Building AI Capability In Health Libraries: practice-based insights from our Health Libraries Australia Community of Practice

Michele Gaca
Informationist (Senior Fellow) University of Melbourne; National Manager, ALIA HLA
https://orcid.org/0000-0001-7350-3299

Cecily Gilbert
Honorary Digital Health Information Resources Specialist, Centre for Digital Transformation of Health, University of Melbourne
https://orcid.org/0000-0003-3538-8976

Acknowledgement
ALIA Health Libraries Australia (HLA) supports all librarians who wish to participate and contribute to this Community of Practice (CoP) focused on Artificial Intelligence in Health Library & Information Services.

Statement of conflicts of interest
No conflicts of interest are reported.

Funding
The community of practice administration is funded by ALIA Health Libraries Australia (HLA).

Abstract
The rapid integration of artificial intelligence (AI) into health and library information services (HLIS) presents both significant opportunities and sector-specific challenges. Understanding AI and the scientific literature evaluating it, is emerging as a critical competency for future healthcare professionals. In response, the Australian Library and Information Association's Health Libraries Australia (ALIA HLA) AI in HLIS Community of Practice (CoP) was established in November 2023 to support health library professionals across Australia and extending to Aotearoa (New Zealand). This CoP provides a collaborative, cross-sector platform to share knowledge, develop best practices, and navigate the ethical, technical, and practical implications of AI adoption. Over 2.5 years, it has fostered professional connection, reduced duplication of effort, and strengthened a shared identity among participants, including those in small or solo roles. As librarians evolve from information gatekeepers to knowledge facilitators, their expertise in evidence appraisal, metadata standards, system interoperability, and information governance remains essential. The CoP highlights the critical role of health library professionals in

ensuring the responsible, effective, and ethically-grounded use of AI to support high-quality evidence and informed clinical decision-making.

"Individually, we are one drop. Together, we are an ocean''
Ryunosuke Satoro

Background

The roll out of artificial intelligence (AI) tools in the library and health information sciences (HLIS) sector is both exciting and confronting, bringing with it a set of distinct, very real sector-specific challenges. As a profession, we are deeply attuned to our identity as custodians of ethical information practices, stewards of metadata integrity, and trusted advisors within our communities - whether in public libraries or specialised settings.

It is within this context that the ALIA (Australian Library and Information Association) HLA (Health Libraries Australia) AI in HLIS Community of Practice (CoP) was established - coincidentally holding its inaugural meeting on the first anniversary of ChatGPT's public launch on 30 November 2022**.**

Overall, librarians and library technicians are increasingly evolving from information gatekeepers to knowledge facilitators - helping researchers navigate complexity with confidence, clarity, and adaptability.

Why a CoP?

Communities of practice are valuable as they enable members to connect, in a less formal setting, across boundaries (library sectors) to collaboratively solve problems, share tacit knowledge and develop breakthrough innovations. CoPs are often defined as "groups of peers who share a concern or passion for something they do and learn how to do it better as they interact regularly" (Goodhue 2021). Therefore, a CoP was the ideal structure given the hope that contributing to and attending a CoP would help accelerate cross-organisational learning, reduce redundant work and foster a shared professional identity regardless of the sector a member represented.

As professionals it is an efficient way to access best practices, saving valuable time (not 'reinventing the wheel') where feasible, and enabling individual members to customise any presented concepts into their own health industry setting. It offers participants a safe space to share ideas, reduce isolation, and build networks and a professional connection. In addition, it supports our small and one person libraries to ensure that they are not being isolated in this time of significant change in practice; supporting each other, regardless of where we reside. The success of this CoP has demonstrated we are truly a united professional front, navigating the AI waters together.

