# JoHILA

## Journal of Health Information and Libraries Australasia

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# Editorial – 'Twas the night before Christmas

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'Twas the night before Christmas, when all through the library,
Not a book was overdue, not even "West's Respiratory Physiology";
The book-drop was placed by the chute with care,
In hopes that Elsevier soon would be there;

The computers were nestled all snug on their desks,
While visions of screen-savers danced until esc;
And the librarian in her twinset and pearls,
Had just settled down to search for articles,

When out on the helipad there arose such a clatter,
She sprang from the chair to see what was the matter.
Away to the window she flew like a flash,
Sidestepping the shelving as she threw up the sash.

The moon's silvery shadow on the grass below,
Gave the lustre of an ethereal glow,
When, what to her wandering eyes should appear,
But a miniature drone, and eight Uber reindeer,

With a gig-job driver, paid minimum wage,
She knew this was capitalism's late, late stage.
More rapid than the NBN his bots they came,
And he whistled, and shouted, and called them by name;

"Now, MEDLINE! now, CINAHL! now, PSYCINFO and EMBASE!
On, COCHRANE! on CROSS-REF! on, DEEPDYVE and SCOPUS!
To the top of the result-list! to the top of the pay-wall!
Now search away! search away! search away all!"

As toner that's replaced, no matter how well-sealed,
Will go everywhere as soon as it's unpeeled,
So over to Endnote the algorithms they flew,
With the sleigh full of citations, and metadata too.

And then, in a twinkling, she heard in the stacks
The ever-present threat of budget cutbacks.
As she drew in her hand, and was turning around,
Through the air-conditioning Covid came with a bound.

Dressed in a mask, and keeping his distance,
A vendor appeared, selling with great persistence;
A bundle of books he had flung on his back,
And he looked like a peddler just opening his pack.

His eyes -- how they twinkled! his markups how merry!
His journals were in bundles, his profits like a cherry!
His authors all gave their labour for free,
Making him more money when raising the fee;

The stump of a pipe he held tight in his teeth,
Though smoking was banned as it led to death;
He had a broad face and a little round belly,
Though obesity, too, is known to be deadly.

He was chubby and plump, and possibly diabetic,
And she wondered when she saw him, if he needed a medic;
A wink of his eye and a twist of his head,
Were further signs that he needed a hospital bed;

He spoke not a word, a sure sign of pathology,
She offered compression stockings, to prevent coagulopathy;
For the evidence was there, as Cochrane reviewed[1],
All trials meta-analysed, all anecdotes eschewed;

He sprang to his sleigh, despite his clear ill-health,
Muttering about open-access eroding his wealth.
She sighed and exclaimed, ere he drove out of sight,
LISTEN TO YOUR LIBRARIAN, FOR WE ARE INVARIABLY RIGHT!

1. Sachdeva A, Dalton M, Lees T. Graduated compression stockings for prevention of deep vein thrombosis. Cochrane Database of Systematic Reviews 2018, Issue 11. Art. No.: CD001484. DOI: 10.1002/14651858.CD001484.pub4. Accessed 10 December 2021.

*All the best for the coming year. Thanks for reading JoHILA.*

# Convenor's Focus | December 2021

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As 2021 draws to a close I am hoping health libraries can reflect on the past year and take away some positives from the rollercoaster road that many of us faced with ongoing lockdowns and restrictions. We look forward to showcasing health libraries in 2022 and demonstrating their expertise, flexibility and innovations.

With the new year just around the corner I thought you might like to hear about some of the priorities that HLA are working on:

1.  The updated *Guidelines for Australian Health Libraries – 5th edition* are set to be published early in 2022. When released we encourage people to read these, review their library services, make plans for service improvements and use the document as an advocacy tool.
2.  A new HLA website is in the process of being constructed. This will include a site refresh and will enable content to be updated more quickly.
3.  A sub-group of HLA gathered to plan out another series of online events for 2022. Topics are vast and we encourage everyone to get involved, come along and learn from your peers. HLA are also in discussions about possible face-to-face events where we can all gather together once again!

We are also working on some other items behind the scenes so hope to share these with you in the coming months. Many of these ideas come from members external to the HLA committee so please do send through anything that you think may be of relevance. As Helen Keller says *"Alone we can do so little; together we can do so much."*

Finally this issue of JoHILA brings a fantastic array of articles together looking at health libraries through different lenses. I'm sure you'll agree that health libraries are resourceful, inspiring and pioneering!

Have a fabulous break, Gemma

# *Guidelines for Australian Health Library and Information Services* 5th edition to be launched in 2022: National Manager report December 2021

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Much has changed in the 13 years since 2008, when the fourth edition of the *Guidelines for Australian Health Libraries* (the *Guidelines*) was published. (Health Libraries Australia, 2008)

In the intervening years, digital technologies have transformed the way health, research, education, and information services are delivered; and contemporaneously, the Covid-19 pandemic is continuing to affect nearly every aspect of our home, work, professional, and community lives.

2008 was the year the Global Financial Crisis peaked. From an economic perspective, special libraries are always subject to the vicissitudes of organisational politics and finances, and in times of economic downturn, they are especially vulnerable. It is a signifier of the relevance and value of health libraries that most have survived organisational restructures, re-shaped boundaries, alternately centralised/decentralised governance arrangements, corporate mergers and shifting affiliations. Some libraries have combined to constitute wider systems and networks; some have extended their remit to provide services to previously underserved populations; and some have temporarily disappeared only to re-emerge in response to a realisation that they are, indeed, essential services.

By the mid-2000s onwards, digital technologies and telemedicine had been transforming models of clinical care; AARNet (the founder of the internet in Australia) had been around for more than a decade, and the delivery of online education and programs of e-research, were increasingly accepted ways of working. Health libraries were early adopters, implementing innovative and cost-effective solutions for the benefit of their online and mobile clients.

Most recently, during the repeated waves of the Covid-19 pandemic, health libraries world-wide have adapted rapidly, collaborating with colleagues to contribute to public health initiatives to ensure that good quality information is available to health professionals on the front lines of care, as well as to policy makers, and consumers. (a. Anderson, A., & Ivacic-Ramljak, T. (2021); b. Anderson, A., & Ivacic-Ramljak, T. (2021).

To realign with the far-reaching micro and macro effects of these global movements - in the economy, in technology, and in public health, a substantial revision of the fourth edition of the *Guidelines* was needed.

### What stays the same?

### Inclusiveness

As with previous editions, the fifth edition of the *Guidelines for Australian Health Library and Information Services* aims to cover all types of health library and information services in all sectors – in hospitals (public and private, metropolitan, regional, and remote health facilities); in not-for profits and government funded healthcare and health information services; in universities and research organisations; in professional associations and colleges; and in commercial, health-related industries. Wherever there is a health library and information service, the *Guidelines* may be applied.

### Reference Group

Our Reference Group was re-constituted to comprise representatives from all the main sectors and regions. And hats off to some of our more tenacious members who have been on the *Guidelines* committee for a number of previous iterations! From September 2019, we met almost monthly to oversee the governance process, testing and refining the literature searches that guarantee the criteria are based on the latest research evidence, and to do the detailed work of revising the content. The health library community is indeed indebted to the diligence, perseverance and scholarship of this indefatigable crew, and my sincere thanks to them all.

### Structure

The structure remains substantially the same. There are four broad Guideline Areas – Planning and Strategy; Organisation and Governance; Resource Management; and Information Service Provision.

There has been, however, some re-shaping of content to elevate topics of strategic importance, and improve the logical connections between the Guideline Areas; and there have been significant changes made to update the detail of the content according to the evidence.

### What has changed?

### 'Living' Guidelines and updated content

In this edition, we have instituted a new model for updating the evidence underpinning the specific criteria. Modeling evidence-based decision-making for policy development, a research librarian was contracted to design the expert searches to update the evidence-base in all Guideline Areas.

Members of the Reference Group selected their Guideline Area of interest, and worked with the research librarian to refine the topic-focused search strategies, conduct the searches, review the literature, and update each of the specific criteria and related appendices – all according to the best available evidence. A peer review process was organised between the Area groups to support the reliability and validity of the research.

Where there was a lack of evidence, a consensus approach within the larger Reference Group was adopted. Many a discussion was had, teasing out the issues and deciding the best approach to making the statements practically applicable to the diverse range of libraries!

The 'live' literature searches are currently available in a google doc (https://sites.google.com/view/hlaguidelinessearches2021/home); we intend to make them publicly accessible to enable health librarians to continually update their knowledge on the topics covered by the *Guidelines,* making them, in effect, 'living' Guidelines.

## Content revisions

Changes to the content have been made to make the *Guidelines* more strategic and to update the evidence base of the specific statements. For example:

- Guideline Area 1: Planning and Strategy, in addition to Criterion 1.1 Strategic planning and to strengthen the links with a library's overall strategic direction, now contains:
    - Criterion 1.2 'Marketing, communications and client engagement planning', relocated from Guideline Area 2: Organisation and Governance to create the platform for advocacy at the core of a library's operations, and to encourage all staff to be visible and proactive;
    - Criterion 1.3 'Financial management' (previously in Guideline Area 3: Resource Management), relocated to elevate the need for more broadly based financial analyses to support advocacy, and underpin budget decision-making and resource allocation.

A significantly strengthened appendix with many examples of various types of planning documents supports this Guideline Area.

- 2.6 'Clinical, health organisation, and information governance' is a new criterion added to Guideline Area 2: Organisation and Governance. (This Area has been renamed from the fourth edition's 'Organisation and Philosophy', and prior to that 'Organisation and Administration'.) It is timely that we elevate the concept of 'governance', given the heavy price that is being paid (including the decline in trust in public institutions) for the proliferation of misinformation and disinformation – this is a crisis of good governance. Being

a trusted profession is part of the essence of librarianship; and health libraries are the <u>only</u> dedicated, secure, permanent and trustworthy source of authoritative, evidence-based information, critical and fundamental to their organisations' information governance structures.

- Guideline Area 3: Resource Management has a number of important revisions.
  - The criterion 3.1 'Human resources' now refers to the Appendix 3. 'Recommended staffing for health library and information services', reproduced with the permission of the Canadian Health Library Association, and referencing their recently released Standards. (Frati, F., Oja, L. A., & Kleinberg, J. 2021). Covering all types of health libraries, the Canadian calculations are more comprehensive than those in our previous *Guidelines*, using a formula that takes into account organisational size, as well as basic, medium and advanced levels of library services.
  - We have removed the previous edition's appendix on requirements for physical space, relying on the criterion 3.2 'Space, facilities and equipment' to outline the detail. Underpinned by an extensive research project undertaken during the course of the *Guidelines* revision, this criterion relates the concept of 'library as place' to the delivery of quality resources and services, applying a fundamental principle of good architectural design - 'form follows function' (<u>b. Anderson, A., & Ivacic-Ramljak, T., 2021)</u>
  - The newly named criterion 3.3 'Data, information and knowledge resources' recognises that a library's information management remit, responsibilities and expertise extend at both ends of the continuum into the related areas of data and knowledge management.
- The introductory comments and supporting literature for Guideline Area 4: Information Service Provision, have been strengthened, to substantiate the value statement that a 'library' of resources without the professional expertise of librarians embedded in the work of their organisations, is merely a 'collection' and not a real library service.
- 4.3 'Evidence-based practice services for health professionals' has been added in Guideline Area 4: Information Service Provision, recognising our unique role and competencies in delivering client-focused information services that underpin our users' evidence-based decision-making and policy development.

## Statement of Purpose

For this edition of the *Guidelines,* the Reference Group decided at the outset that to guide their decision making regarding both the structure and the content of the *Guidelines*, while achieving the goals of being aspirational rather than minimum standards, inclusive and practically applicable in a diverse range of settings, and becoming more evidence-based, an explicit statement of purpose was needed. The following statement was drafted:

The *Guidelines* provide a strategic framework for the planning, development and delivery of services, and for quality improvement of health Library and Information Services (LIS) across sectors. Health LIS enable their organisations to deliver sustainable, quality, safe, evidence-based:

- patient/client-centred care;
- health system policy, planning and programs;
- data, information and knowledge management;
- research, innovation and development; and
- education, teaching and learning.

Not simply a functional statement about how the *Guidelines* may be used, this Statement of Purpose places health libraries firmly in the context of their parent organisations' core business, key to their organisations' achievement of their strategies, goals and operations.

## Aspirational and prescriptive, but not minimum 'standards'

The *Guidelines* are prescriptive in that they provide a statement of best practice that, where possible, references the evidence in the research literature. The *Guidelines* are not, however, minimum 'standards', which (to achieve a goal of practical applicability) would place the baseline at the lowest common denominator.

There are currently no processes for accrediting health libraries; nor are there accompanying regulations that could be used to drive compliance. In a library review, it would be possible to use the *Guidelines* to assess a library's performance on a continuum: some criteria may be met well, some may be met partially, and some may not be met at all. In the latter two circumstances, the *Guidelines* are 'aspirational' and could be used to guide a quality improvement strategy, and as a planning tool, for setting strategic goals and designing short term projects.

## Where to next?

In 2022 we will publish and launch the new *Guidelines*. We will have a targeted communications and advocacy program, to ensure that we are providing a platform and a tool for all health librarians to be advocates in their own organisations, as well as for HLA and the broader Association, to advocate on their behalf.

The *Guidelines* may be used as a tool or a checklist (similar to the one provided for use in conjunction with the fourth edition's Guidelines) for libraries to self-assess, conduct audits of their own performance, develop quality improvement projects, or engage in external reviews. It's early days yet, but the longer-term goal is to set up an accreditation program to emulate the accreditation of hospitals according to the Australian Commission on Safety and Quality in Health Care's hospitals' accreditation program – see https://www.safetyandquality.gov.au/standards/nsqhs-standards. It is envisaged that an accreditation program will be established by ALIA/HLA to enable a

health library to apply, be assessed, and gain accredited status, using the *Guidelines* as the basis of the assessment. Areas for improvement would be recorded and a regular cycle established as part of a continuous quality improvement strategy.

Finally a Guidelines sub-committee of HLA will be established to continually review the literature generated from the 'living' Guidelines expert search strategies. (The searches are temporarily located at https://sites.google.com/view/hlaguidelinessearches2021/home and will be moved to a permanent 'home' on the new HLA website.)

My concluding words of acknowledgement and thanks – to the members of the Reference Group (listed below) who have seen the job through with good humour and professionalism; to our Canadian Health Library Association colleagues who have allowed us to reproduce their staffing recommendations from their recently revised standards; and to all who have contributed to previous editions of the *Guidelines*, and most significantly to the author of the previous edition, Melanie (Kammermann) Foti whose intelligence and foresight set the strategic direction embodied in the previous edition, and motivated me to follow in her footsteps and drive this project.

### Guidelines Reference Group Members
Ann Ritchie, HLA Executive National Manager, Project Leader

Sarah Hayman, Research Librarian, Expert Literature Searches Leader

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Don Keast, Medical Librarian, George Hatch Medical Library Dubbo Health Service, Western NSW Local Health District, New South Wales

Carol Moran, Library Manager, Australian Dental Association, New South Wales

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Alice Anderson, Director Library Services, Monash Health, Victoria

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Blair Kelly, Medical Librarian, Deakin University, Victoria

Laura Foley, Operations Manager, Knowledge Resources, Australian and New Zealand College of Anaesthetists, Victoria

Linda Gay, Specialist Librarian, Alcohol and Drug Foundation, Victoria corresponding member

## References

a. Anderson, A., & Ivacic-Ramljak, T. (2021). Health library spaces and the COVID-19 pandemic: Insights from the Australian healthcare sector. *Journal of Health Information and Libraries Australasia, 2*(2), 13-17. https://www.johila.org/index.php/Johila/article/view/66

b. Anderson, A., & Ivacic-Ramljak, T. (in press). 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*

Frati, F., Oja, L. A., & Kleinberg, J. (2021). CHLA standards for library and information services in Canadian health & social services institutions 2020. *Journal of the Canadian Health Libraries Association / Journal De l'Association Des bibliothèques De La Santé Du Canada*, *42*(1), 14-44. https://doi.org/10.29173/jchla29526

Health Libraries Australia. 2008. Guidelines for Australian Health Libraries, 4th edition. Australian Library and Information Association, Canberra. https://read.alia.org.au/guidelines-australian-health-libraries-4th-edition

# Congratulations on your retirement, Michele Gaca

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Michele Gaca retired on the 13 August 2021 after more than 30 years in a variety of senior roles as an Information / Knowledge Manager. Throughout her career, Michele has contributed to a range of library organisations and services; including affiliated industry services from subscription agents, copyright administration, publishers and software / database suppliers.

