

Digital Health

Contents

Digital Health	1
Overview	2
What is digital health?	2
National digital health initiatives	2
My Health Record	3
The My Health Record participation trial	4
National Digital Health Strategy 2018-22	5
My Health Record Expansion Programme	6
ACT Health - Health eFuture plan	7
Current use of eHealth in the ACT	7
My Health Record engagement in the ACT.....	9
Key Issues.....	10
Incentives to participate	10
Compatible software applications	10
Interoperable secure communications.....	11
Priority Issues.....	11
Primary care engagement – general practice.....	11
Primary care engagement – allied health	12
Primary care engagement – community pharmacy.....	12
Capital Health Network initiative – Transitions of Care (ToC)	13
References	14

Overview

What is digital health?

Digital health is a term that refers to the adoption of technology in health care. eHealth is now being referred to as digital health, though the term digital health more broadly incorporates eHealth, Health IT, clinical and corporate information systems, consumer health, telehealth, ICT infrastructure, the use of mobile devices and applications, the way these are used and the integrity and security of information that they capture, store, share, communicate and display (Australian Digital Health Agency, 2016).

The terms 'eHealth' and 'digital health' often have different meanings and incorporate different elements depending upon the perspective of the organisation and its role in health care delivery. The World Health Organisation (WHO) defines eHealth as the combined use of electronic communication and information technology in the health sector (World Health Organization, 2016). Electronic health or eHealth involves the transformation of health services using IT to deliver better and safer clinical decision making. eHealth is also becoming a key enabler for patients to actively participate in health care processes for diagnosis, treatment and prevention (NHMRC Centre for Research Excellence in e-health, 2016).

Over the last 10-15 years, Australian governments and the private and not for profit sectors have worked together to deliver a coordinated digital health system. In particular, there has been a focus on developing and implementing a shared electronic health record for patients that will allow health care providers to view patients' key health information across different health care settings. Over that time there have been a number of Australian Government eHealth initiatives, including Broadband for Health (2004-2007); HealthConnect (2004 -2008); and the National eHealth Strategy (2008) that lead to the establishment of the Personally Controlled Electronic Health Record system (PCEHR) in 2012.

National digital health initiatives

The PCEHR system was reviewed in December 2013 by an independent panel (Royle et al., 2013). The review of the PCEHR identified a vision of the electronic health record for Australians; it would be a reliable, secure and trustworthy source of key clinical information. It would facilitate efficient and effective treatment of patients by health practitioners and enable consumers to access and manage their own health records in cooperation with their health providers to improve care. It would respect individual privacy but be clinically valuable to all areas of the health care industry. Interaction with the electronic health record would be highly automated and form a natural part of

clinical workflows. The value of sharing health information electronically between health care professionals, would be demonstrated by enhanced efficiency and effectiveness of the delivery of health care, reduced hospitalisations and ultimately lives saved (Royle et al., 2013).

The Australian Government Department of Health, in implementing the recommendations of the review, established the Australian Digital Health Agency (the Agency) in July 2016 to progress the national digital health agenda. The Agency has responsibility for all national digital health services and systems with a focus on engagement, innovation and clinical quality and safety. This includes the transition of relevant activities and resources from the National eHealth Transition Authority and from the national PCEHR (now known as the My Health Record system) system operation activities managed by the Department of Health (Australian Digital Health Agency, 2017a). A key vehicle for delivering digital health is the My Health Record system, comprising a series of enabling technologies such as Healthcare Identifiers, clinical documents, privacy, security and authentication, clinical terminology, and clinical governance.

The Agency conducted a national consultation with key health, government and technology industry stakeholders as well as a community and stakeholder engagement process for all members of the public, 'Your health. Your say', between December 2016 and January 2017. This provided the public with the opportunity to participate in co-producing the vision, objectives and areas of focus for the national digital health agenda (Australian Digital Health Agency, 2017d). The Agency used these insights to develop a National Digital Health Strategy that reflects the needs and aspirations of Australians (Australian Digital Health Agency, 2016). More information on the Strategy is provided on page 5.

