare needs.
Industry and technology sector	Support ongoing development of interoperable products to enable enhanced ability for healthcare providers and organisations to improve safe, effective health care delivery. An essential partner in developing implementable solutions that enable digitally enabled models of care.
Peak organisations	Coordinate the co-design and development of the test bed framework, manage the prioritisation process for projects and manage central funding to support test bed projects. The Agency will also lead the evaluation process and the scale-up and rollout of initiatives across jurisdictions.
Australian Digital Health Agency	Coordinate the co-design and development of the test bed framework, manage the prioritisation process for projects and manage central funding to support test bed projects. The Agency will also lead the evaluation process and the scale-up and rollout of initiatives across jurisdictions.
Commonwealth Government	Identify key health priority areas for future test bed projects. May provide a role in supporting the scaling up of digitally enabled models of care if test beds are found to be successful following an independent evaluation.
State and territory governments	Identify key health priority reform areas based on clinical need for future test bed project and contribute to evaluating and helping to refine digitally enabled healthcare models. Lead or participate in partnerships between industry, healthcare providers and other organisations to test new digitally enabled models of care.

Enhanced Models of Care

Priority actions for co-development 2018-2022

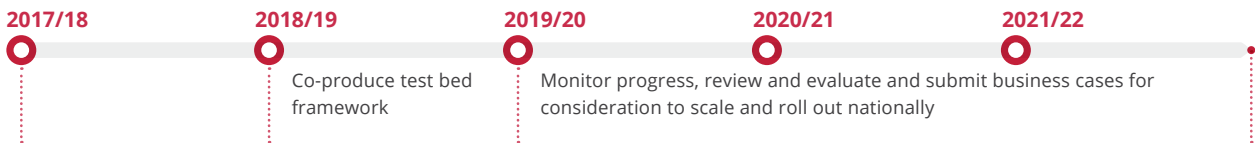
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Test bed and scaling up environments

Establish an environment for the adoption and rollout of evidence-based, enhanced models of care through digital technology, which are co-designed between governments, consumers, clinicians and industry

5.1.1. Digital health test bed framework

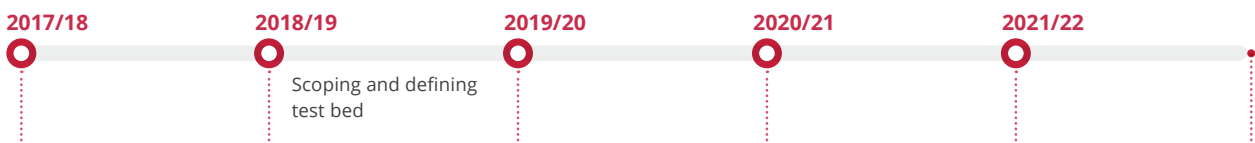
Co-design and implement a digital health test bed framework



Test beds are projects assessing new digitally enabled models of care that are instigated and delivered through sustainable and viable partnerships between industry, government and other organisations. Their purpose is to promote innovation to address Australia's highest priority health challenges, generating evidence of how the new approaches improve health outcomes, are worthy of securing ongoing investment, provide further business opportunities for partners and can be translated for usage more broadly across the health system. A test bed framework will be co-developed to manage the prioritisation process for projects, and to guide how government, industry, universities and healthcare providers can work together to implement and evaluate the use of digital health technologies. The test bed framework will also establish the policy, regulatory and governance parameters for assessing, prioritising, evaluating and maximising the test beds.

5.1.2. Embedding telehealth

Harmonising telehealth models across Australia

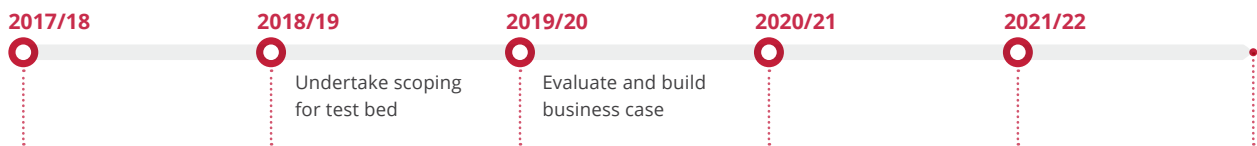


Telehealth is the delivery of accessible, patient-centric health care services, at a distance, using information and telecommunications technologies. While it is used across the health system, offering significant opportunities to improve healthcare access, safety, quality and efficiency, the national consultation heard that there is a desire for it to be used more widely and consistently. With an aim to further embed telehealth into clinical practice, a testbed project will focus on ways to improve access to health services for rural populations, particularly Aboriginal and Torres Strait Islander communities, to offer greater convenience for consumers and deliver improved healthcare outcomes.

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

5.1.3. End-of-life care

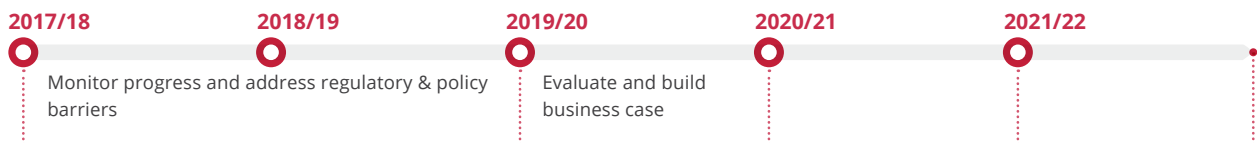
Harmonisation of end-of-life care



Advance care planning helps people think about their future medical treatment and healthcare needs, and advance care planning documents can be included in the My Health Record system to provide increased accessibility to a consumer's advance care planning information nationwide. The end-of-life care test bed will explore how end-of-life care can be embedded into existing clinical workflows, to ensure individuals have their wishes communicated and respected.

5.1.4. Chronic disease management

Supporting coordinated care for people with chronic and complex diseases



The number of patients with chronic and complex conditions is rising, but patients often experience a lack of coordination of their care. Digital health solutions have been developed which could better support patients and the healthcare professionals that care for them. This test bed will investigate how chronic disease management and care coordination can be digitally enabled and scaled up across Australia in ways that maximise improvements to health outcomes, prevents complications from chronic disease and reduces admissions to hospital.

5.1.5. Residential aged care

Supporting the residential aged care sector

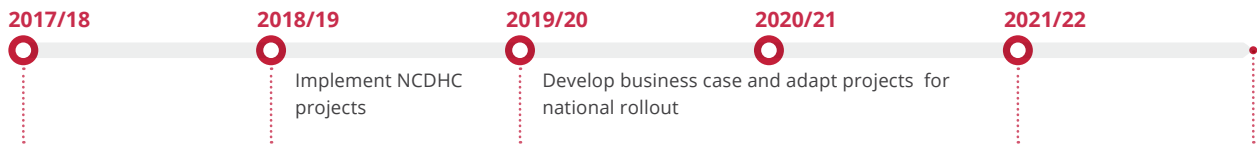


Digital health technologies can improve outcomes for Australians in residential aged care facilities by closing the information gap between aged care and other healthcare professionals. This improvement will enable treating clinicians across health sectors to be confident of the accuracy and timeliness of information they can access when required, with the aim of reducing the number of transfers to hospital, and improving health outcomes for Australians in residential aged care facilities.

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

5.1.6. Children's Health Record

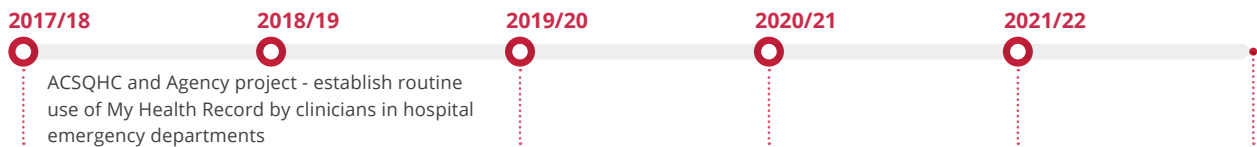
Harmonisation of the Children's Health Record



This test bed will explore how every child in Australia can have the option of a comprehensive digital health record from the time they are conceived, through those critical first years and adolescence - readily accessible by parents and healthcare providers and ultimately for that individual throughout their life. The Australian Digital Health Agency is partnering with eHealth NSW and the Sydney Children's Hospitals Network (SCHN) to establish the National Children's Digital Health Collaborative. The partnership will co-design and test a way for parents and healthcare providers to easily access standardised information on a child's health and development, testing how information can be captured through a child's interaction with the health system through services such as school immunisation programs, and also through their mother's relevant interactions during her pregnancy.

