2.4 Digital health

Digital health is about using technology to collect and share a person's health information. It can be as simple as a person wearing a device to record how much exercise they do each day, to health care providers sharing clinical notes about an individual.

For individuals, this technology can help people to track and control their own health information and inform decisions about their health. For health care providers, it can support continuity of care; improve interactions between providers and patients; and improve the effectiveness, efficiency and delivery of services.

This snapshot explains how digital health is being used in Australia, with a focus on the Australian Government's digital health strategy and online health information initiative—My Health Record.

How digitally connected are we?

Health information can be recorded and shared on a variety of digital devices and platforms, including general practitioner, hospital and pathology systems; smartphones, tablets, desktop computers, smartwatches, and social networks. The clear majority of Australians have access to digital technology. It is estimated that:

- 86% of households had internet access at home in 2016–17 (ABS 2018)
- 88% of people aged 18–75 owned or had access to a smartphone in 2017 (Drumm et al. 2017)
- 78% of adults used the internet to find health-related information in 2015 (Research Australia 2017)
- 96% of general practitioners used computers for clinical purposes in 2014–15 (Britt et al. 2015)
- 23% of Australians had a My Health Record in March 2018. By the end of 2018, all Australians will have a My Health Record unless they opt out (ADHA 2017b, 2018).

Digital health in practice

The scope and use of digital health technologies are growing and changing rapidly. This is enabling real-time information to be available to both patients and their health care providers.

The following initiatives are examples of the growth and benefits of digital health:

- There is growing use of digital systems by Australian health care providers, including general practices, community pharmacies and public and private hospitals.
- Electronic health records are associated with improved quality and safety of care in enhancing clinical decision support and improving handover of care between health care providers (National E-Health Transition Authority 2015).
- Cardiac rehabilitation programs (CRPs) are crucial for improving the health of patients recovering from a heart attack. An Australian CRP delivered through a smartphone resulted in higher attendance (80% compared with 62%) and higher levels of completion (80% compared with 47%) than a face-to-face, centre-based CRP (Varnfield et al. 2014).

Australian Government

Australian Institute of
Health and Welfare

Australia's
health
2018

- Medication-prescribing errors are a serious patient safety issue and costly to public health budgets. An international review found that a change from paper-based ordering to electronic ordering in intensive care units resulted in an 85% reduction in error rates for prescription of medications (Prgomet et al. 2016).

Australia's Digital Health Strategy

In August 2017, all Commonwealth, state and territory health ministers agreed to the following seven strategic priorities for digital health in Australia:

- health information is available whenever and wherever it is needed through the My Health Record
- every health care provider can communicate with their patients and other health care providers through secure digital technologies
- high-quality data with a commonly understood meaning can be used with confidence
- all prescribers and pharmacists have access to electronic prescribing and dispensing by 2022
- maximum use is made of digital technology to improve accessibility, quality, safety, and efficiency of care
- all health care professionals can confidently and efficiently use digital health technologies
- the digital health industry thrives and delivers world-class innovation (ADHA 2017a).

My Health Record is an online platform for storing a person's health information, including their Medicare claims history, hospital discharge information, diagnostic imaging reports, and details of allergies and medications (ADHA 2017b). The person and their authorised health care provider(s), can access these details securely at any time (Box 2.4.1).

Box 2.4.1: Case study

Paige was diagnosed with epilepsy as a teenager and lost her hearing after her first child was born. This is her story:

> At one point during my pregnancy I had to keep track of more than 12 obstetric outpatient hospital visits, 3 neurology appointments, various pathology tests as well as GP visits. To add to this, my husband and I have five children...It became increasingly difficult to keep track of everything. My Health Record helps me keep a single record of my own health information, and the whole family has an individual My Health Record...Personally, it means my medical history is easily accessible to manage my health...As a parent, it empowers me to take control and gain visibility of my family's health care and make the most informed decisions (ADHA 2017a).

In early 2018, around 23% of Australians had a My Health Record. By the end of 2018, all Australians will be registered unless they choose to opt out (ADHA 2017b, 2018). Given this, the Australian Government has built substantial privacy and security safeguards into the legislation establishing the My Health Record (ADHA 2016). A 2017 consumer-perspective review of My Health Record found that although there are some

Australian Institute of Health and Welfare 2018. *Australia's health 2018*. Australia's health series no. 16. AUS 221. Canberra: AIHW.