My Health Record

The My Health Record system provides a secure online summary of an individual's health information. The individual controls who accesses their record. This record provides a single record that is accessible by health care professionals in emergency situations, and during health care service encounters.

Initially called the PCEHR, the system went live in July 2012. This development was preceded by the eHealth foundations necessary for the operation of the system, namely:

- Healthcare Identifier Service
- National Authentication Service for Health (NASH) public key encryption
- Clinical terminology

The Departments of Health and Human Services undertook a wide consumer engagement strategy actively promoting the system to consumers and health care providers. The then ACT Medicare Local provided education, training and support for health care providers and promoted consumer registration through attendance at a number of community events including the multi-cultural festival (ACT Medicare Local, 2014).

The features of the My Health Record are:

- Shared health summary – a clinical document summarising an individual’s health status and important information including current medicines, immunisations, medical conditions, allergies and adverse reactions. This document is created and updated by the individual’s usual GP.
- Event summary – a clinical document summarising a health care encounter/s written by the health care provider who may be a medical practitioner or allied health provider.
- Discharge summary – a clinical document written by a hospital clinician prior to the end of an episode of hospital care. This document contains details of the individual’s conditions, treatment received, investigations undertaken and medicines at the time of discharge.
- Specialist letter – a document written by a treating specialist clinician in response to being referred an individual by another clinician, usually a GP.
- Prescription and dispense records – the prescription details of the medicine/s prescribed by a treating clinician which includes PBS and non-PBS medicines; a dispense record is generated by the supplying pharmacy containing a record of the medicine/s supplied to the individual.

In the first quarter of 2018 pathology and diagnostic imaging results will start to be uploaded to an individual’s My Health Record. ACT Pathology will commence sending results for admitted patients from February. Private laboratories and diagnostic imaging services will commence sending results to the My Health Record system progressively throughout 2018.

The My Health Record participation trial

During January-October 2016, the Department of Health conducted a trial of different participation arrangements for the My Health Record system. The objective of the trial was to test different participation arrangements, including opt-out, to understand the public’s reaction and test the extent to which health care providers will participate when most of their patients have a My Health Record (Siggins Miller, 2016). It also aimed to understand any implementation issues that would need to be addressed before any decision was made about future participation arrangements.

These outcomes were measured by the extent to which the following were achieved:

- increased awareness and understanding of the My Health Record system
- increased confidence to use the My Health Record system
- increased participation in, and use of, the My Health Record system
- increased understanding of the effectiveness of different approaches for driving participation and use of the My Health Record system.

The evaluation found evidence to support the stakeholder consensus that opt-out should be the participation model into the future. Statistically significant findings in the opt-out sites included increased awareness of the My Health Record, increased individual and health care provider recall of communication about the My Health Record; increased individual registration and use of the My Health Record system; increase in health care provider organisations registered to use My Health Record; increased health care provider document uploads to and viewings of My Health Records (Siggins Miller, 2016).

National Digital Health Strategy 2018-22

The National Digital Health Strategy 2018-22, *Safe, seamless and secure: evolving health and care to meeting the needs of modern Australia* (Australian Digital Health Agency, 2017b), was approved in August 2017 by the Council of Australian Governments Health Council. The strategy identifies seven priorities for digital health in Australia including the delivery of a My Health Record for everyone by 2018. The strategic priorities comprise:

1. Health information that is available whenever and wherever it is needed - A key element of priority one is for every Australian to have a My Health Record, unless they choose not to have one, by the end of 2018.
2. Health information that can be exchanged securely - Every health care provider will have the ability to communicate with other professionals and their patients using secure digital channels by 2022.
3. High-quality data with a commonly understood meaning that can be used with confidence - Health care providers and organisations have called for interoperability, for systems to communicate more easily with other systems outside their boundaries. The strategic aim is to enable the exchange of clinical information between health care providers, the systems they use and the people they care for. Achieving interoperability is complex and requires a substantial undertaking. The Agency will lead the development of a national collaborative strategy including agreed interoperability standards, an implementation roadmap, and a conformance scheme.