5.1.7. Emergency care

Better supporting management of health and care emergencies



The use of electronic health records within the emergency department setting can depend on the usability of clinical information systems, its display and access to relevant content. Poor functionality and lack of integration with existing clinical workflows can impede adoption of electronic health records, particularly during busy times. This test bed will consider how health and care information can be shared across health and care practitioners in real-time, to better support management of health and care emergencies. Australians who require emergency care will know that their information is securely available to their treating clinicians, whether they are at home, in hospital, or anywhere else.

Digitally enabled models of care that improve accessibility, quality, safety and efficiency

Enhanced Models of Care

Actions across Australia

Below is a summary of some of the actions that government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway that showcase **digitally enabled models of care that drive improve accessibility, quality, safety and efficiency.**

▶ ACCESS TO HEALTHCARE WHEREVER YOU ARE



The National Digital Health Strategy identifies a number of key health reform areas that are prioritised for testing evidence-based digitally enabled initiatives. Further embedding telehealth into clinical consultations, particularly in rural and remote and Aboriginal and Torres Strait Islander communities, was identified as one of the six priority areas.

Telehealth initiatives are being developed to benefit rural children thanks to a research partnerships between the **Royal Far West**, the **Child Behaviour Research Clinic** and **School of Public Health** at the **University of Sydney**.

The collaboration with the Child Behaviour Research Clinic will include a transportable model of early intervention to improve access and outcomes for children with early-onset mental health issues. The School of Public Health will focus on research and knowledge translation of the value of telehealth to Telecare users, payers and clinicians. This work will help Telecare coordinators improve access, quality and sustainability of services.

The **Northern Territory Department of Health** is using Telehealth video conferencing systems to allow patients in remote areas to connect with healthcare providers in major centres. TeleHealth NT includes seven service domains: Tele-Critical Care, Tele-Specialist Clinics, Tele-Workforce Support, Tele-Complex Case Management, Tele-Inpatient Care, Tele-Family Support and Virtual Visitations, and Tele-Sonography. **Queensland Health's** Telehealth Program deploys over 4000 hardware and software systems in over 200 hospitals and community facilities, supporting more than 70 clinical specialties and sub-specialties across the state.

SA Health's Virtual Clinical Care network enables remote monitoring to provide early detection of symptom changes which can then trigger early intervention. **Healthdirect's** Video Call has been adopted by three jurisdictions to deliver telehealth services across a



→ ACCESS TO HEALTHCARE WHEREVER YOU ARE

range of health services. This program is to be further expanded to additional jurisdictions and healthcare settings.

The **Loddon Mallee Rural Health Alliance**, which covers central to north west Victoria, has been leading the Geri-Connect project. This project supports the provision of geriatric medicine across inpatient and residential aged care settings. Using a telehealth funded model, the project addresses time constraints faced by GPs, and means that patients in residential aged care facilities who may not have had access to geriatric medicine services are now being seen.

The **Telehealth Victoria Community of Practice** is a telehealth focused resource that provides information, online forums and workshops for anyone interested in telehealth. The community of practice aims to facilitate collaboration and networking, provide a hub for finding resources and expertise, and enable sharing of skills and knowledge between experienced and new telehealth users.

The Royal Flying Doctors Service has built on their experience of providing comprehensive health services to some of the most isolated remote and rural locations with a 24/7 telehealth service, known as Remote Consultations. A **Hunter Medical Research Institute** nutrition project called Nutrition Connect supported by **nib foundation** and the **University of Newcastle** will use telehealth technology to bring a dietitian “virtually” into the homes of rural families. The focus will be on children aged 5 to 11 who need more support to improve eating habits and achieve a healthy weight. **nib** has been developing and trialling innovative models of care including involvement in Patient-Centred Medical Homes, delivering chronic disease management programs, and offering telehealth services amongst other digital innovations.

Everlight Radiology’s Teleradiology provides improved patient care by allowing radiologists to provide health care without needing to be in the location as the consumer. Many specialists are located in large metropolitan areas working during daytime hours. Teleradiology allows trained specialists to be available at all times giving consumers in regional and rural Australia direct access to specialists in the same way Telehealth is providing options for consumers. **Arthritis Australia** has remote and online consultations, while another leading health advocacy group has started using telehealth consultations with specialist and other allied health professionals which they will be able to claim a Medicare rebate for.

Blamey Saunders clients have access to a continuum of hearing health care from self-help online to teleaudiology assistance to audiology clinic. Their model blends clinic and online services based on digital tools that are usable by consumers and clinicians alike, allowing the consumer to choose the model of care they prefer and that is most effective for them. The **Breast Cancer Network Australia** is leading an initiative to bring information resources that are primarily in printed form on to mobile devices in an effort to make them more accessible and relevant to consumers, no matter where they live.

▶ **THE NEXT GENERATION COVERED BY DIGITAL HEALTH FROM BIRTH**



The Australian Digital Health Agency is partnering with **eHealth NSW** and the **Sydney Children's Hospitals Network (SCHN)** to establish the **National Children's Digital Health Collaborative**.

The Collaborative is exploring how every child in Australia can have the option of a comprehensive digital health record from the time they are conceived, through those critical first years and adolescence - readily accessible by parents and healthcare providers and ultimately for that individual throughout their life.

The Collaborative comprises around 400 clinicians, consumers, IT experts, and researchers from across Australia and is aimed at making a positive impact on children's health and wellbeing. This wide variety of experts will co-design and test a way for parents and healthcare providers to easily access standardised information on a child's health and development. This initiative will test how information can be captured, not only through a child's interaction with the health system and other services such as school immunisation programs, but also through their mother's relevant interactions during her pregnancy.

Parents and caregivers will no longer have to search for paper records of their children's health records thanks to a national digital version of the 'baby books'. The digital record will keep track of key childhood interventions such as immunisations.

6. Workforce and Education

A workforce confidently using digital health technologies to deliver health and care

**WHAT
WILL BE
DELIVERED
BY 2022**

- 01** The Agency will collaborate with governments, care providers and partners in workforce education to develop comprehensive proposals so that by 2022, all healthcare professionals will have access to resources that will support them in confident and efficient use of digital services.
- 02** Resources and curricula will be developed to ensure all healthcare practitioners are exposed to and trained in digital technologies and their use during training and upskilling.
- 03** A comprehensive set of clinical resources which clearly outline the evidence for how, when and where digital health should be used in everyday clinical practice.
- 04** Promotion of a network of chief clinical information champions to drive cultural change and awareness of digital health within the health sector.

A workforce confidently using digital health technologies to deliver health and care

Healthcare consumers want their clinicians to know how to use digital technology reliably and effectively so that they can be used to improve their experiences with health services.

The National Digital Health Strategy recognises that successful implementation of new technology requires the initial and sustained engagement of front-line users to deliver awareness, education and adoption.

