Australian Conduits in Digital Health for Sustained development with Artificial Intelligence

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I acknowledge the traditional custodians of Australia, and recognize their continued connections to land, waters, and community.
I pay my respects to them and their cultures, and to elders both past and present.

Conduits in Digital Health for Australia

- Australia has continued to build its digital health pathways visualizing a 10 years' post-pandemic strategy informed by space-based technologies, applications, and international experiences.

- The Australian Digital Health Agency ('The Digital Health Agency') has envisioned 'Connecting Australian Healthcare' via the 'National Healthcare Interoperability Plan 2023-2028'.

- The 'Digital Health Blueprint 2023-2033' and 'Action Plan for the Digital Health Blueprint 2023-2033' were released by the Commonwealth of Australia, as represented by the Department of Health and Aged Care.

- The 'National Policy Roadmap for Artificial Intelligence in Healthcare' ('The Roadmap') provides guidance on workforce, industry capability, implementation, regulation and Artificial Intelligence Safety, and was released by the Australian Alliance for AI in Healthcare (AAAiH).

Priorities in Digital Health Interoperability

The 'Digital Health Agency' prioritized 5 elements continuing the work during the post-pandemic period.

- **Identity:** Leveraging the Healthcare Identifiers Service ensures that individuals, healthcare providers and healthcare provider organisations are uniquely and correctly identified when exchanging health information.

- **Standards:** to ensure that digital health standards, specifications and terminology are developed consistently, collaboratively, are fit for purpose, widely adopted and implemented using relevant conformity assessment schemes.

- **Information Sharing:** To Increase information exchange between healthcare providers and individuals by making information discoverable and accessible. This includes consideration of an individual's safety, consent, privacy and data quality.

- **Innovation:** To drive interoperability through future innovations that apply the interoperability principles to new digital health initiatives and functional enhancements.

- **Benefits** : to measure healthcare services' digital health maturity to identify areas for investment that align with their strategic and transformational goals, and the national digital health direction.

Examples of Achieved Interoperability

- The Healthcare Identifiers Service supports the unique and consistent identification of healthcare recipients, healthcare providers and healthcare provider organisations.

- The Australian Medicines Terminology (AMT) and the Australian extension of SNOMED CT (SNOMED CT-AU) provide standard vocabulary to record and exchange clinical information.

- The My Health Record system provides an online summary of an individual's key health information.

- Electronic prescribing enables prescribers, individuals and pharmacists to use electronic prescriptions.

- The National Clinical Terminology Service (NCTS) contains localised HL7 FHIR® resources (Fast Healthcare Interoperability Resources) and SNOMED CT-AU (including the AMT), which is maintained and released monthly.

Examples of Achieved Interoperability

- The National Health Services Directory (NHSD) enables individuals and healthcare providers to access comprehensive, consolidated, accurate and up-to-date information.

- The National Authentication Service for Health (NASH) enables healthcare providers and supporting organisations to securely access, encrypt and share health information.

- Provider Digital Access (PRODA) allows individual healthcare providers and healthcare provider organisations to securely authenticate and access online provider services across all government sectors.

- The Metadata Online Registry (METEOR) is Australia's repository for national metadata standards for health, housing and community services statistics and information.
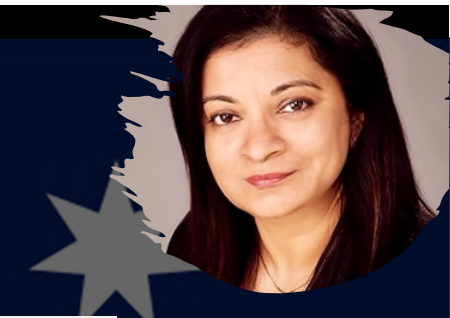
Digital Health Action Plan 2023-2033

- The Digital Health Blueprint 2023-2033 and the action plan for implementation was released by the Commonwealth of Australia as represented by the Department of Health and Aged Care.

- The blue print focuses on partnerships internally with the 'Digital Health Agency' and intergovernmental agreements with States and Territories, to modernize the health infrastructure.

- There is continuing work with international partners such as the 'Global Digital Health Partnership' and the 'World Health Organisation', emphasizing the role of a digitally enabled collaborative, global, health workforce advancement.

Modernise My Health Record

- MyMedicare is a new voluntary system for patients and healthcare providers to support health consumers who register with their General Practice (GP) and nominate them. Their information will be viewable in My Health Record so that hospitals, and other allied healthcare providers (including nurse led practices) can readily communicate with each consumer's nominated GP.

- Partnering with the Australian Digital Health Agency, the Australian Government has commenced the transition of My Health Record from being a clinical document (PDF) system to an atomic data-rich platform by aligning with international health data standards, such as HL7 and FHIR, to enhance interoperability and promote person-centered care for all Australians.