Michele's contribution to health librarianship has been extensive. Her most recent position was as Chief Librarian at Austin Health & Mercy Hospital for Women in Heidelberg, Victoria. Since her commencement in 2014, the Austin Health Sciences Library has undergone a significant transformation, emerging as a strong, cohesive team who continue to work together to further Austin Health's reputation as a centre of excellence for evidence-based practice.

In 2015, Michele spearheaded the development of multiple research courses at Austin Health. This started with *Fundamentals of Research* and over the years added *Advanced Research Methods*, *How to Write a Research Paper* and a research fundamentals course tailored for medical students.

Under Michele's leadership, the Library received the Austin Health's 2016 "Spirit of ANZAC" award, which recognises strong teamwork, persistence, ingenuity and success in the face of adversity. The Austin Health Sciences Library were the first non-clinical area to win this award, which was a great honour for our team.

In 2017, as part of the Austin Health Choosing Wisely committee, Michele led the *Ask an Informationist – engaging with the evidence* initiative. The Choosing Wisely Australia campaign encourages clinicians to have important conversations about potentially unnecessary hospital tests, treatments and procedures. The Library team created a series of evidence reports with infographic summaries based on suggested clinical questions to help clinicians "choose wisely". Choosing Wisely Australia embraced the Library's approach which led to invitations to attend several National events.

Michele ably steered the Austin Health Sciences Library team through all the unexpected hurdles of the pandemic throughout 2020 and 2021, ensuring we could provide an uninterrupted Library service. In March 2020, Michele also helped to curate and bring together our Austin COVID-19 Research page.

Michele played an important role as a member of the state-based portal Clinicians Health Channel (CHC) Reference Group in Victoria. Allison Hart, MedicalDirector, has kindly provided the below words in recognition for her contribution to the CHC: *"Michele's commitment in driving new requirements for usage analysis, visual data analytics and unbiased review of clinical content resource choices, has ensured that the Clinicians Health Channel continues to deliver gold standard, evidence based, decision supporting clinical information at the point of care, which in turn supports clinician's and patients every day in Victoria."* ~Allison Hart, Manager, Clinical Content, MedicalDirector

Michele has been involved with a number of professional memberships (joining ALIA as an Associate in July 1987), committees and groups over the years. Between 2013 – 2017, Michele was the President of Health Libraries Inc. (HLI). During her presidency, Michele led the Committee, improved financial compliance for HLI, presented at and helped organise the annual HLI conferences and arranged timely and relevant professional developmental activities to equip today's health librarians with the latest knowledge and skills.

Michele was part of the HeLiNS project team that won the ALIA Research Award in 2016. In 2020, Michele coordinated a national team of health librarians to redevelop the "live'' literature searches that originated as part of the HeLiNS project. The searches, which Michele convinced the Australian Commission on Safety and Quality in Health Care (ACSQHC) to link on their website, are used by hospital staff and Standard Clinical leads to keep abreast of current evidence to support best practice and quality initiatives in line with the current NSQHS Standards 2nd edition. She has also presented internationally about this project and other initiatives at conferences in Ireland and Bali. Michele is deeply committed to sharing her knowledge and furthering the profession beyond the confines of the physical library, demonstrating that hospital libraries and librarians are integral to a hospital's quality and safety agenda.

Our Austin Health Sciences library team would like to thank Michele for all her positive energy and her commitment in developing us as library professionals. She has always encouraged us to take on new challenges, to step outside of our comfort zones and has always been open to listening and implementing our ideas. Congratulations on your retirement Michele and we wish you all the very best for your next chapter in life!

# Reflections On Retirement

Debby Frawley
Formerly Central Queensland Hospital and Health Service, Rockhampton

In May this year I retired from my position as a librarian at Rockhampton Hospital Health Sciences Library. This stage of my career had spanned over nineteen years. My eventual foray into the world of librarianship took a very long and circuitous route, but it is something I've never regretted for an instant. Way back in the dawn of pre-history I completed an Arts Degree at University of Queensland, then succumbed to the inevitable family genetic predisposition to go nursing. My two sisters also became nurses and my mother was a Nurse Educator who taught us all! I trained at Rockhampton Base Hospital in the late 1970s, but never really intended to make nursing my lifelong career.

I did briefly think of becoming a librarian after my Arts Degree, but it wasn't until the late 1980s that I seriously began to take steps. Places were limited in the one and only Queensland Librarian course, so I moved to Canberra and did Midwifery training at Woden Valley Hospital. In 1993 I was overjoyed to get into the Graduate Diploma of Library & Information Management at Canberra University.

From the first day I felt as though I'd come home! I loved every minute of the course, despite having to attend lectures whilst continuing to work full time shifts in a postnatal ward. Unfortunately I got nabbed for several weeks night duty over the time I could have done an optional library practical placement. I've always regretted this as the lack of practical experience made it quite difficult to get a library position later. Full time positions were very hard to obtain at that time, despite the fact that I did a number of library volunteering jobs at the National Library and other places.

It wasn't until I moved back to Queensland in 1998 that my library career finally took off. After attending an ALIA event in Toowoomba, I was offered a short full-time library contract as a Library Officer in the Reference Section at the University of Southern Queensland Library (USQ). I remember walking in and immediately thinking that I was on the right planet! I did several short contracts there, and at the Public Library, along with casual nursing shifts at different hospitals. This led to a rather schizophrenic existence, especially the day when one public library client spluttered in shock, "But I saw you at the hospital??" I also had to nurse a couple of library colleagues when they were admitted for surgery. I found this quite disconcerting, but they assured me afterwards that they were very glad it was me looking after them!!

And indeed this was my life for the next few years, juggling library contracts which I loved, and casual nursing which I did NOT enjoy, but needed to keep doing to pay

the bills. I moved home to Rockhampton in 2002, and one of my mother's nursing colleagues suggested I submit my resume to the Rockhampton Hospital Library.

As you would expect, I'd always been told by people that my nursing experience would be absolutely wonderful for a medical library position. Upon graduating this was last on my list as I wanted to get as far away from hospitals as I could. However, fate has a peculiar way of making things happen.

Straight away I was offered a short term contract to backfill the Rural Network Information Librarian whose job involved regular training trips to all the far flung facilities covered by the library. These contracts were ongoing over the next two years to cover staff travel or conference leave, and as usual casual nursing filled in the gaps. In 2004 I backfilled holiday leave for the Library Managers at Redcliffe and Mount Isa Hospital Libraries - this was excellent experience especially in Mt Isa where I learned to catalogue the hard way, amidst ongoing computer and technical problems. The line manager was also very delighted about my nursing experience and offered me a nursing contract when I'd finished the library one. Naturally I had to decline, although over the years I was offered similar contracts especially in the Central West region.

During my Redcliffe stint, I was urgently contacted by Rockhampton Hospital Library to come back as the manager was leaving, and they would be short staffed. I was already committed to Mount Isa, but upon my return went straight back to Rockhampton Hospital Library and never left!

As for nursing, I kept my general registration for a number of years, and even did a few weekend casual shifts at Rockhampton Hospital to keep my hand in. In 2011 I decided this was absolutely ridiculous, and was totally overjoyed to finally "decommission" myself.

In 2005 I was appointed to the permanent full time position as Rural Liaison Librarian, and it was my turn to travel around our districts delivering Clinical Knowledge Network (CKN) training to Queensland Health staff. In those days Queensland Health was divided into three zones, with Rockhampton Hospital Library servicing the Central Zone. This was a massive area stretching from Rockhampton down to Kingaroy and Gympie, and out to Longreach, Winton and beyond in the central west. Initially we received separate CKN funding but this was later ceased. My life became very busy with the constant travel and planning. I paid yearly visits to the facilities in each Health Service District, holding CKN and database training sessions, and Evidence Based Practice and Clinical Appraisal Workshops. It was possible to hold workshops in the larger facilities with dedicated training rooms and networked computer access, but I constantly encountered technical problems or lack

of available computers. Eventually we acquired a travelling lap-top and datashow to be self-sufficient if the need arose.

Life was also perilous on the road as I usually travelled alone, even to the Central West. I soon learnt not to drive in the early mornings or evenings when vast numbers of native animals and birds were on the move. I hit a small kangaroo on a back road to Isisford on one trip, but didn't incur any visible damage. Another colleague fell foul of an emu on an earlier trip, but luckily was travelling with other people at the time.

While staff were always very hospitable and glad to see me, training sessions were often fraught with interruptions, problems and even emergencies. A lot of my sessions were held around the only available ward or department computer, with staff coming and going as their workload allowed. This was a big problem in the smaller facilities, especially the remote Primary Health Care Centres with very low staff numbers. Sometimes I would be trying to train people at the main reception desk where an endless stream of clients would appear, needing medical attention or just popping in for a chat.

One of my colleagues was unfortunate enough to have a cardiac arrest occur during one of her training sessions, so the staff immediately rushed off to assist the patient. I remember having a great group assembled at the end of their shift for a quick session. Suddenly they all got up and disappeared without a word, it was knock-off time! Vanishing staff were a common occurrence.

A typical day would see me arrive, locate someone in authority to introduce myself, then be ushered to an available computer in a remote room or at the nurses' station, hopefully be given a cup of coffee and left to it. Quite often they would have forgotten I was due to visit, or the person I'd liaised with was on leave or days off. With promises of rounding people up, the staff member would depart and often I never saw them again. Sometimes nobody came, or a trickle of staff when they were free, or the odd person who was studying and needed help. At one rural facility I set up the training room, then found out that all the health workers had gone home for lunch. Eventually they came back and the training could resume!

Other visits could see the staff all ready and lined up by the Director of Nursing, and very keen to listen. At times facilities and departments were so busy or full of emergencies that there was no way any training could take place, so I'd carry on to the next place.

Training health staff in the clinical setting is far from an ideal situation as the needs of the patients must always come first. Often I arranged training sessions around

staff inservices or handover times, or would set myself up in a quiet room with a computer so staff could come for individual sessions.

While my job wasn't a typical librarian role, and not at all what I'd first envisioned myself doing, it was very rewarding and provided experiences that most librarians would never encounter. The hospitality of bush staff was incredible, and many staff members often thanked us for thinking of them and travelling all that way to visit them. We always had a notable upsurge in client requests from a particular area after these training sessions. Most staff, and indeed many in larger hospitals today, are still unaware that the health science library exists and can offer so many services to assist their clinical practice, research or study.

Eventually our CKN funding was withdrawn and we ceased training trips in 2013. I was happy to be back in the library at this stage, as now I had a chance to concentrate on my first love, simply being a librarian. The constant travel was very tiring and also long distance driving was hazardous.

Initially the library was situated in the old Nurses' Quarters building as part of the Yangulla Rural Health Training Unit. This was demolished in 2008, and the library moved to a large "temporary" demountable on the hospital campus. In 2015 the demountable site was commandeered for another building, so the library moved to a very small temporary space in a new ward block, where it remains to this very day. A new library space has yet to be fitted out due to lack of funding.

Despite thoroughly enjoying my library career, I was very glad to retire and love every minute of it!  Plans include more overseas travel and a trip on the Indian Pacific when possible, taking up golf, and long overdue home renovations. I have enough family history to collate and organize until I'm at least 95, not to mention learning to play Mah Jong and other activities which involve lots of coffee and lunches 😊.

# 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

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*Over the last 25 years, health library collections and working practices have shifted in response to an increasingly digital world. As a result, there is a need to examine the continuing role of physical library space in health care environments. There is also a need to consider changes made in response to the COVID-19 pandemic when health librarians found themselves providing essential information services from home, disconnected from physical libraries, at a time when health professionals urgently needed reliable and high-quality information. This study examined the impact of the pandemic and recent evidence about library space in health care settings. We explored the role of physical libraries in health care settings as we emerge from the pandemic into a new normal.*

## Introduction

The trend towards digital content has markedly changed health libraries. When the COVID-19 pandemic was declared in 2020, the digital trend had already transformed library services. However, for some health libraries this trend is only moderately reflected in their physical library space. Whether this lack of change is due to a nostalgia for print, a lack of appetite for change, or an absence of funding for renovations, it is important to understand the role of physical library space in our modern information ecosystem and how it can best serve its patrons.

Physical library spaces have always been about much more than print collections. Where the move towards digital made this evident, the COVID-19 health pandemic made it crystal clear. Restricted access to print material with library teams working from home during the pandemic underlined the necessity of access to online resources. This highlights the continuing function of libraries as supportive, flexible spaces where collaboration, social gathering, education, and digital access are at the fore, rather than providing greatly reduced print collections.

Looking beyond libraries, the global experience of COVID-19 is transforming how people live, work, learn, and engage with technology.[1,2] In spite of, or perhaps because of, the increasing amount of time spent at home, "people will need places where they can come together, connect, build relationships, and develop their careers."[3] Libraries have generally emerged from the crisis in a stronger position as

providers of public spaces that bring people together while also contributing to a culture of learning and knowledge sharing.

The aim of this study was to examine existing evidence on the role of library space in health care environments and to identify the impact of COVID-19 on this role via a survey of health librarians in Australia and internationally.

## Literature Review

### Methodology

We conducted a literature review of current research about physical health library spaces. We searched Medline, Embase, Emcare, and Proquest Nursing & Allied Health for relevant peer-reviewed studies published between January 2015 and January 2021 using keywords and medical subject headings related to libraries, library design, facility design, interior design, physical library space, and library trends. A grey literature search of business publications and news media was also included. We checked reference lists of select articles and hand searching was undertaken in key library journals.

Our exclusion criteria included studies of non-health libraries or multi-disciplinary academic libraries, studies published earlier than 2015 due to significant recent change in libraries (other than two studies identified in reference checking), and studies about library services that did not specifically reflect on physical space. In total, 124 articles were identified and reviewed. After screening, 30 articles were identified as relevant to the research question.

### Literature themes

Existing evidence on physical library space exposed six key themes: preceding decades of transition; declining print; changing library skills; reducing footprints and funding challenges; technology and zones that enable collaboration, education, social gathering; and, wellbeing and quiet work.