To establish a clear, shared framework for all members, a ToR (terms-of-reference) was created (AI HLIS CoP 2023). This document defines the purpose, objectives, reporting, membership and commitment of the community. The AI CoP brings together health library and information practitioners involved in the service development, implementation, training, guidance, and navigation for responsible ethical use of generative artificial intelligence in the health library and information sector within Australia and Aotearoa (New Zealand). It provides a platform for sharing knowledge, concerns, best practices, and resources related to artificial intelligence policies, standards, programs, and tools used by health libraries.

Membership

Membership has grown from 60 participants at the initial invitation in October 2023 to almost 170 members over the past two and a half years. Members are geographically diverse, representing all Australian states (minus Tasmania) and territories as well as both islands of Aotearoa (New Zealand). The community spans a broad range of health library and information sectors, including agencies, colleges, government, local health districts, hospitals, and universities, with particularly strong representation from the latter two (refer to Figure 1 & Figure 2).

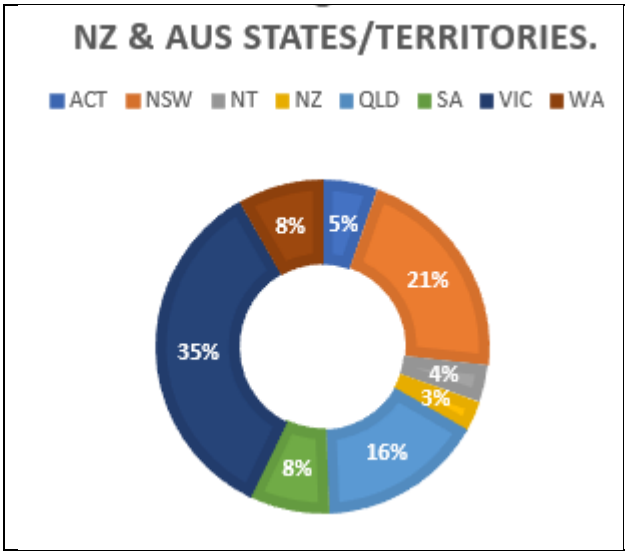


Figure 1: Geographical dispersion

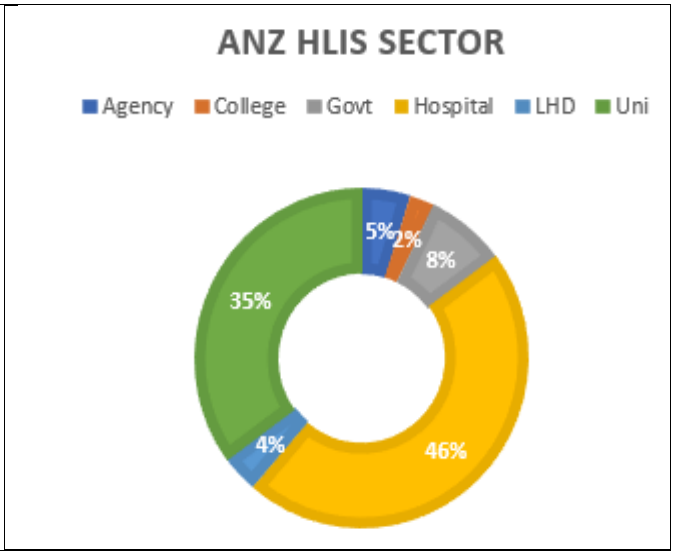


Figure 2: Membership by HLIS sector

The CoP has an active quarterly meeting cycle where participants share and present. In line with Harvard meeting best practice, meetings are set for 45 minutes, with discussion points sent in advance. Occasionally members are approached prior to a gathering to ensure conversation flow and topicality. Online meetings are now prevalent, so some prior planning is important, especially as there are often no visual cues (e.g. slide presentations). The CoP focus is essentially discussion, sharing of lived realities, evolving challenges, applied solutions and community use, validation and acceptance of relevant frameworks and tools. Members are encouraged to provide brief case studies that offer insights on how, as practicing health librarians, we can

utilise initiatives to transform our local library services. Members consistently report that the value of the community lies not only in relationship building and shared learning, but also in alleviating anxiety about the rapid pace of AI-driven change across the sector. It reinforces a collective understanding that this transition is being navigated together.

