One year on: the National Policy Roadmap for AI in Healthcare

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Australian Alliance for Artificial Intelligence in Healthcare

A National Policy Roadmap for Artificial Intelligence in Healthcare

MACQUARIE University

CSIRO Australian e-Health Research Centre

RMIT UNIVERSITY

digital health crc

AIDH AUSTRALASIAN INSTITUTE OF DIGITAL HEALTH

The Australian Alliance for AI in Healthcare

- The Australian Alliance for Artificial Intelligence in Healthcare (AAAiH) is a peak body that brings together over 100 national and international partners and stakeholders in academia, government, consumer, clinical, industry organisations and other peak bodies.
- Formed in 2018, it supports the accelerated adoption of AI-enabled healthcare in Australia.
- Recent focus has been in strategic areas including Safety, Quality and Ethics, and Workforce.

What we wanted from the Roadmap

- Seed the creation of a formal national plan by end of 2025 to create an AI-enabled Australian healthcare system.

- Identify short term achievable priorities that plug urgent gaps, and wherever possible exploit existing structures and processes and organisations.

2024 – a year of government reviews

- Senate Select Committee on Adopting Artificial Intelligence. (submissions closed 10 May 2024; Report due 26 November 2024).
- Department of Industry, Science and Resources (DISR). Mandatory guardrails for AI in high-risk settings – Proposals (closed 4 October 2024).
- Department of Health and Aged Care (DoHAC). Safe and Responsible AI in Health Care (closed 14 October 2024).
- Therapeutic Goods Administration (TGA). Clarifying and strengthening the regulation of AI (closed 20 October 2024).

Australian Government
Productivity Commission

May 2024

Leveraging digital

Better integrating digital technology into healthcare could save more than $5 billion a year and ease pressures on our healthcare system.

- Making better use of data in electronic medical record systems could save up to $5.4 billion per year by reducing the length of time patients spend in hospital, and up to $355 million through fewer duplicated tests.
- Up to 30% of the tasks undertaken by the workforce could be automated using digital technology and artificial intelligence (AI); precious time that could be spent caring for patients.

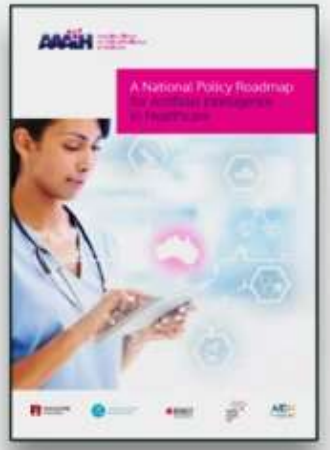
Evidence base and digital foundations

Data sharing and digital systems

The *Digital Health Blueprint 2023-2033 and Action Plan*, the *National Digital Health Strategy 2023-2028* and the *National Healthcare Interoperability Plan 2023-2028* will deliver the foundations for data-sharing and digital systems that grows uptake and usability of AI.

High-level Program Logic

There is a need for a systematic and integrated approach to AI program policy, planning, implementation, monitoring and evaluation. .



Policy and frameworks to support safe adoption

Ethical, safety, trust, data, social, liability, and regulation clarity concerns must be addressed to integrate AI technologies within health care. Australia has a few Whole of Government approaches but lacks the healthcare-specific policy and frameworks. The AAAiH released *A National Policy Roadmap for Artificial Intelligence in Heath Care* to convey the sector's policy viewpoint.

HEALTH DESIGNLAB

Research and field interviews

The Health Design Lab is undertaking this human centred research and design project to explore the opportunities and barriers to uptake of AI in primary healthcare. Our focus is on how AI might reduce non-clinical or administrative burden.

Australian Government
Department of Health and Aged Care

AI Safety, Quality, Ethics and Security

Priorities

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.

AI Safety, Quality, Ethics and Security

Recommendations

1. To better coordinate and harmonise the responsibilities and activities of those entities responsible for oversight of AI safety, effectiveness, and ethical and security risks, establish a National AI in Healthcare Council.
2. To ensure AI in healthcare is safe, effective and therefore does not harm patients, it needs to be developed and deployed within a robust risk-based safety framework.
3. For accreditation, healthcare organisations using AI should demonstrate that they meet minimum AI safety and quality practice standards.
4. Urgently communicate the need for caution in the clinical use of generative AI when it is currently untested or unregulated for clinical settings, including the preparation of clinical documentation.
5. Ensure the national AI ethical framework from the Department of Industry, Science and Resources supports the deployment of value-based clinical and consumer AI in routine practice.