Some studies described cumulative change in libraries over more than four decades[4] that laid the groundwork for the strategies used to manage the impact of the COVID-19 pandemic.[5,6,7,8] Summarising this phenomenon, Murgatroyd concluded that "(i)n many ways we had anticipated this long before it become a matter of necessity. Our large collections of journals and clinical texts are digital. Our systems for access and management of our collections are cloud based. We have had in place for a number of years digital communication channels … we have long ago enabled remote access."[9] However, even with ubiquitous electronic access, physical space has remained important[10] because of, "the many other place centered activities and services the library can support."[11] For example, physical library space provides a

comfortable place to meet colleagues, have a quiet moment alone, and to access library training or librarians' expertise.[12]

This evidence confirmed what librarians already know, that the most influential change to health library spaces has resulted from digitisation[13,14,15] and reduced print collections.[16,17,18,19,20,21,22,23] While some print resources remain, most commonly due to lack of electronic availability[24,25] or user preferences,[26] an exponential uptake of digital resources has facilitated a transition from collection-oriented libraries[27] to spaces that are more reflective of "a community's vision of itself," [28] affirming the value of physical library space well beyond simply storing the library's print collection.[29]

Just as collections are now available beyond library walls, librarians no longer limit themselves to available resources or work only within the library space.[30] Future-ready librarians work in reconfigured staff spaces[31] and provide services in a range of formats, including online webinars and embedded service models.[32] Librarians with development expertise,[33] "creative, technologically savvy, knowledgeable about evidence-based medicine, problem-solvers, and expert multitaskers,"[34] have adapted with their libraries. With the onset of the COVID-19 crisis, librarians were already equipped with the skills to adapt quickly and effectively, particularly in health care settings where librarians found themselves delivering in-demand services as essential health care workers[35] while facing restrictions, lockdowns, and other challenges.[36]

Facilitating the use of information technologies is widely associated with library space. Libraries introduce new digital tools and technology-based content, with librarians on hand to support their use.[37,38] In fact, many patrons now visit library spaces only to use technology, such that electrical outlets are in high demand for a range of devices.[39,40,41] The need for technology has grown so much that Nelson concluded, "new technology is probably the most important issue in planning future space."[42]

While technology use has grown, libraries have battled decreasing physical footprints.[43] Shrinking space has resulted not only from smaller print collections, but largely due to the cost of physical space.[44,45] Cost and the availability of funding can be insurmountable barriers for libraries who want to maintain or update their remaining space. Prentice writes, "as physical and monetary resources grow scarcer, the determination of practical library space utilization is an ongoing challenge faced by many institutions."[46] Looking towards the future, it will be important for librarians to convince decision-makers whose view of libraries may be outdated,[47] that the growth of digital content is an opportunity to repurpose rather than reduce library space.[48]

Within libraries, research indicates that health professionals seek and use zones for collaboration, education, social gathering, wellbeing, and quiet study, with unlimited hours of access [49,50] and natural light.[51,52,53] Spaces for collaboration and social gathering are closely related, but must be well planned to function alongside quiet individual study space,[54,55] which remains essential.[56] Despite the challenges of pairing collaborative and independent work spaces, a number of studies identified the importance of collaborative areas for group learning,[57,58] innovation, and creativity [59] - so much so that the creation of collaborative zones has been the main focus of revisions to library spaces in the past decade.[60,61]

Collaboration spaces in modern libraries support both education activities and social gathering. Education activities include training in information literacy and evidence-based practice,[62] tying services to curricular frameworks and accreditation standards.[63] The evolution of group learning[64] and learning commons[65,66] has seen libraries evolve into a more social environment where patrons gather for interaction,[67,68] supported by nearby or co-located cafes.[69] Research by Hillman linked social space with wellbeing, where "students often indicate their desire to be near others studying," even when studying independently, especially when libraries "add café and stress-relief services."[70] In hospitals, physical space provides an important respite from the stresses of frontline health care[71] and a comfortable place for health workers to relax when taking a much-needed break.[72]

Studies focusing on library spaces as important quiet zones describe these spaces as supporting wellbeing as well as simply a place for independent study and research. Quiet zones provide a place to conduct research, reflect, study, or simply work with fewer distractions,[73] with the latter being of particular value to frontline health professionals.[74] Quiet space that creates an environment conducive to concentration[75,76] where serious work can be accomplished[77] was identified as the most popular zone in health libraries by Steigerwalt, Eldermire and Prentice.[78,79,80] This zone needs to be protected from noisy collaborative areas,[81] with McCaffery noting that "the importance of quiet space to users should not be underestimated … international data indicates that quiet space for individual work is becoming increasingly important to library users."[82]

Overall, these themes are pervaded by an overwhelming need for flexibility in health library spaces to support their demonstrated uses, functions and activities. Design can support flexible use of space by creating open areas and adaptable learning spaces[83] with a variety of options for seating and technology that can be moved for repurposing as needed.[84,85] However, design alone is not enough. Library staff who manage the space also need to be adaptable, well-practised at change,[86] and responsive to patrons' influence on library environments that evolve with needs,[87] to ensure the continuing satisfaction of library users.[88]

## COVID-19 health library survey

### Methodology

In September 2020, we surveyed health librarians to identify the impact of the pandemic on physical library spaces, and clarify how library spaces in health care settings were used during COVID-19. Librarians were asked to describe their expectations for long-term adjustments to physical library space, library responses to the COVID-19 crisis, and whether the pandemic motivated a new wave of change for the sector.

The survey was designed in a Google form and comprised 16 multiple choice and two free response questions. Survey questions asked about adjustments to physical space during COVID-19, infection prevention measures, operations, crisis management, and potential lasting change. Health librarians were targeted by circulating the survey to health library email lists in Australia and internationally. One reminder was sent before the survey closed and 137 responses were received over eight weeks of data collection.

### Distribution of responses

Responses were received largely from the special library sector, encompassing specialised libraries that provide information services in a specific area. More than 70% of responses were from health care librarians (i.e., in hospital and health organisations), with academic librarians being the next most common respondent (28%). Nearly half of all responses (48%) were from Australia.

| Table 1 : Distribution of responses | | | |
|---|---|---|---|
| **Library sector** | | **Geographic location** | |
| **Type** | **N** | **Region** | **N** |
| Special – health care | 97 | Australia | 65 |
| Special – corporate/govt. | 10 | UK & Europe | 33 |
| Academic health libraries | 30 | USA & Canada | 38 |
| | | Singapore | 1 |

Table 1: Library sectors and geographic locations of respondents

### Adjustments to physical library spaces

Building security increased in most libraries (78%) during the pandemic, which is not unexpected given that most participants worked in clinical environments where patients with COVID-19 were treated. In spite of this, a significant proportion (69%) continued to allow patron access to physical libraries during the pandemic, either as normal or with some limitations. The remaining 31% of libraries were not accessible to patrons as part of pandemic restrictions.
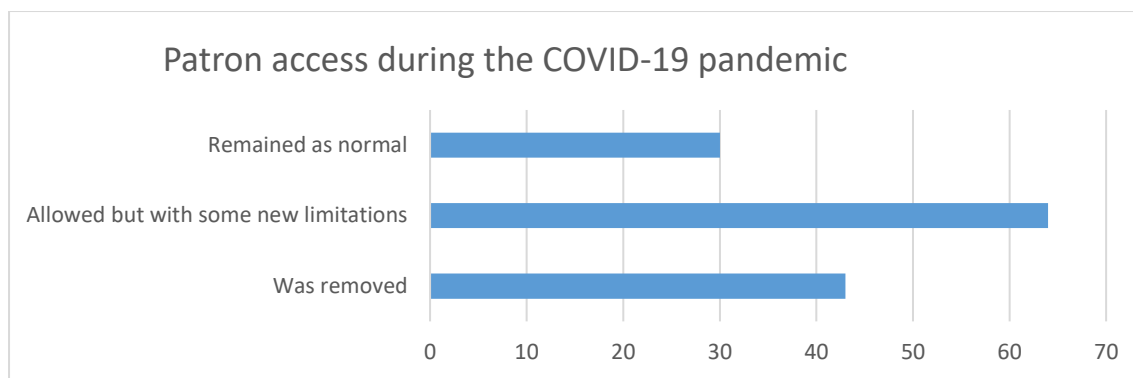
Chart 1: Patron access to library space during the COVID-19 pandemic

For more than half of participating libraries, staff continued to work on-site throughout the pandemic. Around one in five (21%) librarians continued to work on site at pre-pandemic levels, while one third continued with reduced rosters. A small number of libraries (9) were un-staffed because employees were furloughed or mobilised to other areas of their organisation. In the remaining 41% of libraries, staff provided services while working from home.

Library spaces were not widely re-purposed during pandemic lockdowns, with only 12% repurposed entirely for use by another work group. More than half remained entirely as libraries while a further 21% remained as libraries with some re-purposing of sections. A small number of libraries were closed (9%) and one respondent reported that they did not have a physical space during or prior to COVID-19.
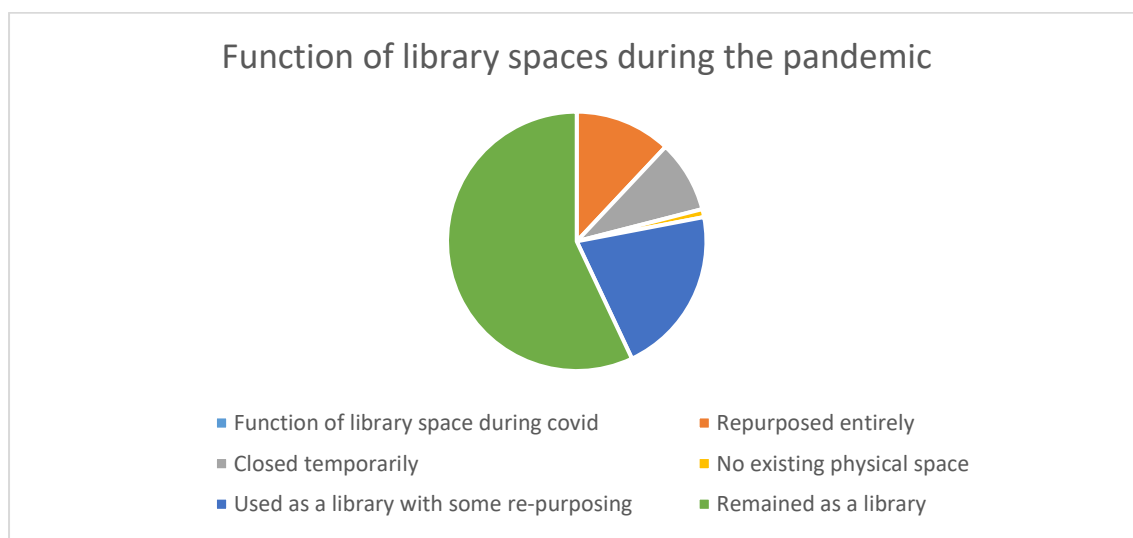


Chart 2: Function of library spaces during the pandemic

## Infection prevention measures
Limiting patron numbers, re-arranging furniture, and reducing the number of seats, were the main methods used to implement social distancing in library spaces. Less frequently, computers and meeting areas were closed.
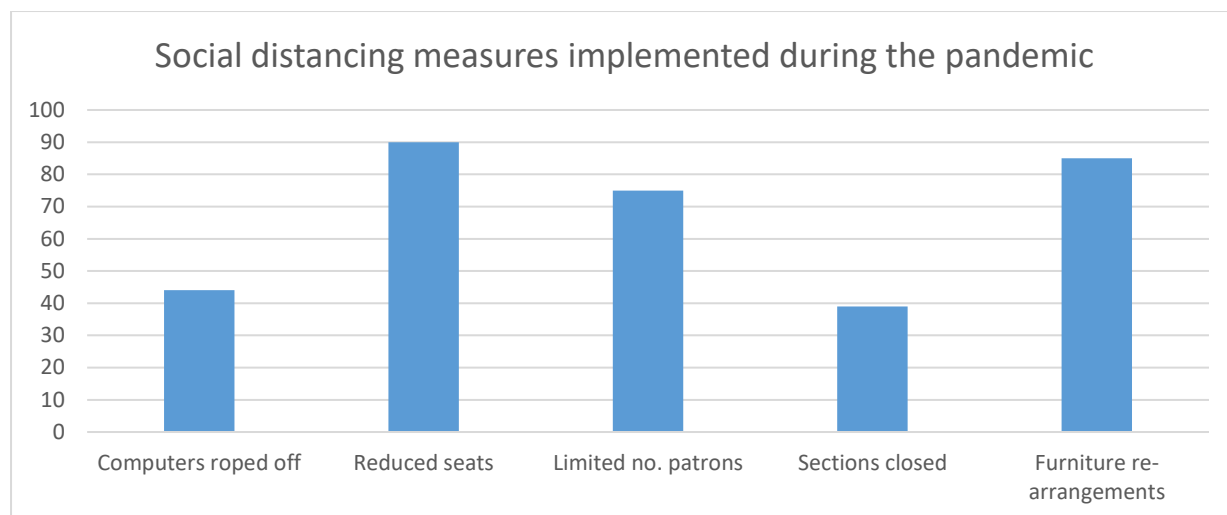
**Chart 3: Social distancing measures implemented during the pandemic**

Sanitisation was a high priority during the pandemic with 87% of libraries installing hand sanitising stations. A high proportion also increased cleaning schedules (65%) and ensured that patron computers and devices were wiped down between uses (62%). Workstations and study carrels were slightly less likely to be wiped down between uses (56%). Only 46% of libraries reported sanitising returned loans, with this low figure likely to correspond to restricted access to print collections. 65% of libraries who continued to circulate print materials quarantined book returns before processing.

### Library Services

The pandemic led to restricted print loans, in-person enquiry desks, and training. However, there was increased provision of online training, recorded webinars, virtual referencing, and the creation of additional 'how to' resources. Click and collect services, website chat, and new library guides, also increased, but to a lesser extent (as shown in chart 4).

**Chart 4: Library services that increased during the pandemic**

Services in most urgent demand were literature searches (82%), research assistance (62%), and quick reference questions (34%). 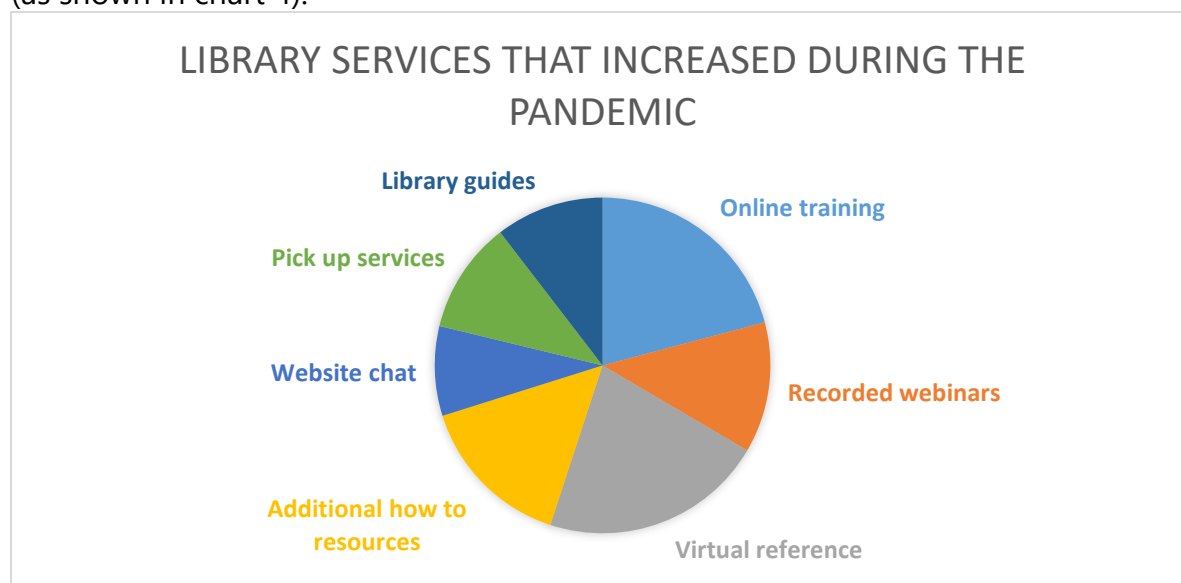Curated information such as COVID-19 library guides and bulletins were also urgently needed (26%) along with access to physical space (57%).

