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Table of Contents

EDITORIAL

2023 in Health Libraries	Daniel McDonald	2-4

REGULAR FEATURES

Convenor's Focus	Gemma Siemensma	5
Tech Showdown – Clipchamp vs Screencastify	Cassandra Gorton	6-8

ARTICLES

Current issues and status of mis/disinformation in the health library context: a rapid literature review	Mozhdeh Dehghani, Liz Harris	9-25
Using DSpace to create a repository for the communication of clinical trials and research with consumers	Hannah-Lee Obst	26-30
"We need to talk about PICO": Approaching the move from question formulation to search strategy	Erica Hateley	31-38
Extending high quality health information to non-government organisations across the Northern Territory: experiences of NT Health Library Services	Saara Kahkonen; Margaret Purnell	39-44
Lessons learnt from developing support services for systematic and scoping reviews in a regional university library	Erin Roga; Dr Karen Pruis	45-53
What's in the research toolbox for a team of academic Liaison Librarians	Jasmine Castellano; Paula Everett; Vikki Langton	54-58
Gratisnet: the power of the network	Gina Velli	59-61
Queensland Health Libraries Network Professional Development Day	Jana Waldmann	62-63
Australian Health Library Christmas Decorations	Cairns; South West; Central Gippsland	64-72

MEMBER SPOTLIGHT

South Australia Medical Imaging	Jannette Novice	73-76

SPONSORED CONTENT

Ovid Synthesis		77-78

Editorial – 2023 In Health Libraries

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2023 in Numbers

- Medline Citations Indexed (Annual): 1369611
- Medline Citations Cumulative Total: 29807639
- Medline Journal Titles: 5282
- Pubmed Searches 2.58 Billion

No wonder you are tired.

2023 in more numbers

- RELX Total dividend paid to shareholders: 54.6 pence
- RELX total payments to journal article authors, peer reviewers, HREC members: Hahahahahahahahahahahahahaha (ALIA lawyers redacted further comments)

2023 in point of care tools: a comparison of UpToDate and Dynamed

- ALIA lawyers really redacted further comments

2023 in collegial banter about the football

- ALIA lawyers strongly suggest not printing such defamatory remarks about the Collingwood football club and their many supporters.
- ALIA lawyers instead suggest emphasising the Brisbane Lions won the more important competition, the AFLW. And Spain won the Women's world cup. And the Matildas almost did. And Sam Kerr scored that goal. With that calf.

2023 in quotes

- There is nothing new about dodgy information galloping ahead of truth, especially in times of crisis. Shakespeare opens Henry IV Part II with Rumour alone on stage, "stuffing the ears of men with false reports". The difference now is that Rumour moves at the speed of a photon down an optical fibre, while evidence seeps in slowly like ink drying on a notepad. ~ Rafael Behr

- Since its launch in November last year many people, most buzzing with a kind of algorithmic awe, have sent me songs 'in the style of Nick Cave' created by ChatGPT. There have been dozens of them. Suffice to say, I do not feel the same enthusiasm around this technology. I understand that ChatGPT is in its

> infancy but perhaps that is the emerging horror of AI – that it will forever be in its infancy, as it will always have further to go, and the direction is always forward, always faster. It can never be rolled back, or slowed down, as it moves us toward a utopian future, maybe, or our total destruction. Who can possibly say which? Judging by this song 'in the style of Nick Cave' though, it doesn't look good, Mark. The apocalypse is well on its way. This song sucks. What ChatGPT is, in this instance, is replication as travesty. ChatGPT may be able to write a speech or an essay or a sermon or an obituary but it cannot create a genuine song. It could perhaps in time create a song that is, on the surface, indistinguishable from an original, but it will always be a replication, a kind of burlesque. Songs arise out of suffering, by which I mean they are predicated upon the complex, internal human struggle of creation and, well, as far as I know, algorithms don't feel. Data doesn't suffer. ChatGPT has no inner being, it has been nowhere, it has endured nothing, it has not had the audacity to reach beyond its limitations, and hence it doesn't have the capacity for a shared transcendent experience, as it has no limitations from which to transcend. ChatGPT's melancholy role is that it is destined to imitate and can never have an authentic human experience, no matter how devalued and inconsequential the human experience may in time become. ~ Nick Cave

2023 in international health library journal content

- The Americans
    - Introducing the Journal of the Medical Library Association's policy on the use of generative artificial intelligence in submissions [link]
    - PubMed's core clinical journals filter: redesigned for contemporary clinical impact and utility [link]
    - Optimizing the literature search: coverage of included references in systematic reviews in Medline and Embase [link]
- The Canadians
    - Leveraging Wikipedia in undergraduate health sciences education: a key tool for information literacy and knowledge translation [link]
    - Scaffolded, embedded required: information literacy education in undergraduate health sciences [link]
- The Europeans
    - PubMed, Clinicaltrials.gov: a critical analysis of new features after three years from the launch of the new release. Results from an interactive training course [link]
    - Same search, different results: algorithm bias in various Discovery Tools in library search [link]
    - Norwegian Medical Librarians' Views about the Future [link]

    - Report from the Training, Education and Development for Medical Information and Library professionals (TrEDMIL) sub-group of EAHIL [link]
- The Brits
    - An overview of the capabilities of ChatGPT for medical writing and its implications for academic integrity [link]
    - Identifying knowledge practices in an infodemic era: Rediscovering the professional identities of LIS professionals in an infodiverse environment [link]
    - Drug information-seeking behaviours of physicians, nurses and pharmacists: A systematic literature review [link]
    - How research into healthcare staff use and non-use of e-books led to planning a joint approach to e-book policy and practice across UK and Ireland healthcare libraries [link]
- The Hospitalists
    - The Hospital Library and Hospital Librarian Contributes to Patient-Centered Care [link]
    - Transitioning from Academic Librarianship to Hospital Librarianship at the Nation's Oldest Medical Library [link]
    - Clinical Librarian Rounding in Community Hospital Internal Medicine Residency: 2022-2023 Pilot Program Survey Results and Evaluation [link]
    - The Best RX is Better UX: Redesigning, Migrating, and Usability Testing a Hospital Library Website [link]
    - Microsoft 365 Apps for Library Statistics [link]
    - Just Breathe: Building Wellness into a Hospital Library Space [link]
- The JERMLs
    - Database Search Translation Tools: MEDLINE Transpose, Ovid Search Translator, and SR-Accelerator Polyglot Search Translator [link]
    - Article Processing Charges in Gold Open Access Journals: An Empirical Study [link]
    - Epistemonikos: A Free Database for Medical and Systematic Review Researchers [link]

2023 in non-JoHILA Australian health library journal content

- Government-supported clinical knowledge and information resource portals are key to ensuring quality, safe health care and evidence-based practice – the Australian context [link]
- Technology and informatics in Australian health libraries [link]
- Health librarians as part of the perioperative care team [link]

Convenor's Focus | December 2023

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Evolving - Digital literacy, Digital health, Digital scholarship was the theme of this year's HLA/HLI Conference which was held in October in beautiful Melbourne. Delegates were treated to a wealth of information and knowledge from various speakers on a range of topics. A shout out to the organising committee who put in months of work to see this come to fruition. We can't thank you enough for all your time and effort. A huge thanks to our sponsors as well who made this event possible and our speakers who generously gave their time.

In recent weeks the summary report of the Specialist Digital Health Workforce 2023 has been released which highlights the pivotal role health librarians play in the wider health informatics, digital data, information and knowledge space. The health system is increasingly reliant on this workforce to realise benefits from large health IT investments and to create value from increasing volumes of electronic health data. Being counted with others in the health information workforce data is essential to advocate for health librarians and to demonstrate the unique role we play within health organisations.

We are looking for people to join the HLA Executive committee, in particular people with an interest in Awards and Finance. Please email gemma.siemensma@gh.org.au with a brief paragraph about yourself and what you feel you can bring to the HLA Executive. Don't forget to include your personal ALIA membership number too. The HLA Executive are an incredible group of individuals who work tirelessly behind the scenes to help advance health libraries in Australia. Joining the committee helps make new connections and opens you up to endless opportunities and networks so please consider popping your hand up – it's definitely worth it!

A new *Artificial Intelligence in Health Library & Information Services* Community of Practice has just started so if you are keen to join this or other communities of practice please visit the HLA website for more information. Work is continuing on the Professional Development calendar for 2024 so hopefully we will see you online soon – please get in touch if you have suggestions for events or if you are willing to be a guest speaker!

Enjoy a well deserved rest over the festive season and I look forward to working together next year to highlight the amazing work of health libraries in Australia.

Gemma

Tech Showdown – Clipchamp vs Screencastify

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Tech Showdown is a regular feature of JoHILA. Novel products, software, and technologies will be compared against each other to determine who is the winner, based on available features, ease of use, and price. If you have an idea for Tech Showdown or would like to see a comparison of two particular technologies, please email Cass.

Incorporating screen recording and video editing tools within a health librarian's kit can significantly enhance the delivery of educational content and improve the overall learning experience for library users. Screen recording allows librarians to capture step-by-step demonstrations of various software applications, online resources, or interactive tools relevant to health research and information retrieval for patient care. These recordings can be invaluable for creating tutorials on database navigation, literature searching, or address frequently asked questions. Video editing tools then come into play to refine and customise the content, ensuring clarity and conciseness. Librarians can seamlessly integrate additional visual elements, overlay annotations, and incorporate graphics and branding to augment the educational material.

This dynamic approach facilitates accessible learning opportunities for time conscious health library users but can be time consuming on the end of the librarian. In the blue corner we have Clipchamp, an Australian developed tool for video editing and recording acquired by Microsoft. In the red corner we have Screencastify, a browser extension for Chrome that boasts of being the leading screen recorder on Chrome. Let's compare the two in detail before you sign up for an account.

Round 1: Features

Clipchamp:

- Screen and camera recording.
- Editing tools such as trim, crop, resize, and audio removal. Includes the ability to edit screen recordings and associated camera recordings separately.
- Enhancement options such as branding and captions.
- Integrations with OneDrive, Google Drive, YouTube, TikTok, and LinkedIn.

Screencastify:

- Screen and camera recording.
- Editing tools such as cropping, zooming, and audio adjustment.
- Enhancement options such as title cards and blurring of sensitive information.

- Integration with Google Drive.

Winner – Tie. Both tools offer similar features. Clipchamp offers slightly more integrations, but they may not be of use. For example, while Clipchamp integrates with OneDrive, which is commonly offered across health services with Microsoft 365, it may require administrator approval to be offered as an app within an organisation's Microsoft suite.

Round 2: Ease of Use

Clipchamp:

- Designed for novice video editors, or users that need to create large amounts of content.
- Provides pre-designed templates for convenience.
- The layout and navigation are simple and similar to Canva.
- Clipchamp offers the ability to upload videos from a mobile device via an easy-to-use QR Code, which is a lot less clunky than emailing it to yourself, downloading it to your PC, then uploading it to the tool.

Screencastify:

- Screen recording via the Chrome browser extension is very simple – click start and wait for the countdown timer to reach 0!
- Sharing videos from Screencastify is simple, making it a great tool for capturing issues with an online resource and sending it to a vendor.
- Screencastify will only record what is shown in your Google Chrome browser, so if you're wanting to record something in another program, this is not the tool for you.
- Screencastify requires a Google account to access, so if your organisation has blocked Google services, bad luck!

Winner – Clipchamp. Screencastify has too many caveats to be an effective, long-term solution for libraries.

Round 3: Price

Clipchamp:

- The free version of Clipchamp allows for an unlimited number of high-definition videos lasting 30 minutes each.
  - Videos that include premium features under the free plan can still be created and exported, but will include a Clipchamp watermark.
- The single license premium version of Clipchamp is available for $17 AUD a month. The premium account includes additional stock material, filters, a brand kit, and content back up.

Screencastify:

- In a recent change, the free version of Screencastify only allows for 10 videos lasting 30 minutes each. The 10-video limit *includes* deleted videos. You cannot delete videos to make room for more recordings.
- The single license premium version of Screencastify is available for $7 USD a month. The premium version has no restrictions on the number or length of videos.

Winner – Clipchamp, hands down. Screencastify's decision to limit videos and include deleted videos within that limit is baffling.

Winner

Clipchamp! Clipchamp's free version will meet the needs of most libraries, while still being user friendly. Users can leverage the suite of available templates, in a similar way to Canva, eliminating the need to start from scratch with a video.

Current issues and status of mis/disinformation in the health library context: a rapid literature review

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The publications under review have been included in Appendix 1.

Acknowledgement
This review was presented at the Asia-Pacific Conference on Health, Law & Special Libraries 2023, and we are disseminating the presented content by publishing it in JOHILA.

We acknowledge Austin Health's Clinical Librarian, Mina Nichols-Boyd, for assisting with the search for this review.

ChatGPT was used to assist with editing the text of this manuscript.

Introduction

The novel coronavirus disease (COVID-19) has caused not only a pandemic and global health crisis but also widespread misinformation in social media and published literature (Epstein, 2022). Healthcare providers have an important role in informing patients and the public with relevant knowledge and to suppress misinformation at all information access points (Epstein, 2022). Healthcare workers are themselves also vulnerable to misinformation. Health sciences librarians have a responsibility to dispel this mis/disinformation via providing accurate resources and health information literacy.

During the pandemic, lack of relevant and credible information, misinformation, disinformation, or even information overload all added to the great challenge for libraries, like other organisations, to combat the crisis. Normal operations and services in many libraries were greatly disrupted during the pandemic. Libraries were reportedly responding to challenges by pivoting to new ways to meet their users' needs (Yu & Mani, 2020). Although there is a wealth of research around public and academic libraries in dealing with mis/disinformation (Auberry, 2018; De Paor & Heravi, 2020; Makhoul et al., 2021; Revez & Corujo, 2021; Young et al., 2021), there is little to no information around the issues and status of mis/disinformation in the

health sciences library context (Akers et al., 2022; Kumar et al., 2022; Sharma et al., 2022).

Current research in the health library context is limited to how medical/health sciences libraries responded to the COVID-19 health crisis (Yu & Mani, 2020), including health care library experiences during the COVID-19 pandemic that consider changes made in response to the pandemic when health librarians were providing essential information services from home and were disconnected from the physical library (Anderson & Ivacic-Ramljak, 2021); or the impact of COVID-19 on reference services provided by academic health sciences librarians to examine the scope of reference services, changes to reference work, and the range of reference questions that academic health sciences librarians received amidst the COVID-19 pandemic (Charbonneau & Vardell, 2022).

To address this gap and advance our knowledge of mis/disinformation, we aimed to conduct a rapid literature review. This review seeks to identify the current issues and discuss the status of mis/disinformation within the context of health sciences libraries. The findings may potentially inform our future practices in addressing this issue.

Methods

Before conducting the review, we set specific inclusion and exclusion criteria. Articles were considered for inclusion if they met the following conditions: 1) written in English, 2) published at any date, 3) focused on roles, services, and resources related to mis/disinformation within health libraries (including academic health libraries), and 4) encompassed various types of publications. Publications unrelated to health libraries were excluded.

To identify relevant documents for this review we searched Ovid MEDLINE database and the Web of Science core collection (platform). We developed the initial search strategy in MEDLINE. The search was then adapted for the Web of Science platform (WoS). Due to time and resource constraints we decided to focus on MEDLINE and WoS only, so we have not included grey literature. For our eligibility criteria we only included documents that discussed practice in a hospital or academic health library setting. We excluded documents that looked at health literacy and misinformation more generally (ie from a clinician or consumer perspective). There were no limits placed on the search. See (Figure 1. MEDLINE strategy)

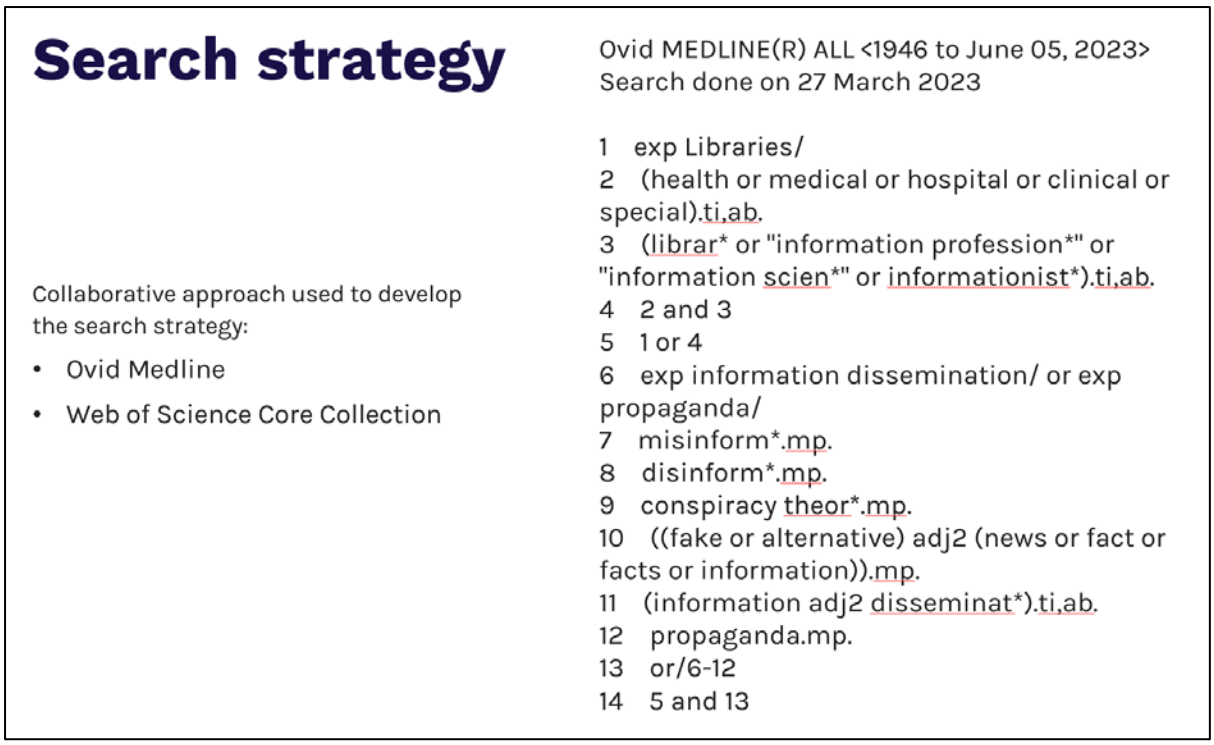

Figure 1: Search Strategy

Data extraction

The search results were imported into the Covidence systematic review software (Veritas Health Information). The MEDLINE and Web of Science searches yielded 796 articles, with Covidence removing 44 duplicates. The inclusion criteria were integrated into the software as a category for screening citations (titles and abstracts) during level 1 and full-text articles during level 2 screening.