Post a meeting a recap email is distributed by the Convenor - mainly to circulate important evidence synthesis articles and links to tools that members have identified as valuable or to be avoided. This is important because not all members are able to attend all gatherings. Days and times of events are varied to accommodate those working part-time; school holidays are avoided where possible.

Main focus to date

"*Understanding AI, and the scientific literature that evaluates it, will be a key clinical competency for the next generation of healthcare providers''*
Jackson (2025)

The following section highlights some key areas the community has discussed as it responds to the rapid integration of artificial intelligence across health information practice. It highlights how members are building capability, adapting evidence synthesis approaches, strengthening digital literacy, and critically engaging with emerging AI-enabled tools and systems to ensure safe, effective, and evidence-based practice.

- **CPD (Continued Professional Development)**: As a professional community, we actively explore and participate in training opportunities that strengthen our capacity to curate, interpret, and communicate information effectively to our service users. This includes sharing what we've learned from courses or programs such as Cochrane training events, Research Support Community (RSC) days, as well as other freely-available university and government-supported courses.

- **Evidence synthesis & responsible use of AI:** Demonstrating the value of librarians in the evidence synthesis process is increasingly important as AI and automation reshape how evidence is produced and used (Flemyng 2025; Holst 2025; Thomas 2026). Advances in language models (e.g. ChatGPT, Claude, Google Gemini etc.) with AI-powered search engines/information aggregators (products such as Consensus, Evidence Hunt, Perplexity, Undermind etc.) coupled with workflow tools like ASReview, Covidence, DistillerSR, EPPI-Reviewer, TERA (The Evidence Review Accelerator) (Clark 2025) all claim to enable efficiencies in search strategy development, screening, data extraction, risk of bias assessment (RoB), and synthesis writing.

Within this evolving landscape, librarians play a critical role in ensuring methodological rigour, transparency, and reproducibility - guiding the effective and responsible use of these tools to produce high-quality, trustworthy evidence (Everett 2026)

- **Strengthening digital literacy**: In particular – addressing the overreliance on AI by some users, the risks and costs of hallucinations (such as invalid citations and unverified summaries), and the growing presence of misinformation. Within parts of the health workforce, there is increasing concern about the limitations of large language models (LLM) in conducting rigorous literature searches, making our role in critical appraisal and evidence validation more important than ever.

- **Vendor AI integration:** AI features are increasingly embedded in discovery layers, knowledge management systems and EHR (Electronic Health Record) integrated search tools and virtual scribe software. As information managers, librarians see the issues that may arise through the loss of control over search algorithms, how proprietary AI models have the potential to reduce transparency, and vendors may upsell AI features without evidence of benefit (Kpodzro 2026). The long-term costs of these factors are unpredictable.

As a community we understand that AI adoption will not create value in itself. The value of this technology and our key competencies will come from considered translation, redesigning our business models and library services to take advantage and educate our users on what AI has to offer –a librarian-in-the-loop.

Getting lingo right?

As librarians, our long-established methodology for designing answerable clinical questions embodies an analytical process, in which we pinpoint the PICO/T (or PICOS, SPIDER, SPICE, PCC etc) question framework concepts in the research query and use each of these to build the search strategies for each database we plan to search. In effect, terms that are emerging, like the 'Chain of Thought' or CoT concept is a new way of expressing what we already do. However, as Zhang cautions: "Getting data content through prompt engineering to AI may mislead us into overlooking that the most significant factor for better content is still the quality of the AI models themselves'' (Zhang 2023). For our community, the challenge then is not simply learning and adopting the new language of AI but applying it in ways that preserve the rigour, judgement and methodological strengths librarians already bring to search practices.