## Crisis response

The introduction of PPE equipment and additional cleaning supplies was implemented in around half of libraries (56%) and was the most common response to the crisis. Staff supports were increased in 45% of libraries, including health and safety, guidance on using newly introduced online tools, employee assistance programs (wellbeing support), and flexible rosters. As shown in chart 5, libraries also assisted with non-library work in other departments, supplied essential information on COVID-19, provided stress relief to patrons, and built new partnerships with their organisations.
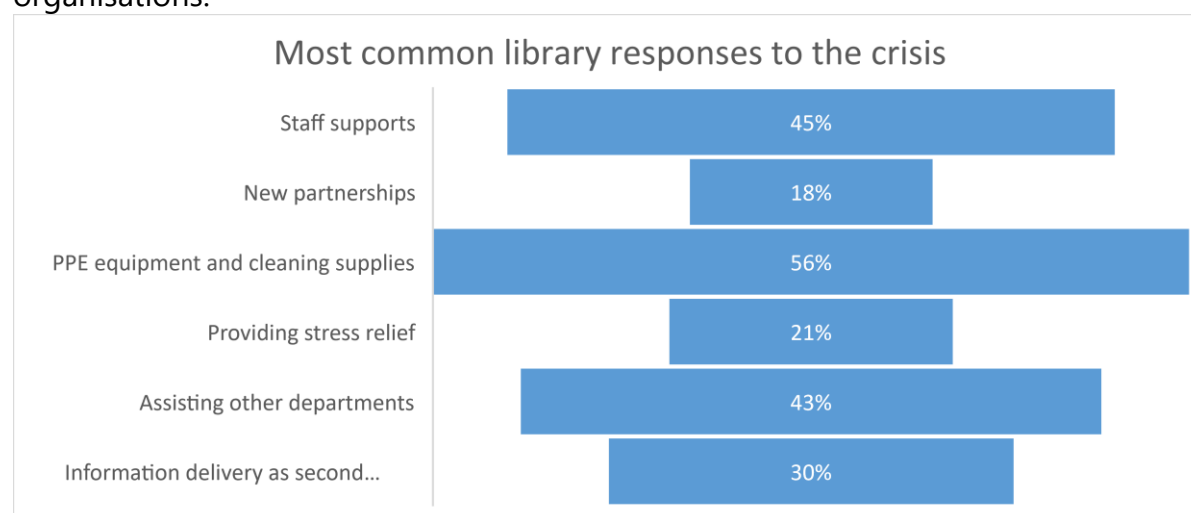


Chart 5: Most common library responses to the crisis

Libraries also fast-tracked projects in response to the crisis. These included social media communications, virtual reference systems, SpringShare LibGuides, use of online collaboration tools, click and collect and scan on demand services, online training, and website chat with a librarian.

## Lasting change

When asked about changes arising from COVID-19 that might become permanent, less than one quarter of respondents predicted reductions of library space. More than half predicted virtual reference would be permanent, along with online training, working from home arrangements, and infection prevention measures.

Table 2 lists expected changes alongside the most popular priorities for libraries coming out of the pandemic. The implementation of new digital tools, apps, and technology platforms was the most commonly identified priority, with keeping up-to-date (current awareness) also ranked highly. Many libraries will expand their

teaching programs and shore up business continuity plans, while only a small proportion (12%) expected to return to business as usual.

| Predicted changes | % | Next priorities | % |
|---|---|---|---|
| Virtual reference and training | 66% | New tools, apps and platforms | 53% |
| Staff not always present | 64% | Current awareness | 49% |
| Infection prevention measures | 64% | Expanding teaching programs | 44% |
| Social distancing | 43% | Business continuity planning | 38% |
| Cloud based team work | 33% | Data Science initiatives | 25% |
| Reductions in space | 24% | No new priorities, business as usual | 12% |
| Repurposed libraries | 15% | | |

Table 2: Changes and priorities

When asked about the skills librarians need to develop to support post-pandemic change and priorities, three in four identified agile ways of working (77%), and skills for online meetings and training (74%). Relationship building (53%) and creating original content (42%) were also popular responses. Skills flagged as important and their relative frequency are shown in Chart 6.
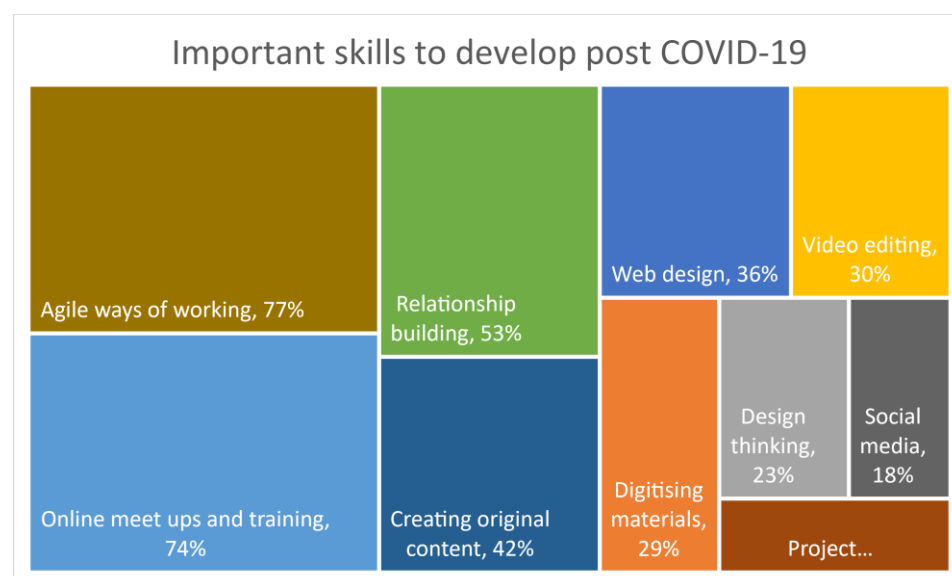


Chart 6: Important skills to develop post COVID-19

### Open comments

Librarians' free response comments highlighted that physical library spaces were in demand during the pandemic: "the library was in high demand as students and faculty with children at home sought out a quiet place … we've found that patrons care very little for our remaining print materials, but they crave a space where they can work and study in peace and quiet."

Another common theme was quick adaptation in response to change. Libraries drew on their "previous flexibility and adaptability" because they are "always anticipating and creating new things." Moreover, respondents reflected on the pandemic "as an opportunity" and a moment "rich with opportunities to fundamentally improve how we connect with patrons and bring the service to them." Another respondent remarked, "professionally I love COVID-19 since it dared us to try out things without knowing how it would go. I hope we can keep up this way of working."

## Discussion

This study provides a summary of peer reviewed literature on the use and function of physical library space in specialised health libraries. Our results show that physical library space has a range of uses in health care environments and its necessity is greatest when it provides zones that support technology, collaboration, social gathering, education, wellbeing, and quiet work.

Although management of collections continues to be a core activity in health libraries, no studies focused on the function of physical space to store print collections, while several studies noted the decreasing importance of print materials. This points not only to the general adoption of digital information, but also to a shift away from managing print materials to the current focus in libraries on access and discovery systems that underpin quick and easy access to any resource, from anywhere.

Analysis of survey responses showed that there were changes in access to, and use of, physical spaces during the pandemic in response to local restrictions. These measures included sanitising practices, re-arrangement of zones for social distancing, and limiting patron numbers or density, alongside additional staff supports and an increase in online services for training, reference, research support, guidance, and communication.

We did not find a significant negative effect on library services as a result of the restriction measures. In contrast, many libraries saw COVID-19 as a catalyst for change and responded by moving technology-based initiatives forward. Libraries capitalised on previous change and prioritised what they could do with technology to best support patrons in the new working environment. Additionally, most library spaces continued to function as libraries with varying staff presence and continued access for patrons.

The themes of adaptability and openness to change identified in survey responses mirrored those identified in the literature review, where evidence demonstrated that current use of library space is based on multi-purpose zones that support education and social infrastructure. The risk of library space reductions was highlighted in both the literature review and survey responses with anticipated post-pandemic changes.

To mitigate this risk, health librarians should take a flexible approach to arrangement of their physical spaces, allowing mobile layouts and changeable zones. It is important that every inch of space should be justified by meaning and practical use.

The results of the survey, with around half of responses from Australian libraries and half from international organisations, alongside our review of the international literature, can be generalised to all countries that apply library services in health care, although each country has different health care and education systems.

### Future research

Based on the principle that form should follow function, additional research is needed to clarify the architectural and interior requirements that will best support working patterns and library functions post-COVID-19.

### Conclusion

While the function of library space has evolved over time, the need remains. The literature review and survey we conducted demonstrated an enduring requirement for physical library space in health care environments. Our findings support a call for health services to take into account the importance of library space for health professionals' knowledge, development, education and wellbeing.

While the COVID-19 pandemic has been a worldwide disaster, its role in advancing a technological shift toward online service provision presents an opportunity for lasting change in physical library spaces. We are living in a moment rich with possibilities with the potential to improve how libraries reach their patrons, deliver information services, and interact with organisational partners. The opportunity of this moment is best summed up by a librarian who responded to our survey, as well as the words of one of the world's great writers who also resides in a country among the worst hit by the pandemic:

*There are opportunities everywhere. Lament some losses, but there are some amazing new adventures too. ~ Library survey respondent*

*"... we can walk through lightly,*
*with little luggage,*
*ready to imagine another world.*
*And ready to fight for it."*
*- Arundhati Roy, 'The pandemic is a portal'*

### Acknowledgements

## References

[1] Sneader, K., Singhal, S. (2020). Beyond Coronavirus: the path to the next normal [Online article]. McKinsey & Company - Our Insights, 23 March 2020. https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/beyond-coronavirus-the-path-to-the-next-normal

[2] Baker, M. (2021). 9 future of work trends post-COVID-19 [Online article]. Gartner Insights, 29 April 2021. https://www.gartner.com/smarterwithgartner/9-future-of-work-trends-post-covid-19

[3] Bacevice, P., Mack, J., Tehrani, P., Triebner, M. (2020). Reimagining the urban office [Online article]. Harvard Business Review. 14 August 2020. https://hbr.org/2020/08/reimagining-the-urban-office

[4] Taylor, M.V. (2015). Impressions of an old master: hospital libraries and librarians, 1970–2014. Medical Reference Services Quarterly, 34(1), pp. 104-112. https://doi.org/10.1080/02763869.2015.986797

[5] Caplan, V.F. (2020, September 9). Adaptability & resilience in the face of sudden change: supporting teaching & learning online [Paper presentation]. Virtual Librarian Summit 2020: Library & Technology - Summit Part I, Hong Kong.

[6] Earl, M.F. (2020). Transforming health sciences library spaces [Review of the book Transforming health sciences library spaces, by A. Campbell]. Journal of the Medical Library Association, 108 (1), pp. 153-154. https://doi.org/10.5195/jmla.2020.828

[7] Saragossi, J., Stevens, G.A., Scheinfeld, L. & Koos, J.A. (2020). Leveraging survey results in support of a library renovation: a case study. Medical Reference Services Quarterly, 39(3), pp. 238-253. https://doi.org/10.1080/02763869.2020.1774254

[8] Becker, B.W. (2015). Advances in technology and library space. Behavioral & Social Sciences Librarian, 34(1), pp. 41-44. https://doi.org/10.1080/01639269.2015.996496

[9] Murgatroyd, P. (2020, April 29). At the coalface of the COVID-19 pandemic: the role of the Counties Manukau Health Library. Libraries Aotearoa. https://www.librariesaotearoa.org.nz/korero-blog/at-the-coalface-of-the-covid-19-pandemic-the-role-of-the-counties-manukau-health-library

[10] Gibson, D.S., Hernandez, M. & Draemel, A. (2015). Destination library: validating the importance of physical space. Journal of Hospital Librarianship, 15(3), pp. 251-261. https://doi.org/10.1080/15323269.2015.1049057

[11] Weise, F. (2004). Being there: the library as place. Journal of the Medical Library Association, 92(1), pp. 6-13. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC314099/

[12] Marshall, C. & Epstein, H.A.B. (2019). Unique services available from the hospital library. Journal of Hospital Librarianship, 19(4), pp. 345-349. https://doi.org/10.1080/15323269.2019.1664852

[13] Nadine, D., Joanne, M.M., Elizabeth, R.L., Debra, R., Matthew, E.W. & Bradley, A.L. (2019). Building new twenty-first century medical school libraries from the ground up: challenges, experiences, and lessons learned. Journal of the Medical Library Association, 107, pp. 6-15. https://doi.org/10.5195/jmla.2019.493

[14] Gillum, S. & Williams, N. (2019). Promoting library visibility through creative programing. Medical Reference Services Quarterly, 38(3), pp. 236-251. https://doi.org/10.1080/02763869.2019.1623616

[15] Gerber, A. (2020, March 25). How medical librarians are handling the coronavirus crisis. Library Journal. https://www.libraryjournal.com/?detailStory=how-medical-librarians-are-handling-the-coronavirus-crisis

[16] DeFrain, E. & Hong, M. (2020). Interiors, affect, and use: how does an academic library's learning commons support students' needs? Evidence Based Library and Information Practice, 15(2), pp. 42-69. https://doi.org/10.18438/eblip29677

[17] Nadine, ibid.

[18] Tredwell, S. (2021, April 28). The post-COVID library. Slaw. http://www.slaw.ca/2021/04/28/the-post-covid-library/

[19] Nelson, P. (2003). Current issues in the design of academic health sciences libraries: findings from three recent facility projects. Journal of the Medical Library Association, 91(3), pp. 347-351. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC164398/

[20] Gibson, ibid.

[21] Taylor, ibid.

[22] Britton, R.M. & Robertson, J. (2019). Reference to stacks: getting the most out of library resources. Medical Reference Services Quarterly, 38(2), pp. 156-162. https://doi.org/10.1080/02763869.2019.1589864

[23] Glazier, R. & Spratt, S. (2016). Space case: moving from a physical to a virtual journal collection. The Serials Librarian, 70(1-4), pp. 325-332. https://doi.org/10.1080/0361526X.2016.1157011

[24] Gibson, ibid.

[25] Slaw, ibid.

[26] Dexter, ibid.

[27] DeFrain, ibid.

[28] Dexter, ibid.

[29] Slaw, ibid.

[30] Taylor, ibid.

[31] Nelson, ibid.

[32] Taylor, ibid.

[33] Patterson, B., Casucci, T., Hull, B.E. & Lombardo, N.T. (2018). Library as the technology hub for the health sciences. Medical Reference Services Quarterly, 37(4), pp. 341-356. https://doi.org/10.1080/02763869.2018.1514899

[34] Dexter, ibid.

[35] Gerber, ibid.

[36] Yuvaraj, Global responses of health science librariansto the COVID-19 (Corona virus) pandemic: adesktop analysis

[37] Patterson, ibid.

[38] Saragossi, ibid.

[39] Hillman, C., Blackburn, K., Shamp, K., & Nunez, C. (2017). User-focused, user-led: space assessment to transform a small academic library. Evidence Based Library and Information Practice, 12(4), pp. 41-61. https://doi.org/10.18438/B83X00

[40] Becker, ibid.

[41] Eldermire, E.R.B. (2019). Data-driven space planning: using suma to collect data. Journal of the Medical Library Association. 107(4), pp. 611–612. https://doi.org/10.5195/jmla.2019.757

[42] Nelson, ibid.

[43] Saberi, M.K., Jahangiri, P. & Pazooki, F. (2020). Evaluation of hospital libraries based on the medical library association's (MLA's) standards: a study from Iran. Journal of Hospital Librarianship, 20(3), pp. 217-230. https://doi.org/10.1080/15323269.2020.1778994

[44] Slaw, ibid.

[45] Saragossi, ibid.

[46] Prentice, K.A. & Argyropoulos, E.K. (2018). Library space: assessment and planning through a space utilization study. Medical Reference Services Quarterly, 37(2), pp. 132-141. https://doi.org/10.1080/02763869.2018.1439213

[47] Prentice, ibid.

[48] Gibson, ibid.

[49] Dexter, ibid.

[50] Nelson, ibid.

[51] Dexter, ibid.

[52] Nelson, ibid.

[53] Prentice, ibid.

[54] DeFrain, ibid.

[55] Nelson, ibid.

[56] Dexter, ibid.