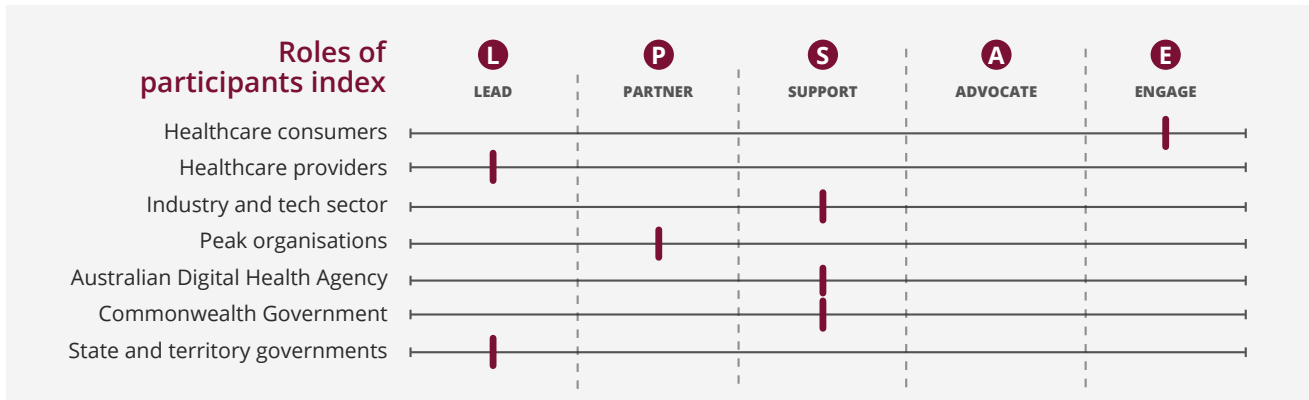
While digital technology adoption in the rest of our lives has become common, implementing digital technology changes across the health sector is one of the most complex adaptive changes in the history of healthcare, and perhaps of any industry.

It is therefore imperative that there is a nationally coordinated approach to workforce and other health and care stakeholders' education to support this change.

The benefits for Australians and the Australian healthcare system are:

- ✓ All healthcare practitioners will be able to confidently and efficiently use digital technologies and services to interact with patients, use and contribute to their health record and exchange clinical information with the rest of the health system.
- ✓ The next generation of health and care workforce will be exposed to and trained in new clinical pathways, digital technologies and the importance of high-quality data.
- ✓ The workforce will be positively engaged on the effect of digital technologies and services on their working lives.

Roles of participants in order to achieve benefits



Healthcare consumers	Expect that governments and health care providers are adequately training and educating their workforce in digital technologies that support the delivery of health services.
Healthcare providers	Participate in training and education modules on the use of digital technologies, and drive change to ensure that the digital solutions assist them efficiently to deliver more effective and safe healthcare services. Engage with other organisations, including software vendors who provide a variety of digital health training and information, to promote digital adoption of the workforce.
Industry and technology sector	Ensure products and services have appropriate training guides and support for healthcare professionals, peak organisations and state and territory healthcare service delivery partners.
Peak organisations	Participate in the design and delivery of best practice digital literacy programs across Australia by a range of national partners. Promote the use and benefits of digital health solutions to their membership.
Australian Digital Health Agency	Work with training organisations, Primary Health Networks, private healthcare providers and states and territories to identify the best training delivery model for implementing digital solutions. Work with scientific organisations (e.g. HISA) and peak bodies to update clinical pathways and guidelines, embedding digital health best practices, working with training organisations to ensure continued professional development requirements are met, and developing and refreshing materials regularly.
Commonwealth Government	Ensure national health policy enables delivery of best practice digital literacy programs to the broader health workforce across Australia by a range of national partners.
State and territory governments	Design, commission, conduct, coordinate, support and evaluate education and training programs for clinical, corporate and support staff, including VET, vocational, undergraduate, professional entry/clinical trainees, new graduates.

A workforce confidently using digital health technologies to deliver health and care

Workforce and Education

Priority actions for co-development 2018-2022

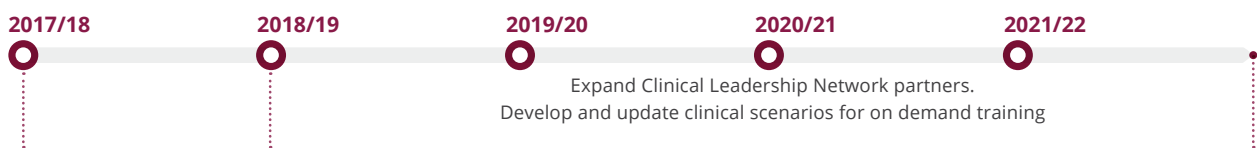
6.1

Develop the capabilities needed to ensure digital technologies deliver better health and care outcomes

Support the workforce to adapt to, use and embrace the changes and opportunities created by digital health innovation through helping people and organisations develop the capabilities needed to embed these innovations into their work flows

6.1.1. Supporting adoption by the health workforce

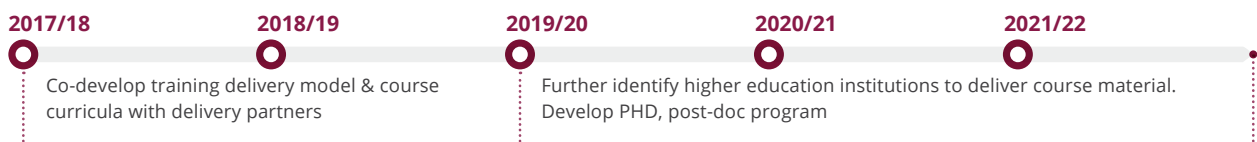
Supporting the workforce to confidently use digital technologies



Support the workforce adapt to, use and embrace the changes and opportunities created by digital health innovation through helping people and organisations develop the capabilities needed to deliver better health and care outcomes. Promote a network of chief clinical information champions to drive cultural change and awareness of digital health across the health sector to help embed digital health into routine clinical practice.

6.1.2. Digital health embedded in training

Development of digital health national educational curricula and training materials

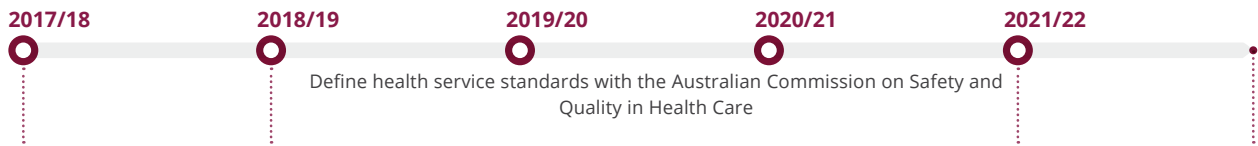


Coordinate and develop national curricula and training materials that can be delivered by universities, health services, Primary Health Networks, peak bodies and training organisations (including the health information workforce, clinical coders, health librarians, and health informatics workforce) aligned to the requirements of continuing professional development programs for all healthcare providers. Co-production of higher and tertiary education curricula relating to digital health and incorporation of components into existing courses. Enhance usability through the Agency On Demand Training service, and deliver best practice digital literacy programs across Australia for all healthcare providers, including sectors with low levels of participation such as allied health professionals and medical specialists.

A workforce confidently using digital health technologies to deliver health and care

6.1.3. Digital health in national standards and accreditation

Integration of digital health in national standards and accreditation requirements



The professional associations and workforce accreditation bodies will lead the integration of digital health into national workforce accreditation to ensure healthcare providers have easy access to best practice guidelines, access to IT infrastructure in the learning environment, and other supporting resources which increase their understanding of how, when and why to use digital health solutions to improve outcomes in their routine clinical practice.



A workforce confidently using digital health technologies to deliver health and care

Workforce & Education

Actions across Australia

Below is a summary of some of the actions government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway to ensure **the workforce is confidently using digital health technologies to deliver health and care.**

▶ TRAINING THE HEALTH WORKFORCE TO CONFIDENTLY USE DIGITAL TECHNOLOGIES



Healthcare organisations are engaging and supporting frontline workers to increase their skills and facilitate the cultural change required to ensure the health workforce is able to confidently and efficiently use digital technologies and create new digitally enabled clinical pathways.

In an initiative with **Health Information Management Association of Australia** and the **Health Informatics Society of Australia (HSIA)** the **Australasian College of Health Informatics (ACHI)** has established the Certified Health Informatician of Australasia (CHIA). The CHIA credential demonstrates that candidates meet the health informatics core competencies to perform effectively as a health informatics professional in a broad range of practice settings. The certification has been designed to address the lack of formal recognition for health informatics skills in the Australian health workforce.

NSW Health provides their workforce access to a statewide e-learning management system, My Health Learning, which includes over 100 modules and courses. My Health Learning provides easy access to learning and development courses and the ability to plan and log both formal and informal learning and professional development. Workers are also able to undertake ICT internship, cadet and graduate placements within eHealth NSW, including an Aboriginal ICT Cadet Program where participants are engaged in a range of projects providing them with opportunities to develop their knowledge and skills in the use of digital health technologies.