Title and abstract screening were conducted for 752 articles, resulting in the exclusion of 684. For the remaining 68 articles, full-text screening was performed, leading to the exclusion of 47 studies. Reasons for exclusion included being an abstract-only publication, unavailability of the full text, non-English content, not related to health libraries, or not addressing misinformation or disinformation. This process left 21 studies that were included in the review, as depicted in Figure 2.

Two reviewers independently read the included full text articles and extracted the data (half each).
The extracted information was categorised as follows:

- The definitions of mis/disinformation
- The types of mis/disinformation that were referred to in the articles
- Actions that libraries or librarians have taken to combat mis/disinformation
- Suggestions and recommendations that the authors had to combat misinformation

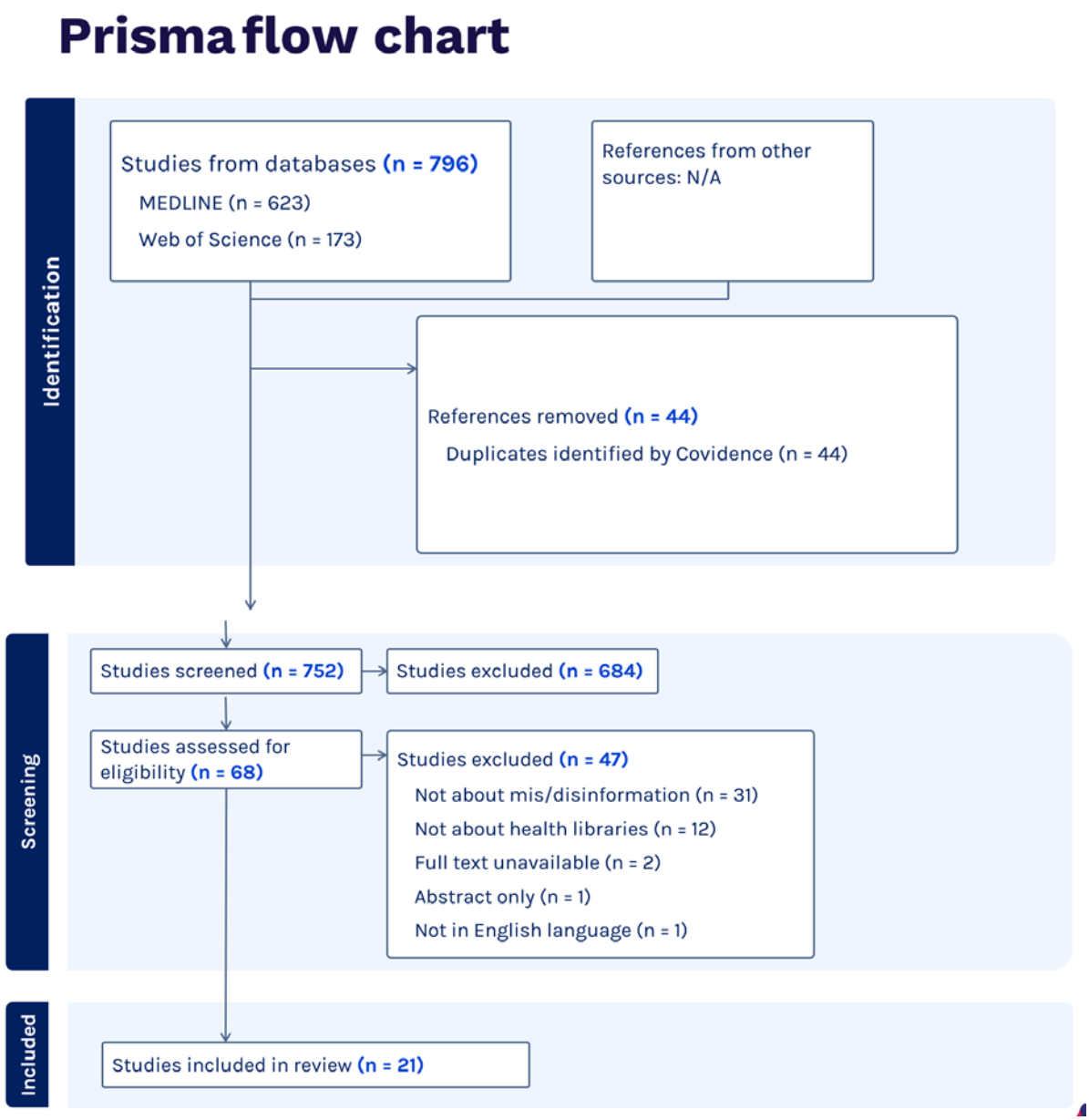

Figure 2: PRISMA flow diagram

Results

The characteristics of the studies incorporated into the review, encompassing various study types were text and opinion articles, three reviews (including a systematic review), exploratory studies, cross-sectional studies, content analyses, and one observational study involving semi-structured interviews. The publication dates spanned from 2008 to 2022, with only four studies from 2008 to 2011, followed by an increase in the number of publications from 2018, reaching seven in 2021 (see Figure 3).

The studies were conducted in different countries, with the distribution as United States (n= 11), Italy (n=3), Pakistan (n=2), and One study each for India, Spain, Malta, and Zambia, and one international study.

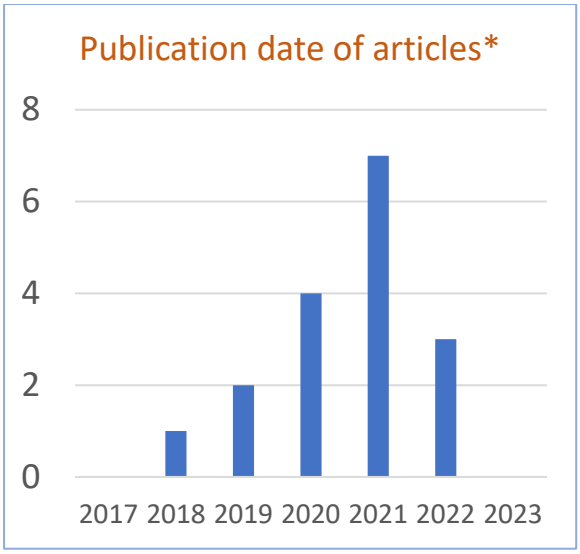

Figure 3: Publication date of articles

The definitions of mis/disinformation

Out of 21 articles misinformation was defined in two articles as "inaccurate or misleading information shared by people who do not recognize it as such" (Bianchini et al., 2019) and "unreliable information that is disseminated inadvertently". (Ashrafi-Rizi & Kazempour, 2020, as cited in Morgan-Daniel et al. (2020).

Disinformation was defined as "inaccurate information that is intentionally produced and disseminated for political, economic, or cultural reasons" Ashrafi-Rizi and Kazempour (2020) cited in Morgan-Daniel,et al, (2020) ; "false information that is intended to mislead" (Herrero-Diz & Lopez-Rufino, 2021); and "intentionally misleading information used to obfuscate legitimate resources" (Pomputius, 2019). Looking at the definitions of mis/disinformation, most authors did not explicitly define misinformation or disinformation. This tells us that authors assume there is a general understanding of what misinformation is, and this is not different in the context of health information or health libraries.

The types of mis/disinformation that were referred to in the articles

The articles addressed various forms of misinformation, which we categorised into three groups: definitions, COVID-19-related misinformation, and broader perspectives (see Table 1).

Definitions

Firstly, authors referred to types of mis/disinformation that fell under definitions, synonyms, or categories of misinformation, encompassing terms such as falsehoods, deceptive or baseless information, misinformation circulated online or on social media, fake news, and generally any content characterised as disinformative, pseudohistorical, or pseudoscientific (Bianchini et al., 2019; Herrero-Diz & Lopez-Rufino, 2021; Jaeger & Taylor, 2021; Schneider et al., 2020).

COVID-19-related misinformation

Eight papers addressed COVID-19-related misinformation, discussing aspects such as the infodemic – characterised by an overabundance of information, including misinformation (Allen, 2021; Chan et al., 2022; Charbonneau & Vardell, 2022; Epstein, 2022; Morgan-Daniel et al., 2020; Naeem et al., 2021; Yuvaraj, 2020). These papers highlighted false claims pertaining to the virus, its transmission, treatments, and prevention. Additionally, there was exploration of conspiracy theories surrounding Dr. Anthony Fauci (spokesperson for the USA's White House Coronavirus Task Force), the virus's origin and severity, and the role of algorithms in amplifying these messages (Jaeger & Taylor, 2021).

The coverage extended to misinformation originating from governments, encompassing instances where politicians dismissed COVID as a hoax or overhyped its impact. It also delved into governments withholding COVID data and disinformation campaigns from Russia (Jaeger & Taylor, 2021). One paper pointed out that the rush to publish scientific research during the pandemic led to compromised peer review processes and the publication of substandard research (Brown, 2008).

Broader perspectives

There were additional forms of misinformation that extended the scope of the concept, considering specific instances that broadened the understanding of misinformation or disinformation. For instance, one paper discussed urban myths or medical myths, using the example of the "Freshman 15" – the belief that college freshmen gain fifteen pounds of weight in their first year away from home. Although rooted in news reports and anecdotes, this myth did not withstand scientific scrutiny (Brown, 2008).

Various authors discussed other types of health misinformation. This included the overproduction of digital content, which becomes misleading when of low quality or overwhelming in quantity. This connects with the issue of limited access to quality health information, where individuals lack reliable resources and are inundated with the overabundance of poor-quality content (Herrero-Diz & Lopez-Rufino, 2021). One paper explored complementary and alternative medicines, describing them as therapies lacking scientific support (Bianchini et al., 2019).

Another article highlighted what they called "state-mandated misinformation." This referred to certain U.S. states requiring individuals seeking abortion to be provided with information on the procedure's risks. However, the information given is often not grounded in scientific evidence and can be inaccurate (Barr-Walker et al., 2021).

Several papers raised concerns about academic publishing, including the use of artificial intelligence or bots mimicking academic writing, the inclusion of unreliable

sources in academic papers that could propagate misinformation (Herrero-Diz & Lopez-Rufino, 2021), predatory publishing producing poorly peer-reviewed work (Allen, 2021), and preprints serving as a potential source of misinformation due to the lack of vetting and peer review, which may result in findings that do not withstand rigorous scrutiny (Akers, 2018).

Table 1: Types of mis/disinformation

Category	**Type of misinformation**
Definitions	• Falsehoods • Deceptive information • Unfounded information • False information online • Fake news • Deep fake and cheap fake videos • Misinformation in social media • Any type of content that is disinformative, pseudohistorical, and pseudoscientific
COVID-19	• Infodemic • Harmful, false claims related to the virus • False claims about transmission, treatment & prevention • Pseudoscientific health therapies • Conspiracy theories • Algorithms reinforcing messages • State and local politicians… asserted that the virus is a hoax or overhyped • Secrecy around statistics (e.g. Brazil government) • Disinformation campaigns from Russia • Inadequate peer review
Broader perspectives	• Medical myths, urban myths • Overproduction of digital content • Lack of access to quality health information • Complementary and alternative medicine – not supported by scientific evidence (MeSH definition) • Difference among experts and layperson's assessments • State-mandated misinformation re abortion safety and risks

	• Artificial intelligence and bots that mimic academic writing • Predatory publishing • Use of unreliable sources in academic papers • Preprints

Actions that libraries or librarians have taken to combat mis/disinformation

Identifying misinformation

Of the 21 studies, 13 focused on actions taken by libraries or librarians to counter misinformation. Librarians played a role in identifying misinformation, involving the identification of predatory journals and the creation of blacklists and whitelists, such as Beall's list. They also contributed to open-access journal directories (Allen, 2021).

Librarians conducting research

Librarians engaged in research themselves, generating high-quality information or rectifying misinformation. For instance, one study conducted a content analysis of websites related to complementary and alternative medicine for cancer to pinpoint deceptive online information (Bianchini et al., 2019). Another conducted a systematic review on the "Freshman 15" concept, as mentioned earlier (Brown, 2008).

Training information literacy

Information literacy training emerged as a significant initiative, encompassing efforts to train staff in identifying predatory journals (Allen, 2021) and instructing students on using evidence-based medicine resources to address clinical questions (Akers, 2018). Some initiatives extended to training high school students and the general public (Barbaro et al., 2022).

Collaboration with other entities

Certain authors documented successful collaborations with other organisations. For instance, one group in Italy collaborated with the national health service to establish a web portal dedicated to offering accurate health information to the public and dispelling false news (Barbaro et al., 2022). Another team engaged in an international, cross-disciplinary project aimed at raising awareness about COVID-19 through the creation of videos and workshops (Chan et al., 2022).

Reference services

One paper reported a survey of academic health library reference services and found that 32% of librarians had supplied information to counteract COVID-19 misinformation. This information encompassed topics such as hydroxychloroquine, masks, and the presence of microchips in vaccines (Charbonneau & Vardell, 2022).

Formulation of search strategies

Another measure implemented was the formulation of search strategies specifically for COVID-19. Library associations were noted to be actively building repositories of expert searches focused on various COVID-19 topics (Naeem & Bhatti, 2020). These articles demonstrate that many health librarians are engaged in efforts to tackle misinformation in its various forms. However, none of the papers have reported on the results of these efforts, so it is not known how effective the programs are.

Suggestions and recommendations

Authors made various suggestions and recommendations on how libraries and librarians might combat misinformation, in addition to the real examples discussed above.

Curation & Training

Libraries commonly engage in curation and training. Four articles discussed the curation of resources, emphasising terms like trustworthy, authoritative, and best evidence, particularly in the context of COVID-19 (Akers, 2018; Chan et al., 2022; Charbonneau & Vardell, 2022; Epstein, 2022). Quality assessment, specifically highlighting the prominence of retraction notices in digital databases, was addressed in one article (Schneider et al., 2020).

Additionally, four articles highlighted training initiatives within health libraries, focusing on educating individuals to search for and identify quality information while discerning fake news (Chan et al., 2022; Herrero-Diz & Lopez-Rufino, 2021; Kim et al., 2011; Naeem & Bhatti, 2020). One article proposed leveraging reference services to assist patrons in developing skills to evaluate information resources (Charbonneau & Vardell, 2022).

Collaborations

Seven articles recommended collaborations with external parties (Akers, 2018; Barr-Walker et al., 2021; Brown, 2008; Charbonneau & Vardell, 2022; Epstein, 2022; Kim et al., 2011; Kosciejew, 2021). These included collaborations with journalists and media, health professionals, public health organisations, public libraries, researchers, and external clinics or community organisations. These partnerships would aim to improve health information literacy, provide resources, develop information materials or support the organization's efforts in combatting mis/disinformation.

Providing information externally

Six articles proposed disseminating information to external entities, which included providing information to public health contacts (Barr-Walker et al., 2021; Naeem et al., 2021), sharing accurate information on social media (Allen, 2021; Barbaro et al., 2022), conducting classes or seminars in public libraries, and collaborating to create

handouts (Charbonneau & Vardell, 2022; Epstein, 2022). The target audiences for these efforts would encompass health providers, patients, and the general public. Additionally, one paper recommended that health librarians assume a leadership role at the community level to disseminate critical information about HIV (Kanyengo, 2010).

Advocacy

Three papers identified a role for librarians in advocacy. This involvement extended to advocating for legislative changes concerning abortion (Barr-Walker et al., 2021) or transparency in artificial intelligence (Herrero-Diz & Lopez-Rufino, 2021), as well as serving as general advocates for their community (Bianchini et al., 2019).