[57] McCaffrey, C., & Breen, M. (2016). Quiet in the library: an evidence-based approach to improving the student experience. Libraries and the Academy, 16(4), pp. 775-791. https://doi.org/10.1353/pla.2016.0052

[58] Young, L.M., Machado, C.K. & Clark, S.B. (2015). Repurposing with purpose: creating a collaborative learning space to support institutional interprofessional initiatives. Medical Reference Services Quarterly, 34(4), pp. 441-450. https://doi.org/10.1080/02763869.2015.1082377

[59] Easton, L., Adam, S., Durnan, T. & McLeod, L. (2016). Identifying and classifying user typologies within a United Kingdom hospital library setting: a case study. Evidence Based Library and Information Practice, 11(4), pp. 14-30. https://doi.org/10.18438/B8V33P

[60] Hillman, ibid.
[61] Beck, ibid.
[62] Dexter, ibid.
[63] Young, ibid.
[64] McCaffrey, ibid.
[65] DeFrain, ibid.
[66] Beck, ibid.
[67] Weise, ibid.
[68] Nelson, ibid.
[69] Dexter, ibid.
[70] Hillman, ibid.
[71] Murgatroyd, ibid.
[72] Hillman, ibid.
[73] Dexter, ibid.
[74] Gibson, ibid.
[75] Prentice, ibid.

[76] Steigerwalt, K., Fitterling, L., Harvey, M., McQueeny, S.K., DeGeus, M., Franco, N., Thompson, M., Sykes-Berry, S., Mullaly-Quijas, P. & Thompson, J.A. (2019). Health sciences patron preference for library spaces: a multisite observational study. Medical Reference Services Quarterly, 38(1), pp. 1-21. https://doi.org/10.1080/02763869.2018.1548890

[77] Hillman, ibid.

[78] Steigerwalt, K.E. (2020, August 13). Making space: a quantitative vision for the future of library space planning [Paper presentation]. MLA Conference 2020. https://www.mlanet.org/d/do/18120

[79] Eldermire, ibid.

[80] Prentice, ibid.

[81] DeFrain, ibid.

[82] McCaffrey, ibid.

[83] Hillman, ibid.

[84] Dexter, ibid.

[85] Nelson, ibid.

[86] Caplan, ibid.

[87] Hillman, ibid.

[88] DeFrain, ibid.

# Award winning digital room booking system: big improvements, small budgets

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## Background

The Sydney Children's Hospitals Network (SCHN) Medical Library is physically located at the Children's Hospital at Westmead (CHW). The Medical Library has four group study rooms which are bookable for study purposes. These are very popular with staff and students at CHW and are the only dedicated study spaces available in the hospital. Due to this, there are certain criteria that must be met for booking a room to ensure they are primarily being used for group study and a formal policy called "Library Group Study Rooms – Bookings" is in place. Walk-ins are welcome when rooms are not already in use, however to book a room patrons must be doing some form of study and book for two or more people. During COVID-19 an amendment has been made to the booking policy to allow individuals to book if they are engaged in online training (e.g. a Zoom session).

## The Problem

The original Library booking system was a time-consuming two-step process using both Outlook and a separate room booking form. Patrons were required to complete an online booking form which was then manually processed by Library staff who would have to add the booking to Outlook, notify the patron of which room had been booked and print out an updated copy of that room's Outlook calendar to display inside the room. On top of this, many patrons were unaware of the booking form which led to Library staff having to take additional time to complete it on their behalf.

This booking system was highly inefficient for a number of reasons. Firstly, patrons were unable to directly book rooms themselves, leading to high levels of administration by Library staff. Secondly, although the Library is a 24/7 space that staff can swipe in and use, bookings could really only be made when staff were onsite during normal office hours. Thirdly, printing out daily calendars led to a lot of paper waste, particularly as this paper had to be replaced every time a new booking was made that day. This also meant that staff regularly had to disturb patrons by going into the study rooms to replace the calendar printout. Lastly, the booking form was only available via the SCHN intranet, meaning that staff and medical students off-site or without easy access to a work computer were unable complete the form for themselves.

## A solution

Our proposed solution saw the HLA/Medical Director Digital Health Innovation Award 2021 awarded to us for "A Digital Room Booking System".

The Medical Library has been using the Springshare LibApps platform since 2016 when we purchased LibGuides. Since then we have purchased a number of modules including LibCal, LibWizard and LibAnswers. We were already using LibCal as a way of booking appointments with library staff, however the LibCal module also allows staff to set up "spaces" which can be booked either as a whole or with designated seats in a space. LibCal is highly responsive and allows for a number of customisations including how calendars are displayed, confirmation, reminder and follow-up emails to patrons, booking forms, and many specific settings such as maximum booking lengths, room check-ins and more.

We were able to secure funding to purchase tablets to be displayed outside each room to replace the Outlook calendar printouts, meaning that patrons would be able to easily see availability when outside rooms and book directly from the tablet.

The perceived benefits of transitioning to a LibCal room booking system were:
• Less time spent by Library staff confirming, making and organising room bookings.
• An integrated booking system with the booking form and calendar all in one.
• A more environmentally friendly booking system which doesn't rely on paper printouts.
• Users would be able to book rooms from anywhere without needing to access the hospital intranet.
• Users would be able to check which rooms are available without having to contact the Library.
• If users were a "no-show", rooms would automatically revert back to being available, providing greater access, particularly after hours.

## Implementation

Due to COVID-19, all room bookings had been suspended and rooms were available on a first-come-first-served basis, which made it easier to trial the new booking system in one room initially without having to use two systems at once. A tablet was installed outside Room 1 with the room calendar displayed. The Fully Kiosk Browser app was used to display the LibCal site as this enables for the calendar to be refreshed regularly, which means the calendar outside the room remains up to date and the tablet screen stays on at all times. A sign was put up outside the room with information about the booking system and a QR code to check in, however this proved to be confusing for patrons as most people thought the code was used to make bookings.

Fig. 1: Using tablet to make a booking

During this trial phase feedback was sought from patrons and there were several issues with the tablet which required troubleshooting, such as slow charging and a flat battery. Amazing how an original charger could fix this problem. After a three week trial period these issues were resolved and we felt confident in moving forward to the next phase, which involved installing the other tablets and making all rooms bookable. During this phase new posters were designed with simplified information. QR codes for checking into rooms were placed on the wall above the tablets and on the table inside group study rooms.
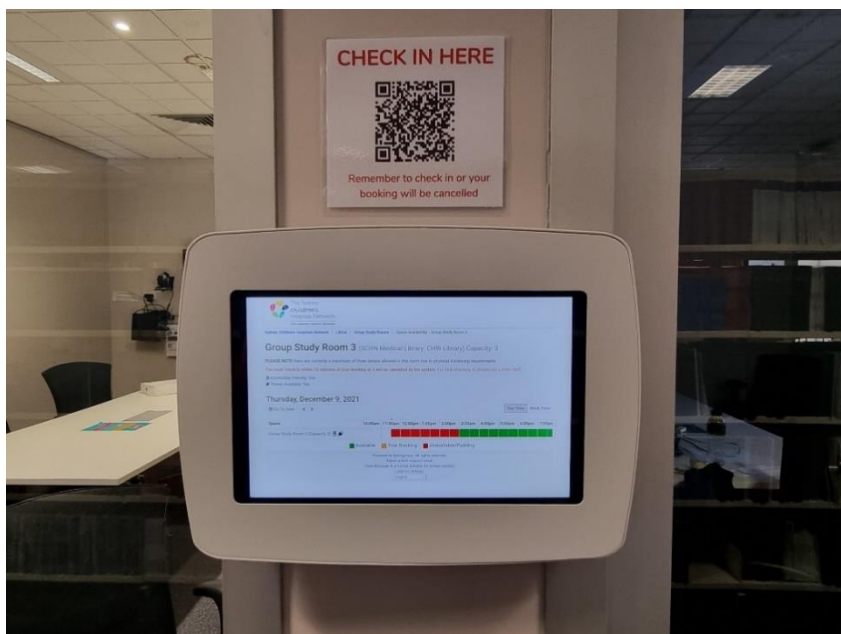


Fig. 2: Tablet with calendar display and QR code to check in.

Fig. 3: Library Group Study Rooms and tablets.

## Lessons learned and future directions

•       Uptake on the booking system has been excellent so far considering that there are fewer patrons on-site at the moment and we haven't yet officially commenced promoting the booking system across the hospital. We anticipate a full launch and roll-out will commence early in the New Year with education and training provided to hospital staff, as well as providing the URL for them to book from their computers, home or via their phones.

•       One ongoing challenge that has been identified is the failure of many patrons to check in, resulting in their bookings being cancelled by the system. In times of high use this may prove to be an issue if patrons think their booking is secure and other users book as the system shows the room as available. We have several strategies we can implement to address this and will trial them going forward to see which is the most effective. These include adding red bold text at multiple points on the booking form, placing the QR code to check in into multiple places, sending a reminder email two hours before bookings with a reminder to check in, and having Library staff monitor bookings and manually sign in patrons and/or remind patrons to check in before the booking is cancelled.

•       We have also had some issues with tablets restarting or Fully Kiosk Browser closing and are continuing to troubleshoot this as we go. Altering settings such as stopping automatic updates has helped to resolve most problems, and we recognise that there will always be some technical difficulties that arise.

• A feedback form is currently emailed out to all patrons one hour post-booking, which we will continue to monitor to gauge user satisfaction and identify other areas of improvement. Feedback received so far has been very positive.

• The next step for the project is to install a large touch screen which will display the availability of all rooms at once. We are also investigating the addition of the interactive mapping module in LibCal, which will allow us to display the group study rooms in a map format. This will enable us to highlight other points of interest in the library such as printers and page phone, but the biggest advantage is that patrons will be able to put in their booking requirements such as date and time, and available rooms will show up as green areas on the map. Rooms can then be directly booked from the map, with the same booking form as the calendar page. This means that patrons who are unfamiliar with the Library will be able to see which room they have booked on the map. Our prize money from the HLA/Medical Director Digital Health Innovation Award will enable this to happen.

• We are investigating extending the room booking system to the rest of the Education department, who would then also benefit from the interactive mapping module.

• Using LibCal and tablets has proven to be cheap, effective way to modernise our room booking system and improve patron services while also saving Library staff significant time.

# Article processing charges and fully open access journals: National Health and Medical Research Council funded articles

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Noreen Kirkman graduated with a Master of Philosophy from Curtin University in 2020, the topic of her thesis covering compliance under the National Health and Medical Research Council's Open Access Policy.

## Abstract

*Introduction*: The National Health and Medical Research Council, Australia's largest medical research funder, mandates open access for journal articles published from funded research. Publishing articles in fully open access journals is an acceptable route to achieve compliance. However, the total cost of article processing charges and the extent to which Council funds contribute to payment are unknown.

*Objectives*: The main objectives of this study were to calculate the cost of article processing charges and determine the extent of acknowledgement of payment for Council-funded articles published in fully open access journals during 2019.

*Methods*: The funding acknowledgement fields of Web of Science provided the list of Council-funded articles. The Directory of Open Access Journals identified fully open access journal titles and their article processing charges. Data analysis involved bibliometric research methods, principally descriptive statistics.

*Results*: The cost of article processing charges for 2,261 articles published in 2019 was over US$5,000,000. Charges ranged from zero to US$5,200, with the median being US$1,900. The acknowledgement of payment of article processing charges was extremely low (1.72%).

*Discussion*: The insufficient acknowledgement of the considerable expenditure on article processing charges is concerning. The "Australian Code for the Responsible Conduct of Research" underscores the principles of transparency in declaring interests. Required is greater disclosure of expenditure on article processing charges and accountability for public-funded research.

*Conclusion*: The disclosure of article processing charge payments should be mandated by the Council and included in the publication metadata deposited in repositories under the National Health and Medical Research Council's Open Access Policy. Acknowledgements and disclosures are essential in recognising professional contributions and ensuring the responsible conduct of research.

## Introduction

The National Health and Medical Research Council (NHMRC) is an Australian Government agency responsible for coordinating health and medical research funding. Expenditure on over 612 grants under the 2021 NHMRC Grant Application Round amounted to A$913 million (NHMRC, 2021, November 10). The Council promotes ethical conduct and integrity in research through the "Australian Code for the Responsible Conduct of Research". The Council also recognises the importance of providing access to publicly funded research through the NHMRC Open Access (OA) Policy (NHMRC, 2018b; NHMRC, 2020, April). The policy requires peer-reviewed journal articles and conference papers resulting from the Council's funding to be OA within 12 months of publication. Compliance with the NHMRC Policy is achievable by publishing OA articles in journals in hybrid subscription, delayed access, and fully OA journals. For authors of non-OA articles, the deposit of accepted manuscripts in repositories (known as green OA) is an accepted route.

This study focuses on NHMRC-funded articles published in fully OA journals, also known as gold OA. The source for the identification of fully OA journals is the Directory of Open Access Journals (DOAJ) (https://doaj.org). All journal titles are freely and immediately OA accessible under open licences. Although many fully OA journals do not charge fees (Morrison, 2018; Morrison et al., 2021; Morrison et al., 2015; Solomon & Björk, 2012), Crawford (2020, 2021) found that two-thirds of articles in fully OA journals had article processing charges (APCs). The cost of APCs is a crucial consideration for authors in deciding whether to publish OA.

The average APC for publishing in a fully OA journal was US$1,023 in 2019 but increased to US$1,203 in 2020 (Crawford, 2020, 2021). APC-based OA is one of the characteristics of mega-journals, along with large volume, broad scope, and soundness-based peer review (Björk, 2015). Many mega-journals have competitive APCs to achieve economic market share: for example, the charge for Nature's *Scientific Reports* is marginally lower than for *PLOS ONE* (Alencar & Barbosa, 2021; Khoo, 2019). Some publishers have re-submission policies for manuscripts submitted to selective titles that default to broad scope journals. BMJ's policy identifies *BMJ Open* as the journal for the automatic reconsideration of re-submitted articles (Björk, 2015). BMC has a similar policy associated with its subject-specific titles (Spezi et al., 2017).

Some journals converted from the subscription model have low APCs, as in the case of Wolters Kluwer's *Medicine* (2017). However, Khoo (2019), Crawford (2016, 2020), Shi and Morrison (2020) identified the steady increase in the cost of APCs to publish in journal titles published by BioMed Central (BMC), Frontiers Media, Multidisciplinary Digital Publishing Institute (MDPI), and Hindawi. The entry of subscription journal publishers into fully OA journal publishing has also been of concern (Morrison, 2017; Solomon & Björk, 2016), including Holtzbrinck Publishing Group's acquisition of Springer and BMC (Shi & Morrison, 2020).

BMC was among the first commercial OA publishers and one of the earliest publishers to introduce a membership program providing APC discounts (BioMed Central, 2019, February 17). MDPI's Institutional Open Access Program also facilitates APC discounts for articles published in MDPI journals (Korolev, 2020; MDPI, 2018, December 23), with Frontiers Media offering discounts under institutional memberships (Frontiers, 2019, January 27). Some journal publishers offer waivers for authors of identified countries, while others provide discounts to member institutions. While lower APCs are incentives, Vervoort et al. (2021) warned that discount programs influence authors' decision-making.

Some funders in medicine and health allow grants or additional funding to pay for APCs (Solomon & Björk, 2012; Wang et al., 2015). However, research funding in some clinical fields, such as primary care and public health, is often inadequate to cover the cost (Ellingson et al., 2021; Nicholas et al., 2017; Solomon & Björk, 2012; Wang et al., 2015). Grants sometimes favour experienced researchers over early-career or junior researchers (Nicholas et al., 2017). Ellingson et al. (2021) identified differences between researchers in clinical medicine. General researchers published more in fully OA journals with no or lower APCs, while high-impact authors paid higher APCs and published to a greater extent in hybrid subscription journals (Ellingson et al., 2021).

Funder OA policies contributed to growth in OA but not all provide clear advice on APCs. The Wellcome Trust was one of the first funders to mandate OA (Pinfield, 2015; Pinfield et al., 2017) and accommodates reasonable APCs for grant-holders to publish in fully OA journals (Wellcome Trust, 2021). In cases involving multiple funders, the Trust recommends splitting costs relative to funders' contributions. Under the United Kingdom Research and Research OA Policy (UK Research and Innovation, 2021), OA block grants available through research councils provide assistance to pay for APCs to publish in fully OA journals (UK Research and Innovation, 2021, August 31). However, some funding agencies do not fund APCs (Earney, 2017).