A new computer based system for managing online education courses and e-Learning modules, Tasmanian Health Education Online (THEO) supports mandatory clinical and digital health education, with a number of My Health Record e-Learning modules to be introduced by the end of 2018. The **University of Tasmania** will also offer clinical placement and support for the development of the current and future health care workforce.



→ TRAINING THE HEALTH WORKFORCE TO CONFIDENTLY USE DIGITAL TECHNOLOGIES

ACT Health is developing a program to encourage the nursing workforce to become digital champions and through a number of e-Learning packages to support staff to new ICT systems across the territory as well as including digital technologies in clinical training as a core competency.

Queensland Health is continuing the rollout of wireless networks and Bring Your Own Device (BYOD) initiatives which are already improving the mobility of clinicians. These networks will be pivotal in the design of new facilities, including wi-fi for patients and staff. It is also providing financial support for health professionals to complete the CHIA program to build Queensland Health's digital health workforce capacity and capability.

WA Health has a strong focus on expanding the telehealth service to increase staff access, capability and capacity through education, support and professional development and networking and increased patient access to the continuum of care and expertise in the country areas. Specialties include emergency telehealth service (24/7), asthma and COPD, diabetes, antenatal, mental health, oncology and stroke services.

The **Northern Territory Government** enables healthcare workers to undertake medical education and training and prevocational medical training accreditation at the Medical Education and Training Centre. There will be support health services for prevocational recruitment to achieve a sustainable workforce in the Northern Territory. Victoria is utilising the seven Workforce Networks across Victoria to engage workers from health and human services organisations in a range of workforce initiatives, including e-learning portals and face-to-face education and training sessions.

NPS MedicineWise is a provider of quality online learning modules about medicines and medical tests. The modules are delivered via a user-friendly interface and contain the latest, evidence-based clinical information that has been researched, written and reviewed by experts and specialists. **Dementia Australia** operates an innovative educational program that uses virtual reality technology to enable participants to see the world through the eyes of a person with dementia. The EDIE program, which operates within a fee-for-service model in NSW and Victoria, provides healthcare workers and those caring for people living with dementia with an increased understanding of the experiences and needs of individuals with dementia.

Digital technology is also reaching members of **Exercise and Sports Science Australia**. They will benefit from an ESSA project that looks at My Health Record and future digital requirements to help their clients across the health spectrum, from preventative health through to chronic disease management.

Similar to the ESSA project, the **Allied Health Professions Australia** and its members are working to improve digital health literacy among allied health practitioners, working to engage with software vendors, and participating in Agency programs to promote allied health involvement.

Current and future clinical leaders can also apply to be part of the **CXIO Network**, a specialised forum to help them share information – from innovations to emerging clinical



→ TRAINING THE HEALTH WORKFORCE TO CONFIDENTLY USE DIGITAL TECHNOLOGIES

issues and solutions – in order to deliver improved patient care. The CXIO Network is supported by HISA, ACHI in partnership with the **Australian Digital Health Agency**.

ACHI sets standards for professional practice and education in health informatics, provides evidence-based guidance to jurisdictions, supports initiatives, facilitates inter-disciplinary collaboration and mentors the community, and has developed a Health IT Scientific Program for HISA.

To affirm the role of nurses in digital healthcare, the **Australian College of Nursing** has produced a joint position paper with HISA with key actions, including urging nurses and midwives to lead in decision-making as well as to partner, to obtain the knowledge and experience to act as knowledge brokers and to transform services and empower patients in self care.

In May 2018, the Health Information Workforce Census was conducted. The aim of the census project is to quantify and qualify the Australian health information workforce, specifically to delineate and count the workforce, consider the future configuration of the workforce, identify health information workforce shortfalls, and identify current health information training and career pathways. The census project is a collaborative project between the **University of Tasmania, University of Melbourne, Australian Digital Health Agency, Australian Library and Information Association Health Libraries Australia, Australasian College of Health Informatics, Health Informatics Society of Australia, Health Information Management Association of Australia, and the Victorian Government Department of Health and Human Services**. The next census will be in May 2020 and every three years thereafter.

7. Driving Innovation

A thriving digital health industry delivering world-class innovation

- 01** Australians will have better and more informed access to safe, quality health applications, tools and content, through a digital services endorsement framework that will be co-produced with clinical, design and innovation leaders.
- 02** A new health innovation exchange will be established, where clinicians, researchers and entrepreneurs use data to identify opportunities to work collaboratively on designing digital health solutions.
- 03** The Agency will work with industry to evolve the developer support program to reduce barriers to innovation and enable opportunities for better integration with the My Health Record system and other digital services.
- 04** The Agency will consult with the community on development of a comprehensive approach to digital inclusion, to ensure new innovations do not leave anyone behind.
- 05** Adoption will be accelerated by providing best practice design principles and guidelines to improve usability and user experience.

**WHAT
WILL BE
DELIVERED
BY 2022**

A thriving digital health industry delivering world-class innovation

The National Digital Health Strategy outlines the vision for fostering an environment that supports innovation to improve the experiences of consumers and clinicians and enhance our ability to improve health outcomes of Australians through safer, more efficient and effective healthcare delivery.

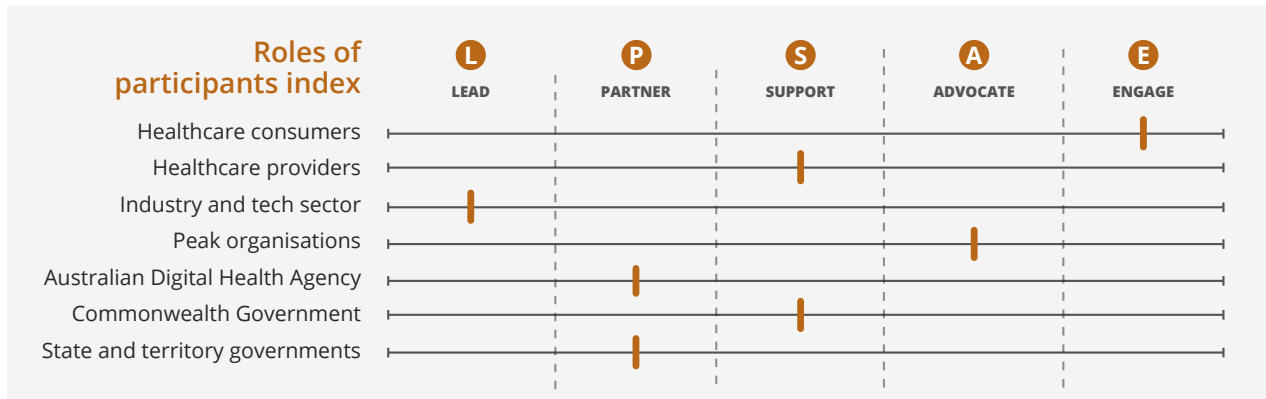
Accelerating innovation in the healthcare system means facilitating meaningful partnerships, working together to remove barriers, and learning from successful products and projects, both locally and internationally.

Software and technology companies, researchers, entrepreneurs and innovating clinicians and consumers will drive digital health innovation, supported by an open and collaborative approach that creates the conditions necessary to design and develop new offerings that meet the needs of health consumers and the healthcare professionals who care for them.

The benefits for Australians and the Australian healthcare system are:

- ✓ There will be greater availability of well-designed and developed digital health solutions, leading to improved patient and clinician choice and experience.
- ✓ There will be increased rates of industry developing and scaling innovative digital health and care services.
- ✓ More people will have the opportunity to improve their digital skills and participate in the digital economy.
- ✓ Digital health solutions will contribute to building a strong and entrepreneurial economy.
- ✓ Australia will be acknowledged globally as a leader in digital health and have an open system that supports industry to develop innovative digital health solutions that deliver improved health outcomes.