Prompt engineers

As a profession we have always been synonymous with this step-by-step reasoning that is CoT - we don't just jump straight to an answer; rather we use logic to construct and execute systematic search strategies. Prompt engineering is an extension on our expertise with the identification of key words within controlled language indexes, to create refined precise questions for generative AI chatbots (Zhang 2023). Prompts consist of similar elements to PICO/T – we are thinking in terms of context, instruction, inputs and output format – which all work together to provide AI systems with the necessary background – information, clear directions, relevant data and formatting requirements needed to generate accurate and useful responses. The community spends much time discussing the constantly emerging new tools, processes and techniques.

Tools that incorporate and build on the PICO/T principles to assist AI prompt and research query development shared during community conversations are:

CLEAR (Capture-Layout-Examine-Align-Reflect) (Taylor 2025)
COSTAR (Context, Objective, Style, Tone, Audience, Response) (Blasingame 2026)
RISEN (Role, Instructions, Steps, End Goal, Narrowing) (Sercombe 2025)
TCEPFT framework (Task, Context, Example, Persona, Format, Tone) (Han 2023).

These tools guide users to write comprehensive prompts to help extract PICO/T elements from medical literature designed to help when interrogating LLM tools for health information queries. Their popularity as stated by Sercombe *et al* is because systematic reviews are essential to guide clinical practice; however, they are resource-intensive and may be prone to bias or error. The prompt tools are designed to help organise inputs to guide AI models toward accurate, relevant and contextually appropriate outputs, and they're being tested iteratively by librarians and information professionals.

Given AI tools and frameworks are evolving and being used by our clinician, researcher and student user populations (Teolis 2026) – together we share, evaluate, test, discuss and take local action. Our community is united in understanding we have a clear role in providing sage advice on how to use tools safely and adhere to relevant AI policies.

Beyond the hype – supporting health information literacy

The hasty, and inevitable, commercialisation of artificial intelligence has created an information environment in which public understanding is increasingly shaped by vendor-driven narratives rather than independent evidence. This dynamic reflects Bernays' concept of the *engineering of consent*, in which opinion is shaped through selective information disclosure, emotional framing, which sounds appealing with an air of scientific authority (Bernays 1969). Marketing narratives frequently emphasise –

for example – the inevitability of progress "AI is the future"; precision "AI eliminates human error", and societal benefit "AI will transform healthcare", while downplaying methodological uncertainty, dataset bias, and the absence of reproducible validation. This disconnect creates fertile conditions for mis- and disinformation, particularly in domains such as healthcare, where clinical practitioners have experienced the transformation toward evidence-based care initiated by Archie Cochrane, which emphasises the importance of transparent, reproducible evidence.

As health librarians we support evidence-focused practitioners and researchers in medicine, nursing and allied health. The commercial and marketing environment poses a direct challenge, and a constant discussion point for our community of practice. Evidence synthesis relies on transparent methods, critical appraisal, and reproducibility, yet AI hype often substitutes promotional claims for empirical scrutiny. When public and organisational decision-making is influenced by engineered narratives rather than methodological rigour, the risk of inappropriate adoption, over-trust, and the potential for clinical harm increases. The accelerating pace of AI development further compounds this risk: new tools emerge faster than they can be independently evaluated, and health systems may feel pressured to adopt technologies before their safety and effectiveness are established. Our community actively shares and discusses new educational and training initiatives we and other librarians have created to support our organisations in their evaluation and adoption of AI policies, practices and procedures.

Within this landscape, health information literacy is an important safeguard. Library and information specialists have a central role in cultivating and promoting the skills required to distinguish among validated evidence, preliminary findings, commercial claims, and misinformation. Our expertise in search strategy design, critical appraisal, and methodological standards for evidence synthesis positions us as essential counterweights to 'engineered consent'. This responsibility requires planning and commitment. By supporting clinicians, researchers, and the public to interrogate AI claims, we help ensure that adoption decisions are grounded in evidence rather than persuasion. In this sense, strengthening health information literacy is not merely an educational activity but a form of risk mitigation that protects healthcare systems from the vulnerabilities created by rapid unquestioned technological change (Heller 2024).