According to the NHMRC Direct Research Costs Guidelines, grants cover research, not publication costs, although funds may become available over the project's lifetime (NHMRC, 2017, 2019). The Council OA Policy mandates the

acknowledgement of NHMRC funding in publication metadata but does not specify the disclosure of APC payments (NHMRC, 2020, April). Previous research found that 20.85% of Council-funded articles published during 2013-2014 were in fully OA journals (Kirkman, 2018; Kirkman & Haddow, 2020).

Many NHMRC grant recipients are also members of universities, research institutes and hospitals, and may have access to institutional funds or membership discounts for APCs. However, the Council of Australian University Librarians (CAUL) and the Council of New Zealand University Librarians (CONZUL) identified the lack of information at the institutional level about APC payments (Cramond et al., 2019). CAUL's (2018) submission to the Australian Government's Inquiry into Funding Australia's Research Response questioned the contribution of Australian funders with OA policies, such as the NHMRC, to the payment of APCs.

The literature revealed the gap in information about the total costs of APCs despite funders mandating OA. Australia's largest funder, the NHMRC, has an OA Policy but the Council's contribution to APC payment is unknown. This study investigated the cost of APCs to publish Council-funded articles in fully OA journals and the extent to which the Council contributed to APC payments for OA mandated by the Council's policy.

## Objectives and Research Questions

The initial objectives were to determine the extent to which fully OA journals in this study had APCs and calculate the cost. Further objectives aimed to identify the APCs of core journal titles and uncover the degree of disclosure of APC payments. The following research questions guided the research. Of articles entirely and partially funded by the NHMRC and published in fully OA journals during 2019:

- What were the number and proportion of articles and journal titles with APCs?
- What were the total, range, and median costs of the APCs?
- What were the core journal titles, subject focus, and publishers?
- What was the extent of APC acknowledgement?

## Methods

Centralised collections proved useful in international studies, but the lack of central management of APC data in Australia made similar investigations difficult (Pieper & Broschinski, 2018; Shamash, 2016, October 26; Wakeling et al., 2021; Woodward et al., 2014). Relevant to this investigation were studies into the APCs of fully OA journals using data provided by the DOAJ (Crawford, 2016, 2018, 2020, 2021; Ellingson et al., 2021; Khoo, 2019; Wang et al., 2015). Other studies into APCs gathered data from journal websites (Ellingson et al., 2021) or through Unpaywall (https://unpaywall.org ) (Cramond et al., 2019).

For this study, Web of Science (WoS) was the source of NHMRC-funded articles: the search strategy combining the funding acknowledgement information for variations

of "National Health and Medical Research Council" and the publication year 2019. The search output downloaded to Microsoft Excel in early 2020 formed the master spreadsheet, with all articles verified as receiving funding from the NHMRC. The DOAJ identified the required journal titles: a separate spreadsheet of articles in fully OA journals created for data collection and analysis. The dataset included the funding acknowledgement and Web of Science Category (WC) fields, the latter mapped to the Australian and New Zealand Standard Research Classification (ANZSRC) fields of research (FoR) as used by the NHMRC bibliometric report (NHMRC, 2018a).

The download of APC information on a specific date (1 May 2020) was necessary to ensure consistency. As most APCs were in United States dollars (US$), the standardisation to this currency enabled analysis. Amounts were those derived from direct conversion with rounding not used. Publishers' websites from late December 2018 and early 2019 were the sources for data on membership programs offering APC discounts.

Bibliometric analysis used descriptive statistics to analyse APC and other data relating to the articles and journal titles. The tallying of data enabled the calculation of the total cost of APCs, the mean (average), and the median (middle) APC. While the average APC is suitable for a normal distribution, the median APC is less likely to skew results for long-tail distributions with very high and low APCs. Data analysis included the examination of the funding acknowledgement fields for disclosures of APC payment. The categorisation of articles into fully NHMRC-funded and those with multiple funders enabled further analysis of the distribution of APC payments.

## Results
### Articles and journal titles with article processing charges
The number of NHMRC-funded articles published in full OA journals in 2019 was 2,261 (representing 29.9% of 7,562 articles supported by the Council in that year) and published in 331 journal titles. Table 1 presents the actual numbers of journal titles and articles with or without APCs. The results demonstrated that over 98% of articles were APC funded OA. Over 95% of the journals had APCs, with article volumes varying from journal to journal.

*Table 1: Articles and Journal Titles with Article Processing Charges*

| Category | Articles (n) | Articles (%) | Journal Titles (n) | Journal Titles (%) |
|----------|-------------|-------------|-------------------|-------------------|
| With APC | 2,222 | 98.28 | 315 | 95.17 |
| No APC | 39 | 1.72 | 16 | 4.83 |
| Totals | 2,261 | 100.00 | 331 | 100.00 |

## Total, range, and median costs of article processing charges

The total cost of the APCs was US$5,047,064.40. Of the article dataset, 39 had no charges, while 2,222 (over 98%) of articles had APCs ranging from US$271.80 to US$5,200. The average APC was US$2,232.23. The median was US$1,900. For a graphical representation of the range of APCs, see Figure 1.
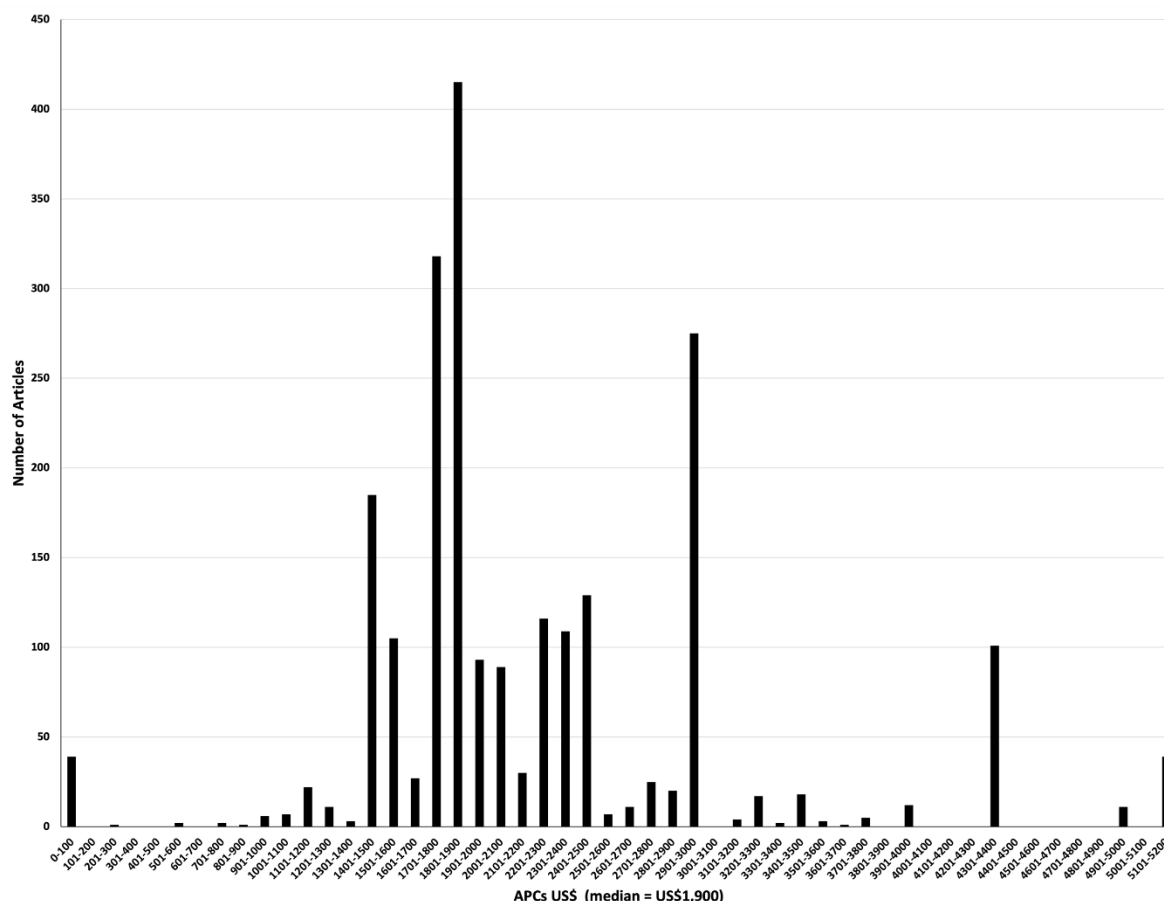


*Figure 1: Range of Article Processing Charges for Articles in Fully Open Access Journals*

## Journals, fields of research, and publishers

Table 2 provides data for those titles with 20 or more articles: the number of journal titles precluded the tabulation of all journals. Journal titles with below-median APCs included *BMJ Open* (US$1,875), *Scientific Reports* (US$1,456.25) and *PLOS One* (US$1,595). Charges for publishing in most BMC journals were also below the median APC. Straddling the middle ground between the median and average APCs were four journals published by MDPI, the range being US$1,855 and US$2,268. The APC (US$2,950) for publishing in *Frontiers in Immunology* was above the average, with *Nature Communications* (US$4,362.50) and *Cell Reports* (US$5,200) having the highest charges, the former being the third most favoured journal in which authors published.

ANZSRC fields revealed the subject areas in which NHMRC grant recipients published. Journals with APCs below the median were mainly in the multidisciplinary

sciences and public health and health services. While there were above-median APCs for some journals within clinical sciences, this field included over 20 specialist sub-fields. Higher APCs were evident among journals within the fields of immunology and neurosciences. *Cell Reports* charged the highest APC within biochemistry and cell biology and this study.

*Table 2: Journals, Article Processing Charges, Publishers, and Fields of Research*

| Journal Titles | Articles (n) | APC US$ | Publisher | ANZSRC Fields of Research (*Non-standard) |
|---|---|---|---|---|
| *BMJ Open* | 194 | 1,875.00 | BMJ | General Medical and Health Sciences* |
| *Scientific Reports* | 147 | 1,456.25 | Nature | Multidisciplinary Sciences* |
| *Nature Communications* | 101 | 4,362.50 | Nature | Multidisciplinary Sciences* |
| *PLOS ONE* | 95 | 1,595.00 | PLOS | Multidisciplinary Sciences* |
| *Frontiers in Immunology* | 76 | 2,950.00 | Frontiers | Immunology |
| *International Journal of Environmental Research and Public Health* | 57 | 2,371.13 | MDPI | Public Health and Health Services |
| *Nutrients* | 49 | 2,061.86 | MDPI | Nutrition and Dietetics |
| *International Journal of Molecular Sciences* | 48 | 1,855.67 | MDPI | Biochemistry and Cell Biology |
| *BMC Public Health* | 46 | 1,712.50 | BMC | Public Health and Health Services |
| *Cell Reports* | 39 | 5,200.00 | Elsevier/Cell | Biochemistry and Cell Biology |
| *BMC Health Services Research* | 26 | 1,712.50 | BMC | Public Health and Health Services |
| *Frontiers in Neuroscience* | 25 | 2,950.00 | Frontiers | Neurosciences |
| *eLife* | 24 | 2,500.00 | eLife Sciences | General Biological Sciences* |
| *Frontiers in Psychiatry* | 23 | 1,900.00 | Frontiers | Clinical Sciences |
| *Journal of Medical Internet Research* | 22 | 2,500.00 | JMIR | Public Health and Health Services |
| *PLOS Neglected Tropical Diseases* | 21 | 2,250.00 | PLOS | Clinical Sciences |
| *Journal of Clinical Medicine* | 20 | 2,268.04 | MDPI | General Medical and Health Sciences* |
| *Journal of the American Heart Association: Cardiovascular and Cerebrovascular Disease* | 20 | 2,000.00 | Wiley for American Heart Association | Cardiovascular Medicine and Haematology |

Presented in Table 3 are the results of the analysis of publishers with journals with four or more articles with data for publishers of journal titles with fewer articles or no APCs aggregated to facilitate tabulation. Publishers of journals with no APCs, including the Royal Society of Chemistry and the National Institute of Environmental Health Sciences, published 39 articles in 16 journals.

Eight publishers (Frontiers, BMC, Nature Publishing Group, MDPI, Elsevier, the BMJ Publishing Group, PLOS, and Wiley) published over 85% of articles in journals with APCs and amounting to over US$4,000,000. The average cost of APCs for the eight publishers was US$2,275: an amount higher than the average and median APC for articles in fully OA journals.

BMC, MDPI and Frontiers published 46.13% of the articles, their discount agreements probably contributing to the high level of publishing in their journals. Archived publishers' websites, dating from late 2018 and early 2019, provided data on the number of Australian institutions in membership programs. MDPI's (2018, December 23) program involved 16 institutions: ten universities and six organisations, including the Australasian College of Tropical Medicine. All associations/organisations had discounts between 15 and 25%, while most universities agreed to 10%. BMC (2019, February 17) had memberships with 13 Australian universities and the Royal North Shore Hospital Department of Radiation Oncology. In January 2019, one Australian university had a membership agreement with Frontiers (2019, January 27).

*Table 3: Article Processing Charges by Publishers*

| Articles (n) | Journals (n) | APC (US$) | Publisher |
|---|---|---|---|
| 442 | 90 | 803,161.14 | BMC |
| 309 | 29 | 819,430.00 | Frontiers Media |
| 292 | 38 | 577,216.51 | MDPI |
| 286 | 15 | 767,019.57 | Nature Publishing Group |
| 203 | 3 | 394,500.00 | BMJ Publishing Group |
| 164 | 7 | 317,825.00 | Public Library of Science |
| 116 | 22 | 437,911.91 | Elsevier |
| 115 | 25 | 266,752.87 | Wiley |
| 32 | 3 | 83,550.00 | American Society for Microbiology |
| 32 | 7 | 75,831.25 | Oxford University Press |
| 32 | 3 | 72,800.00 | JMIR Publications |
| 24 | 1 | 60,000.00 | eLife Sciences Publications Ltd |
| 18 | 1 | 54,000.00 | JAMA Network |
| 17 | 11 | 31,950.00 | SAGE Publishing |
| 17 | 3 | 31,450.00 | Association for Research in Vision and Ophthalmology |
| 13 | 7 | 28,622.00 | Dove Medical Press |
| 13 | 7 | 25,390.00 | Hindawi Limited |
| 12 | 1 | 48,000.00 | American Association for the Advancement of Science |
| 12 | 8 | 24,593.48 | Taylor & Francis Group |
| 10 | 1 | 11,950.00 | PeerJ Inc. |
| 9 | 1 | 16,875.00 | Microbiology Society |
| 6 | 4 | 12,895.00 | Wolters Kluwer |
| 6 | 2 | 9,477.12 | Ivyspring International Publisher |

| Articles (n) | Journals (n) | APC (US$) | Publisher |
|---|---|---|---|
| 4 | 1 | 12,000.00 | Life Science Alliance |
| 4 | 1 | 11,700.00 | Society for Neuroscience |
| 34 | 24 | 52,163.55 | Publishers of journals with APCs (3 or less articles) |
| 39 | 16 | 0.00 | Publishers with no APCs |
| 2261 | 331 | 5,047,064.40 | |

## Acknowledgement of article processing charges

Acknowledgement statements are also sources of funding. However, only 25 articles (just over 1%) in this study disclosed APC payments. Of these articles, five acknowledged the NHMRC; one recognised the joint payment by the Council, the University of Newcastle, and the ARC; and another involved the NHMRC and the Walter and Eliza Hall Institute (WEHI). The ARC supported three APCs; WEHI financed another two, as did the Victor Chang Cardiac Research Institute. Australian and international universities and overseas research institutes funded the remainder of APC payments.