Self-education

Self-education was another theme, with authors suggesting that "librarians should not be afraid of going beyond their comfort zone, acquiring different skills or experimenting with new collaborations" (Barbaro et al., 2022, p. 197). Another suggested that we need to be aware of trends in artificial intelligence and understand factors relating to how machine learning assesses misinformation in social media (Pomputius, 2019). It was also highlighted that being mindful of how false information is organised and recognising cues indicative of misinformation, especially in contentious topics where librarians may not be subject matter experts, is crucial (Bianchini et al., 2019).

Obligations

Finally, there were some papers that stated or suggested that librarians had an obligation or imperative to combat misinformation, whether that be a professional, moral or ethical obligation (Allen, 2021; Herrero-Diz & Lopez-Rufino, 2021). These papers used terms like "should" or "must", in contrast to some of the other papers who suggested ideas, using language like "well positioned to create solutions" or "we see an opportunity for".

There are many strategies here that health libraries could implement to address misinformation. However, authors have generally not addressed considerations of feasibility for health libraries given their limited resources, nor what is reasonable given the goals of parent organisations. For example, collaborations with external organisations or providing resources and training externally might be possible in an academic setting but outside of scope for librarians working in a hospital. Health librarians must carefully consider what is practicable in their own context.

Discussion

This study has identified the current issues and status of mis/disinformation within the context of health sciences libraries. Based on this review, health library practices

related to mis/disinformation can be categorised into the following: source evaluation, information literacy, research, and collaboration.

Source evaluation represents actions focused on assessing the reliability of information sources. Based on this review, identifying predatory journals (Herrero-Diz & Lopez-Rufino, 2021), identifying misinformation via checklists such as creating blacklists & whitelists e.g. Beall's list and contributions to DOAJ (Allen, 2021) were the primary activities undertaken by health libraries. Studies in other library sectors also indicate the utilisation of a checklist approach to evaluate information sources in library practices combating fake news (Revez & Corujo, 2021).

Information literacy represents actions/training provided to patrons and staff and focused on identifying, finding, evaluating, applying, and acknowledging sources of information. The main activities in support of information literacy were implementation of reference services and training, for example, training staff/faculty on identifying predatory journals (Herrero-Diz & Lopez-Rufino, 2021), training students to use EBM resources to answer clinical questions (Charbonneau & Vardell, 2022), teaching information literacy to high school students and the general public (Barbaro et al., 2022). In other sectors also the literature predominantly emphasises information literacy strategies, with librarians considering information literacy as a primary response to the fake news phenomenon (Agosto, 2018; Dalkir & Katz, 2020).

Research represents actions focused on involving in research, encompassing either health librarians conducting research (Bianchini et al., 2019; Brown, 2008) or the development of search strategies (Naeem & Bhatti, 2020). Research support is mentioned as a strategy of academic libraries' battle against misinformation during COVID-19 (Bangani, 2021).

Collaboration represents actions focused on collaborating with various stakeholders. For example, Italian librarians collaborated with the National Health Service to strengthen efforts against misinformation (Barbaro et al., 2022). Additionally, collaboration was observed with the Health Informatics Promotion Project to spread awareness of COVID-19 (Chan et al., 2022). In a recent report from Critica – a nonprofit research organisation committed to combating misinformation – "Coalitions/Collaborations" were identified as practices against misinformation. Thirteen initiatives labelled as coalitions have entailed collaborations that unite various stakeholders (Scales & Gorman, 2023).

Conclusion

A diverse array of ideas and activities are currently being undertaken by health librarians with regard to mis/disinformation. As yet, there is insufficient evidence to gauge the success of the suggested strategies and methods, highlighting a notable gap in assessing the impact of libraries' efforts. This study also underlines the

importance of considering the health library's role within the broader goals of the parent organisation. It provides insights for further research and issues to consider for librarians who want to combat mis/disinformation.

References

Agosto, D. E. (2018). *Information literacy and libraries in the age of fake news*. ABC-CLIO. https://publisher.abc-clio.com/9781440864193/

Akers, K. G. (2018). Report from the Medical Library Association's InSight Initiative Summit 1: Engaging Users in a Disruptive Era. *Journal of the Medical Library Association*, 106(4), 554-572. https://doi.org/https://dx.doi.org/10.5195/jmla.2018.561

Akers, K. G., Hu, E., Rehman, N., Yun, H. J., Hoofman, J., Monconduit, R., & Mendez, J. (2022). Building First-Year Medical Students' Skills in Finding, Evaluating, and Visualizing Health Information Through a "Debunking Medical Myths" Curricular Module. *Medical science educator*, 32(2), 309-313.

Allen, R. M. (2021). When peril responds to plague: predatory journal engagement with COVID-19. *LIBRARY HI TECH*, 39(3), 746-760. https://doi.org/10.1108/LHT-01-2021-0011

Anderson, A., & Ivacic-Ramljak, T. (2021). What is the place of the Library Space in health care? A literature review and survey of health care library experiences during the COVID-19 pandemic. *Journal of Health Information and Libraries Australasia*, 2(3), 18-33. https://doi.org/10.55999/johila.v2i3.83

Ashrafi-Rizi, H., & Kazempour, Z. (2020). Information Typology in Coronavirus (COVID-19) Crisis; a Commentary. *Archives of Academic Emergency Medicine*, 8(1), e19. https://doi.org/10.22037/aaem.v8i1.591

Auberry, K. (2018). Increasing students' ability to identify fake news through information literacy education and content management systems. *The Reference Librarian*, 59(4), 179-187. https://doi.org/10.1080/02763877.2018.1489935

Bangani, S. (2021). The fake news wave: Academic libraries' battle against misinformation during COVID-19. *The Journal of Academic Librarianship*, 47(5), 102390. https://doi.org/10.1016/j.acalib.2021.102390

Barbaro, A., Amicarella, S. E., Ferrari, P., Sorcini, I., & Zedda, M. (2022). Embedded librarians: An innovative experience in health and wellness communication. *Health information and libraries journal*, 39(2), 194-197. https://doi.org/https://dx.doi.org/10.1111/hir.12410

Barr-Walker, J., DePineres, T., Ossom-Williamson, P., Mengesha, B., & Berglas, N. F. (2021). Countering Misinformation About Abortion: The Role of Health Sciences Librarians. *American journal of public health*, 111(10), 1753-1756. https://doi.org/https://dx.doi.org/10.2105/AJPH.2021.306471

Bianchini, C., Truccolo, I., Bidoli, E., CRO Information Quality Assessment, & Mazzocut, M. (2019). Avoiding misleading information: A study of complementary medicine online information for cancer patients. L*ibrary & information science research*, 41(1), 67-77. https://doi.org/10.1016/j.lisr.2019.02.006

Brown, C. (2008). The information trail of the 'Freshman 15'--a systematic review of a health myth within the research and popular literature. *Health information and libraries journal*, 25(1), 1-12. https://doi.org/https://dx.doi.org/10.1111/j.1471-1842.2007.00762.x

Chan, H., Chu, S., Gala, B., Islam, M. A., Batool, S. H., Bhardwaj, R. K., Lamba, M., & Jayasekara, P. K. (2022). Equipping Students and Beyond with Sound COVID-19 Knowledge to Survive and Thrive Despite the Pandemic. *Proceedings of the Association for Information Science and Technology*. *Association for Information Science and Technology*, 59(1), 633-635. https://doi.org/https://dx.doi.org/10.1002/pra2.673

Charbonneau, D. H., & Vardell, E. (2022). The impact of COVID-19 on reference services: a national survey of academic health sciences librarians. *Journal of the Medical Library Association*, 110(1), 56. https://doi.org/10.5195/jmla.2022.1322

Covidence systematic review software, Veritas Health Innovation, Melbourne, Australia. Available at www.covidence.org.

Dalkir, K., & Katz, R. (2020). *Navigating fake news, alternative facts, and misinformation in a post-truth world*. IGI Global.

De Paor, S., & Heravi, B. (2020). Information literacy and fake news: How the field of librarianship can help combat the epidemic of fake news. *The Journal of Academic Librarianship*, 46(5), 102218. https://doi.org/10.1016/j.acalib.2020.102218

Epstein, H.-A. B. (2022). Dispelling Covid-19 Misinformation. *Medical Reference Services Quarterly*, 41(1), 80-85. https://doi.org/https://dx.doi.org/10.1080/02763869.2022.2021036

Herrero-Diz, P., & Lopez-Rufino, C. (2021). Libraries Fight Disinformation: An Analysis of Online Practices to Help Users' Generations in Spotting Fake News. *SOCIETIES*, 11(4). https://doi.org/10.3390/soc11040133

Jaeger, P. T., & Taylor, N. G. (2021). Arsenals of Lifelong Information Literacy: Educating Users to Navigate Political and Current Events Information in World of Ever-Evolving Misinformation. L*ibrary quarterly*, 91(1), 19-31. https://doi.org/10.1086/711632

Kanyengo, C. W. (2010). Information and communication: a library's local response to HIV/AIDS in Zambia. *Health information and libraries journal*, *27*(1), 57-65. https://dx.doi.org/10.1111/j.1471-1842.2009.00855.x

Kim, H., Park, S.-Y., & Bozeman, I. (2011). Online health information search and evaluation: observations and semi-structured interviews with college students and maternal health experts. *Health information and libraries journal*, 28(3), 188-199. https://dx.doi.org/10.1111/j.1471-1842.2011.00948.x

Kosciejew, M. (2021). The coronavirus pandemic, libraries and information: a thematic analysis of initial international responses to COVID-19. G*lobal knowledge memory and communication*, 70(4-5), 304-324. https://doi.org/10.1108/GKMC-04-2020-0041

Kumar, N., Walter, N., Nyhan, K., Khoshnood, K., Tucker, J. D., Bauch, C. T., Ding, Q., Jones-Jang, S. M., De Choudhury, M., & Schwartz, J. L. (2022). Interventions to mitigate COVID-19 misinformation: protocol for a scoping review. *Systematic Reviews*, 11(1), 1-5. https://doi.org/10.1186/s13643-022-01917-4

Makhoul, J., Kabakian-Khasholian, T., & Chaiban, L. (2021). Analyzing the social context of health information and misinformation during the COVID-19 pandemic: a case of emerging inequities in Lebanon. *Global Health Promotion*, *28*(1), 33-41. https://doi.org/10.1177/1757975920984178

Morgan-Daniel, J., Ansell, M., & Adkins, L. E. (2020). COVID-19 Patient Education and Consumer Health Information Resources and Services. J*ournal of consumer health on the internet*, 24(3), 302-313. https://doi.org/10.1080/15398285.2020.1792166

Naeem, S. B., & Bhatti, R. (2020). The Covid-19 'infodemic': a new front for information professionals. *Health information and libraries journal*, 37(3), 233-239. https://doi.org/https://dx.doi.org/10.1111/hir.12311

Naeem, S. B., Bhatti, R., & Khan, A. (2021). An exploration of how fake news is taking over social media and putting public health at risk. *Health information and libraries journal*, 38(2), 143-149. https://doi.org/https://dx.doi.org/10.1111/hir.12320

Pomputius, A. (2019). Putting Misinformation Under a Microscope: Exploring Technologies to Address Predatory False Information Online. *Medical Reference*

Services Quarterly, 38(4), 369-375. https://doi.org/https://dx.doi.org/10.1080/02763869.2019.1657739

Revez, J., & Corujo, L. (2021). Librarians against fake news: A systematic literature review of library practices (Jan. 2018–Sept. 2020). *The Journal of Academic Librarianship*, 47(2), 102304. https://doi.org/10.1016/j.acalib.2020.102304

Scales, D., & Gorman, S. (2023). *Countering medical misinformation: A framework to support successful intervention*. Critica. https://abimfoundation.org/wp-content/uploads/2023/05/050423_Critica_CounteringMedicalMisinformation-compressed.pdf

Schneider, J., Ye, D., Hill, A. M., & Whitehorn, A. S. (2020). Continued post-retraction citation of a fraudulent clinical trial report, 11 years after it was retracted for falsifying data. *Scientometrics*, 125(3), 2877-2913. https://doi.org/10.1007/s11192-020-03631-1

Sharma, R., Kumar, M., & Rohilla, K. K. (2022). COVID-19 Infodemic: Evaluating Information-Seeking Behaviour Among Healthcare Workers During a Pandemic. *Cureus*, 14(1). https://doi.org/10.7759%2Fcureus.20910

Young, J. C., Boyd, B., Yefimova, K., Wedlake, S., Coward, C., & Hapel, R. (2021). The role of libraries in misinformation programming: A research agenda. *Journal of Librarianship and Information Science*, 53(4), 539-550. https://doi.org/10.1177/0961000620966650

Yu, F., & Mani, N. (2020). How American academic medical/health sciences libraries responded to the COVID-19 health crisis: an observational study. *Data and Information Management*, 4(3), 200-208. https://doi.org/10.2478%2Fdim-2020-0013

Yuvaraj, M. (2020). Global responses of health science librarians to the COVID-19 (Corona virus) pandemic: a desktop analysis. *Health information and libraries journal*, 37(4), 337-342. https://doi.org/https://dx.doi.org/10.1111/hir.12321

Appendix 1. The list of the publications being reviewed

Akers, K. G. (2018). Report from the Medical Library Association's InSight Initiative Summit 1: Engaging Users in a Disruptive Era
Allen, R. M. (2021). When peril responds to plague: predatory journal engagement with COVID-19
Bianchini, C., et al. (2019). Avoiding misleading information: A study of complementary medicine online information for cancer patients
Barbaro, A., et al. (2022). Embedded librarians: An innovative experience in health and wellness communication
Barr-Walker, J., et al. (2021). Countering misinformation about abortion: The role of health sciences librarians
Brown, C. (2008). The information trail of the 'Freshman 15'--a systematic review of a health myth within the research and popular literature
Brown Epstein, H.-A. (2022). Dispelling Covid-19 misinformation
Chan, H., et al. (2022). Equipping students and beyond with sound COVID-19 knowledge to survive and thrive despite the pandemic
Charbonneau, D. H., et al. (2022). The impact of COVID-19 on reference services: A national survey of academic health sciences librarians
Herrero-Diz, P., et al. (2021). Libraries fight disinformation: An analysis of online practices to help users' generations in spotting fake news
Jaeger, P. T., et al. (2021). Arsenals of lifelong information literacy: Educating users to navigate political and current events information in world of ever-evolving misinformation
Kanyengo, C. W. (2010). Information and communication: A library's local response to HIV/AIDS in Zambia
Kim, H., et al. (2011). Online health information search and evaluation: Observations and semi-structured interviews with college students and maternal health experts
Kosciejew, M. (2021). The coronavirus pandemic, libraries and information: A thematic analysis of initial international responses to COVID-19
Miranda, G. F., et al. (2009). Improving health communication: Supporting the practice of health communication

Morgan-Daniel, J., et al. (2020). COVID-19 patient education and consumer health information resources and services

Naeem, S. B., et al. (2020). The Covid-19 'infodemic': a new front for information professionals

Naeem, S. B., et al. (2021). An exploration of how fake news is taking over social media and putting public health at risk

Pomputius, A. (2019). Putting misinformation under a microscope: Exploring technologies to address predatory false information online

Schneider, J., et al. (2020). Continued post-retraction citation of a fraudulent clinical trial report, 11 years after it was retracted for falsifying data

Yuvaraj, M. (2020). Global responses of health science librarians to the COVID-19 (Corona virus) pandemic: a desktop analysis

Using DSpace to create a repository for the communication of clinical trials and research with consumers

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Background

Consumer involvement in research and clinical trials is expected as part of Standard 2 of the National Clinical Trials Governance Framework (Australian Commission on Safety and Quality in Health Care, 2022).

Consumer involvement in research improves public awareness of, and support for, science and research, and ensures that research is relevant to community needs (NHMRC, 2016). Consumers defined here as patients and potential patients, carers, and people who use health care services, should be engaged in all facets of the research process (Australian Clinical Trials Alliance, 2023). However, consumer involvement in dissemination and even gaining access to study results is less likely to occur than consumers being involved in the initial design and recruitment stages (McKenzie, 2022).

Historically it has been a difficult task for consumers and members of the public to find research output from South West Healthcare (SWH). It can be time consuming without training or access to research databases.

Even internally, there was a lack of communication of research outcomes across the organisation. Research is conducted, completed, but not disseminated to the organisation. The library attempted to stay abreast of publications and share these via our monthly newsletter. Not all studies conducted at our organisation closed the research loop with the ethics and governance office, reported published outcomes, or shared research findings with the consumers who participated in the studies.
A further issue is that many of our staff members choose to affiliate primarily, and sometimes solely, with their university affiliation. The university is often the party who has paid for the paper to be published. This again makes it hard to link research that is occurring in our health service with us.