2

Australian Government
Australian Institute of
Health and Welfare

Australia's
health
2018

concerns about privacy and security, there is sufficient trust in the government to put systems in place to ensure this (Van Kasteren et al. 2017). See Chapter 2.5 'Secondary use of health information' for more information on the legal instruments that regulate sensitive data.

What is missing from the picture?

There are no national data available to allow detailed understanding of the use and outcomes from the vast range of digital health applications.

Where do I go for more information?

Detailed information on Australia's National Digital Health Strategy is available at <www.digitalhealth.gov.au/about-the-agency/publications/australias-national-digital-health-strategy>.

Information about My Health Record for individuals and health care providers is available at <www.myhealthrecord.gov.au>.

References

ABS (Australian Bureau of Statistics) 2018. Household use of information technology, Australia, 2016–17. ABS cat. no. 8146.0. Canberra. ABS.

ADHA (Australian Digital Health Agency) 2016. Legislation and governance. Sydney: ADHA. Viewed 11 December 2017, <https://myhealthrecord.gov.au/internet/mhr/publishing.nsf/Content/legislation>.

ADHA 2017a. Annual report 2016–17. Sydney: ADHA. Viewed 3 November 2017, <https://www.digitalhealth.gov.au/about-the-agency/publications/reports/annual-report/Annual_Report_Australian_Digital_Health_Agency_2016-2017_Online.pdf>.

ADHA 2017b. Australia's National Digital Health Strategy: safe, seamless and secure. Sydney: ADHA. Viewed 3 November 2017, <https://www.digitalhealth.gov.au/about-the-agency/publications/australias-national-digital-health-strategy/ADHA-strategy-doc-(2ndAug).pdf>.

ADHA 2018. My Health Record statistics. Sydney: ADHA. Viewed 23 March 2018 <https://myhealthrecord.gov.au/internet/mhr/publishing.nsf/Content/news-002>.

Britt H, Miller GC, Henderson J, Bayram C, Harrison C & Valenti L et al. 2015. General practice activity in Australia 2014−15. General practice series no. 38. Sydney: Sydney University Press.

Drumm J, White N, Morne S & Davey M 2017. Smart everything, everywhere: mobile consumer survey 2017—the Australian cut. Sydney: Deloitte. Viewed 4 December 2017, <http://landing.deloitte.com.au/rs/761-IBL-328/images/tmt-mobile-consumer-survey-2017_pdf.pdf?utm_source=marketo&utm_medium=lp&utm_campaign=tmt-mobile-consumer-survey-2017&utm_content=body>.

National E-Health Transition Authority 2015. My eHealth record to national eHealth record transition impact evaluation: phase 1 evaluation report. Sydney: National E-Health Transition Authority Ltd.

Prgomet M, Li L, Niazkhani Z, Georgiou A & Westbrook J 2016. Impact of commercial computerized provider order entry (CPOE) and clinical decision support systems (CDSSs) on medication errors, length of stay, and mortality in intensive care units: a systematic review and meta-analysis. Journal of the American Medical Informatics Association 24(2):413–22. doi:org/10.1093/jamia/ocw145.

Research Australia 2017. Australia speaks! Research Australia opinion polling 2017. Sydney: Research Australia. Viewed 4 December 2017, <https://researchaustralia.org/wp-content/uploads/2017/08/2017-Opinion-Poll-Digital.pdf>.

Van Kasteren Y, Maeder A, Williams P & Damarell R 2017. Consumer perspectives on MyHealth Record: a review. In: Ryan A, Schaper L & Whetton S (eds). Integrating and connecting care: selected papers from the 25th Australian National Health Informatics Conference. Amsterdam: IOS Press 239:146–152. doi: 10.3233/978-1-61499-783-2-146.

Varnfield M, Karunanithi M, Lee C-K, Honeyman E, Arnold D, Ding H et al. 2014. Smartphone-based home care model improved use of cardiac rehabilitation in postmyocardial infarction patients: results from a randomised controlled trial. Heart 100(22):1770–9. doi:10.1136/heartjnl-2014-305783.

Chapter 2

2

Australian Institute of Health and Welfare 2018. *Australia's health 2018*. Australia's health series no. 16. AUS 221. Canberra: AIHW.

3