Roles of participants in order to achieve benefits



Healthcare consumers	Engage with digital products and online communities that promote better health and well being. If not confident in using digital tools, participate in usability panels to allow networking between industry and the consumer community.
Healthcare providers	Encourage consumers to use digital products and solutions which promote better health and wellbeing, but ensure consumers are provided the support options they need to use digital solutions confidently. Participate in usability panels to allow networking between industry and the clinical community.
Industry and technology sector	Design innovative products and digital solutions that are intuitive and easy to use, to ensure that all consumers are able to access their benefits. Actively engage with the wider health sector, researchers and panels of clinicians and consumers to collaborate on innovation concepts that allow targeted research and development of solutions for priority problems.
Peak organisations	Build support for the design approaches within specific communities of interest and encourage their members to engage with the technology sector. Provide expert advice on behalf of their members on how best to compile a list of safe, evidence-based digital health services and content that have beneficial health outcomes
Australian Digital Health Agency	Coordinate the innovative and technical aspects of the digital health program, focused on open innovation, specifications and standards, and product development. Provide overall design integration for all of the services developed to ensure that the national digital health systems and services provide the best user experience, and deliver measurable improvements that are derived from evidence of user needs, and deliver tangible benefits across the health ecosystem.
Commonwealth Government	Engage with Australian businesses to provide advice on connecting and partnering with the digital health industry, and promoting Australia's digital health capacity to overseas markets. Engage with research organisations, and continue building evidence on the barriers to digital literacy (through the Australian Bureau of Statistics). Ensure all Australians have access to communications services to benefit from digital health.
State and territory governments	Lead local strategies and implement programs that support digital health innovation. Promote innovation showcases, such as expos, awards and hackathons, to support local innovators. Partner with the Agency to coordinate efforts and provide learnings to other states and territories.

Driving Innovation

Priority actions for co-development 2018-2022

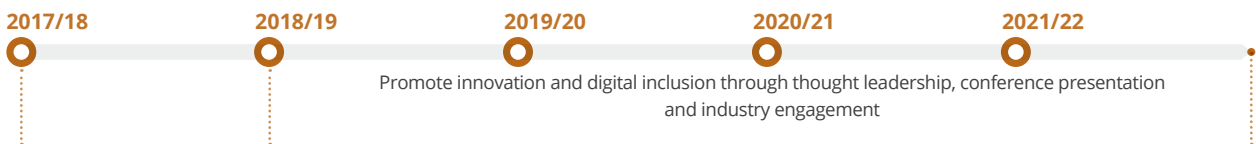
7.1

Promote inclusiveness and equality of experience

Support people experiencing digital disadvantage to have the opportunity to improve their digital skills to both access technology, and be able to use it effectively

7.1.1. Address the barriers to digital inclusion

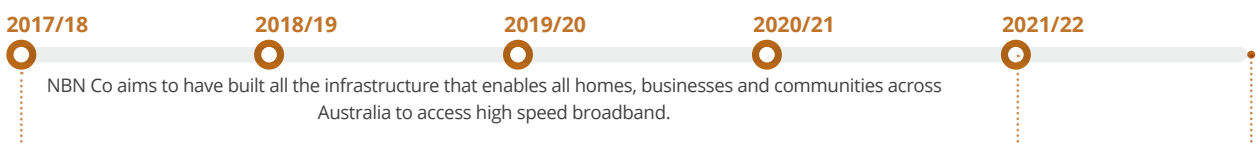
Deliver programs that improve digital literacy and ensure inclusiveness



There is not yet equal opportunity for all Australians to benefit from the digital innovation that is transforming many aspects of our lives, particularly for those who make the greatest use of health services. To ensure new innovations in healthcare don't leave anyone behind, and to better inform health consumers about how digital tools like the My Health Record can benefit them, innovation and digital inclusion will be promoted through thought leadership, conference presentations and industry engagement. A network of local community partners, including non-government organisations and public libraries who run digital literacy programs, will be developed for consumers to improve digital literacy and ensure inclusiveness, equity and cultural safety for target populations, including Aboriginal and Torres Strait Islander peoples, culturally and linguistically diverse (CALD) populations, people living with a disability, carers, and older Australians.

7.1.2. Reliable and affordable connectivity for all Australians

Ensure all Australians have access to communications services to benefit from digital health



The use of digital health products and services relies on affordable and reliable broadband infrastructure and mobile networks. The Australian Government has made a commitment to ensuring that, to meet Australia's economic and social needs, all Australians have access to very fast broadband

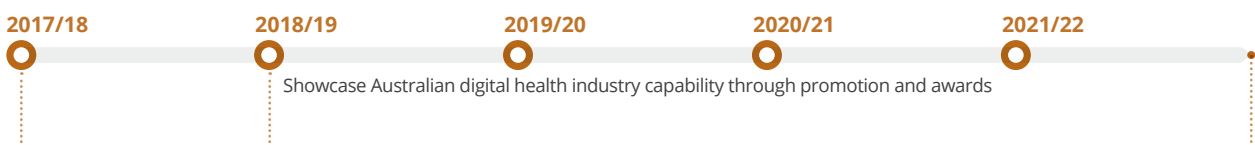
as soon as possible, at affordable prices, and at the least cost to taxpayers. This commitment is being delivered by the rollout of the National Broadband Network (NBN). This will ensure all Australians have access to communications services and can rely on them to address their health needs, and be able to benefit from future innovative digital health services as they become available. As highlighted in the Productivity Commission's report into Telecommunications Universal Service Obligation, further government intervention is likely to be required to address service availability for some user groups, including people with disability or life-threatening health conditions, people living in remote Indigenous communities, some older people with limited digital literacy, and people without a permanent fixed address.

7.2 Fuel and accelerate health and care innovation

Fueling and accelerating innovation in health and care by fostering the conditions needed for people and organisations to create new digital health solutions, and scaling up the innovations that work so they can be meaningfully adopted by the broader health and care community.

7.2.1. Innovation showcase

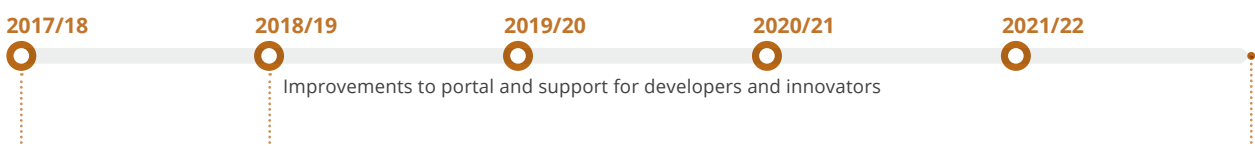
Recognising excellence in digital health innovations



Innovators need support to scale up their technology and be provided with pathways for delivery. An innovation showcase leveraging the work of organisations like ANDHealth and MTPConnect, will recognise excellence in digital health innovations through awards and publishing case studies of the health and care innovations that are working.

7.2.2. Developer Partner Program

Guiding and supporting developers to bring new ideas to market



To ensure innovators are supported in adopting standards, are provided a space for collaboration, and are provided guidance to help understand the digital health ecosystem, the Agency's Developer Partner Program will be expanded. This will help to simplify, guide and support developers on how to bring new ideas to market, facilitate test environments, provide an open source hub of code sets, and provide support on how digital health national infrastructure services can support what developers are trying to achieve.

7.2.3. Digital health services endorsement framework

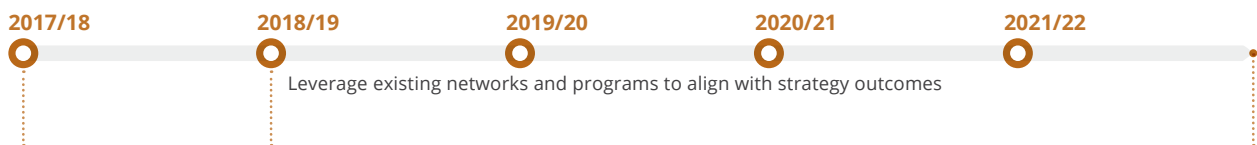
A user-friendly list of evidence-based digital health apps, services and content



Despite there being over 250,000 mobile health apps available to consumers, few have been independently tested for their efficacy. A sustainable digital health services endorsement framework will be co-designed to complement existing initiatives by both the public, private and non-government sector to compile a user-friendly list of evidence-based digital health services and content that have beneficial health outcomes. Industry representatives, researchers, clinicians and consumers will collaborate to co-design this list. The lessons learned from local and international attempts to accredit or endorse digital services (such as mobile apps) will be leveraged. As part of the framework, support for the technology sector should be provided to ensure companies can access information about the right type of clinical trials and clinical evidence gathering to support their health claims.