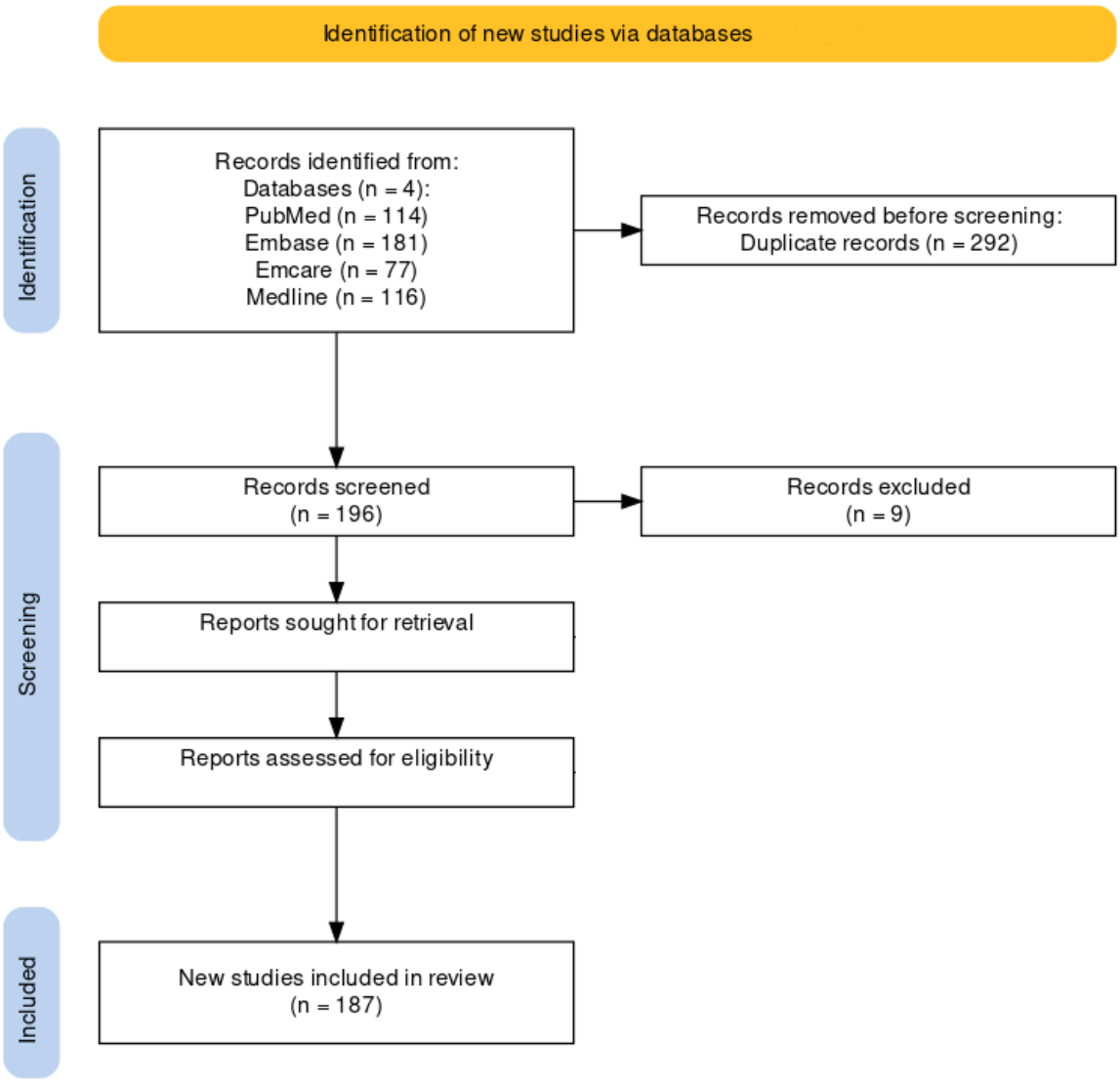
To address this issue, the Library, with support from the Research Office, created a digital repository using the DSpace platform. A digital repository provides staff with an effective means of disseminating their research findings, including open access publications. DSpace is an open-source digital repository that provides users with the ability to capture, store, and share a wide variety of digital content.

Search Methodology

The initial gathering of content for the repository was conducted across the following databases: PubMed, Embase (Ovid), Emcare (Ovid), and Medline (Ovid).

The following search teams that had been identified as author or contributor affiliations were used: “South West Healthcare”; “South West Health Care”; “Southwest Healthcare”; “South West Regional Healthcare”; “South West Regional Hospital”; “Camperdown Base Hospital”; “Camperdown Hospital”; “Warrnambool Base Hospital”; “Warrnambool Hospital”.

The resulting articles were screened to identify if one of the authors was a SWH staff member or if the research was conducted using SWH data. Searches were exported into EndNote and duplicates were removed. Excluded studies included authors affiliated with South West Healthcare Services and South West Healthcare Systems which are two unrelated American organisations. Article alerts based on this have now been set up on these databases to help us identify studies as they are published.



Secondly, the library searched for the names of known South West Healthcare authors on these databases as well as Google Scholar, ResearchGate and ORCID pages.

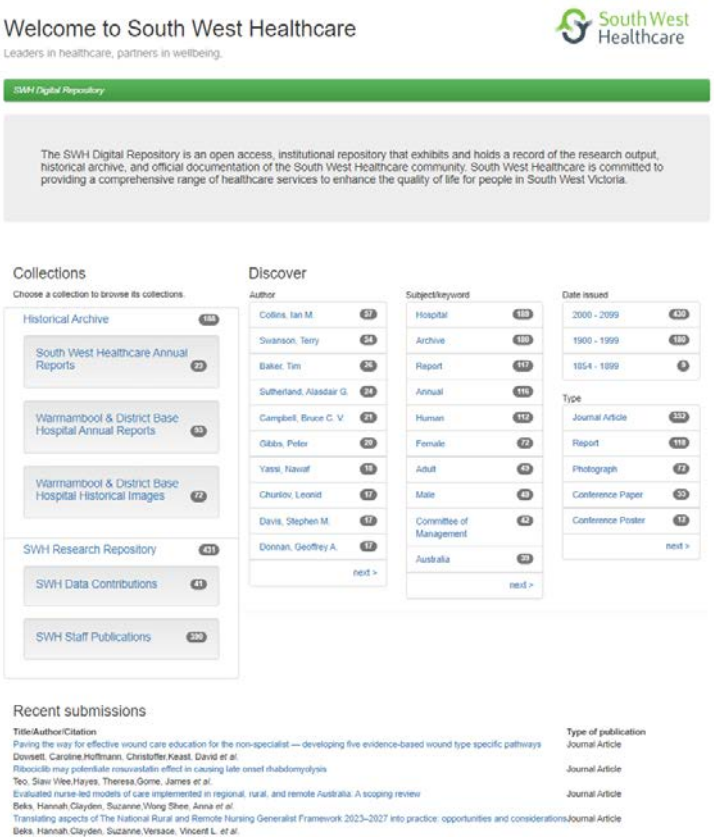
Finally, we reached out to staff via the library newsletter to share their publications.

Repository Development Methods

SWH engaged Prosentient Systems to help with initial site configuration and hosting of the DSpace. The site was branded to match with the SWH website and given the subdomain repository.southwesthealthcare.com.au

Prosentient Systems staff along with SWH research and library staff spent time developing the site configuration and required metadata field requirements for item submission.

The first batch of articles were bulk imported from the resulting EndNote library from our affiliated authors search. Additional metadata indicating SWH author and department was added. Initially two collections were created, SWH Staff Publications and SWH Data Contributions, which together make up the SWH Research Repository. A secondary collection, the Historical Archive, has since been developed. This collection contains annual reports and historical images from our health service. From the repository landing page users can search by collection or discover content by author, subject or content type.



Project benefits – for South West Healthcare

Easy Access to Digital Content - the digital repository provides users with easy and reliable access to their digital content. With a user-friendly interface researchers, librarians, and other staff can easily find and access the information they need.

This repository is still developing, being less than 6 months old, and we continue to look at ways to enhance access, better embed content and provide article requesting for behind paywall articles.

Improved Research Efficiency - the digital repository provides a centralised location for storing and managing research data, making it easier for researchers to collaborate, share, and build upon existing research.

As we prepare for our first National Clinical Trials Governance Framework accreditation we are working closely with our Clinical Trials and Quality teams. The repository is one of our strategies to meet some of the actions in the framework.

Capturing Research Output - the digital repository enables SWH to encapsulate and assist in disseminating research outputs generated or contributed to by our staff. This enhances the potential for inclusive, accurate reporting and the potential for translation of research outputs into service improvements.

The repository has increased visibility of research outputs, and extended the reach of our content. Items that may have previously only been findable internally can now be cited from Google Scholar. We launched the Digital Repository at our first ever Research Celebration day in May 2023. Poster presentations from that day were able to be loaded to the Digital Repository and were indexed and findable in a Google Scholar search almost immediately.

Project benefits – for the wider community

Increase community awareness and engagement – the repository highlights the diverse activities that take place within the organisation. By consolidating and organising digital content, the SWH repository makes it easier to locate, access, and share research beyond the organisation. There is still marketing activities to be done, but our health service communications team are starting to make use of the items we load.

Closing the research loop - Consumers become engaged in the research they are participating in. The SWH Digital Repository is linked directly from the SWH website research pages. The goal is for researchers and the research office to be able to share direct links to content for anyone wishing to know the outcomes of a study they may

have participated in. In the future we want to work with the Clinical Trials team to tag research articles to trial names and registration number so users can sort by trial.

Preservation of Historical Records - The digital repository can be used to preserve our archival history. We can ensure that historical records are safe, secure, and easily accessible to staff and the public. The library was often asked to provide images to the media team or members of the public related to our staffing, nurse training or hospital history. As we catalogue more images to this repository it makes it easier for users to find relevant content.

References

Australian Commission on Safety and Quality in Health Care. (2022). The National Clinical Trials Governance Framework and user guide for health service organisations conducting clinical trials. Retrieved from https://www.safetyandquality.gov.au/publications-and-resources/resource-library/national-clinical-trials-governance-framework-and-user-guide

Australian Clinical Trials Alliance. (2023). Consumers. Retrieved from https://involvementtoolkit.clinicaltrialsalliance.org.au/consumers

Haddaway, N. R., Page, M. J., Pritchard, C. C., & McGuinness, L. A. (2022). PRISMA2020: An R package and Shiny app for producing PRISMA 2020-compliant flow diagrams, with interactivity for optimised digital transparency and Open Synthesis. Campbell Systematic Reviews, 18(2), e1230. https://doi.org/10.1002/cl2.1230

McKenzie, A., Bowden, J., Zalcberg, J.R. et al. (2022). A snapshot of consumer engagement in clinical trials in Australia: results of a national survey of clinical trial networks and research organisations. Research Involvement and Engagement, 8(3). https://doi.org/10.1186/s40900-022-00338-w

NHMRC. (2016). Statement on Consumer and Community involvement in Health and Medical Research. National Health and Medical Research Council, Consumers Health Forum of Australia

"We need to talk about PICO": Approaching the move from question formulation to search strategy

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This paper begins with PICO and its place in health librarianship, before moving to discuss a model of teaching knowledge that may offer some new ways of thinking about PICO (or, perhaps, leaving PICO behind). My two main points of contention with the ubiquity of PICO in health librarianship are:

1. That it is only one among many approaches to question formulation; and
2. That question formulation strategies are treated 'as' search formulation strategies.

I am particularly interested in PICO's ubiquity as a teaching tool for advanced information-seeking within health libraries, and the possible division between what health librarians are teaching and what they do when moving from question formulation to designing search strategies.

The Rise of PICO

The PICO question formulation tool is a real success story of the evidence-based practice (EBP) movement. First described in 1995 as part of a short editorial advocating for better–that is, more answerable–clinical questions, the authors pose and answer a question of their own:

> What makes a clinical question well built? First, the question should be directly relevant to the problem at hand. Next, the question should be phrased to facilitate searching for a precise answer. To achieve these aims, the question must be focused and well articulated for all 4 parts of its "anatomy": 1) the patient or problem being addressed; 2) the intervention or exposure being considered; 3) the comparison intervention or exposure, when relevant; 4) the clinical outcomes of interest. (Richardson et al., 1995, p. A-12)

Since 1995 PICO has become almost synonymous with EBP. Any clinician or health information professional who has had even a basic introduction to EBP is likely to have been taught PICO as a foundation.

I will stipulate that PICO is extremely useful when used for its original purpose: the formulation of answerable clinical questions, especially when those questions address a specific intervention or therapy. One does not need to look far before finding areas where PICO is less useful: "the PICO framework is best suited for representing therapy questions, and considerably less-suited for diagnosis, etiology,

and prognosis questions" (Huang et al., 2006, p. 363). It is not suited for many allied health, quality improvement, qualitative etc. questions, which is okay because it was not designed for such contexts. This is why there are multiple question formulation frameworks that have been developed in the past few decades; and, clinical librarians know that PICO is just one of many such possibilities (see the supplement to Booth et al. 2019 for a list of 38 such alternatives). For anyone new to question formulation in the health sciences PICO can be helpful: it is easy to learn, easy to remember, and easy to use.

Presumably that accounts for any number of university and/or hospital library resources (e.g. LibGuides) on EBP placing PICO front-and-centre. Similarly, any number of books, articles, and websites devoted to instruction in EBM suggest PICO – good old familiar, "universal", unquestioned PICO – as an essential component. It makes a kind of sense that an EBP clinician or health information professional called upon to find evidence, or deliver training in finding evidence, might default to using and/or teaching PICO. While I hope to complicate that, I am even more interested in challenging any default use of PICO for developing search strategies.

Making the move from asking to finding

The fact that Richardson et al. (1995) mentioned "facilitate searching" as part of their rationale may account for its persistence in not just question formulation discourse but literature searching discourse today. Indeed, there is a slippage or blurring legible when one looks for PICO in the realm of search. It is well and truly in the literature by 2011 (Arguelles, 2011; Davies, 2011), and by 2017 one paper asserts that "The PICO Framework should also be used to develop the search terms that are informed by the PICO question" (Considine et al., 2017, p. 79). However, even when PICO is the appropriate framework for question formulation of the issue at hand, health librarians leave it behind for searching because we know it can be inappropriate or just plain not work.

Top-tier guidance affirms that we should set PICO aside as we move from asking to searching. The NHMRC's guidance on producing evidence-based clinical guidelines suggests leaving "the outcome field blank ensures that studies presenting all relevant outcomes are identified" (National Health and Medical Research Council, 2019, online). The *Cochrane Handbook for Systematic Reviews of Interventions* (Lefebvre et al., 2022) advises against including outcomes in systematic review search strategies, even when PICO has been useful in developing the review question:

> The structure of search strategies in bibliographic databases should be informed by the main concepts of the review, using appropriate elements from PICO and study design. It is usually unnecessary, however, and may even be undesirable, to search on every aspect of the review's clinical question. Although a research question may specify particular comparators or outcomes, these concepts may not be well described in

> the title or abstract of an article and are often not well indexed with controlled vocabulary terms. (Lefebvre et al., 2022, sec. 4-4-2)

Intra-health-libs discourse generally does not necessarily advocate or even imply PICO as a search-formulation tool. When clinical librarians are talking to each other PICO does not come up (Burns, 2015), or is treated as one of several options (Eldredge (2008), Ballantyne Scott et al. (2022)). That may be because we know that when it comes to searching, PICO can be distinctly unhelpful.

In 2000, Booth et al. described trying "EBM-structured forms" (basically PICO forms) for literature search requests, and the librarians ended up rating "minimally structured forms more highly than EBM-structured forms" (p. 239) because they generally offered more context for the information need. The lack of helpfulness runs the gamut of enquiry types that health librarians might be answering. From direct clinical queries, where it seems that "PICO queries do not result in better recall or precision in time-limited searches" (Hoogendam et al., 2012, p. 121), to the more complex searches required for systematic reviews: "when using PICO as a search strategy tool, searching on all of the PICO elements will result in a lower recall [...] of especially the outcome element" (Frandsen et al., 2020, p. 73). It should be noted that a follow-up study noted that excluding outcomes can lead "to an enormous increase in the number of retrieved records" (Frandsen et al., 2022, p. 85), but that this may be connected with the prevalence of single-stranded search strategies (p. 87).

Teaching the move from asking to finding

To the extent that PICO is a useful and influential framework, health information professionals need to know it, understand it, and apply it. There is a strong chance we will also need to know how to teach it. My two concerns are that we may be teaching PICO in such a way as to imply that it is the only question formulation tool, and that we may be (intentionally or not) teaching that PICO is a tool for search strategy formulation.

There are PICO filters and benchmarks in emerging AI tools for developing search strategies, and major databases and platforms incorporate PICO search-building tools (e.g. https://pubmedhh.nlm.nih.gov/pico/index.php) Literature refers to such examples and describes teaching techniques such as assessing students for "PICO conformity" (Philbrick et al., 2019), making PICO fun with a "PICO pal" (Waszak et al., 2022) or the "PICO game" (Milner and Cosme, 2017). Anecdotal evidence is not rigorous, but I have myself attended training sessions where "PICO" was used as a synonym for "question", even for topics where a PICO-style question would be, at best, limiting.