Owing to the low level of acknowledgements of APC payments, further categorisation summarised the cost of APCs by groups of funders (see Table 4). International funders with NHMRC grants funded almost one-third of the publications. More than two-thirds of the articles had financial support from funder collaborations between the Council and other Australian and New Zealand funders and a small number of scholarship-holders. While the relative contributions are unknown, the APC expenditure for journal articles funded by Australian funders was in the vicinity of over US$3,000,000.

The NHMRC was the only research funder for 430 articles (19%), three having no APC. Of the 427 articles with APCs, the total cost amounted to almost US$900,000, with an APC range of US$271.74 to US$5,200. The average APC was US$2,088. The median APC for the sub-set of NHMRC-only funded articles was US$1,875, comparable to the median APC of US$1,900 in the study.

*Table 4: Council-funded Articles by Funder Collaborations*

| Funder Collaboration | APCs (US$) | Articles (n) | Articles (%) | APC Cited (n) | APC (US$) |
|---|---|---|---|---|---|
| No other funder | 891,581.43 | 430 | 19.02 | 5 | 12,034.29 |
| ARC | 233,882.08 | 99 | 4.38 | 3 | 7,176.25 |
| Scholarships | 231,291.86 | 114 | 5.04 | 0 | 0.00 |
| Australian & NZ (including commercial) | 1,887,977.78 | 879 | 38.88 | 10 | 22,398.11 |
| International (including commercial) | 1,802,331.25 | 739 | 32.68 | 7 | 18,060.00 |
| Totals | 5,047,064.40 | 2,261 | 100.00 | 25 | 59,668.65 |

NHMRC-only funded articles provided an opportunity for further analysis using ANZSRC fields matched to APCs: the results are presented in Table 5. The area of public health and health services encompassed the broadest range of APCs from just over US$800 to US$5,000: the latter charge was for articles in *Lancet Global Health* and *Lancet Public Health*. A similar pattern existed for articles in biochemistry and cell biology journals, which included the highest APC in this study (US$5,200) for *Cell Reports*. The field of multidisciplinary sciences encompassed many journal titles with below-median APCs (such as *Scientific Reports* and *PLOS ONE*) and *Nature Communications* with one of the highest APCs in the investigation.

*Table 5: Council-Only Funded Articles (n=430): Fields of Research and Article Processing Charges*

| Articles (n) | ANZSRC Fields of Research (*Non-standard) | Lowest APC (US$) | Highest APC (US$) |
|---|---|---|---|
| 79 | General Medical and Health Sciences* | 1,875.00 | 3,500.00 |
| 61 | Public Health and Health Services | 815.22 | 5,000.00 |
| 60 | Clinical Sciences | 0.00 | 3,300.00 |
| 50 | Multidisciplinary Sciences* | 1,195.00 | 4,362.50 |
| 40 | Biochemistry and Cell Biology | 1,237.11 | 5,200.00 |
| 30 | Immunology | 0.00 | 3,000.00 |
| 18 | Nutrition and Dietetics | 1,787.50 | 2,062.50 |
| 15 | Microbiology | 1,855.67 | 3,300.00 |
| 12 | Neurosciences | 1,750.00 | 3,000.00 |
| 11 | General Biological Sciences* | 1,546.39 | 2,500.00 |
| 8 | Pharmacology and Pharmaceutical Sciences | 1,649.48 | 2,950.00 |
| 6 | Cardiovascular Medicine and Haematology | 1,712.50 | 2,000.00 |
| 6 | Genetics | 1,875.00 | 3,200.00 |
| 6 | Oncology and Carcinogenesis | 1,712.50 | 2,430.00 |
| 6 | Optometry and Ophthalmology | 1,850.00 | 1,850.00 |
| 6 | Other Medical and Health Sciences | 1,712.50 | 1,712.50 |
| 6 | Paediatrics and Reproductive Medicine | 1,030.93 | 2,490.00 |
| 4 | Medical Physiology | 2,950.00 | 2,950.00 |
| 2 | Biomedical Engineering | 1,855.67 | 1,855.67 |
| 2 | Human Movement and Sports Science | 271.74 | 1,739.13 |
| 1 | Dentistry | 1,712.50 | 1,712.50 |
| 1 | Medical Biochemistry and Metabolomics | 1,900.00 | 1,900.00 |

## Discussion

The percentage of Council-funded articles published in fully OA journals in 2019 was 29.9%, a noteworthy increase compared to 20.85% recorded in a previous study on compliance with the NHMRC OA Policy (Kirkman, 2018; Kirkman & Haddow, 2020). Most journals had APCs, a high percentage (98%) of articles involved APC payment. The finding contrasts with extensive literature arguing that most fully OA journals

have no or negligible cost (Morrison, 2018; Morrison et al., 2021; Morrison et al., 2015; Solomon & Björk, 2012). In addition, the total expenditure on APCs was massive: over US$5,000,000 for a single year. Although APC discounts likely reduced this total, data collected from publishers' websites showed that universities and research centres did not universally embrace concessional membership programs.

Mega-journals were responsible for driving much of the growth in full OA. Many mega-journals had below-median APCs, high acceptance rates, and broad subject scope (Björk, 2018; Siler et al., 2020; Spezi et al., 2017; Wakeling et al., 2016). Nature's *Scientific Reports* directly competed with *PLOS ONE*: journals with multidisciplinary coverage and below-median APCs. The slightly lower APC of *Scientific Reports* probably contributed to the higher level of Council-funded articles during 2019 compared to *PLOS ONE* that was more popular among NHMRC grant recipients during 2013 and 2014 (Kirkman, 2018; Kirkman & Haddow, 2020).

Fully OA journals in medicine and health also contributed to the increase in full OA, with more Council-funded articles during 2019 in *BMJ Open* than *PLOS ONE* (Kirkman, 2018; Kirkman & Haddow, 2020). The popularity of *BMJ Open* among NHMRC grant recipients was primarily due to its relatively low APC and medical focus, but also due to BMJ's practice of automatic consideration of re-submitted articles in that journal (Björk, 2015). BMC, with its suite of journal titles with below-median APCs, also has a re-submission policy redirecting authors to other journals by the publisher (Spezi et al., 2017). However, the public health specialty of *BMC Public Health* and *BMC Health Services Research* was probably the chief factor for the relatively high publishing rates in these journal titles.

Despite many journals in this study having median or below-median APCs, journals with some subject specialisation tended to have above-median APCs. BMC, Frontiers Media and MDPI were the publishers of almost half of the journals in which Council-funded authors published (see Table 3) and included journal titles covering specialist subjects, such as BMC's *Breast Cancer Research*, *Frontiers in Immunology*, and MDPI's *Nutrients*. Khoo (2019), Crawford (2016, 2020), Shi and Morrison (2020) identified these publishers as responsible for the steady increase in the cost of APCs.

However, the highest APCs (between US$4,362.50 and US$5,200) were for reputable journals within public health and health sciences, biochemistry and cell biology, and the multidisciplinary sciences. The extensive global reach and impact of journals such as *Nature Communications*, the *Lancet Global Health*, the *Lancet Public Health*, and *Cell Reports* undoubtedly influenced many authors' decision-making to publish in these titles. Still, the capacity to pay higher APCs was also a major contributing factor. This finding confirmed Khoo's (2019) argument that high APCs are not obstacles for some authors.

The analysis by grant collaborations (see Table 4) found that one-third involved international funding agencies and organisations, some with policies supporting the payments of moderate APCs to publish in fully OA journals such as the Wellcome Trust (Wellcome Trust, 2021). Two-thirds of the articles obtained research funding from the NHMRC in partnership with Australian funders and a small number of New Zealand funding agencies and scholarship-holders, with an APC of over US$3,000,000. Yet very few articles (just over 1%) included disclosures of the source of APC payments, and fewer still acknowledged the Council as contributing to the cost.

The "Australian Code for the Responsible Conduct of Research" outlines the principles of responsible research conduct, including transparency in declaring interests to avoid conflict of interest and accountability in using public resources (NHMRC et al., 2018). According to *Disclosure of Interests and Management of Conflicts of Interest*, direct and indirect payments and publishing research require disclosure (NHMRC et al., 2019). The acknowledgement of APC payments should be a requirement in the publication metadata deposited in repositories as required under the Council's OA Policy.

The NHMRC mandates OA, but APC cost is a barrier to many authors' decisions to publish OA. In mandating OA, the NHMRC needs to have a clear statement on the payment of APCs to ensure greater compliance with its policy and ensure access to publicly funded research by the wider community and researchers. Reporting APC payments should be an essential part of publication acknowledgements and responsible conduct of research.

### Limitations

The author acknowledges the limitations of Web of Science and recognises that other databases, such as Scopus, have funding acknowledgement fields with additional or different data. While the rationale for standardising APCs was to enable analysis, currency conversion based on daily exchange rates has inherent limitations. Time constraints precluded the systematic searching of acknowledgements in the publication metadata of repositories for information on APC payments. Time also prevented an in-depth investigation of publishers' APC discount programs and waiver policies.

### Recommendations for Further Research

More comparative research into APCs is crucial for a greater understanding of the issues of OA, including authors' capacity to pay and the contribution of funders with OA mandates to support APC payment. Further investigations need to encompass APC disclosure within the context of codes of ethical research, and the use of grants to review. Additional studies are also necessary to assess the effect of transformative agreements on funders' assistance for APCs in fully OA journals (Borrego et al., 2020).

## Conclusion

The benefits of publishing in fully OA journals include free, immediate, and unrestricted access to research by the wider community and researchers. However, the cost of APCs is a critical consideration in authors' decision-making to publish OA. In mandating OA, the Council needs to have a clear policy on the payment of APCs to ensure access to publicly funded research and greater compliance under the NHMRC OA Policy.

The "Australian Code for the Responsible Conduct of Research" outlines the principles of responsible research which include transparency and accountability for public resources. The disclosure of APC payments should be a requirement in the publication metadata deposited in repositories as required under the Council's OA Policy. Acknowledgements and disclosures are essential in recognising professional contributions, transparency, and accountability in the responsible conduct of research, especially in medicine and health.

## References

Alencar, B. N., & Barbosa, M. C. (2021). Open access publications with article processing charge (APC) payment: A Brazilian scenario analysis. *Anais da Academia Brasileira de Ciências, 93*(4), e20201984. https://doi.org/10.1590/0001-3765202120201984

BioMed Central. (2019, February 17). *Membership*. https://web.archive.org/web/20190217143024/https://www.biomedcentral.com/about/institutional-support/membership

Björk, B.-C. (2015). Have the "mega-journals" reached the limits to growth? *PeerJ 3*(e981). https://doi.org/10.7717/peerj.981

Björk, B.-C. (2018). Publishing speed and acceptance rates of open access megajournals. *Online Information Review, 45*(2), 270-277. https://doi.org/10.1108/OIR-04-2018-0151

Borrego, Á., Anglada, L., & Abadal, E. (2020). Transformative agreements: Do they pave the way to open access? *Learned Publishing, 32*(2), 216-232. https://doi.org/10.1002/leap.1347

Council of Australian University Librarians. (2018). *Inquiry into Funding Australia's Research response*. CAUL. https://web.archive.org/web/20210328162228/https://www.caul.edu.au/sites/default/files/documents/gov-inqu/research-funding2018response.pdf

Cramond, S., Barnes, C., Lafferty, S., Barbour, V., Booth, D., Brown, K., Costello, D., Croker, K., O'Connor, R., Rolf, H., Ruthven, T., & Scholfield, S. (2019). *Fair, affordable and open access to knowledge: The CAUL Collection and Reporting of APC Information Project.* Shifting sands and rising tides: Leading libraries through innovation: 40th IATUL Conference, 23–27 June 2019, Perth, Western Australia. https://docs.lib.purdue.edu/iatul/2019/fair/2/

Crawford, W. (2016). *The gold OA landscape 2011–2014*. Cites & Insights Books.

Crawford, W. (2018). *Gold open access journals 2012-2017 (GOAJ3)*. https://figshare.com/articles/dataset/Gold_Open_Access_Journals_2012-2017_GOAJ3_/6429362/1

Crawford, W. (2020). *Gold open access 2014-2019: articles in journals (GOA5)*. Cites & Insights Books. https://waltcrawford.name/goa5.pdf

Crawford, W. (2021). *Gold open access 2015-2020: articles in journals (GOA6)*. Cites & Insights Books. https://waltcrawford.name/goa6.pdf

Earney, L. (2017). Offsetting and its discontents: Challenges and opportunities of open access offsetting agreements. *Insights, 30*(1). http://doi.org/10.1629/uksg.345

Ellingson, M. K., Shi, X., Skydel, J. J., Nyhan, K., Lehman, R., Ross, J. S., & Wallach, J. D. (2021). Publishing at any cost: A cross-sectional study of the amount that medical researchers spend on open access publishing each year. *BMJ Open, 11*(2), e047107. http://dx.doi.org/10.1136/bmjopen-2020-047107

Frontiers. (2019, January 27). *Institutional Membership*. https://web.archive.org/web/20190127130721/https://www.frontiersin.org/about/institutional-membership

Khoo, S. Y.-S. (2019). Article processing charge hyperinflation and price insensitivity: An open access sequel to the serials crisis. *LIBER Quarterly, 29*(1), 1-18. http://doi.org/10.18352/lq.10280

Kirkman, N. (2018). *A study of open access publishing by NHMRC grant recipients* [Master of Philosophy, Curtin University]. Perth. https://espace.curtin.edu.au/handle/20.500.11937/77026

Kirkman, N., & Haddow, G. (2020). Compliance with the first funder open access policy in Australia. *Information Research, 24*(4), paper 857. http://informationr.net/ir/25-2/paper857.html

Korolev, S. (2020). UWM publications in MDPI journals. *UWM Libraries Other Staff Publications, 14*. https://dc.uwm.edu/lib_staffart/14

MDPI. (2018, December 23). *Institutional Open Access Program (IOAP)*. https://web.archive.org/web/20181223212250/https://www.mdpi.com/about/ioap

Morrison, H. (2017). From the field: Elsevier as an open access publisher. *The Charleston Advisor, 18*(3), 53-59. https://doi.org/10.5260/chara.18.3.53

Morrison, H. (2018). *Global OA APCs 2010-2017: Major trends*. ELPUB 2018, Toronto, Canada. https://hal.archives-ouvertes.fr/hal-01816699/document

Morrison, H., Borges, L., Zhao, X., Kakou, T. L., & Shanbhoug, A. N. (2021). *Open access article processing charges 2011-2021*. http://hdl.handle.net/10393/42327

Morrison, H., Salhab, J., Calvé-Genest, A., & Horava, T. (2015). Open access article processing charges: DOAJ survey May 2014. *Publications, 3*(1), 1-16. https://doi.org/10.3390/publications3010001

National Health and Medical Research Council. (2017). *NHMRC direct research costs guidelines*. NHMRC. https://web.archive.org/web/20190413231911/https://www.nhmrc.gov.au/sites/default/files/documents/attachments/direct-researchrcostsrguidelinesraugustr2017.pdf

National Health and Medical Research Council. (2018a). *Measuring up 2018*. NHMRC. https://www.nhmrc.gov.au/about-us/publications/measuring-2018

National Health and Medical Research Council. (2018b). *Open access policy: November 2018*. NHMRC. https://web.archive.org/web/20210118010056/https://www.nhmrc.gov.au/about-us/resources/open-access-policy

National Health and Medical Research Council. (2019). *NHMRC direct research costs guidelines*. NHMRC. https://www.nhmrc.gov.au/funding/manage-your-funding/funding-agreement

National Health and Medical Research Council. (2020, April). *Open access policy November 2018: Minor changes to align with funding agreement requirements around research metadata*

https://web.archive.org/web/20210118010056/https://www.nhmrc.gov.au/about-us/resources/open-access-policy

National Health and Medical Research Council. (2021, November 10). *Outcomes of funding rounds*. https://web.archive.org/web/20211110195539/https://www.nhmrc.gov.au/funding/data-research/outcomes