4. Better availability and access to prescriptions and medicines information - By the end of 2018, all consumers and their health care providers will have access to comprehensive view of their prescribed and dispensed medicines through the My Health Record system. By 2022 there will be digitally enabled, paper-free options for all medicine management, including the ability to request medicines online and for all prescribers and pharmacists to electronically prescribe and dispense medicines, increasing convenience for consumers and improving safety.
5. Digitally-enable models of care that improve accessibility, quality, safety and efficiency - The aim is to test digital technologies and their benefits in real-world environments prior to full scale implementations. This strategy aims to set up 6 test beds projects by 2022.
6. A workforce confidently using digital health technologies to delivery health and care - The Agency will collaborate with governments, care providers and partners in workforce education to develop comprehensive proposals so that by 2022 all health care professionals will have access to resources that support confident and efficient use of digital services.
7. A thriving digital health industry delivering world-class innovation - The Agency will work with industry to evolve the developer support program to reduce barriers to innovation and enable opportunities for better integration with My Health Record and other digital services.

The strategy is built on the assumption that every participant in the health sector plays an important role in achieving the vision of digitally enable health care. The strategy is intended to guide the investment by state and territory governments, private industry and health care providers (Australian Digital Health Agency, 2017b).

My Health Record Expansion Programme

The Australian Government announced in the 2017 Budget the creation of a My Health Record for every Australian to begin nationally from mid-2018. Consumers who do not have a My Health Record, will have a record created, unless they choose not to have one. The Agency has carriage of this program together with a number of partners including state and territory health authorities, the Primary Health Networks and Aboriginal Health Services (Australian Digital Health Agency, 2017b).

The expansion program will move the My Health Record system consumer engagement mechanism from the current opt-in model to an opt-out model of participation. In addition to changing the model of consumer engagement the program will continue to drive uptake and usage of the system by health care providers and organisations to ensure the benefits are realised. The uptake will be supported by continued provider education, training and technology improvements to make it easier, more efficient and worthwhile.

ACT Health - Health eFuture plan

ACT Health eHealth vision will enable ACT Health to efficiently deliver safe, high quality, integrated, coordinated and sustainable health care services, in a patient centric environment (ACT Health, 2015). ACT Health adopted a planned best of breed approach (mixing and matching software packages from different vendors) to the sourcing of Information and Communication Technology (ICT) clinical systems; systems that are widely used across the environment and are sourced from a small number of vendors. Specialised applications are sourced from niche vendors.

The current strategy was developed in the context of the following:

- Ageing of the population
- Population growth
- Increasing rates of chronic and preventable disease
- Inequity in access and outcomes
- Increasing consumer expectations
- Complexity of modern health care delivery
- Workforce challenges

There are a number of challenges in the ACT eHealth agenda:

- A number of systems are reaching their end of life and/or are lacking in the latest technology
- Patient information is currently held on paper and in a number of different clinical systems where access by the clinical team is not seamless and may be incomplete
- Minimal clinical decision support is available at the point of care
- The clinical portal contains an incomplete view of a patient's medical history; clinicians are unaware of its full functionality and benefits to the daily work processes; clinical portal integration with the various clinical system is incomplete
- Limited means to share health information with services outside ACT Health
- Clinicians within the hospitals do not have access to the My Health Record system

Current use of eHealth in the ACT

The clinical portal (using Orion Health technology), is accessible to clinicians at the Canberra and Calvary public hospitals and provides a single point of access to certain patient information, including patient demographics, discharge summaries, referrals received from general practice, previous episodes of care, allergies and alerts, pathology results and radiology reports and images. Discharge summary templates for adults and paediatrics are in the clinical document portal. A number of clinical units are not connected to the portal and do not create discharge summaries that

can be securely communicated to clinicians involved in managing the patient post discharge. These units include mental health, mothers and babies, neonates, same day surgery, hospital in the home and renal dialysis.

Discharge summaries are created in the portal and are submitted to the My Health Record system where the patient has a record and consents to the upload of the document. The portal will be enabled in March 2018 to allow clinicians to view a patient's My Health Record. ACT Health is planning to enable the viewing of the My Health Record system from within the public hospitals in early 2018.