The road ahead

"*Health AI is no longer a futuristic promise; it is a strategic imperative*."
Dai (2026)

Effective use of AI will require its own kind of critical thinking. In Australia our safety and quality regulator has highlighted the risks of treating digital health as a purely

IT-driven initiative, disconnected from clinical governance frameworks (ACSQHC 2026). This presents a clear opportunity to engage with digital stakeholders and demonstrate our longstanding expertise in system interoperability, metadata standards, persistent identifiers, and the critical importance of data privacy and secure information exchange.

At the same time, the role of librarians and information professionals continues to evolve, from information gatekeepers to knowledge facilitators, supporting students, clinicians and researchers to navigate increasing complexity with confidence, clarity, and adaptability. While artificial intelligence can accelerate the production of content labelled as "evidence", the validity and integrity of that evidence remain paramount to achieving meaningful improvements in clinical decision-making and patient care.

Understanding where AI adds value, while ensuring sustained human oversight, is essential for the effective translation of real-world evidence into healthcare practice. In this context, the expertise of librarians and library technicians has never been more vital. Our Health Libraries Australia, Community of Practice will continue to provide a forum for shared learning and discussion over the coming years, supporting the development of our collective expertise as this AI landscape evolves.

References

ACSQHC (2026) *Priorities for digitally enabled care – a future roadmap*. https://www.safetyandquality.gov.au/news-and-media/latest-news/priorities-digitally-enabled-care-future-roadmap

ALIA HLA (2023) *Artificial Intelligence in Health Library & Information Services, Community of Practice (CoP)* https://hla.alia.org.au/ai-cop/#gsc.tab=0

AI HLIS CoP (2023)- Artificial Intelligence in Health Library & Information Services, *Terms of reference*. https://hla.alia.org.au/wp-content/uploads/2023/12/AITOR.pdf

Bernays, EL., & Cutler, HW. (Eds.). (1969). *The engineering of consent* (3rd ed.). University of Oklahoma Press. (Originally published in 1955.)

Blasingame, MN., Koonce, TY., Williams, AM., Su, J., Giuse, DA., Krump, PA., Giuse, NB., (2026) Comparing five generative AI chatbots' answers to LLM-generated clinical questions with medical information scientists' evidence summaries. *J Med Libr Assoc.*114 (2):94-104. https://pubmed.ncbi.nlm.nih.gov/41982429/

Clark, J., Barton, B., Albarqouni, L., Byambasuren, O., Jowsey, T., Keogh, J., Liang, T., Moro, C., O'Neill, H., Jones, M. (2025) Generative artificial intelligence use in evidence

synthesis: a systematic review. *Res Synth Methods*. 16(4):601-619. doi: 10.1017/rsm.2025.16.

Dai, T., McDonald, KM., Baumgart, DC. (2026) Global advances in health artificial intelligence: a workforce imperative. *Lancet*. S0140-6736(26)00693-8. doi: 10.1016/S0140-6736(26)00693-8.

Everett, JAC., Claessens, S., Knöchel, TD. *et al.* (2026) Principles for understanding trust in artificial intelligence. *Nat Rev Psychol* **5**:388–401 https://doi.org/10.1038/s44159-026-00562-1

Flemyng, E., Noel-Storr A., Macura, B., Gartlehner, G., Thomas J., Meerpohl, JJ., Jordan Z., Minx J., Eisele-Metzger, A., Hamel, C., Jemioło, P., Porritt, K., Grainger, M. (2025) Position statement on Artificial Intelligence (AI) use in evidence synthesis across Cochrane, the Campbell Collaboration, JBI, and the Collaboration for Environmental Evidence 2025. *Campbell Syst Rev*. 10;21(4):e70074. doi: 10.1002/cl2.70074