Resources and examples such as these are not exclusively for health librarians, but as part of their own evidence-based practice librarians will find such resources and may

well be persuaded by the ubiquity of PICO discourse. It is worth remembering that the EBP model includes not only available evidence but also the practitioner's knowledge and skills.

Teacherly knowledge and practice

Many health librarians have both experience and expertise in question formulation, search strategy development, and the relationship between the two activities. Many health librarians deploy these skills as part of their regular professional practice, and also have to teach these skills to other health professionals. In order to reflect upon these aspects of health librarianship I am drawing on a distinction between expert knowledge and the teaching of expert knowledge. Emerging in the literature of teacher education in the 1980s, work by Lee Shulman and others influentially defined and described *content knowledge* and *pedagogical content knowledge*. I offer it here as a useful lens for understanding both the interdependence and differences between librarians' practice and teaching.

Content knowledge addresses the need for deep and detailed knowledge of what is being practiced: "The teacher need not only understand that something is so; the teacher must further understand why it is so, on what grounds its warrant can be asserted, and under what circumstances our belief in its justification can be weakened and even denied" (Shulman, 1986, p. 9). In the case of PICO, health librarians must understand what it is, what it is for, and when, where, and how it may or may not be useful. Such knowledge will strengthen their practice as they make informed decisions about how best to formulate answerable questions. Ideally, this knowledge will be sufficiently thorough to enable explaining it to other people.

The delivery of such knowledge via training, teaching, or education requires the development of *pedagogical content knowledge*: "the most regularly taught topics in one's subject area, the most useful forms of representation of those ideas, the most powerful analogies, illustrations, examples, explanations, and demonstrations—in a word, the ways of representing and formulating the subject that make it comprehensible to others" (Shulman, 1986, p. 9). Again, in the case of PICO, this would mean health librarians develop a number of ways to represent what it is, adjusting or amending those representations or explanations to meet the specific contexts, capacities, and experiences of those they are teaching.

Shulman's terms can help us distinguish between health librarian teaching and practice in order to advocate for librarians to take themselves seriously as expert educators and practitioners when it comes to formulating questions and search strategies. When I think about health librarians who use their knowledge and experience to use PICO for question formulation when it is appropriate, and then leave the PICO framework behind for designing search strategies to locate literature that may help answer their question, I think of them as experts. I think of them as

evidence-based practitioners. I think of them as professionals who do, can, or will translate their content knowledge into pedagogical content knowledge.

Educators of health professionals, unite!

I invite health information professionals to reflect upon their own use (or non-use) of PICO in their own practice, especially in terms of content knowledge and pedagogical content knowledge. If they are uneasy with the PICO status quo, they may take comfort in an emerging critique of the current state of affairs, and feel reassured that it is thus far coming from health educators and librarians!

Recent work by Jonathan D. Eldredge (who has written about and advocated for evidence-based health librarianship for many years) has critiqued PICO as a teaching tool. Writing about training medical students and physician assistant students in question formulation, he and his co-authors note that a "growing body of evidence points to the limitations to PICO despite its common use" (Eldredge et al., 2021, p. 69); and, further that their "study supports mounting evidence that we need to reconsider the utility of PICO" (Eldredge and Nogar, 2022, p. 49).

The most trenchant recent critiques have been made by nurse educators:

> In our experience, PICO often seems to represent or signify EBP in students' minds; that is, the rote activity of formulating a structured clinical question has come to engulf the much more complex and rich process of critical decision-making in care delivery that EBP is meant to be. As a pedagogical tool, PICO is not only ineffective, but it has mistakenly come to reify EBP, making it impractical and even detrimental to the teaching of EBP curricula. (Schiavenato and Chu, 2021, p. 2)

It is possible that many health librarians may share these concerns and frustrations, perhaps even feeling that "PICO is overused, outdated, and flawed" (Cullen et al., 2023, p. 517). If so, this begs the question of what to do when it comes to PICO?

Teaching nuance is an act of kindness

I suggest starting with one's content knowledge and pedagogical content knowledge – where, when, and how are we using and teaching PICO? Why are we using and teaching it in those particular ways? Schiavenato and Chu explicitly argue for moving away from PICO-by-default in our teaching: "an obvious start is with an educational de-emphasis on structured question formation. That is, teaching what PICO is, and what it is not; its narrow application, as well as its considerable limitations" (2021, p. 2). This can very much be seen as a call to reconsider how we translate our content knowledge into pedagogical content knowledge!

It is also important to attend to the work of librarians who offer kind, nuanced, and empathetic approaches to teaching question formulation. Kloda and Bartlett (2013)

offer a particularly useful reminder that many of our colleagues and/or learners may be stressed or anxious by the time they meet with us. In this light, taking a nuanced approach to PICO is an act of kindness:

> PICO, and other structures, might best be thought of as guides or recommendations rather than strict formulations to be followed. Information needs should not be thought of in terms of restricted structures, as articulating and communicating them can already be difficult and linked to feelings of anxiety for the individual asking the question. (Kloda and Bartlett, 2013, p. 59)

Taking the time to learn about PICO's history and meaning can empower health librarians to explain and contextualise it for their colleagues, library users, and learners. Such work to enhance one's expertise alongside one's experience can also empower health librarians not to be rigidly prescriptive: to use or suggest PICO when relevant, but be confident and competent to suggest when it is not relevant. Throwing out PICO in no way means throwing out structure or rigour.

What I am advocating for

I invite and encourage my fellow health librarians to reflect on their PICO mindset. I believe and argue that we need to:

- treat question formulation and search design as related but distinct activities in our teaching and our practice;
- complicate question formulation and model alternatives;
- introduce strategies for searching in particular that move away from PICO (beyond building good habits, this can also help reveal flaws in the question that may have been introduced by PICO)
- consider why, whether, and how we are connecting and enacting our content knowledge and your pedagogical content knowledge; and,
- make the implicit explicit, and start preaching what we practice!

References

Arguelles, C. (2011). Evidence-Based Practice Mentors: Taking Information Literacy to the Units in a Teaching Hospital. *Journal of Hospital Librarianship*, *11*(1), 8-22. https://doi.org/10.1080/15323269.2011.537989

Ballantyne Scott, B. (2022). Developing a code of practice for literature searching in health sciences: a project description. *Journal of the Canadian Health Libraries Association / Journal de l'Association des bibliothèques de la santé du Canada*, *43*(1). https://doi.org/10.29173/jchla29409

Booth, A., Noyes, J., Flemming, K., Moore, G., Tunçalp, Ö., & Shakibazadeh, E. (2019). Formulating questions to explore complex interventions within qualitative evidence synthesis. *BMJ global health*, *4*(Suppl 1), e001107. https://doi.org/10.1136/bmjgh-2018-001107

Booth, A., O'Rourke, A. J., & Ford, N. J. (2000). Structuring the pre-search reference interview: a useful technique for handling clinical questions. *Bulletin of the Medical Library Association*, *88*(3), 239-247. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC35232/

Burns, E. C. (2015). *Being a Solo Librarian in Healthcare: Pivoting for 21st Century Healthcare Information Delivery*. Chandos.

Considine, J., Shaban, R. Z., Fry, M., & Curtis, K. (2017). Evidence based emergency nursing: Designing a research question and searching the literature. *International emergency nursing*, *32*, 78-82. https://doi.org/10.1016/j.ienj.2017.02.001

Cullen, L., Hanrahan, K., Tucker, S., Edmonds, S. W., & Laures, E. (2023). The Problem with the PICO Question: Shiny Object Syndrome and the PURPOSE Statement Solution. *Journal of PeriAnesthesia Nursing*, *38*(3), 516-518. https://doi.org/10.1016/j.jopan.2023.01.024

Davies, K. S. (2011). Formulating the Evidence Based Practice Question: A Review of the Frameworks. *Evidence Based Library & Information Practice*, *6*(2), 75-80. https://doi.org/10.18438/B8WS5N

Eldredge, J. D. (2008). Evidence-Based Practice. In M. S. Wood (Ed.), *Introduction to Health Sciences Librarianship* (pp. 241-270). Routledge.

Eldredge, J., & Nogar, C. (2022). Physician Assistant Student Training in Question Formulation: A Quasi-Experiment. *The journal of physician assistant education 33*(1), 47-50. https://doi.org/10.1097/JPA.0000000000000409

Eldredge, J., Schiff, M. A., Langsjoen, J. O., & Jerabek, R. N. (2021). Question formulation skills training using a novel rubric with first-year medical students. *Journal of the Medical Library Association*, *109*(1), 68-74. https://doi.org/10.5195/jmla.2021.935

Frandsen, T. F., Nielsen, M. F. B., & Eriksen, M. B. (2022). Avoiding searching for outcomes called for additional search strategies: a study of Cochrane review searches. *Journal of clinical epidemiology*, *149*, 83-88. https://doi.org/10.1016/j.jclinepi.2022.05.015

Frandsen, T. F., Nielsen, M. F. B., Lindhardt, C. L., & Eriksen, M. B. (2020). Using the full PICO model as a search tool for systematic reviews resulted in lower recall for some PICO elements. *Journal of clinical epidemiology*, *127*, 69-75. https://doi.org/10.1016/j.jclinepi.2020.07.005

Hoogendam, A., de Vries Robbé, P. F., & Overbeke, A. J. P. M. (2012). Comparing patient characteristics, type of intervention, control, and outcome (PICO) queries with unguided searching: a randomized controlled crossover trial. *Journal of the Medical Library Association*, *100*(2), 121-126. https://doi.org/10.3163/1536-5050.100.2.010

Huang, X., Lin, J., & Demner-Fushman, D. (2006). Evaluation of PICO as a knowledge representation for clinical questions. *AMIA Annual Symposium Proceedings*, 359-363. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1839740/

Kloda, L. A., & Bartlett, J. C. (2013). Formulating Answerable Questions: Question Negotiation in Evidence-based Practice. *Journal of the Canadian Health Libraries Association (JCHLA)*, *34*(2), 55-60. https://doi.org/10.5596/c13-019

Lefebvre, C., Glanville, J., Briscoe, S., Featherstone, R., Littlewood, A., Marshall, C., Metzendorf, M.-I., Noel-Storr, A., Paynter, R., Rader, T., Thomas, J., & Wieland, L. (2022). Chapter 4: Searching for and selecting studies. In J. Higgins, J. Thomas, J. Chandler, M. Cumpston, G. Li Bassi, M. Page, & V. Welch (Eds.), *Cochrane Handbook for Systematic Reviews of Interventions* (ver. 6.3). Cochrane. https://training.cochrane.org/handbook/current/chapter-04#section-4-4-2

Milner, K. A., & Cosme, S. (2017). The PICO Game: An Innovative Strategy for Teaching Step 1 in Evidence-Based Practice. *Worldviews on evidence-based nursing*, *14*(6), 514-516. https://doi.org/10.1111/wvn.12255

National Health and Medical Research Council. (2019, 6 September, 2019). *Guidelines for Guidelines: Identifying the evidence*. https://www.nhmrc.gov.au/guidelinesforguidelines/develop/identifying-evidence

Philbrick, A. M., Hager, K. D., Lounsbery, J. L., Moon, J. Y., Pereira, C., Undeberg, M. R., Westberg, S. M., & Reidt, S. (2019). Educational Prescriptions to Document Evidence-Based Medicine Questions in Ambulatory Care Advanced Pharmacy Practice Experiences. *American journal of pharmaceutical education*, *83*(8), 7299. https://doi.org/10.5688/ajpe7299

Richardson, W. S., Wilson, M. C., Nishikawa, J., & Hayward, R. S. A. (1995). The well-built clinical question: a key to evidence-based decisions. *ACP Journal Club*, *123*(3), A12-A13. https://doi.org/10.7326/ACPJC-1995-123-3-A12

Schiavenato, M., & Chu, F. (2021). PICO: What it is and what it is not. *Nurse education in practice*, *56*, 103194. https://doi.org/10.1016/j.nepr.2021.103194

Shulman, L. S. (1986). Those Who Understand: Knowledge Growth in Teaching. *Educational Researcher*, *15*(2), 4-14. https://doi.org/10.3102/0013189X015002004

Waszak, D. L., Stec, M., Martini, K., & Mihal, C. C. (2022). An Innovative Approach to Teaching Evidence-Based Practice: Use of PICO Pal. *Nurse educator*, *47*(6), 332-335. https://doi.org/10.1097/NNE.0000000000001226

Extending high quality health information to non-government organisations across the Northern Territory: experiences of NT Health Library Services

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Abstract

This paper discusses NT Health Library Services' initiative to provide resources and services to health professionals who work for non-government organisations across the Territory. In 2009, Memorandums of Understanding (MOUs) were established. Since then a website has been created specifically for these MOU members and a recent renewal and upgrade project ensured the agreements were updated and the website security standards were being met. With vendor permission the library currently offers access to the following: eight research databases, two clinical decision support tools, one medication database and five electronic book and journal collections. Marketing has begun to increase awareness among these external clients.

Introduction

In the age of digital information saturation, utilising authoritative health information is crucial to enable health professionals to deliver evidence-informed practice. High quality electronic information resources can positively impact clinician decision-making and clinical care (Maggio et al., 2019). The business of health libraries is to streamline this health information discovery for clients so that reliable knowledge can be translated more readily into patient care. To achieve this, active curation of a collection of resources and tools is required as well as liaising with content providers who allow access to these resources based on formal agreements. Promotion can then be undertaken to increase awareness for clients who require access to this information to inform their work.

Health information professionals sit in the middle of the vendors and the health professionals, managing access to these resources and ensuring that access is authenticated for only those users as defined by agreements. These agreements are usually within the bounds of the health department or hospital where the health library sits. However, for other health organisations, increasing costs for high quality electronic journals, clinical decision support tools, medication information and electronic books have meant that many cannot afford to subscribe to these quality

health information resources for their staff (Purnell, 2018). This is a significant issue in Australia's Northern Territory (NT) where there are many small community and non-government health organisations who play a crucial role in the delivery of holistic, timely, culturally aware health care in the Territory. This paper will focus on the journey of one health library leveraging partnerships with vendors to connect community health organisations with quality health information across the NT.

Background

The population of the NT makes up 1% of the total population of Australia (Australian Bureau of Statistics, 2021). Many live rurally and remotely, and 70% of those people living remotely are Aboriginal Australians residing in one of 600 remote communities and outstations (NT Health, 2023).

The Department of Health (NT Health) manages the single public health service in the Territory, operating six hospitals and delivering direct care through 74 primary health clinics (Northern Territory Government, 2022). Resource sharing and collaborative partnerships have long been active across the Territory, and NT Health also supports around 133 clinics and services operated by Aboriginal Community Controlled Health Organisations (ACCHOs), and works in close partnership with numerous other Non-Government Organisations (NGOs).

With many based in rural and remote areas of the NT, where time is critical and internet connections can be poor, there is a gross inequity of resource access for the staff in these organisations (Wakerman and Humphreys, 2019). This inequity threatens the level of health care provided to Territorians living outside of regional centres, a majority of whom are Aboriginal Australians already living with inequitable health, societal and living conditions (Thomas et al., 2015).

As the sole health library service for all of the Northern Territory – an environment where government and non-government primary health professionals often work alongside each other – we inevitably consider the division between who can and who cannot access our resources.

The Partnerships

Back in 2009, NT Health Library Services asked how we could further contribute to improving health outcomes in the Northern Territory. We believed we could do that by increasing equity of access to high-quality information and knowledge resources for health professionals in the NT, beyond the bounds of NT Health employment status. We were already offering library membership and use of our physical resources to health professionals not employed by NT Health. However, with technology becoming increasingly useful as a tool to share information across great distances, we recognised an opportunity. We re-thought our understanding of who our clients are and how we could support them, asking ourselves how we can deliver

health information to remote health professionals that is high-quality, sustainable, far-reaching, concurrent, and at low or no cost to us or the organisations involved.

We began to re-think our existing partnerships. In 2009, after discussions with internal stakeholders, representatives from health organisations and some informal scoping with our vendors, what resulted was a suite of Memorandums of Understanding (MOUs) which enables NT Health Library Services to act as a bridge to extend trustworthy information into the hands of non-affiliated primary health care professionals across the Territory, at low cost to us, and no cost to these organisations.

The end-user product, operating with the name eLibrary4HP, is an electronic library of select quality health information resources for eligible health professionals across the Territory. The concept of eLibrary4HP is simple, but relies on three basic elements to unite: first, the providers must allow access to their content; next, health organisations must express interest in gaining access through a formal MOU; and finally, the health library must manage the authentication of this access. It remained much the same for 11 years until Library Services commenced a Renewal and Upgrade Project which ran from 2020 to 2023. This project ran in two phases: first, renewing all existing MOU agreements with participating health organisations; then, re-aligning member management processes to bring them up to current security standards.

All of the resources provided in eLibrary4HP are done so on a gratis basis - these vendors have willingly agreed to extend access already outlined in our licencing agreements to health practitioner staff working in participating external community health organisations. In 2009 we had six participating vendors offering: two research databases, two clinical decision support tools, one medications database and one e-journal collection. Today, ten vendors are participating in the eLibrary4HP service, offering members: eight research databases, two clinical decision support tools, one medications database, and five electronic book and journal collections.