As ACT Health is able to connect to and contribute information to the national eHealth Record system, a connection to the Healthcare Identifier Service is established, and from this, the Individual Healthcare Identifier (IHI) is able to be stored in the ACT patient master index. This initiative has resulted in administrative cost savings as the IHIs have been used to identify duplicate health records.

A facility to receive referral documents sent to the Canberra Hospital Outpatients Department from GPs using Medical Director and MedTech32 has been in place for several years. As this facility is GP software dependent it is not available to the majority of general practices who use Best Practice software and documents are not addressable to all services provided at the Canberra and Calvary Public hospitals.

ACT Health is looking to implement an interim 'smart form' solution that will be compatible with the majority of clinical practice software used in general practice. This will include the popular Best Practice software and enable pre-population of patient details on creation of the form by the general practice, as well as use of the referral data by the systems at ACT Health. A longer term solution will be developed to support the proposed central intake for all referrals to ACT public ambulatory care services.

My Health Record engagement in the ACT

The state of registration and use of the My Health Record system in the ACT as of 31 December 2017 is shown in Figure 1.

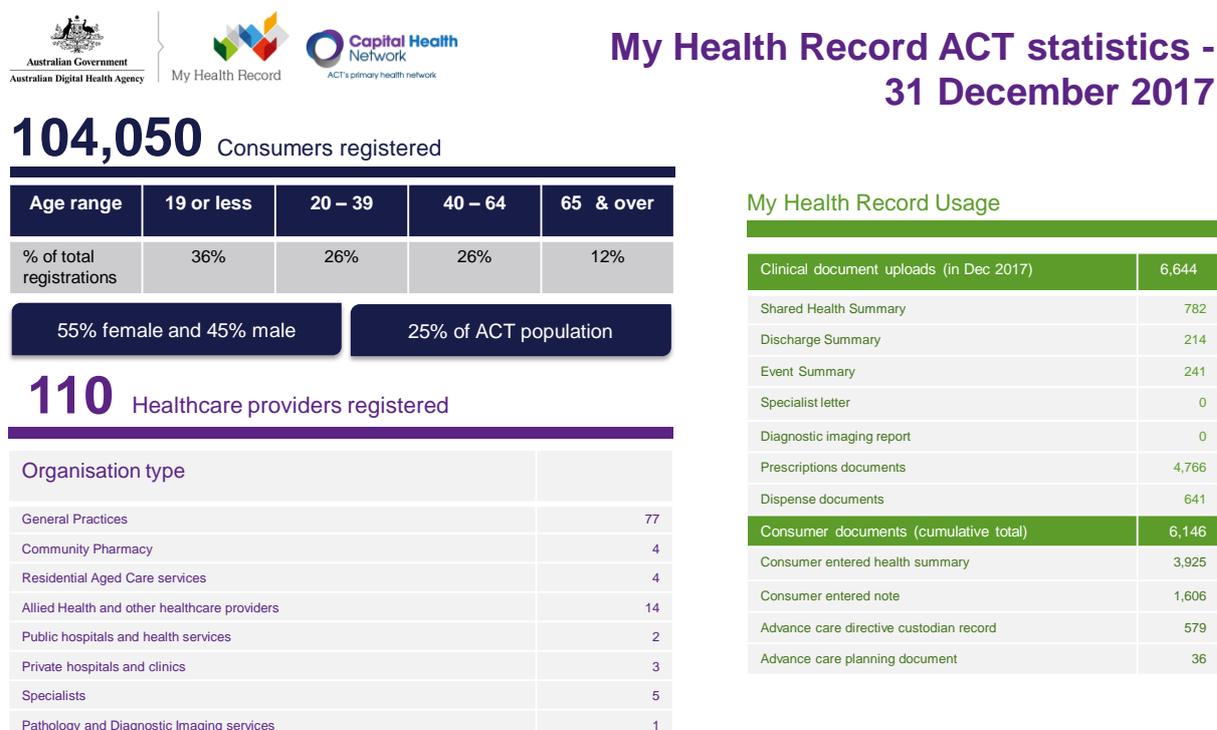


Figure 1: My Health Record ACT statistics 31 December 2017

Source: Data received directly from the Australian Digital Health Agency, January 2018

General Practice – 77 general practices (over 80% of general practices in total) are registered with the My Health Record system in the ACT. The majority of the general practices in the ACT use secure messaging to receive pathology and radiology results. The majority of practices do not use this facility to send referral documents, preferring to print, sign and fax these documents. Capital Health Network is actively encouraging all correspondence containing personal health information to be communicated through secure messaging.