7.2.4. Health innovation exchange

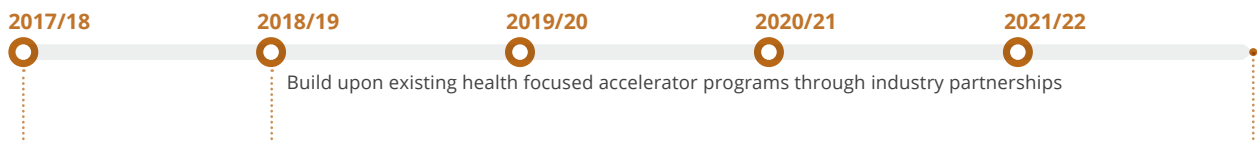
A forum for clinicians, researchers and entrepreneurs to work collaboratively



Leverage existing networks and programs to facilitate meaningful partnerships between industry, healthcare consumers and the research sector, focusing on addressing the health system's highest priority challenges. A new health innovation exchange will support the establishment of a forum where clinicians, researchers and entrepreneurs, both local and international, can work collaboratively on digital health services that are focused on solving the highest priority health and care problems faced by consumers and clinicians, aligned to the priorities of healthcare providers.

7.2.5. Partnerships with start-up accelerators and incubators

Helping to transform ideas into competitive businesses



A broad range of existing health focused accelerator programs will be built upon. These programs are leveraging Australian and international personnel with proven expertise to support the surfacing and development of early stage innovations, partnering with organisations that support start-ups to transform their ideas into competitive businesses, providing resources, knowledge, procurement advice, seed funding, access to networks, providing assistance to companies on how to penetrate international markets, and sharing information on regulatory landscapes in Australia and overseas. The objective would be to facilitate regulatory sandpits, joint ventures and strategic partnerships to both support the creation of new digital health solutions, and scale up current digital health innovations.

7.2.6. Development of design principles

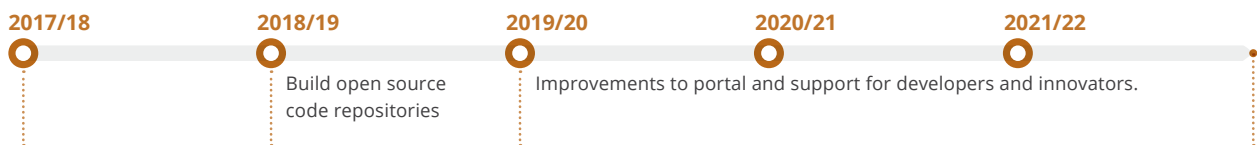
Ensuring digital health products and services meet usability needs



Collaborative development for design principles and guidelines for digital health services and content, and investigating how these could be incorporated into a broader conformance framework that is focused on ensuring usability needs are met when developing digital health products and services. Ensure user design standards cater for deployment in regional, rural or remote areas and for people with disabilities. These principles would supplement the Digital Transformation Agency's Digital Service Standard.

7.2.7. Support for app enablement

Fostering innovation of mobile, portal and desktop applications



Support innovation of mobile, portal and desktop applications by enabling connectivity to digital health systems separate to the My Health Record, such as electronic prescribing, secure messaging, and other consumer provided sources (for example fitness devices). The Agency will work collaboratively with developers to leverage digital health foundations, the HL7™ FHIR® standard and Application Programming Interfaces (APIs) for exchanging digital information.

7. Driving Innovation

Actions across Australia

Below is a summary of some of the actions that government, clinical, technology, industry and advocacy organisations told the Australian Digital Health Agency are already underway to deliver **a thriving digital health industry delivering world-class innovation.**

▶ SHINING A LIGHT ON DIGITAL HEALTH INNOVATION



A key outcome for the National Digital Health Strategy is to foster a vibrant digital health industry in Australia, delivering world-class innovations to improve the lives of healthcare consumers and providers and to reduce unnecessary health expenditure.

Health Horizon is a website that features health innovations in Australia and globally. Supported through the **MTPConnect** Project Fund Program – whose members include **Health Informatics Society of Australia, Medical Technology Association of Australia, ANDHealth, Novartis, Medical Software Industry Association**, the **University of Newcastle, QUT** and **Hospital and Health Services IP** – the site allows individuals to follow innovations, and get notified when they make progress in the future. Digital health innovations being showcased by **Health Horizon** include **Kinetic Finger** – a body-powered 3D printed finger prosthetic for finger amputees, **SHUTi** – an online self-help program using cognitive behaviour therapy to help relieve insomnia, and **PainChek** – a smartphone-based facial recognition system (the world's first) that enables patients with dementia to report their pain levels.

Accenture's Healthcare 2020 initiative is a global community of practice that innovates, educates and collaborates. At its core it tracks the leading health startups globally and engages with the leading research and development, driving much of their thought leadership and point of view development.

The **Health Informatics Society of Australia's** annual Australian Telehealth Conference showcases advances in virtual and connected care, including supplementary technology like artificial intelligence, wearables, robotics, mobile applications and 3D printing.

Direct digital health industry support is being provided by the **ANDHealth+** program, by providing mid-stage digital health companies with support from proven experts to undertake a significant piece of work focused on securing the clinical or commercial evidence needed to support the raising of growth capital and to progress market entry strategies. In addition, the Australian Government's \$35 million **BioMedTech Horizons** program (delivered by **MTPConnect**) is an initiative to support innovative collaborative health technologies, drive discoveries towards proof-of-concept and commercialisation that address key health challenges as well as maximise entrepreneurship and idea potential.

▶ **FOSTERING AN ENVIRONMENT OF DIGITAL HEALTH INNOVATION**



Government's role in the delivery of a thriving digital health industry is to support industry and innovators to foster an agile and self-improving health system that is sustainable. State and territory governments are helping to foster a climate of digital health innovation through a range of initiatives. **Queensland Health** is tackling the funding and organisational structures that get in the way of innovators trying to better prevent and detect health issues by administering the Integrated Care Innovation Fund (ICIF), which is designed to help fuel better practices at all levels of the health system. Queensland Health also collaborates with **Johnson & Johnson** to award prize money to help fund healthcare research with high potential for commercialisation.

The **Western Australian Government** is commencing work on a hackathon guideline to assist staff and stakeholders interested in hosting hackathons to develop innovative solutions to local problems. The state is also embedding an enterprise architecture practice, which will facilitate the development of business, information, applications and technology roadmaps, plus a set of guidelines and standards for the Western Australian health system.

NSW Health is continuing to host regular industry partnership summits with universities, ICT suppliers, clinicians and researchers, and collaborating with industry to pilot solutions to address health system challenges. **ACT Health's Digital Solution Division** is being represented in the Small Business Innovation Partnerships Program, which aims to promote opportunities for small business in the ACT. **Victoria's Department of Health and Human Services** is participating as an industry partner in the Digital Health Cooperative Research Centre (CRC) which focuses on improving the health and healthcare of Australians and advancing the economy through collaborative research and development that combines clinical expertise, data and information and telecommunications technologies.

The **ACT Government** is developing an Enterprise Research Platform to drive evidence-based practice improvement and innovation in health and care. The platform will provide access to appropriate research data and remove barriers to research-based innovation. The **Northern Territory Government** is developing a Digital Territory Strategy to identify the objectives and priorities for digital services over the next five years and outline a roadmap of actions to achieve the objectives. The strategy will create the framework to promote and enable digital capabilities for Territory businesses and citizens that will improve communities, create jobs, grow the economy, and develop Territorians' knowledge and attitudes about health and their ability to participate in their own healthcare.

▶ **RESHAPING HOW WE DELIVER HEALTH AND CARE**



A thriving, innovative Australian digital health industry will provide Australian consumers and providers with cutting-edge digital health solutions to make their healthcare interactions safer, more convenient, and more efficient. New services and new efficiencies have the potential to have an enormous impact both economically and on overall quality of life.