This service is designed to bring authoritative information resources into the hands of primary and community health care professionals. These are staff who are generally working in remote locations, and with vulnerable communities. To enter into an MOU, organisations must operate primarily in the Territory and be either a Non-Government Organisation or an Aboriginal Community Controlled Health Organisation and do not have access to a library service in the NT or elsewhere. As per the MOUs, access to eLibrary4HP is stipulated only for health practitioner staff within these organisations.

Library Manages Access

In 2009, without additional resources or funding to get this initiative off the ground, Library Services sought to make the process as simple as possible and minimise staff time whilst delivering a sustainable product. The site was initially set up to run through EZPZ proxy and was hosted onsite on NTG servers. Login credentials were generic, with each participating health organisation delegated a username and password, which all individuals from that certain organisation would then use. This process was not particularly secure, and in 2019, significant risks were identified in relation to allowing external users into the NTG IT environment. Resolving these issues and rebuilding a more secure, robust service was the focal point of Phase two of the Renewal and Upgrade Project.

In May 2023, as part of Phase two, we migrated to a cloud based, hosted proxy through a third party provider. We then transitioned all eLibrary4HP members to an individual sign-on, and restricted email addresses in registration forms to a finite list of domains associated with member organisations. Anyone attempting to input an email address with any other domain – including one from our own organisation (NT Health) – receive an error message. This institutional email address is then used as their username for eLibrary4HP, and all communication regarding the service is sent to that address.

Not only is this a secure and user-friendly way to manage legitimate authentication, but this new process also enables us to keep track of any bounced emails and monitor usage statistics from an individual all the way to an organisational level.

Awareness Through Marketing

Our Communications Plan has already identified the MOU organisations as there is clearly a need to increase awareness of this service to the individuals it is designed to support (Hermes-DeSantis et al., 2021). Currently, the Training and Research Support team are building a new Remote Outreach Plan and eLibrary4HP member organisations are firmly addressed within that document. While our communications efforts on the whole are primarily aimed at our NT Health clients, both of these plans can and should accommodate external clients.

With increasing awareness of the service, there is the threat that costs may rise. Annual costs for the proxy service increased from around $1,000 dollars to $2,500 dollars with the hosted proxy upgrade. While our strategic priorities still justify this charge, increasing costs may impact on the future sustainability of this service.

The Future

The fact that all participating content providers are providing access at no cost is what makes this initiative viable and sustainable. However, several have stated in the past that they may have to impose additional costs to our agreements if usage from

the eLibrary4HP cohort rises too significantly. If this occurs, the continuance of the service may be at risk.

Future threats include the potential for vendors to add costs and the increase demand on staff time. For now, staff time is minimal thanks to efficient membership processes, low member numbers, and swift technical support from our hosted proxy vendor. If these raise significantly in future, the sustainability of the service may also be at risk.

There have been 373 login sessions for eLibrary4HP in the past six months. Despite low numbers, feedback has indicated that this service is highly valued amongst those who use it. The clinical information and current management recommendations have had huge impacts on clinical practice, enabling individuals to provide up to date evidence-based care (Lienesch et al., 2020).

For organisations with little to no funding, remote locations and vulnerable patients, any support we can provide is valuable. NT Health as an organisation agrees. The NT Health Strategic Plan 2023-2028 places an emphasis on strengthening relationships with non-government and Aboriginal-controlled organisations, noting that "our services need to be accessible to all" (NT Health, 2023). The staff at NT Health Library Services believe that the eLibrary4HP initiative – in increasing equity of access to authoritative health information – is already making steps toward that vision.

Conclusion

This initiative shows that even the most basic of health library fundamentals – who our clients are – can evolve. Through a shift in thinking and some proactive actions, health libraries are continuing to adapt to their client needs in the face of technological advancements and inequities. We can think, and re-think, in creative ways about our existing partnerships, and whether informal arrangements can become formal agreements.

References

Australian Bureau of Statistics (2021). Snapshot of Australia. ABS. https://www.abs.gov.au/statistics/people/people-and-communities/snapshot-australia/2021

Hermes-DeSantis, E. R., Hunter, R. T., Welch, J., Bhavsar, R., Boulos, D., & Noue, M. A. (2021). Preferences for accessing medical information in the digital age: health care professional survey. *Journal of Medical Internet Research*, *23*(6), e25868. DOI: 10.2196/25868

Lienesch, J., Murphy, K. A., Parnell, T. E., & Miles, A. (2021). Regional and rural allied health professionals in Australia need better information services training and

support for evidence-based practice. *Health Information & Libraries Journal,* 38(4), 281-294. DOI: 10.1111/hir.12368

Maggio, L. A., Aakre, C. A., Del Fiol, G., Shellum, J., & Cook, D. A. (2019). Impact of clinicians' use of electronic knowledge resources on clinical and learning outcomes: systematic review and meta-analysis. *Journal of Medical Internet Research,* 21(7), e13315. DOI: 10.2196/13315

Northern Territory Government. (2022). NT Health Annual Report 2021-2022. https://health.nt.gov.au/__data/assets/pdf_file/0003/1179111/nt-health-annual-report-2021-22.pdf

NT Health. (2023). Strategic Plan 2023-2028. Northern Territory Government. https://health.nt.gov.au/__data/assets/pdf_file/0015/1206510/nt-health-strategic-plan-2023-2028.pdf

Purnell, M. (2018). Globalisation and its impact on the Journal Collections of Research Libraries in Australia: a health library's perspective. *Journal of the Australian Library and Information Association,* 67(1), 55-63. https://doi.org/10.1080/24750158.2018.1436116

Thomas, S. L., Wakerman, J., & Humphreys, J. S. (2015). Ensuring equity of access to primary health care in rural and remote Australia-what core services should be locally available?. *International journal for Equity in Health*, *14*(1), 1-8. https://doi.org/10.1186/s12939-015-0228-1

Wakerman, J., & Humphreys, J. S. (2019). "Better health in the bush": Why we urgently need a national rural and remote health strategy. *Medical Journal of Australia*, 210(5), 202-203. DOI: 10.5694/mja2.50041

Lessons learnt from developing support services for systematic and scoping reviews in a regional university library

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This paper is based on a presentation at the Health Libraries Australia and Health Libraries Inc. National Conference on October 19th, 2023 by the authors.

Abstract

At Federation University Australia, the number of queries received by the library about conducting scoping and systematic reviews from academics and Higher Degree by Research students has increased. In response, Liaison Librarians developed an online subject guide and ran a series of webinars. The webinars were then adapted to a series of longer workshops with more hands-on activities. Currently, an online open textbook with interactive elements is being written to allow people to work through content at their own pace. A further series of activity based digital workshops in an online flipped classroom model is being planned, along with other initiatives such as a Community of Practice. To be successful, this project required librarians to develop their own digital skills and knowledge, as well as the participants'. The digital content and workshops have increased equity for participants as they can access it no matter their location or other commitments. Cross-campus collaboration has increased and the library is continuing to evolve and adapt to meet the needs of academics and students.

Keywords

Systematic reviews, Open Educational Resource, Digital, Equity, Collaboration

Introduction

In 2020, the Liaison Librarians across Federation University Australia's four campuses noticed a sharp increase in demand for support with complex search strategies for scoping and systematic reviews. These requests came from academics, Masters and Higher Degree by Research (HDR) students, with many generating individual appointments with librarians held face-to-face or online. Many students informed us that when they asked their supervisors for support, they were simply referred to the library. In addition to help with searching, they were also requesting assistance with review methods outside the library's scope, such as data extraction, indicating a lack of understanding about what the library's role is in supporting reviews. It was at this

point we realised that while supervisors are experts in their discipline, this does not necessarily mean they are also experts in library research areas such as developing complex search strategies, using databases or screening programs. In addition, there seemed to be some confusion about the difference between systematic reviews and searching systematically. Consequently, we realised we needed to rapidly evolve as a team if we were going to deliver the specialised support required.

First steps

Subject guide

We first developed a subject guide about reviewing the literature in a systematic way. Initially we referred queries to guides from other institutions, but we felt we needed a Federation University guide with content relevant to our students and academics. This meant people could access support and guidance from us at any time, from anywhere, and were not limited to librarian availability. This was particularly important as Federation's typical student is older, and therefore more likely to have work or caring responsibilities (Stone & O'Shea, 2019). Additionally, as we are a regional university, they are located across Victoria. We structured the guide according to the stages of a review, and included the most common review types we were asked about. As we are not experts in academic writing, we collaborated with Learning Skills Advisors. Their role is to develop students' academic writing skills and they provided content about the differences between traditional literature reviews and systematic reviews, and the style and structure of writing.

Creating this guide required us to upskill and learn rapidly, as we needed to ensure we provided accurate advice. We recognised we had a great deal to learn about conducting reviews as we were new to this area and had limited previous experience. We attended professional development webinars and watched videos from other institutions. We also attended the five-day annual course conducted by the Australian Evidence Based Practice Librarians' Institute. Finally, we read extensive journal articles and books, frequently discussing what we had learned, and seeking feedback from each other on search strategies we were developing or had found in the literature.

The guide was launched at the Federation University Higher Degree by Research Conference in July 2022. We ran a one-hour in person session to showcase the guide and inform students about the content included, and we received many questions and comments. As of November 2023, the guide has received over 4800 views. It has been edited and updated as required to reflect the changing needs of our academics and students, such as adding in more types of reviews or online tools that we feel may be helpful.

Webinars

We then delivered two series of webinars for HDR students and academics. These allowed participants to ask questions as they arose and follow along with content and skills we demonstrated. In the first series, we ran a webinar on each stage of the review process, again collaborating with Learning Skills Advisors on the content about writing. Running them as a series allowed people to attend those of most interest. We recorded them and made the videos available via a page on the subject guide. These sessions were primarily focused on delivering information to participants through demonstrations and content on the subject guide, for example searching databases or using reference management software. The attendance for each webinar was between five to ten attendees and while they were well received, participants expressed a desire for opportunities to have hands-on practice in addition to the content.

Our next webinar series consisted of three longer workshop style events of half a day each. These were targeted at HDR students and promoted through the Graduate Research School and the University's Research Centres. In response to feedback from the first series, we planned to include hands-on activities that used some of the techniques and tools we demonstrated in addition to delivering content. For example, in the session on screening we placed attendees into break out rooms with a research question and the titles and abstracts of three relevant articles. We asked them to discuss if they would include or exclude these studies and present their reasons to the whole group. These workshops were not recorded, as we felt there would be little benefit to watching recordings due to the hands-on nature of the sessions and we wanted to encourage people to attend live. While the workshops were long, we felt the inclusion of activities justified the length and would help break the sessions up. However, there were still some activities we ran out of time for. The workshops had excellent attendance with approximately 45 students coming to each, and we received positive feedback about them, particularly the activities.

Student appointments

This year, Masters of Health students undertaking a research unit had been assigned an assessment that included a scoping review component. While the assessment was titled a 'scoping review', the only guidance provided to students was the article on developing a methodological framework for scoping studies by Arksey and O'Malley (2005), and the PRISMA-Sc was not used to guide their reporting, as is best practice. Exemplar reviews given to students by supervisors often had poor quality search strategies reported. These students made many individual appointments, were highly stressed, and confused about what was required for the assessment. We also saw third-year nursing students who were assigned a heavily modified version of a scoping review, in which they were required to search systematically but not follow a formal screening process, and then produce a modified PRISMA flowchart. Naturally, these students were extremely distressed about their assignments.

To manage the time commitment of the large number of appointments, we reached out to the coordinators of these units and offered to run classes to support students in a more sustainable way. This was met with enthusiasm by the academics, and we ran online classes on topics such as the structure of a scoping review, searching systematically, and using reference management software. For one unit, we were even asked to teach tutorials by ourselves for two weeks due to staffing issues (but without the pay of a sessional tutor!). However, while students attended these classes, there was minimal engagement. They did not contribute to the planned discussions, even in the chat function of the online meeting platform. This lack of engagement meant we had to discuss the topics between ourselves to explore the concepts and tease out solutions to some of the issues. These classes did not have the effect we were hoping for, as we still received many students booking individual appointments.

We then had extensive discussions between ourselves, the Learning Skills Advisors, and Learning Designers about the issues we saw in these assessments and how best to manage these while providing much needed support for students. Together, we provided feedback to coordinators and discipline leads on the issues we identified and the confusion and stress of the students.

Current support

At the time of writing in November 2023, we are delivering a series of ten half hour webinars on searching systematically covering the following topics:

- Research question frameworks, keywords, and synonyms
- Seed papers
- Subject headings and keywords
- Combining terms and advanced operators
- Searching databases to test the search strategy
- Evaluating the search strategy
- Translating the search strategy
- Grey literature
- Citation tracking
- Reporting the search strategy

These prioritise hands-on activities and active learning to promote knowledge retention and student engagement (Rossi et al., 2021), while providing opportunities for discussion to enable student reflection on their understanding (Hokanson et al., 2019). The multiple shorter webinars reduce cognitive fatigue (Shail, 2019) while allowing us to cover the content comprehensively. These changes were informed by feedback from the participants of previous webinars. At the conclusion of the series, we will ask participants what further content about reviews they are interested in and how we could improve sessions to help plan our future offerings. In response to

feedback already received, we plan to make future sessions longer to allow more time for activities and discussions.

Finally, as part of a realignment at Federation University Library, the Liaison Librarians have been assigned specialisations according to emerging needs, one of which is a Review Protocol specialist. While these roles and their specific responsibilities are currently being developed, this role will provide in depth support for students and academics conducting reviews.

Future plans

In response to feedback from students and academics we are developing an online open Creative Commons (CC-BY) licensed textbook. This Open Educational Resource (OER) is aimed at conducting systematic and scoping reviews and developing practical search skills using interactive elements, such as videos, H5P activities, and quizzes. This text will be an exemplar in our university wide OER project run through the Council of Australian University Librarians. We will also run a series of activity based workshops using a flipped classroom model where students will work through material from the OER before attending (Reidsema, Hadgraft, & Kavanagh, 2017). It is hoped this will better prepare students for the workshops, increase engagement and enable them to clarify any issues to reinforce their learning (Cuetos, 2023). Finally, given our students are spread across the state studying on campus or online, we believe the flipped classroom model will be a more equitable learning experience (Willis, 2017).

After we publish the OER and conduct the online workshops, we plan to gather feedback from HDR students and academics. We will refine how we conduct webinars and review and update the subject guide. Peer learning sessions with our Liaison Librarian colleagues are also a priority to increase their knowledge and confidence when supporting students and academics with complex search strategies (Stark & Aiello, 2021).

We are also collaborating with unit coordinators to consider how to meet the needs of Masters students conducting reviews. We need to promote student engagement and understanding while maintaining a realistic time commitment by librarians. Some ideas we have so far include changing the assessment from a scoping review to a rapid review, which can be conducted in a shorter timeframe (Garrity et al., 2020), creating a Community of Practice for students to empower them to learn from and with each other (Mercieca, 2017), or providing professional development for academics regarding the stages and process of a quality review. Any of these potential initiatives will require reflection on their effectiveness for student learning.

Equity and inclusion

Throughout this process, we aimed to increase equity and inclusiveness for students and academics. Students could access webinars and support regardless of their location or other commitments. This was an important consideration, as Federation is a regional university with students located across Victoria. Many also have work and caring responsibilities, so online classes are more accessible and create greater equity (Stone, 2022).

While digital content and classes are beneficial for student equity, it created some challenges such as retaining student engagement and interaction, which is a common issue (Tertiary Education Quality and Standards Agency, 2020). It was important that students did not get an inferior experience due to classes only running online, so we trialled various ways of maintaining interaction, connections, and participation. Managing this is an ongoing learning process for us as we take in feedback and experiment with ways of creating interactive content and experiences.

Open Educational Resources help promote education as a human right and enable equity, inclusion and lifelong learning (United Nations Educational Scientific and Cultural Organization, 2019). They disrupt the commercial academic publishing model, as profits and sales are not a consideration, but information is freely shared with all who need it (Hollich, 2022). Our students will have access to the information for no cost, even after graduation, as will anyone in the world with an internet connection. Other libraries and academics will also be able to reuse and adapt our content to suit their own context. Our OER has the potential to increase equity across the wider university, as we are promoting their use, creation, and adaptation to all our academics. Leading by example means we can demonstrate what is possible and the benefits to students, and we hope they will be inspired to create and adapt OERs as well.

While we work to create equity and inclusion in our support for conducting reviews, offering online only content means we need to be mindful of the potential digital divide. People in very remote areas and on a low income are more likely to be digitally excluded, and those with a disability or not working can find the cost of reliable internet or technologies challenging (Thomas et al., 2023). As Federation University is regional, our students may live in remote areas with unreliable internet, and as students they may also struggle to afford the technology or internet required to adequately participate in webinars. We need to keep this in mind when developing our support in the future.