Aged Care – Four residential aged care facilities registered for the My Health Record system. There are 26 aged care services providing residential care in the ACT. There are two services that are currently working with Capital Health Network to get the My Health Record system working.

Allied Health – 14 allied health practices have registered for the My Health Record system. None of the practices are active users of the system. Capital Health Network has contacted the practices and is working with them to get the system working.

Specialists – Five specialist practices have registered, but are not users of the My Health Record system. Capital Health Network will be offering assistance to these practices to get the system working.

Hospitals – the two public and three main private hospitals in the ACT are registered for the My Health Record system. Discharge summaries are being sent to the My Health Record system from the Canberra Hospital when a patient explicitly consents for this to occur on admission to hospital. The patient consent model adopted by ACT Health requires a patient to re-consent to documents being uploaded, rather than asking that a record not be sent to the My Health Record system.

Neither the Canberra nor Calvary hospitals have the capacity to view a patient's My Health Record. ACT Health plans to enable viewing via the clinical document portal by both public hospitals and for discharge summaries to be uploaded from the Calvary Public Hospital in the first quarter of 2018.

Key Issues

Incentives to participate

The Australian Government Department of Health, Practice Incentive Program (PIP) - eHealth encourages general practices to keep up to date with digital health and adopt new digital health technology and improve the administration processes and patient care (Department of Health, 2016). To be eligible to receive this incentive, practices must:

- Integrate with the Healthcare Identifier Services
- Have secure messaging capability that is compliant with relevant standards
- Ensure the majority of prescriptions are sent electronically to the Prescription Exchange Service
- Use the My Health Record system and upload shared health summaries for a minimum of 0.5% of their Standardised Whole Patient Equivalent (SWPE) each quarter.

The ePIP incentive aimed to increase the number of shared health summary documents uploaded to My Health Record. It did not achieve the anticipated level of increase in uploads for a number of reasons. Anecdotal feedback indicates that one reason for this may be that the incentive is paid to the practice, not to individual GPs, thus it does not motivate all GPs in the practice to increase the number of documents uploaded to the My Health Record system.

Compatible software applications

To access and effectively interact with the My Health Record system, the software used to support clinical care across the sector needs to be compatible. Clinical applications require enhancement to

allow viewing and document uploads to the My Health Record system. There are a number of widely used clinical applications across the sector that need to be enhanced to enable community pharmacies, allied health care providers and aged care facilities to effectively engage with the My Health Record system. Engagement and support with clinical software developers is a key role of the Agency.

Interoperable secure communications

The Agency recognises the importance of secure, reliable communication to share patient health information between clinicians and health services. Secure communication is seen as a core capability that should be available and used by all health care services. Many services use secure messaging to receive pathology and diagnostic imaging results and discharge summaries from hospitals. To be able to communicate with a full range of service providers, a health care business needs to be connected to several messaging providers. The Agency notes there is an inconsistent approach to secure messaging and information exchange and has recently undertaken a secure messaging program to work with industry suppliers of secure messaging solutions and clinical software to reduce the barriers to adoption and provide implementable and interoperable solutions.

Priority Issues

There are a number of priority issues that Capital Health Network is working to address in relation to digital health. These include the participation and active use of digital health by primary health care providers in the ACT.

Primary care engagement – general practice

With 80% of general practices connected to the My Health Record system in the ACT, the initial start-up phase is nearing completion. The focus is moving from registration and set up assistance to use and integration into the daily work flow of a practice. Training is being given to all GPs in a practice to ensure a consistent level of awareness, understanding and capability.