Enhance MyHealth Record Capabilites

The Digital Health Action plan focuses on enhancing MyHealthRecord by enabling:

- **Sharing by default** of key health information. This initiative begins with pathology and diagnostic imaging reports within the next two years, enhancing care continuity and preventing redundant diagnostic services.

- Connecting allied health to My Health Record: supported by allied health software vendors, this initiative will build on adoption within general practice and medical specialists. As a result, increasing members of a patient's healthcare team will have access to their essential health information.

Empowerment via Apps/Wearables

- The Australian Digital Health Agency has delivered the 'My Health app', to provide easy access to key health information on My Health Record.Combined with information from other sources such as the Australian Immunisation Register, consumers will be able to confidently manage their vaccination status through apps on their personal devices.

- Development of user-friendly health apps providing comprehensive health information is underway including direct sharing of electronic prescriptions with pharmacists from the medication screen and providing clear medication timelines and advice for easier discussions with healthcare providers.

- Connected wearable devices that collect a person's real-time health data will enable Australians to be actively involved in managing their health and wellbeing.

Medication Management

- **E-prescribing:** Mandatory use of electronic prescriptions for high-risk and high-cost medicines, to strengthen their safe provision and use, is being implemented. The adoption of e-prescribing to public hospital and healthcare settings, include (not limited to) in-patient and out-patient hospital care, at-home or outreach services, oncology/chemotherapy or palliative care treatment in hospital and other facilities. Expanded adoption ensures consumers with a seamless experience as they transition between clinical settings.

- **Electronic medication charts: a** national framework expanding the usage of charts in varied settings, such as oncology, hospitals (private and public), residential aged care, and palliative care is being established, to enhance clinical safety and medication practices, and reduce administrative burdens for prescribers and dispensers.

- **Real Time Prescription Monitoring (RTPM**) to monitor the prescribing and dispensing of monitored medicines with the aim of reducing their unsafe use in Australia is being implemented Australia wide and the National Data Exchange component of this system has been delivered. The system provides an alert to prescribers and dispensers when a patient is receiving multiple supplies of monitored medicines.

Digital Population Health initiatives

- **Cardiovascular Disease Risk Guideline and calculator/guidelines** provides clinicians with the most up-to-date evidence on the early detection, assessment, and management of CVD risk. Partnering with the National Heart Foundation of Australia, the embedding of the calculator into GP software has commenced.

- **The Daybreak app** is a treatment and early intervention app to provide around-the-clock support to individuals seeking support for their at-risk drinking and to reduce harmful alcohol consumption.

- **Path2Help** is an information and support pathways directory that contains more than 11,000 services nationwide for Australians that recommend support services and information based on individual needs and circumstances to prevent/ recover from alchohol and drug use.

- **Positive Choices** is an online portal targeting teachers, principals, school counsellors, First Nations education officers, youth workers, parents, and young people, to raise awareness about the harms associated with alcohol and other drug use by providing tools and school-based programs on alcohol, tobacco, illicit drugs, and related harms.

- **SMART Recovery** supports all Australians in managing addictive behaviours, anxiety and other mental health issues.

- **Support at Home Assistive Technology and ICT enablement** offers a simplified, accessible pathway that expedites access to Home Care Packages and a wider array of Assistive Technology. The goal is to help older Australians remain comfortably at home for longer.

Artificial Intelligence in Healthcare

- Artificial Intelligence (AI) technologies have been recognized as a pathway to smarter, adaptive health system that is resilient and sustainable for Australia.

- The "National Policy Roadmap for AI in Healthcare ('The Roadmap') provides guidance on workforce, industry capability, implementation, regulation and AI Safety, and was released by the Australian Alliance for AI in Healthcare (AAAiH)

- Priority 1 in the AI roadmap is to ensure patients receive safe, effective, and ethical care from AI healthcare services which have been developed in accordance with ethical principles, a safety framework and are appropriately monitored post-implementation. Health consumers will be assured sensitive healthcare data are protected from privacy breaches or unauthorised use.

- Other priorities include co-design and implementation of a nationally accessible program for digital health literacy, to inform public of AI benefits, risks, and safe use and thereby increasing public confidence in AI.

National investments in AI

- The National Artificial Intelligence Centre helps drive adoption and use of transformative AI technologies. Established within CSIRO's Data61, the centre manages Australia's AI expertise and addresses barriers for small and medium-sized enterprises in adopting and developing AI and emerging technology

- The Therapeutic Goods Administration is working with other major regulatory agencies in the International Medical Device Regulators Forum to establish an optimal regulatory approach for AI-enabled medical devices. This approach balances safety, effectiveness, and timely market access

- CSIRO's bioinformatics group used its own AI-based platform to analyse one trillion genomic data points in the cloud to help locate parts of the human genome that cause disease

- CSIRO's Data61 has developed Artificial Intelligence: Australia's Ethics Framework (A Discussion Paper) to provide principles and guidance regarding implementing AI technologies.

Queries / Sources

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