Australian Government
Department of Health and Aged Care

Whole of Government (WofG) context

- The Digital Transformation Agency (DTA) and the Department of Industry, Science and Resources (DISR) are leading the way in developing policy and AI guidance for Commonwealth agencies.
- To foster whole-of-government alignment, and harvest learnings from across the APS, these two agencies operate the AI in Government Taskforce, whose mission is to help the APS to engage with and deploy AI in a way that is safe, ethical, and responsible.
- The Department of Health and Aged Care is one of 11 agencies participating in the

  Taskforce in advisory capacity. Representatives of the department participate regularly in Taskforce engagements.
- The Department is supporting the AI Taskforce through providing two of our Departmental staff on secondment to work with the taskforce. The Department will benefit from these secondments in being able to shape the agenda to support the Department's outcomes.
- In July 2023, the department contributed a **public submission**[2] to DISR's Supporting responsible AI discussion paper, providing the department's views on how the Australian Government could mitigate potential risks of AI and support safe and responsible AI practices within the health and aged care portfolio.

Australian Government
Department of Health and Aged Care
Therapeutic Goods Administration

Whole of government AI oversight

The Australian Commission for Safety and Quality in Health Care (the Commission) is responsible for e-Health safety and is developing information to support AI safety.

We are working with the Commission and other parts of the Australian Government Department of Health and Aged Care to ensure safety and performance. While we are also balancing the need to minimise regulatory burden for AI. This includes working with the Department of Industry, Science and Resources on their whole of government work on responsible AI.

https://www.health.gov.au/sites/default/files/2024-07/foi-5153-documents-relating-to-the-use-of-ai-in-the-department.pdf
https://www.tga.gov.au/how-we-regulate/manufacturing/manufacture-medical-device/manufacture-specific-types-medical-devices/artificial-intelligence-ai-and-medical-device-software

Australian Government
Department of Industry, Science and Resources

Safe and responsible AI in Australia

Proposals paper for introducing mandatory guardrails for AI in high-risk settings

September 2024

AI Implementation in Hospitals: Legislation, Policy, Guidelines and Principles, and Evidence about Quality and Safety

To harness the enormous benefits of Artificial Intelligence (AI) in healthcare, implementation and use must be done safely and responsibly.

The Commission engaged Macquarie University and the University of Wollongong to undertake a literature review and environmental scan to identify principles that enable the safe and responsible implementation of AI in healthcare. It presents evidence from the contemporary published literature about AI implemented in acute care as well as current, published legislation, policies, guidelines, and principles for AI implementation in healthcare.

Share

NSW Health sets up AI taskforce to oversee AI framework

12 February 2024

By Kate McDonald

NSW Health has established a new taskforce to inform and guide the use of artificial intelligence in the public health system in NSW. The AI taskforce is co-chaired by NSW Health's deputy secretary for clinical innovation and research Jean-Frédéric Levesque and chief information officer Zoran Bolevich and will be supported by

Australian Government
Department of Health and Aged Care
Therapeutic Goods Administration

Generative AI regulation

Software that incorporates generative AI such as large language models (LLMs), text generators, and multimodal generative AI are all regulated as a medical device if they meet the definition.

Artificial intelligence text-based products like ChatGPT, GPT-4, Gemini (formerly Bard), Claude and others have recently received media attention.

Clinical and technical evidence must demonstrate the safety, reliability and performance of the product using the generative AI such as LLM to the same standard as other medical devices – for higher risk products, clinical and technical evidence are required to be more stringent.

It is important to note that it is unlikely to be a medical device, and is not regulated by us, where:

- there is no medical purpose or claim associated with the product using the generative AI such as LLM, or
- it does not meet the definition of a medical device as defined in the section 41BD of the *Therapeutic Good Act 1989*.

https://www.tga.gov.au/how-we-regulate/manufacturing/manufacture-medical-device/manufacture-specific-types-medical-devices/artificial-intelligence-ai-and-medical-device-software

Health service use of unregulated Artificial Intelligence (AI)

Health Service Advisory

FINAL OFFICIAL

Purpose

This Advisory is issued in response to emergence of new generative AI programs such as ChatGPT and similar generative AI models. It outlines the interim position on safe use; no such application is listed on the Therapeutic Goods Administration (TGA) Australian Register of Therapeutic Goods (ARTG).