Strategy

CHN is engaged in the following initiatives:

- supporting general practices, on request, to install, train and operationalise the use of the My Health Record system.
- continuing to raise awareness in general practice of the benefits of the My Health Record system and new developments in its functions and capabilities.
- supporting GPs to send referrals by secure communications from within the practice.

Primary care engagement – allied health

A small number of allied health practitioners in the ACT registered for the My Health Record system 3-5 years ago. Those practices who wish to enable connection are being assisted to set up access to the My Health Record system. Low participation on behalf of the allied health professions is in part due to lack of clinical software use and/or conformance with the My Health Record system. From the initial public awareness campaign in 2012 there has been no active promotion of the system. This compares to the experience of other Primary Health Networks where the level of allied health participation in the My Health System is equally low (Australian Digital Health Agency, 2017e). As of September 2017 none of the commonly used allied health clinical software are yet conformant with the My Health Record system. To access the My Health Record system individual practitioners will access the Provider Portal using individual NASH certificates. This also comprises updating access for current staff, assisting new staff to apply and revoking certificates issued to staff no longer working in the practices.

Strategy

- In the short term, CHN has contacted each of the registered practices and offered support to get the My Health Record system and secure communications installed and operational. Promotion has and will occur through workshops and on-line seminars.
- CHN will undertake an awareness raising campaign to all allied health providers informing them of the benefits and requirements of the My Health Record system.

Primary care engagement – community pharmacy

Community pharmacy within the ACT has engaged with a prescription exchange service to be able to receive prescription data generated by the prescriber. This benefits the pharmacy by reducing the time taken to record a prescription in the dispensing system and eliminates transcription errors. However, pharmacies are not engaged with the My Health Record system and CHN experience to date indicates they are largely unaware of the system and the potential benefits to their customers and their business. This aligns with the experience of other Primary Health Networks where the level of community pharmacy participation in the My Health System is equally low. As at July 2017, 1,000 of the 5,000 community pharmacies in Australia are registered with the My Health Record system (Australian Digital Health Agency, 2017e).

Strategy

- CHN has embarked on a number of strategies designed to understand the level of awareness amongst pharmacists in the ACT and to seek support for engagement with the sector.
- CHN has secured the support from the business arm of Capital Chemists to promote My Health Record system connection to its members.
- The Pharmacy Guild and the Australian Digital Health Agency have committed to work together to help build the digital health capability of community pharmacy (Australian Digital Health Agency, 2017c).

Capital Health Network initiative – Transitions of Care (ToC)

CHN has commenced an initiative focused on transitions of care between hospital and primary health care. This program is based upon evidence showing that a multifaceted approach is required to keep people with chronic disease well and out of hospital, and to reduce hospital stays and emergency department presentations. The initiative is being delivered in collaboration with a number of units (particularly ED) at the Canberra Hospital and some general practices across the ACT (Capital Health Network, 2017).

The need for effective communication and information exchange between clinicians, including the use of electronic health records, is best met through the effective use of digital health technology.

It is expected that secure electronic communication will be used to transmit patient information between participating providers. Referral information from the treating doctor/s in the hospital to the GP and community based supports; discharge summary and care plans will be available at the time the patient leaves the hospital to the patient's GP, allied health and community pharmacist, and residential aged care facility (where relevant).

Strategy

The My Health Record system will be a vehicle to facilitate access to pertinent health documents. On enrolment to the program all patients will be asked if they hold or would consent to having a My Health Record created for them.

Before leaving the hospital a discharge summary including investigation results, referral services and current medicines information will be sent to the GP, and the My Health Record.

The patient's GP will keep the patient's shared health summary up to date; the community pharmacy will receive all prescriptions and upload the dispense records; allied health will be able to access the My Health Record system to view these documents and if able contribute event summaries as services are provided.

Secure messaging will be used to send patient health information, that is, reports and referrals between the participating care providers. CHN will assist practices to select a messaging provider and set it up if they do not have one in place and assist clinicians to register for and set up access to the My Health Record system.

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