Lessons learnt

What have we learnt that could be useful for librarians in a similar situation to our own? Federation University Library is small but mighty, and we know there are others like us with big ambitions and limited resources.

- Upskill! If, like us, you work in a small institution, you may be limited in the amount of peer learning available. However, this does not mean you cannot learn. Attend any webinar or professional development available in your budget, read all the articles and books on conducting reviews you can find, look at material such as subject guides or videos created by experts, and if possible, try to find a mentor from another institution. You will have a steep learning curve, and it will take time, but it is worth it for the increase in your confidence and understanding.
- Collaborate! In small institutions like ours, librarians do a bit of everything, meaning we are all busy and pressed for time. Working with other interested colleagues means the workload is spread more equitably and doesn't impose an undue burden on one person. Furthermore, seek out other support staff or academics who might be interested in working with you, as people from different areas often look at things in ways you had not thought of. If you have multiple campuses, meet online. We learnt during lockdowns that being based at different locations is no barrier to collaboration, so make use of this now.
- Boundaries! Any healthy relationship needs clear boundaries, and the relationship between librarians and academics is no different. Setting expectations about what is in and out of the library's scope can avoid misunderstanding and requests to provide services and support that are not your area of responsibility. Consider what is feasible and manageable, especially if you have a small staff. This could be documented and made available to academics before commencing formal support. Learn from our mistakes!

The process of developing support for conducting reviews has led us to continually evolve and adapt. As our academic and student needs have changed, we have altered what we do to ensure they are equitably supported. The content we teach, the way we deliver it and our support for individuals and teams is continually evolving as we meet with them and receive feedback, and as we ourselves learn new skills. We are supporting the curriculum and courses to evolve, as we provide feedback in turn to academics based on what we observed. In a constantly changing higher education and research ecosystem, one thing we are sure of is that our support services for conducting reviews will be in a constant state of adaptation and evolution.

References

Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19-32. https://doi.org/10.1080/1364557032000119616

Cuetos, M. J. (2023). Application of the flipped classroom model to stimulate university students' learning with online education. *Journal of Technology and Science Education*, 13(1), 368-380. https://doi.org/https://doi.org/10.3926/jotse.1806

Garritty, C., Gartlehner, G., Nussbaumer-Streit, B., King, V. J., Hamel, C., Kamel, C., Affengruber, L., & Stevens, A. (2021). Cochrane Rapid Reviews Methods Group offers evidence-informed guidance to conduct rapid reviews. *Journal of Clinical Epidemiology*, 130, 13-22. https://doi.org/10.1016/j.jclinepi.2020.10.007

Hokanson, S. C., Grannan, S., Greenler, R., Gillian-Daniel, D. L., Campa, H., & Goldberg, B. B. (2019). A study of synchronous, online professional development workshops for graduate students and postdocs reveals the value of reflection and community building. *Innovative Higher Education*, 44(5), 385-398. https://doi.org/10.1007/s10755-019-9470-6

Hollich, S. (2022). The unrealised promise of OER: An exploration of copyright, the open movement, and social justice. In C. J. Ivory & A. Pashia (Eds.), *Using Open Educational Resources to promote social justice* (pp. 3-22). Association of College and Research Libraries. https://www.ala.org/acrl/sites/ala.org.acrl/files/content/publications/booksanddigitalresources/digital/9780838936771_OA.pdf

Mercieca, B. (2017). What is a community of practice? In J. McDonald & A. Cater-Steel (Eds.). *Communities of practice: Facilitating social learning in higher education*. (pp. 3-25). Springer. https://doi.org/10.1007/978-981-10-2879-3_1

Reidsema, C., Hadgraft, R., & Kavanagh, L. (2017). Introduction to the flipped classroom. In C. Reidsema, L. Kavanagh, R. Hadgraft, & N. Smith (Eds.), *The flipped classroom practice and practices in higher education* (pp. 3-14). Springer. https://doi.org/10.1007/978-981-10-3413-8

Rossi, I. V., de Lima, J. D., Sabatke, B., Ferreira Nunes, M. A., Ramirez, G. E., & Ramirez, M. I. (2021). Active learning tools improve the learning outcomes, scientific attitude, and critical thinking in higher education: Experiences in an online course during the COVID-19 pandemic. *Biochemical and Molecular Biology Education*, 49, 888-903. https://doi.org/https://doi.org/10.1002/bmb.21574

Shail, M. S. (2019). Using micro-learning on mobile applications to increase knowledge retention and work performance: A review of literature. Cureus, 11(8), e5307. https://doi.org/10.7759/cureus.5307

Stark, R. K., & Aiello, M. T. (2021). Solo but not alone: Self-directed online peer education as a way to increase professional knowledge and skills. *Journal of Hospital Librarianship*, 21(1), 1-10. https://doi.org/10.1080/15323269.2021.1860448

Stone, C. (2022). From the margins to the mainstream: The online learning rethink and its implications for enhancing student equity. *Australasian Journal of Educational Technology*, 38(6), 139-149. https://doi.org/10.14742/ajet.8136

Stone, C., & O'Shea, S. (2019). Older, online and first: Recommendations for retention and success. *Australasian Journal of Educational Technology*, 35(1). https://doi.org/10.14742/ajet.3913

Tertiary Education Quality and Standards Agency. (2020). *Foundations for good practice: The student experience of online learning in Australian higher education during the COVID-19 pandemic*. https://www.teqsa.gov.au/sites/default/files/student-experience-of-online-learning-in-australian-he-during-covid-19.pdf?v=1606442611

Thomas, J., McCosker, A., Parkinson, S., Hegarty, K., Featherstone, D., Kennedy, J., Holcombe-James, I., Ormond-Parker, L., & Ganley, L. (2023). *Measuring Australia's digital divide: Australian Digital Inclusion Index 2023*. ARC Centre of Excellence for Automated Decision Making and Society, RMIT University, Swinburne University of Technology, & Telstra. https://www.digitalinclusionindex.org.au/wp-content/uploads/2023/07/ADII-2023-Summary_FINAL-Remediated.pdf

United Nations Educational Scientific and Cultural Organization. (2019). Recommendation on Open Educational Resources (OER). https://www.unesco.org/en/legal-affairs/recommendation-open-educational-resources-oer

Willis, L.-D. (2017). Implications for pedagogy: Flipping the classroom to engage pre-service teachers. In C. Reidsema, L. Kavanagh, R. Hadgraft, & N. Smith (Eds.), *The flipped classroom practice and practices in higher education* (pp. 273-287). Springer. https://doi.org/10.1007/978-981-10-3413-8

What's in the research toolbox for a team of academic Liaison Librarians

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We would like to acknowledge and thank the organisers of the Asia Pacific Health, Law & Special Libraries Conference, and our colleagues in the Academic Liaison team at the University of Adelaide Library.

This paper highlights how the library uses technology and information to connect with people in the University Library. Multimedia content production, webinars, self-guided webpages, and cross-team collaboration have all enabled the Academic Liaison team to reach new audiences and provide accessible and targeted research support. From one-on-one consultations to workshops with over 400 attendees – the team combines online and in-person services to be the conduit between key research stakeholders and the library.

Background

A team of five Liaison Librarians at the University of Adelaide Library provide wide ranging research support and subject specific knowledge to numerous schools. As part of a presentation at the Asia Pacific Health, Law & Special Libraries Conference, the team shared three projects undertaken to provide sustainable, bespoke and targeted support.

Scalable support during COVID & beyond

Two of the key themes in the University of Adelaide Library's Operational Plan are 'Supporting Research Excellence and Impact' and providing 'a Compelling Student Experience'. The COVID pandemic provided some valuable lessons for the team in how they effectively support these objectives. Prior to lockdown, the team was finalising a suite of information literacy courses aimed at new undergraduate students. This timing was an opportune coincidence and helped enormously with teaching support over the coming months.

Other issues which arose during that time included health researchers having restricted access to their labs or fieldwork – so they turned to alternative projects like systematic reviews – and the team's workload increased quite significantly. In Law, it was necessary to quickly pivot by offering online consultations and workshops to help law researchers. Alongside this, the team continued to support research activities such as open access, research metrics, research data management, and strategic publishing.

The team's support model since COVID has included the development of an online workshop program for 2023 to provide scalable support to the research community. This had included sessions on research metrics, strategic publishing (including Read & Publish agreements), searching for systematic reviews, and targeted workshops for academics during grant application periods. The Library's Strategic Publishing webpages have also been updated to provide targeted and accurate information for researchers to guide them in the first instance when seeking support for publishing. Alongside a Systematic Review Fundamentals MyUni course, these projects have allowed the team to provide timely support to a large research community which we then supplement with one-to-one, or in-person sessions as needed.

The Academic Liaison team's planning for 2024 will be inclusive of these existing projects, with the aim to target key periods in the academic year to provide timely and useful support on a wider level without compromising service quality.

Research support toolbox

A high level of tailored and sustainable support is maintained across each research support area by the team's research support toolbox. Three of the tools in the box are: developing a Systematic Review charter, providing Legal subject matter expertise and creating a video for Clinical Titleholders.

Systematic review charter

In November 2023 the Library Systematic Review Service Charter was published and the existing Systematic Review LibGuide updated. With a growing demand for support in systematic reviews, it was important to ensure that a sustainable service could be provided despite having a small team. This charter sets out clear boundaries

for what falls within the scope of the assistance offered by the team when it comes to supporting systematic reviews, which helps manage researcher expectations.

In the charter, there are separate sections that provide links to existing support materials like the SR LibGuide and the Advanced Searching for Health Sciences course. The course is accessible on MyUni (the learning management system) and covers systematic searching methods for all the major health databases. Researchers are therefore directed to the self-help resources in the first instance. For those who wish to consult with a librarian, a level of preparatory work is required, and outlined within the charter. This ensures that researchers who meet with the Liaison Librarians come prepared with preliminary search strategies. The team also takes advantage of training opportunities offered by vendors, such as those provided by Covidence - a systematic review management tool.

The service charter has been a first step in providing sustainable support to researchers, and the team is now working on the next step to scale this support. This includes developing an online training course on systematic reviews, allowing users to access self-service support at any time, in line with the Library's Learning & Teaching Principles. This will also attract credit points for Higher Degree by Research students (HDR) completing the University's Career and Research Skills Training program.

The course is being developed by the Systematic Review Course Working Group, a team comprising two Liaison Librarians (subject matter experts) and four members of the Library's Learning Support Team (course design experts). The course will be completed by the end of 2023 and will guide students through each step of the systematic review workflow, with a focus on advanced literature searching and troubleshooting. It will be self-enrolled and self-paced. The content will include interactive activities, guides and quizzes that will meet the University's accessibility standards. Concurrently, the existing Advanced Searching for Health Sciences course is being updated to include additional database platforms, thereby giving it a broader appeal by making the content interdisciplinary. Finally, additional 'quick reference guides' are being created, that will be added to the Systematic Review Libguide, and will be linked in the new course.

Legal subject matter expertise

The law toolbox comprises a range of tools, developed for self-help and independent research within the Law School. These tools build on the researcher's skill set, developing critical legal research skills which they may not yet have or will assist them to consolidate and build on what they know already. These tools are built collaboratively, with the Law Liaison Librarian providing subject expertise for these resources which are then built by the Library's Learning Support Team.

This includes a comprehensive LibGuide on law resources complemented by a Law essentials course on how to research with links to all of the key legal databases used in Australian legal research and foreign and international law. There is additional material to improve research skills which demonstrate and model how to find primary source material: case law or legislation. This includes bite sized videos and quizzes within the LibGuide and a Library Essentials MyUni course.

During a presentation to undergraduates, a Kahoot quiz revealed that only half the students were aware of legal research referencing rules – this is evidence of a need for further training resources. The content in the online guides is modular and scalable, for use from first year to final year, supporting the development of digital capability skills that are used in university study and to deliver the University's graduate attributes for 'living, learning and working in a digital society'.

Building on the skills they gain from these resources, the liaison librarian can then collaborate with academics to deliver tailored sessions. Prior to COVID sessions were conducted face to face – the University Library now offers online, in person or hybrid learning experiences. Often recordings are created and then embedded into a course. The online support provided offers a comprehensive self-service support option for the students, enabling the Liaison Librarians to allocate more time supporting research excellence and engaging in strategic activities, such as exploring the use of Open Educational Resources (OERs) and discovering metrics with academic research and teaching staff.

This combination of tools produces positive learning and research outcomes and sets students up to utilise their legal research skills in the real world. At present, the Law Liaison Librarian is collaborating with law academics on refreshing the existing content to provide more targeted resources for research.

Clinical Titleholders' video

A targeted library services video was created for a specific cohort of Clinical Titleholders, or affiliated researchers, in the Health & Medical Sciences Faculty. It was discovered that this group of 1800 were not fully utilising access to the Library's services, unlike fulltime researchers and students. This group felt unseen and unrepresented proportional to the work they contribute to the University.

To address this, the Health and Medical Sciences Liaison Librarians developed a script, and alongside the University's talented video production team, they created a video emphasising the collection of journals and e-books, key online guides, and courses. It highlights access to research and teaching support, such as the Read and Publish Agreements for Open Access publishing, and eligibility to seek 1-1 support with the Liaison Librarians for their research and systematic searching needs. A

Medical School Titleholder was recruited to participate in the project, providing a testimonial that helped to further engage our target audience.

This video has enabled the Liaison Librarians to communicate with a large cohort of patrons in a sustainable and informed way. It has subsequently been shared at Titleholder events, included in mailing lists, and incorporated into the Titleholders intranet webpage, and has increased the understanding of Library services to a previously unserved but important research community.

Team approach & takeaways

These tools provide examples of how a more team-based, task-sharing approach is being utilised by the Academic Liaison team, which continues to expand as the team works to meet the key themes of the University of Adelaide Library's Operational Plan. With collaboration, the team found that they can work smarter and streamline content to further develop tools and resources to support research. In a busy team, these practices facilitate the support research excellence for the community. And importantly, the toolbox is not finite – it will grow and change over time, in response to the needs of researchers at the university, as demonstrated by the new projects and reviews being undertaken now.

Gratisnet: the power of the network

Gina Velli, on behalf of the Gratisnet Committee

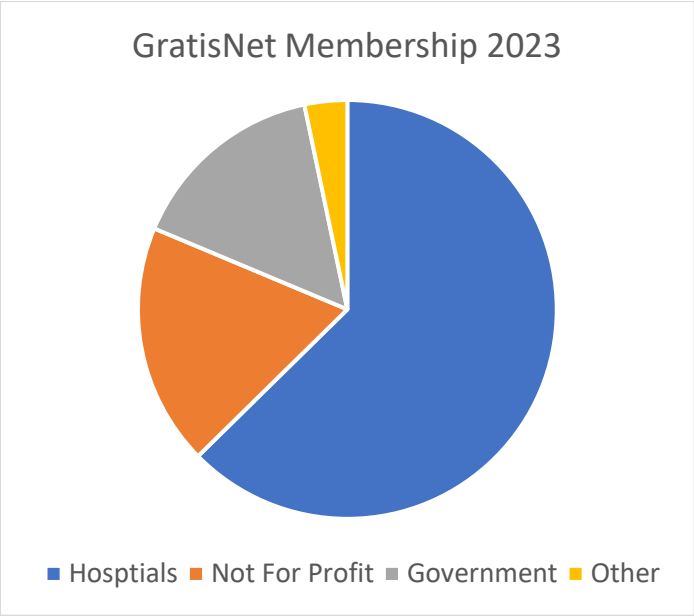
No Library is an island with a collection that stretches to provide everything a client might want. GratisNet to the rescue! Whilst never a replacement for collections, an efficient resource sharing system is a means to acquire those papers from infrequently required journals that are now so discoverable. Expanded access to resources provides your clients with more comprehensive information for their clinical and research needs. With an extensive network of 183 members and an energetic steering committee, GratisNet is able to connect your library with a wide range of resources from libraries and medical institutions across Australia. As budget constraints continue to be a concern for many individuals and organisations, GratisNet's ability to source articles and books at a fraction of the cost of purchasing individual copies or subscriptions makes it a smart and efficient choice. The community at GratisNet is renowned for its friendly and helpful atmosphere, where members actively collaborate and support one another in achieving their common goals. Get in touch for more information on contact@gratisnet.org.au

GratisNet provides a collegial and supportive environment that fosters personal and professional growth. Whether a member is a novice or an experienced professional, they can expect to find a welcoming environment where their contributions are valued. Camaraderie among members is evident in their willingness to share experiences and resources, creating an atmosphere that encourages learning and development. Through this collaborative approach, members are given the opportunity to expand their professional networks, gain new insights, and enhance their skills. Since 1982, GratisNet has continuously strived to update, adapt, and improve to better serve its members. This commitment to ongoing growth and development further strengthens the sense of community and ensures that members have access to the latest advancements and resources in their respective fields.

To be eligible for GratisNet membership, libraries must be situated in Australasia and be involved in health or adjacent fields. GratisNet allows libraries in the health and science fields across Australasia to access and share resources with ease. By creating a web-based list of serials, GratisNet ensures that members can conveniently locate and utilise the materials they need. Notably, there are no inter-library lending costs associated with journal articles and loans provided between GratisNet members. As members, libraries have the ability to set their own hours of operation for supplying documents and can also dictate the volume of materials they are capable of providing, so the impact of membership on staff workloads is minimal and governable.