This Advisory requires Victorian health services to:

- align any clinical use of 'generative artificial intelligence' (AI) software, such as ChatGPT, with national regulation, and
- establish local procedures to authorise the use of AI in health care, and ensure that its use satisfies regulatory obligations

This Advisory is intended for all clinical and technical staff in Victorian public health agencies.

Workforce

Priorities

Understand knowledge gaps in the workforce and then train the current and future healthcare workforce in the use and implementation of AI-enabled healthcare services.

Workforce

Recommendations

6. Support the development of a shared code of conduct for the safe, responsible and effective use of AI by health professionals and organisations.

7. Assist professional bodies in accessing expertise and prior models to support the development of profession specific codes of practice for the responsible use of AI.

Meeting your professional obligations when using Artificial Intelligence in healthcare

Resources

Joint statement on professional responsibilities for prescribing and dispensing medicines

Meeting your professional obligations when using Artificial Intelligence in healthcare

Case studies

Further information about AI

Artificial Intelligence (AI) technology is rapidly becoming integrated into many areas of healthcare. This guidance explains how existing responsibilities in National Boards' codes of conduct apply when practitioners use AI in their practice.

This guidance will be updated regularly to reflect new developments in AI and share updates from other regulators.

Artificial intelligence in healthcare

AI can be defined as 'computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision making, and translation between languages'[1]. Some AI tools available for health practitioners are

https://www.ahpra.gov.au/Resources/Artificial-Intelligence-in-healthcare.aspx

RACGP

Artificial intelligence (AI) scribes

Last updated 25 July 2024

What is an 'artificial intelligence scribe'?

An artificial intelligence (AI) scribe is a tool that can automate parts of the clinical documentation process for a medical practitioner. AI scribes can convert a conversation with a patient into a clinical note, summary, or letter that can be incorporated into the patient's health record.[1] AI scribes are also referred to as digital scribes, virtual scribes, ambient AI scribes, AI documentation assistants, and digital/virtual/smart clinical assistants.

https://www.racgp.org.au/running-a-practice/technology/business-technology/artificial-intelligence-ai-scribes

Generative Artificial Intelligence and Large Language Models

Position Paper
August 2024

The Royal Australian
and New Zealand
College of Radiologists®

AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

Risks and benefits of AI in note-taking

28 Oct, 2024

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RISK MANAGEMENT Scott Shelly and Alexander Sheridan of health law firm Barry Nilsson, along with BMS, discuss the use of artificial intelligence in note-taking, a physiotherapist's professional obligations and the role of notes in mitigating risk.

Artificial Intelligence

Principles for safe use of AI by nurses

Nursing informatics must be involved at all stages of generative AI development and intrinsically involved in maintaining Australian nursing standards and practice.

Nurses must:

a. Continue to use their nursing knowledge and critical thinking to ensure that AI is providing accurate and safe solutions (AIDH, 2024). This will ensure patients and the broader community are afforded the best care in line with AHPRA's Shared Code of conduct principles (AHPRA, 2023).

b. Be cognisant when generative AI is used in nursing. Be cognisant of generative AI in digital tools used to provide care, including applications with decision support, predictive tools, and automation.

Consumers

Priorities

Help all Australians, including vulnerable consumers, safely use AI to navigate the complex healthcare system and be active participants in the management of their own care and wellbeing.

Consumers

Recommendations

8. Co-design and collaboratively implement a nationally accessible program for digital health literacy to inform the public of AI's benefits, risks and safe use, and increase public trust and confidence in AI.
9. Work together with Aboriginal and Torres Strait Islander communities to develop a mechanism that collates health-related data for use in AI in a culturally safe and trusted manner within their control, in line with principles of Indigenous Data Sovereignty.
10. Ensure professional codes of conduct and training emphasises the role of clinicians in educating patients about the responsible use of AI, as part of a commitment to shared decision making.