Goodhue, R., & Seriamlu, S. (2021). A quick guide to establishing a Community of Practice: ARACY. Canberra. https://www.aracy.org.au/resources/a-quick-guide-to-establishing-a-comunity-of-practice/

Han, BK. (2023). 6 essential elements of AI prompt engineering: TCEPFT as BK Han's mnemonic. https://medium.com/@BK.HAN/6-essential-elements-of-ai-prompt-engineering-tcepft-as-bk-hans-mnemonic-43e689f22ad8

Heller, M. (2024). Frameworks for analyzing the use of generative artificial intelligence in libraries. *Computers in Libraries*, *44*(10):36-40. https://www.infotoday.com/cilmag/dec24/Heller--Frameworks-for-Analyzing-the-Use-of-Generative-Artificial-Intelligence-in-Libraries.shtml

Holst, D., Moenck, K., Koch, J., Schmedemann, O., Schüppstuhl, T. (2025). Transparent reporting of AI in systematic literature reviews: development of the PRISMA-trAIce Checklist. *JMIR AI*; 4:e80247. https://ai.jmir.org/2025/1/e80247

Jackson, GP., Shortliffe, EH. (2025) Understanding the evidence for artificial intelligence in healthcare. *BMJ Qual Saf*. 34(7):421-424. doi: 10.1136/bmjqs-2025-018559.

Kpodzro, S., Kim, JY., Hasan, A. et al, (2026) A collaborative best practice guide for promoting AI vendor transparency in health care: the HAIP AI vendor disclosure framework. *NEJM AI* 3(5) doi: 10.1056/AIp2500985

Sercombe, J., Bryant, Z., Wilson, J. (2025) Evaluating a customized version of ChatGPT for systematic review data extraction in health research: development and usability study. *JMIR Form Res.* 9:e68666 https://formative.jmir.org/2025/1/e68666

Taylor, W. (2025) CLEAR Mapping: a meta-cognitive framework for transparent, reflexive and evidence-aware qualitative analysis. *Social Sciences,* 14(6):610-621 https://doi.org/10.11648/j.ss.20251406.15

Teolis, MG., Poletti, EJ., Stephenson, PL., & Whitehead, S. (2026). AI in practice: trends in hospital and clinic libraries. *Medical Reference Services Quarterly*, *45*(2):158–170 https://doi.org/10.1080/02763869.2026.2639471

Thomas, J., Hair, K., Noel-Storr, A. et al. (2026) Responsible use of AI in evidence SynthEsis (RAISE): recommendations for practice (version 3) *Open Science Framework* doi: 10.17605/OSF.IO/FWAUD

Zhang, B. (2023) Prompt engineers or librarians? An Exploration. *Medical Reference Services Quarterly*. 42(4):381-386 doi: 10.1080/02763869.2023.2250680

Author's Biographies

Michele consults as an Informationist for the Melbourne Medical School, University of Melbourne, and contributes as an Honorary Senior Fellow for Departments of Surgery & Critical Care, Austin Health Precinct, University of Melbourne. Her expertise lies in research-driven, evidence-based organisations within the fields of environment, health, science, and technology. Michele has been a member of the DARE (Data Analytics and Research Evaluation) Centre, Austin Health since conception in May 2018. DARE focuses on AI technologies and brings together the expertise of data scientists with clinician researchers to analyse and interpret large and complex health data sets. Currently Michele also contributes to ALIA membership in the role of National Manager, Health Libraries Australia and is the Convenor of the AI HLIS CoP

Cecily has worked in academic and health libraries and centres in Brisbane, Perth and Melbourne, most recently (2012 - 2026) in the University of Melbourne's Centre for Digital Transformation of Health. Her work roles have included clinical information services, assistance with health informatics research projects, digital health information resources, and providing classes & guidance on literature searching & evidence synthesis. Cecily has been a contributing member of the AI HLIS CoP since inception.