GratisNet's platform offers a comprehensive and easy-to-use interface that is suitable for users with varying levels of technological expertise. Its user-friendly design ensures that individuals with all backgrounds can easily navigate and make use of the platform. One of the standout features of GratisNet's interface is the convenience it offers in uploading and downloading PDFs. Moreover, GratisNet understands the importance of providing support to its new members and offers help and assistance in navigating the platform. Quick start guides are available to ensure users can quickly get up to speed with using the platform effectively. Whether someone is just starting out or experienced in using online platforms, the user-friendly interface of GratisNet makes it a hassle-free experience for everyone. By creating an accessible and intuitive platform, GratisNet promotes inclusivity and ensures that users can effortlessly access the resources they need.

183 Australian hospital and health science libraries have chosen to become members of GratisNet for several compelling reasons. Firstly, the exceptional return on investment that comes with this membership. By joining GratisNet, these libraries gain access to a vast array of unique and rare journals, as well as grey literature that cannot be found on other commercial lending platforms. This expanded access is invaluable to researchers and medical professionals who rely on up-to-date and diverse sources of information for their work. Additionally, GratisNet provides access to international medical journals that are not readily available elsewhere. Furthermore, being part of GratisNet allows these libraries to tap into the extensive holdings of Government Health collections, ensuring access to crucial resources that could otherwise be challenging to obtain. Undoubtedly, the decision to align with GratisNet has proven to be a wise choice for Australian hospital and health science libraries, as it enhances their ability to provide invaluable support to the medical community and contribute to advancements in health science research.



In April 2023, the GratisNet proudly welcomed its newest member, FRNSW Library, to our community. With a dedicated focus on firefighting and firefighter health and safety, the library offers a diverse collection of resources pertaining to various aspects of this critical profession. Alongside materials related to rescue operations, hazmat operations, emergency management, and fire investigation, the library also provides literature on building fire safety and general topics such as leadership and personal development. The scope of the library's collection extends beyond physical health, encompassing resources that shed light on the psychological responses to emergencies and disasters. Additionally, the library collects materials specifically addressing emergency response and communications for the elderly and disabled, emergency medical services, rescue operations, and basic life support as practiced by firefighters and other first responders.

GratisNet is an indispensable tool for libraries, providing a wide range of comprehensive resources to support their work. The platform not only offers access to unique and rare journals, international medical journals, and government health collections, but also fosters a supportive environment for personal and professional growth. By offering expanded access to comprehensive resources, GratisNet remains a smart and efficient choice for libraries.

Queensland Health Libraries Network Professional Development Day

Jana Waldmann
Manager Library Services | The Prince Charles Hospital

In November this year, Redcliffe Hospital hosted 42 health librarians (plus many others via Teams) for the 2023 Queensland Health Libraries Network Professional Development Day. Filled with thought-provoking sessions across a wide range of topics, it was a wonderful opportunity to come together and discuss the current state of medical librarianship and some of the changes on the horizon.

The day kicked off with an overview of the research programs within Redcliffe Hospital and Metro North's Community and Oral Health directorate. It was great to hear how valued libraries are within these teams and interesting to learn how a librarian can be officially integrated into research pathways to ensure better outcomes (even when working only 11 hours a week with no actual library!). Technology updates followed, with the Queensland Health Office of Research and Innovation providing an update on the State-wide RedCap roll out (survey and database tool used to capture research data) and then Ebsco got us up to speed with the latest updates and helpful functions within DynaMed.

The middle session hit on some of the hot topics of 2023: open access and Artificial Intelligence (AI). Dr Danny Kingsley provided an engaging overview and discussion of how open access has changed the publishing landscape, particularly around read and publish deals, market consolidation and open access books. Gina Velli from the Princess Alexandra Hospital Library highlighted implications of Large Language Models (LLM) in research and libraries, covering current regulations and policies, potential uses, and emerging concerns regarding the impact of AI in these areas. This was complemented by Marco Fahmi from the Queensland Government Data and Information Services, giving us a glimpse into how AI and LLM might be integrated into workflows in the future.

Gemma Siemensma, Manager of Grampians Health Library and the Health Libraries Australia (HLA) convenor, was in town to talk about the great achievements of HLA throughout the year and the priorities for 2024 and beyond. She also provided an insight into the lay of the land for Victorian health libraries, and how Grampians Health Library extends their services outside of the traditional library sphere to get involved in consumer health, hospital policies and documents, and research committees. The trend for librarians to think outside of the box and find innovative ways to support their organisation was continued by Kim Meers (Redland Hospital

Library), who outlined opportunities such as becoming a Research Integrity Advisor and her work with health literacy.

Plus, there were cataloguing tips, a rundown of the ALIA Qld Mini Conference, the implementation of High Value Conversations program in Mackay and a wonderful interactive session (and drama performance!) from the Sunshine Coast Health Institute Library team on maintaining strong relationships with patrons, despite their [inappropriate/annoying/poorly formed] service requests. But the best thing was the opportunity to mingle, chat and connect with colleagues that you usually only get to speak to over the phone/email/Teams. A big thank you to all the presenters for sharing their time and expertise, Kim and Jane Orbell-Smith for hosting, Daniel McDonald for running the getting-to-know-each-other-better quiz, Ebsco for sponsoring morning tea, and JR Medical for some sweet, sweet chocolate to help keep us lively throughout the day. We've had word that the next PD day is potentially in Cairns (if it's published here it has to happen right?!?) so hopefully we'll be tackling 2024s hot topics in the hot tropics.

Australian Health Library Christmas Decorations

Cairns Hospital Library and Knowledge Centre


LKC
MAXIMUM HOME LOAN
Party
Vote 1 United
Australia Party
FOXTEL
WATCH LIVE
TODAY


Study
Rooms
Library


Knowledge
Learn
Connect
Inspire
Library
Evidence
Research & Publication
Update

South West Healthcare Library


EXIT
Library Returns


PEDIATRIC CLINICS • PEDIATRIC RADIOLOGY
PEDIATRIC CLINICS • PEDIATRIC UROLOGY
THE LANCET
HANDBOOK OF NONPRESCRIPTION DRUGS
GROUP THERAPY
TINTINALLI'S

Clayton Wellington Library, Central Gippsland Health

The Christmas bags are full of superseded books recently weeded from the collection, and the gumboots muddy from recent floods.

The thoughts and concerns of the health library community go out to all those across Australia currently affected by the extreme flooding.

Health Library Staff Member Spotlight

Jannette Novice
Medical Imaging Librarian | South Australia Medical Imaging
Jannette.Novice@sa.gov.au

When did you first start working in a health library?

My first health job was actually my current position, which I started in January 2001.

How/Why did you join health librarianship?

I had a SA government contract which was ending soon, and I applied for two jobs in health libraries which were advertised, and was subsequently offered both. One job was for a very small specialist health library in the Medical Imaging Department of Flinders Medical Centre (FMC), and the other position was for the main medical library at the Queen Elizabeth Hospital (QEH). The QEH job included supervision of staff and had great scope for advancement, but I accepted the job at FMC because their interview panel came across as very friendly and happy, in contrast to the QEH panel who seemed quite stern and serious. And I have been very happy with my decision; one of the best aspects of my job has been the people I work with.

What was your previous employment background, prior to health libraries?

During my studies I completed a work experience module in the library of a private law firm. I enjoyed this very much and decided that was where I wanted my library career to be. As a result of this work experience I was offered a summer holiday job at another law firm, and following this I was head-hunted by the Supreme Court Library. In my third year of my library degree I accepted a 0.5FTE library support position at the Supreme Court Library of SA and managed to juggle full-time Uni with a half-time job.

By the end of the year a librarian position came up which management asked me to apply for, but by this time I decided demanding lawyers were not who I wanted to work for, and I moved on to a one year government contract supporting public libraries, which mostly involved cataloguing, looking after the (now defunct) SA film and video library, and their LOTE collection. The end of my contract coincided with the advertisements for the two health library positions, and I have been here ever since.

How do you describe your current position?

I would describe the position as very specialised; only focusing on medical imaging. My current postion has been part-time, 0.4FTE since returning from maternity leave in 2006. My clients are staff only (no public contact), and primarily Radiologists (radiology consultants), our Registrars and Fellows, Radiographers (the

staff who take your images), and our Nurses. I also service our Admin and Management staff and occasionally staff from the executive office of SA Medical Imaging (the state-wide service my department now falls under).

What do you find most interesting about your current position?

I have been in this position for a long time and the changes I've seen have been most interesting. My initial job included tasks not seen in any other library that I know of. We have a hard copy radiology film library (which we no longer add to), and part of my job was in a dark room copying the films from interesting cases to be added to the collection. I also had to photograph images from radiology films (using a large light box with a camera I fitted overhead). I would then take the camera film to the dark room and develop it to make 35mm slides. The RSNA exams used hard copy film and I had to copy each of the films multiple times to make sets of films for use at each exam site. I have also been an exam invigilator.

So, during the early years of my position the job definitely required a librarian full-time. The change to digital medical imaging (picture archiving) at our site corresponded with other tasks moving to electronic form (such as ILL requests, etc.), which decreased my work load immensely. Luckily for me this coincided with my return from maternity leave, whereby I only wanted to work two days per week.

And then there is the cataloguing. There is no way a collection specialising in one specific area of health could use DDC. Subsequently we catalogued our resources according to the modality they focused on, so for example a book on MR imaging would be given the call number of MR followed by a successive number, e.g. MRI.01, MRI.02 etc.; General radiology GE.01, etc.

What has been your biggest professional challenge?

Probably two things…

1. The isolation of my position.

Not only am I a solo librarian, but I am in a very specialised library - if anyone knows of another hospital medical imaging library, please let me know! I reached out to the SA Health Library Service. I was lucky that their previous Knowledge Manager was pleased to find out I existed and took me under her wing to include me in all their in-house training and vendor demonstration sessions whenever possible. I value my relationship with this team to this day. The HLA is also invaluable.

2. Learning enough about medical imaging technology to function as a valued member of staff.

I attended every Radiography CPD session I could get to. We have monthly breakfast sessions which are presented by each modality; not only did I learn much about medical imaging, but I saw opportunities where I could offer my skills. I look out for new technologies being made available at our site (e.g. SPECT CT installation). When

I discovered we were acquiring a chest AI program for use with our SPECT CT, I immediately searched for relevant articles and sent them to our Clinical Director. I have occasionally sat in on clinical meetings, such as the weekly breast meeting; anything where I might learn something or can offer my skills. And being a small library I know the staff and what areas our consultants specialise in, or have a special interest in and can forward any articles I come across which might be of interest to them.

What do you consider the main issues affecting health librarianship today?

There are issues which affect every library, but of special mention is the rising cost of journals, especially when they are journals which are required to be held for training of registrars. In my field the journals *Radiology* and *Radiographics* come to mind. Both published by the RSNA who has not only come up with a pricing module which makes the journal very expensive for multiple site libraries, but the RSNA now also transitions the older volumes of these journals to a 'Legacy' collection. Libraries have already subscribed to these volumes, yet they are now only accessible electronically if the library pays (a rather exorbitant fee) to access the collection. And many librarians like myself had already weeded out the older volumes to make physical room, knowing that they were accessible to us online. Crystal ball moment!

Health librarianship has a lot to offer, particularly in SA. We are very lucky here that SA health libraries are valued to the point where a state-wide library portal has been set up and resources are accessible to anyone working across SA Health. But this isn't the case for many states, and it is a big problem… I cite the following article: Siemensma G *et al.* (2023) *Australian Health Review* doi:10.1071/AH23101

So my biggest tip is to market yourself in any way possible. Don't just get a foot in the door - be bold enough to give it a push. Seek out where your skills can be put to use. Make yourself invaluable to as many staff as possible, and eventually the right people will hear about your service. It doesn't matter who they are; if your CEO mentions something in their weekly email that you could help with, don't be afraid to contact them and tell them how your service can help. Or better still, do a quick search so that you can send an example of the type of information you can find. Send a welcome email to new staff to introduce your service - this might require a contact in HR or even a contact in each department of the hospital for someone to let you know when and who is being hired. Make up a library information pack and place it in every staff tea room of every ward and every department.

What would you do if you weren't a health librarian?

When I was studying Year 12 we had to pay for university; there was no scheme to delay the fees. My parents told me not to consider university because they couldn't afford it. But had things been different I probably would have studied sciences in high school and gone on to do a science degree; etymology interests me.

What is your favourite non-work activity?

I enjoy crochet; each finished project is a joyful achievement. I like weight training at the gym. And I enjoy puzzles such as Killer Sudoku and either playing a computer game called Guild Wars 2, or joining my daughter in some of the games she likes to play.

Anything else you would like to share about yourself?

This year I am being awarded my 25 year ALIA membership pin.
We have a beautiful Burmese kitten named Bonnie who turned one in November.

Sponsored Content: Ovid Synthesis – the workflow solution for evidence-based practice, quality improvement, and research.

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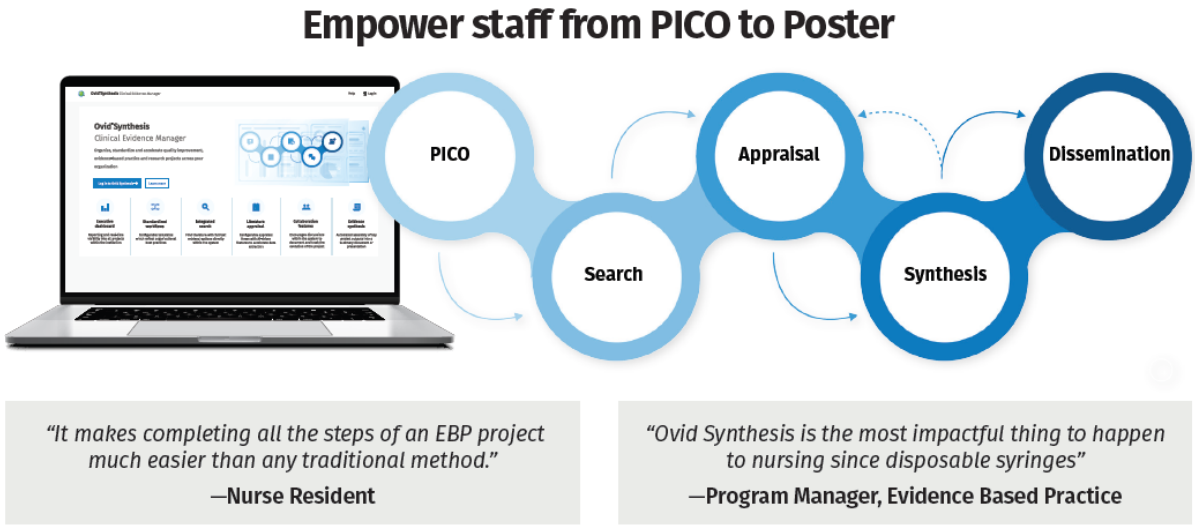

The challenges of supporting EBP, QI and research projects across your organisation:

The library can play a pivotal role in evidence-based practice (EBP), quality improvement (QI) and research projects, but to maximise their contribution, librarians need insight into a project's objectives and status. Being asked to contribute to a project on short notice or without having all the background information can put librarians in a challenging situation and result in frustration for the whole team. Even after a successful collaboration, it can sometimes be unclear whether a project was completed and whether it is having an impact within the organisation and beyond.

How Ovid® Synthesis can help:

Awareness and insight – See what projects are in process, what stage they are at and who is working on them. Get involved when the project is ready for your input to

maximise the value of your impact and save yourself time. See when projects are completed and be included in dissemination efforts.
Collaboration – Built in collaboration features such as comments and mentions allow you to contribute as a full member of the project team and know when others need your feedback.
Flexible search options – Integrated search features encourage teams to consult the literature and build a strong evidence basis for the project, while allowing for different search workflows for different types of projects. The ability to view users' saved searches allows librarians to know what search revisions or improvements are needed.
Access to resources — and help — at the point of need – Search results include PDFs of subscribed Ovid® content and open access articles, putting full text at your users' fingertips. All other results include your link resolver or a "Contact librarian" option so users can reach out when they need assistance.

Maximising value for the library and realising impact for the organisation:
Ovid® Synthesis fosters interdepartmental collaboration across the institution and can drive value for health sciences librarians at several levels.
Leadership –

- Reinforce the value of the library and your expertise with direct involvement in the projects that impact your organisation's bottom line and leadership goals
- View projects across the organisation to gain insights for future partnerships
- Advance organisational impact through increased support for dissemination of projects and results

Collections –

- Drive usage through just-in-time access to resources
- Analyse research interests and active programs through a central repository of projects
- Augment usage statistics with contextual insights around clinical and research priorities

User services –

- Improve efficiency, resourcing, and communication for collaborative projects
- Increase meaningful traffic to research support at relevant workflow stages
- Reference standardised workflow templates for liaison training and awareness

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