Consumers Health Forum OF Australia

Select Committee on Adopting Artificial Intelligence (AI)

Key Recommendations

1. Government to implement risk-based legislation in which healthcare applications of AI are classified as high-risk
2. Healthcare safety and quality regulatory institutions must work cooperatively with consumers, clinicians, and AI developers to address critical regulatory grey areas.
3. Requirements of AI healthcare software must include the assessment of the employed algorithms against minimum standards of safety and quality.
4. AI algorithms must be vetted against bias. This is a fundamental step to prevent algorithms from exacerbating existing discriminatory practices towards marginalised groups.
5. The government should leverage data and consumer protection legislation to engage with consumers, clinicians, and developers in creating a solid data governance framework for AI software in healthcare.
6. Legislation must protect consumers against data being used for perverse profiteering.
7. Development of resources to increase AI literacy in the Australian population, particularly its applications within healthcare provision.
8. AI integration in healthcare to happen under the stewardship of the Australian Commission on Safety and Quality in Healthcare. The National Safety and Quality Health Service Standards must be amended to address generative AI use and its implications explicitly.

Industry

Priorities

Support development of the local healthcare AI industry to become globally competitive and deliver significant clinical and economic benefits to Australia.

Industry

Recommendations

11. Develop national clinical AI procurement guidelines in partnership with the jurisdictions, health services and industry.
12. Provide support and incentives for local industry (and SMEs in particular).
    a. Consider expanding the R&D Tax incentives scheme to cover regulatory compliance costs.
    b. Ensure the pathway to reimbursement for AI-based clinical services via Medical Services Advisory Committee (MSAC) is understood.
    c. Consider additional funding to support new products to come to market.
13. Develop mechanisms to provide industry with ethical and consent-based access to clinical data to support AI development and leverage existing national biomedical data repositories.
14. Support the development of a National AI Capability Centre in Healthcare (NAICCH) to assist industry (and SMEs in particular) to bring products to market.
15. Assist future policy by identifying emerging AI markets and opportunities.

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Home › Grants and programs › Artificial Intelligence AI Adopt Program

Artificial Intelligence (AI) Adopt Program

Funding for Artificial Intelligence (AI) Centres to help SMEs adopt AI technologies

Last Updated: 18 September 2024

Each of the AI Adopt Centres has a different focus on how it can help:

- ARM Hub AI Adopt Centre supports businesses to learn more about AIand robotics, and what they need to leverage AI effectively particularly in the field of manufacturing. They also offer an AI-as-a-service model that is fully cloud-based and supported by the ARM Hub.
- Australian Regional AI Network (ARAIN) empowers regional growth through practical AI advice, awareness and education for small business. They are particularly focussed on the forestry, agriculture, fisheries and renewable technology areas.
- SAAM (Safe AI Adoption Model) make safe and responsible AI easy for small to medium enterprises. They have an online hub of simple tools and practical resources to help Australian small and medium enterprises capitalise on the benefits of AI while minimising their risks.
- SMEC AI (Small to Medium Enterprise Centre of Artificial Intelligence) is delivering courses and one-on-one mentoring in AI. It focusses on medical science, agriculture, renewables and low emissions tech.

Data Lake

The NSW Health Enterprise Data Lake modernises analytics capability, implements best practice for data extracts and reduces timelines, costs and risks associated with developing new data extracts from NSW Health systems.

Research

Priorities

Ensure the development and deployment of AI in healthcare is based on the most up to date evidence, and that Australia retains world-class sovereign capability to use AI and support industry in the national interest.

Research

Recommendations

16. Provide significant targeted support for healthcare AI research that builds sovereign capability and can translate to improved priority health services and support for industry.

Of the 84 randomised clinical trial studies of AI published internationally between 2018-2023, none were conducted in Australia. Most were the US (31%) and China (29%). 37% were in the EU.

AI research in Australia attracted only 0.9% of grant funding available from the National Health and Medical Research Council (NHMRC) and Medical Research Futures Funds (MRFF) for the period 2018-2022.

NHMRC Artificial Intelligence Workshop Report

The report from an NHMRC-organised workshop that brought together experts to discuss the opportunities and risks from the use of AI in NHMRC and the Department of Health and Aged Care Health and Medical Research Office (HMRO)-funded health and medical research, and its translation. This was to ensure Australia is well positioned to make the best use of the technologies to improve human health.