Consumers will be empowered to manage their symptoms or care in their own homes, thanks to the work that **Telstra Health** is doing with care providers to support digital health technology through a mobile workforce. Arthritis sufferers will be able to use MyBackPain, an online website that is currently being evaluated by **Arthritis Australia** as part of a randomised control trial to assess the effectiveness of using intelligent algorithms to provide tailored information for people with acute and chronic back pain.

ID Exchange Pty Ltd in Partnership with **Digi.me Ltd** are collaborating to empower individuals with their health data using digi.me's unique personal data platform. This platform aggregates and normalised the data, which in turn enables consumers to use this data with third parties such as healthcare providers, apps and services. **Foresight Health Care** has combined mobile health coaching software, health monitoring devices, with clinical health coaches to create a complete data driven, clinical self-management and health improvement system for people suffering chronic disease.

Apple has introduced a significant update to their Health app with the iOS 11.3 beta, with a feature for customers to see their medical records on their iPhone. The updated Health Records section within the Health app brings together hospitals, clinics and the existing Health app to make it easy for consumers to see their available medical data from multiple providers whenever they choose. The My Health Record is part of the Australian digital health infrastructure that Apple's Health app and others draw upon and interact with.

The market for health and wellness apps is already blossoming – the challenge is how clinicians and consumers will know which apps will have the functionality, security and privacy they expect. **VicHealth** have launched a consumer-oriented guide to health and wellbeing apps, based on the MARS Mobile App Rating Scale. **Primary Health Tasmania** have commissioned a health app guide for clinicians that will enable them to “prescribe” digital health solutions best suited to their patients. **Queensland Health** is commissioning a pilot program to evaluate mobile health smartphone applications for their clinical functionality, content, usability, cybersecurity and interoperability considerations through the Queensland Policy and Advisory Committee for new Technology (QPACT).

The **Therapeutic Goods Administration (TGA)**, in keeping with its remit in regulating medical devices, is undertaking a number of projects that protect consumers by treating health apps as de facto medical devices, and developing regulations to ensure their security and fitness for purpose. The TGA has provided advice about a suite of defensive measures that medical device sponsors and asset owners can perform to reduce the risk of hacking and other types of cyber-attacks.

▶ **ENSURING INCLUSIVENESS SO ALL AUSTRALIANS BENEFIT FROM DIGITAL HEALTH**



Digital inclusion features prominently in this framework to ensure that all Australians will have access to the coming wave of digital health technologies. One organisation that has assumed a prominent role in Australia's digital inclusion efforts is the **Australian Library and Information Association (ALIA)**, who represent local libraries around Australia. ALIA was one of the first members of the Australian Digital Inclusion Alliance which was launched in August 2017. ALIA's digital inclusion programs include initiatives to promote digital literacy for older Australians and remote regional Aboriginal and Torres Strait Islander communities in Queensland.

Federation of Ethnic Communities' Councils of Australia (FECCA) regularly consults with Australia's culturally and linguistically diverse (CALD) communities to better understand barriers to digital inclusion and best practice design principles and reports on these outcomes. This includes an understanding of diversity within CALD communities and the additional barriers - and opportunities - of digital health for women, LGBTIQ, rural and regional, older, younger and (dis)abled CALD Australians.

The first Australian Digital Inclusion Index was released in 2016, as a joint venture between **Telstra, RMIT University** and the **Centre for Social Impact, Swinburne University**, powered by **Roy Morgan Research**. The index helps identify the barriers to digital inclusion and the impact on communities.

The **ACT Government** is working with the **CSIRO** and **Data 61** to undertake studies aimed at enhancing digital literacy, and the **Tasmanian Government** is developing the Healthy Tasmania Portal, which includes community activities and educational resources as a one stop shop for preventative health information and to improve digital literacy and ensure inclusiveness. The portal includes a toolkit of educational resources to guide preventative health activity that could be used by neighbourhood houses, community health centres, child and family centres, GPs, seniors groups and other community organisations. In addition, it links to resources provided through the Department's Healthy Kids Tasmania and LiveLighter initiatives.

The **Victorian Government** is continuing to enhance the Better Health Channel, which is a consumer portal allowing for personalisation and behaviour change tools. The site is one of the most popular health and medical websites in Australia, with over two million unique visitors each month. It has received many awards, including being ranked the number one health and medical website in Australia.

Critical success factors

In order to realise the benefits of the digital health vision, the National Digital Health Strategy identified six critical success factors that need to be addressed to ensure successful implementation of the strategy's key priority areas. Below are the details of initiatives underway to address each of these critical success factors.

Trust and security assurance

Consumer and healthcare provider trust in digital health is critical to the successful delivery of the National Digital Health Strategy. Strong privacy, security and risk management frameworks to protect sensitive information while also enabling the safe and efficient sharing of information are vital.

Establishing the Cyber Security Centre

The Digital Health Cyber Security Centre (Digital Health CSC) has been established to support secure operation of national digital health systems and protection for Australian personal health information that is stored and transacted through the Agency. The Digital Health CSC also aims to raise the security awareness and maturity across the Australian digital healthcare ecosystem. Within the four themes of 'Partner, Secure, Inform and Respond', the Digital Health CSC provides a range of cyber-security capabilities to support secure national digital health operations across Australia. This enables the Agency to monitor and assess emerging and evolving cyber threats.

Governing the national data system

In response to the Productivity Commission's inquiry into Data Availability and Use, the Australian Government has announced they will invest \$65 million over the forward estimates to reform the Australian data system and introduce a range of measures to implement the Productivity Commission's recommendations. The three key features underpinning these reforms are:

- 1 A new Consumer Data Right will give citizens greater transparency and control over their own data.
- 2 A National Data Commissioner will implement and oversee a simpler, more efficient data sharing and release framework. The National Data Commissioner will be the trusted overseer of the public data system.
- 3 New legislative and governance arrangements will enable better use of data across the economy while ensuring appropriate safeguards are in place to protect sensitive information.

The aim of the reforms to the national data system are to improve Australia's ability to capture the social and economic benefits from existing data, while protecting individual privacy and ensuring people's data is used ethically.

Commitment, cooperation and collaboration across all governments

Given the significant investment in digital health being made across health services and governments, a national approach must acknowledge, complement and build on these developments and not duplicate existing activity.

Co-development of the National Digital Health Strategy and Framework for Action

The digital health vision and its implementation plan have been co-produced by the Agency with all governments, in partnership with consumer groups, the industry and technology sector and healthcare organisations. The strategy was endorsed by the Australian Health Ministers' Advisory Council (AHMAC) and subsequently approved by the COAG Health Council on first presentation. The Agency co-designed the Framework for Action with all states and territories, who shared the initiatives that are underway in their jurisdiction that progress the strategy's outcomes. The Agency also briefed branch heads in the Department of Health to ensure the framework is aligned to Commonwealth Government priorities and supports the broader health reform agenda.

Facilitating national consistency

Mutual interest across all Australian governments is reflected in the Council of Australian Governments (COAG) Intergovernmental Agreement on National Digital Health, with Commonwealth, state and territory health ministers as signatories. The agreement reflects a commitment to the work of the Agency and a recognition of the benefits of a coordinated and collaborative approach across jurisdictions.

The Australian Digital Health Agency is governed by a skills-based Board and is supported by several expert advisory committees, including the Jurisdictional Advisory Committee, which is represented by each state and territory in Australia. The committee provides advice to the Board in relation to all matters that are being considered, or are to be considered, by the Board in order to facilitate national consistency in relation to digital health.

States and territory governments working together to improve child health

Australia's states and territories have joined forces in a unique and transformative partnership that harnesses technology to improve the health and wellbeing of Australian children. The Collaborative is exploring how every child in Australia can have the option of a comprehensive digital health record from the time they are conceived, through those critical first years and adolescence; readily accessible by parents and healthcare providers and ultimately for that individual throughout their life. The Collaborative comprises around 400 clinicians, consumers, IT experts, and researchers from across Australia and is aimed at making a positive impact on children's health and wellbeing.

Establishment of legislative, regulatory and policy frameworks

The management of personal healthcare information and clinical processes is governed by a complex network of federal, state and territory legislation. Australia's policy and legislative framework must be able to accommodate changes that will occur from time to time, and for the maturation of implemented solutions.