Publication Data

2024

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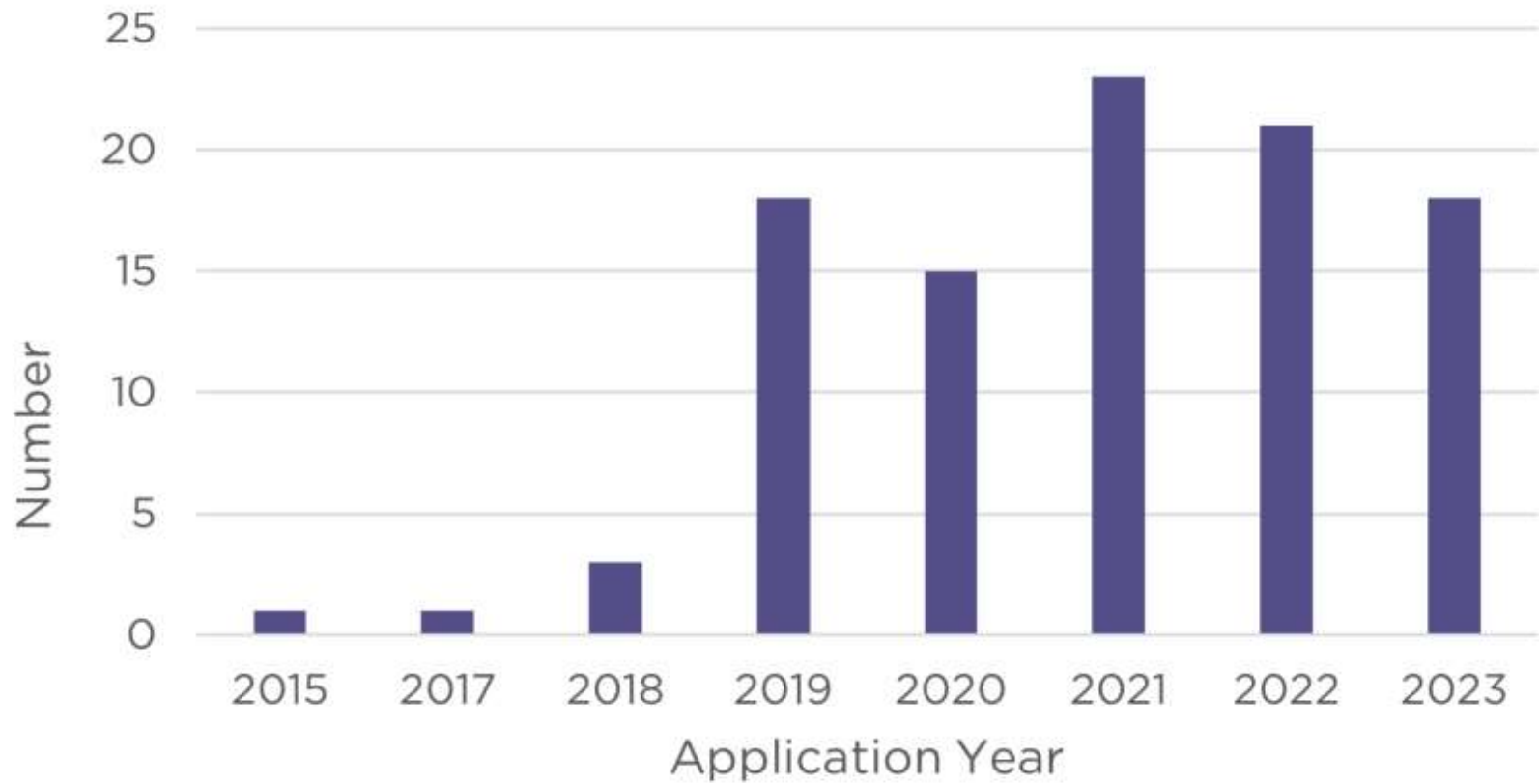
Appendix B - NHMRC and HMRO's previous investments in research involving or related to AI

Between 2015 and 2023, the two funds have funded:

- MRFF - $96.3 million, 35 grants
- MREA – awarded over $106.4 million, at least 100 grants.[1]

Figure 1. NHMRC - Number of grants awarded related to AI



2024 – A year of consultation and (some) early action

- Real progress was made in 2024. We should celebrate that.
- In 2025 we would like to see consultation translate into action.
- Some professional colleges starting to move on codes of conduct.
- Most recommendations for Consumers, Research and Industry remain largely unaddressed.
- Healthcare has attracted minimal targeted funding to date. We hope 2025 Budget will remedy that.
- AI (especially generative AI) continues to evolve faster than regulatory response. Our challenges will grow.
- Momentum is everything. Don't drop the pace.
- The next frontiers – implementation and governance; climate impacts

A National Policy Roadmap for Artificial Intelligence in Healthcare

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https://aihealthalliance.org

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