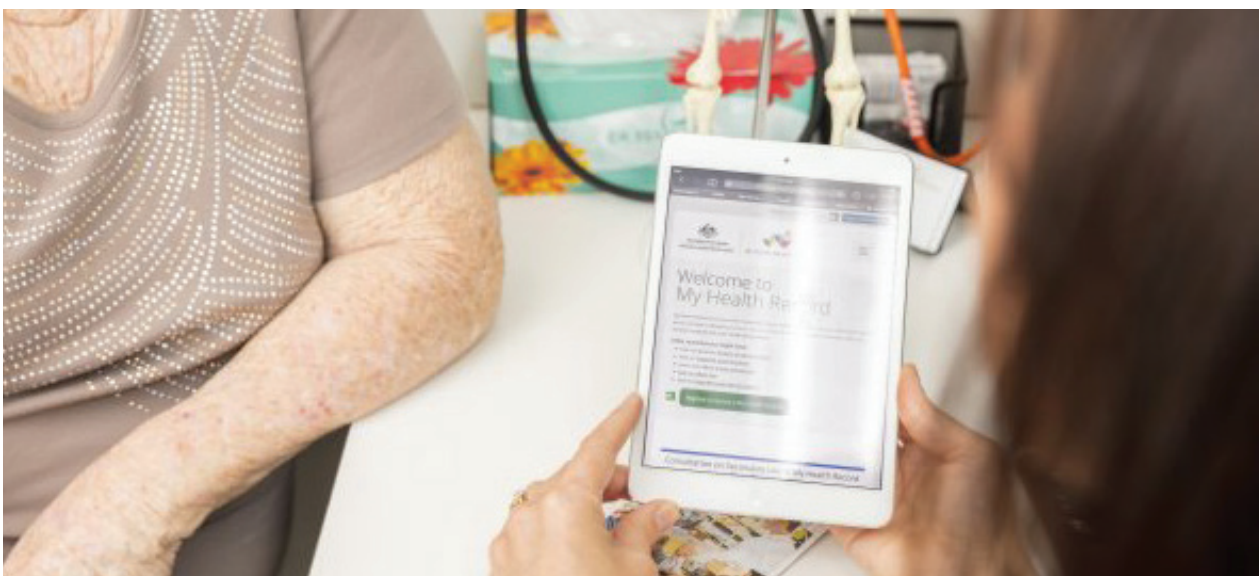
Regulatory exemptions for innovative solutions

The Agency is leading test bed projects, seeking interest from organisations to provide services to establish geographical or health sector-based test beds. The test beds are intended to be partnerships between industry, government and other organisations using new approaches and demonstrate outcomes (e.g. by creating a new digitally enabled model of care, or by generating robust evidence of the impact of an existing digitally enabled service) that can be scaled nationally, and provide further business opportunities for partners.

The test beds will include the testing of policy, regulatory and governance models through the facilitation of regulatory sandboxes offering regulatory exemptions for innovative solutions.

Electronic prescriptions

The Australian Government is investing over \$28 million over five years to introduce a national electronic prescribing system for the Pharmaceutical Benefits Scheme (PBS) and Repatriation Pharmaceutical Benefits Scheme (RPBS) from 10 October 2019. Leading the regulatory work to determine the requirements for electronic prescribing is the Electronic Prescriptions Working Group, established by AHMAC. State and territory chief pharmacists and chief information officers are tasked to develop the legislative framework for electronic prescribing, and help determine the requirements on prescribing operators for the technology used to generate a legal electronic prescription.



Strong consumer and clinician engagement and governance

The ongoing use of collaborative, co-design and co-production principles will be integral to ensuring digital health is usable within the health system. Any initiative requiring a change of practice in the digital health domain will require comprehensive clinical and consumer engagement to be successful.

Co-production approach

Co-production is the process of soliciting user contribution into the development and provision of products and services, resulting in outcomes that better meet user needs. Developing and delivering digital products without a complete understanding of the end user's experience may result in a product that is not usable, is potentially unsafe and ineffective. The Australian Digital Health Agency has embedded co-production into its engagement frameworks, and uses a co-production and user-centred design approach throughout its operations and the product development lifecycle of its products and services. This is demonstrated through the integration of nominated consumer and clinical representatives into the Agency's project and program teams.

Enhanced clinical leadership to represent their professions

The Australian Digital Health Agency has greatly expanded its group of clinical reference leads to promote greater engagement across healthcare sectors by tripling the number of clinical reference leads – from 15 to 45 members. Each one is an experienced, well-regarded healthcare professional who is able to represent the perspectives of their profession in designing digital health products and services. Collectively, they provide an invaluable conduit between the Agency's product and service development teams and Australian healthcare professionals.

Leading by learning

The Australian Digital Health Agency hosts regular community and consumer listening forums to initiate important and ongoing conversations with community groups on how digital health will impact the individuals they support and represent, and to provide opportunities for organisations to provide insights into the challenges facing their members, and to identify new ways to deliver more effective and efficient digital health together.

Effective governance and leadership

Strong national leadership will be critical to the success of this strategy. No single organisation can achieve the desired outcomes from digital health alone. A coordinated approach will support governments and industry to deliver on the objectives.

Connecting digital health to national health reform

The Health Services Principal Committee has an ongoing role to advise the Australian Health Ministers' Advisory Council on health services reform requiring national collaboration. The committee promotes national population health initiatives while collaborating to improve key interfaces between national and state and territories funding and management of services, particularly primary/acute hospital interface, care of older persons and the public/private interface. HSPC also works to improve health system capability (including digital health, performance measures and national health information strategy) as well as advising on workforce planning and reform arising from the work of the National Nursing and Midwifery Education Advisory Network (NNMEAN), the National Medical Training Advisory Network (NMTAN) and the Australian Health Practitioner Regulation Agency (AHPRA).

Achieving the digital health vision together

Achieving the vision of digital transformation will only happen by working in partnership with the healthcare sector and consumers, one of the first decisions the Australian Digital Health Agency Board made was to appoint five Board advisory committees: Clinical and Technical; Consumer; Privacy and Security; Audit and Risk; and Digital Health Safety and Quality Governance. The advisory committees provide strategic thought leadership in their areas of specialist remit, and assist the Agency more broadly in the performance of its functions.

Robust governance arrangements for key national digital health projects

The Australian Digital Health Agency has established robust governance arrangements for key national digital health projects. The My Health Record expansion program includes a steering group which consists of over 30 stakeholder groups, including national clinical peaks, academia and consumer groups. Steering groups representing over 20 peak industry bodies and professional organisations are part of the Agency's programs.

Learning from others

By developing meaningful partnerships between industry, healthcare consumers, and the research sector, and working with our international partners to share our lessons and insights, there is an opportunity to accelerate our progress in digital health.

A new global network to support best use of digital technology in modern healthcare

International participants from 13 countries, Hong Kong SAR, and the World Health Organization (WHO) have kicked off a new global network to support best use of digital technology in modern healthcare. The partnership will create a common platform for international experts to share knowledge and experiences, to network, and to forecast emerging trends to support the digital health landscape. The Global Digital Health Partnership is an opportunity for deep, transformational engagement by governments, digital health agencies, and the WHO so they can learn, share policy and other evidence that supports them to deliver better digital health services. The Global Digital Health Partnership will collaborate on topics including connected and interoperable health care, cyber security, policies that support digital health outcomes, clinician and consumer engagement and evidence and evaluation of digital health.

Industry, government and research partners to transform health delivery

The new Digital Health CRC (Cooperative Research Centre) will invest over \$200 million to develop and test digital health solutions that work for real patients in hospitals and health services, while equipping Australians to better manage their own health and wellness. The centre will operate through collaborative R&D programs involving 40 commercial and government organisations operating across the health, aged care and disability sectors, 24 established and start-up technology, advisory and investment companies, and 16 Australian universities. The centre has the support of both the Australian Digital Health Agency and the Medical Technologies and Pharmaceuticals industry growth centre (MTP Connect). By linking industry expertise with world-class research capability, CRCs generate new knowledge, solve problems and offer opportunities to commercialise new ideas.