National Health and Medical Research Council, Australian Research Council, & Universities Australia. (2018). *Australian code for the responsible conduct of research*. NHMRC. https://web.archive.org/web/20211023145343/https://www.nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018

National Health and Medical Research Council, Australian Research Council, & Universities Australia. (2019). *Disclosure of interests and management of conflicts of interest: A guide supporting the Australian code for the responsible conduct of research*. NHMRC. https://web.archive.org/web/20211023145343/https://www.nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018

Nicholas, D., Rodríguez-Bravo, B., Watkinson, A., Boukacem-Zeghmouri, C., Herman, E., Xu, J., Abrizah, A., & Świgoń, M. (2017). Early career researchers and their publishing and authorship practices. *Learned Publishing, 30*(3), 205-217. https://doi.org/10.1002/leap.1087

Pieper, D., & Broschinski, C. (2018). OpenAPC: a contribution to a transparent and reproducible monitoring of fee-based open access publishing across institutions and nations. *Insights, 31*. http://doi.org/10.1629/uksg.439

Pinfield, S. (2015). Making open access work: The "state-of-the-art" in providing open access to scholarly literature. *Online Information Review, 39*(5), 604-636. https://doi.org/10.1108/OIR-05-2015-0167

Pinfield, S., Salter, J., & Bath, P. A. (2017). A "Gold-centric" implementation of open access: Hybrid journals, the "total cost of publication," and policy development in the UK and beyond. *Journal of the Association for Information Science and Technology, 68*(9), 2248-2263. https://doi.org/10.1002/asi.23742

Shamash, K. (2016, October 26). The impact of article processing charges on libraries and what is being done to help. *Impact of Social Sciences Blog*. https://blogs.lse.ac.uk/impactofsocialsciences/2016/10/26/the-impact-of-article-processing-charges-on-libraries-and-what-is-being-done-to-help/

Shi, A., & Morrison, H. (2020). *BioMedCentral (BMC) 2019–2020*. DigitalCommons@University of Nebraska-Lincoln. https://digitalcommons.unl.edu/scholcom/155/

Siler, K., Larivière, V., & Sugimoto, C. R. (2020). The diverse niches of megajournals: Specialism within generalism. *Journal of the Association for Information Science and Technology, 71*(7), 800-816. https://doi.org/10.1002/asi.24299

Solomon, D. J., & Björk, B.-C. (2012). Publication fees in open access publishing: Sources of funding and factors influencing choice of journal. *Journal of the American Society for Information Science and Technology, 63*(1), 98-107. https://doi.org/10.1002/asi.21660

Solomon, D. J., & Björk, B.-C. (2016). Article processing charges for open access publication - the situation for research intensive universities in the USA and Canada. *PeerJ, 4*, e2264. https://doi.org/10.7717/peerj.2264

Spezi, V., Wakeling, S., Pinfield, S., Creaser, C., Fry, J., & Willett, P. (2017). Open-access mega-journals: The future of scholarly communication or academic dumping ground? A review. *Journal of Documentation, 73*(2), 263-283. https://doi.org/10.1108/JD-06-2016-0082

UK Research and Innovation. (2021). *UKRI open access policy*. UKRI. https://www.ukri.org/wp-content/uploads/2021/08/UKRI-180821-UKRIOpenAccessPolicy-2.pdf

UK Research and Innovation. (2021, August 31). *Publishing your research findings*. UKRI. https://web.archive.org/web/20211109014635/https://www.ukri.org/manage-your-award/publishing-your-research-findings/making-your-research-publications-open-access/

Vervoort, D., Luc, J. G., Sá, M. P. B., & Etchill, E. W. (2021). Open access and article processing charges in cardiology and cardiac surgery journals: a cross-sectional analysis. *Brazilian Journal of Cardiovascular Surgery, 36*, 453-460. https://doi.org/10.21470/1678-9741-2021-0289

Wakeling, S., Kingsley, D., Jamali, H., Kennan, M. A., & Sarrafzadeh, M. (2021). Free for all, or free-for-all? A content analysis of Australian university open access policies. *bioRxiv*. https://doi.org/10.1101/2021.08.20.457045

Wakeling, S., Willett, P., Creaser, C., Fry, J., Pinfield, S., & Spezi, V. (2016). Open-access mega-journals: A bibliometric profile. *PLOS ONE, 11*(11), e0165359. https://doi.org/10.1371/journal.pone.0165359

Wakeling, S., Willett, P., Creaser, C., Fry, J., Pinfield, S., & Spezi, V. (2017). Transitioning from a conventional to a 'mega'journal: A bibliometric case study of the journal medicine. *Publications, 5*(2), 7. https://doi.org/10.3390/publications5020007

Wang, L. L., Liu, X. Z., & Fang, H. (2015). Investigation of the degree to which articles supported by research grants are published in open access health and life sciences journals. *Scientometrics, 104*(2), 511-528. https://doi.org/10.1007/s11192-015-1624-4

Wellcome Trust. (2021). *Open access policy*. https://web.archive.org/web/20211111063143/https://wellcome.org/grant-funding/guidance/open-access-guidance/open-access-policy

Woodward, H., Henderson, H., & Lawson, S. (2014). Report for Jisc collections on Total Cost of Ownership Project. http://dx.doi.org/10.6084/m9.figshare.1061430

# Conference Roundup: LIANZA 2021.
# November 9-11, 2021. New Zealand.

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Cappuccinos and chardonnays in New Zealand's beautiful and vibrant capital city Wellington were unfortunately stymied by Covid19 this year as for the first time the biennial New Zealand Library Association Conference (LIANZA) went fully virtual. Virtual keynotes, breakout rooms, online chats, forums and 'jam boards' became our new normal – yet another first brought about by Covid. With nearly 550 people attending from across all library sectors, and a rich and diverse programme - including presentations and keynotes from colleagues in Australia and the United Kingdom - LIANZA 2021 offered something for everyone.

Many of the messages from the most powerful keynotes transcended sectors.

A keynote address was presented by Associate Professor Hēmi Whaanga, Te Pua Wānanga ki te Ao Faculty of Māori and Indigenous Studies, Te Whare Wānanga o Waikato, University of Waikato, on 'Indigenous identity and sovereignty in the digital sphere'. In this address Dr Whaanga stated that to make changes to enhance inclusion, diversity, equity and an authentic embrace of Te Tiriti o Waitangi, rather than being held back by a perceived need to make changes to the law or changes to our systems, processes and protocols, he urged us to take the first, simple but profoundly important step, to change our hearts. In a similar vein Glenis Philip Barbara, Assistant Māori Commissioner for Children, in her keynote 'Decolonising our libraries and communities', stressed that change will only come with a proactive and deep commitment to sharing power and to entrust our communities with the mandate and resources to meet their own needs and priorities.

Librarians from the health sector were well served with some though provoking presentations.

In her keynote 'Future Ready: Equipping Information Professionals for the Digital Age', Sue Lacey Bryant, National Lead, NHS Knowledge and Library Services, Health Education England, posed the questions: "What does the 4th Industrial Revolution mean for knowledge and library services?" and "How will we harness digital technologies to better manage information for the communities we serve?" Artificial intelligence, robotics, data mining, virtual and augmented reality are technologies

that are shaping our future and whose impact is only just beginning to be felt. Sue asked if we are being sufficiently proactive to better equip organisations, staff and citizens to make better use of information. She argued that the implications for professional development and training for our library and knowledge workforce to rise to the challenges ahead is considerable. The choice is clear, she argued. We can help shape our future in the way that we harness and exploit new technologies to enable better evidence-based care or we can and will be shaped by the future. Sue urged us to turn toward the sun and embrace the opportunities before us.

In her keynote, 'Health literacy for thriving communities: a partnership approach', Ruth Carlyle, Head of NHS Library and Knowledge Services, Health Education England, described how librarians and knowledge specialists in England are working together to address the health literacy challenge. 'The Knowledge for Healthcare' strategy provides a structured model for health literacy, building on information literacy and digital navigation. NHS Education for Scotland (NES) and Health Education England (HEE) have collaborated to develop a new eLearning module to help individuals understand the role health literacy plays in making sure everyone has enough knowledge, understanding, skills and confidence to use health information, to be active partners in their care, and to navigate health and social care systems.

The eLearning session takes about 30 minutes to complete. At the end of the session, participants know why health literacy is important and how to use some simple techniques including Teach Back, chunk and check, using pictures and simple language to improve how to communicate and check understanding with others. For more details see - https://www.e-lfh.org.uk/programmes/healthliteracy/

Of particular interest to librarians employed within the New Zealand health sector was Kareen Carter's overview of 'The Future of Health Libraries in New Zealand'. Kareen, Health Sciences Librarian at the University of Otago, has included her paper in this issue of JoHILA and I would encourage you to read it. The disruptive changes occurring in the NZ health sector currently are transformational and the implications for libraries are significant.

The LIANZA Conference Committee felt the fear and did it anyway. Leaning into the challenge they hosted an excellent conference – a diverse and rich programme with a high level of engagement and connection across three days. As in most things in life you only get out as much as you put in. A fully virtual conference requires an excellent technology platform with outstanding support to work seamlessly and LIANZA was well supported in this regard. As in all plan Bs initiated by Covid19 there is much to learn from and retain as 'business as usual' from this Conference.

In the end the three days flew past – a reminder of the collective power and passion of our profession. We have so much in common across all sectors. So much to learn from each other. When we lift our gaze from what lies immediately before us and look out and beyond and lean into the challenges and possibilities that are on the near horizon one can't help but be energised. The next LIANZA Conference will be in Christchurch in 2023. Put it in your diaries!

# The future of health libraries in New Zealand

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Kareen Carter is Health Sciences Librarian and library manager at the Wellington Medical and Health Sciences Library, a campus library of the University of Otago and clinical library of the Capital & Coast District Health Board.
During 2020/21 Kareen was a participant in the LIANZA Evaluation and Impact programme, basing her associated project on a future library service; within that she surveyed the DHB Library managers to elicit their knowledge and viewpoint on what a future health library might look like; some of that data is shared here.
*The following article is based on Kareen's presentation* The Future of Health Libraries in New Zealand *at the LIANZA 2021 Conference. Thriving Together.* E huri tō aroaro ki te rā, Tukuna tō ataarangi ki muri i a koe. *November 9-11, 2021. New Zealand.*

The New Zealand Health Sector is in a period of extreme pressure and change, not least the libraries within the sector. The aim of this article is to give an overview on the Health Library landscape in New Zealand, and its role in developing a strong health workforce; particularly considering upcoming changes to the District Health Board (DHB) structure arising out of the Health and Disability System Review (2020).

> DHB is the common acronym for District Health Board

## Healthcare in New Zealand

The New Zealand health system is a mix of public and privately funded care. Most health and disability services in New Zealand are publicly funded for eligible people. Government funding of health and disability services means that those eligible may receive free inpatient and outpatient public hospital services, subsidies on prescription items and a range of community support services for people with disabilities.

"The health system's funding comes mainly from Vote Health (or central government), which totalled just over $16.142 billion in 2016/17. Other significant funding sources include the Accident Compensation Corporation (ACC), other government agencies, local government, and private sources such as insurance and out-of-pocket payments. The Ministry of Health allocates more than three-quarters of the public funds it manages through Vote Health to DHBs, who use this funding to plan, purchase and provide health services, including public hospitals and the majority of public health services, within their areas." (Ministry of Health, 2016)
There are 20 DHB's in New Zealand, each governed by The New Zealand Public Health and Disability Act 2000. (Ministry of Health, 2021 September)

Their objectives include:
- improving, promoting and protecting the health of people and communities
- promoting the integration of health services, especially primary and secondary care services
- promoting effective care or support of those in need of personal health services or disability support
- reducing health disparities by improving health outcomes for Māori and other population groups
- reducing – with a view toward elimination – health outcome disparities between various population groups.

The DHBs also plan and deliver services regionally.

New Zealand's public hospitals are owned and funded by DHBs, with 84 registered public hospitals across the country as of 30 October 2021. (Ministry of Health, 2021 October)

## Health Education and Workforce Development

Most of New Zealand's eight Universities and a number of other tertiary institutions including institutes of technology and polytechnics, Wānanga and private training establishments, provide education in the health professions.

Medicine and Surgery and their associated specialties are taught out of the University of Otago and Auckland University, and there are currently four Schools of Medicine – in Dunedin, Christchurch, Wellington and Auckland; with Dunedin being the oldest (founded in 1869, with courses in Medicine commencing in 1875) and Wellington the youngest - in our 44th year. The Christchurch and Wellington Schools are part of the University of Otago.

Medicine and Surgery are six-year degree courses; it takes several additional postgraduate years of study, experience and learning to attain a professional specialty.

In the Health Sciences, Otago's Dunedin campus also teaches Dentistry and Dental Technology, Medical Laboratory Science, Pharmacy and Physiotherapy. The Otago Wellington campus teaches Radiation Therapy at both under- and post- graduate levels. Auckland also teaches Physiotherapy and Pharmacy as well as Optometry and Vision Science.

Nursing is mostly taught at the undergraduate level out of Polytechnics (although Auckland and Massey Universities and the Auckland University of Technology offer a Nursing degree). Postgraduate nursing is taught out of Otago, Auckland, Massey and Victoria Universities.

Graduation, however, is just the beginning of the health workforce learning, with most professions requiring registration and ongoing professional development. The medical and surgical specialties also have professional colleges for the support, development and regulation of specialists.

The NZ health workforce is around 220,000 people, making it the largest single industry in New Zealand, with 75,000 people working in the DHBs. (Health and Disability System Review, 2020)
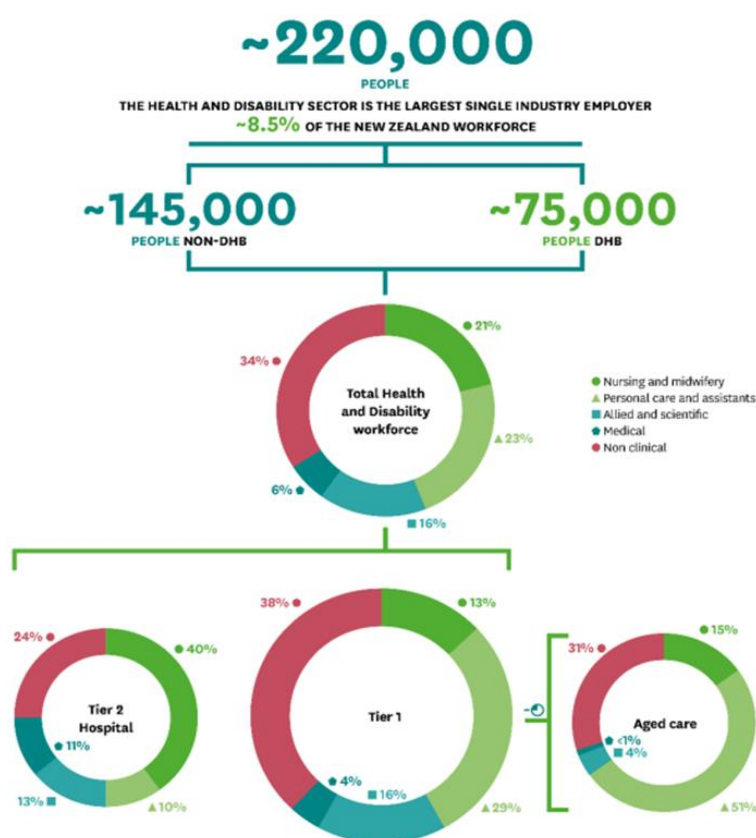


NZ Health workforce data - Image from NZHDSR final report p.182

## The Health Library Sector

There are around 26 health science libraries in New Zealand, within the Ministry of Health, the Universities and the District Health Boards; additionally, there are libraries within Non-Governmental Organisations, Polytechnics and private training establishments which have a health component.

All 20 DHBs have some form of Library service, however staffing and services vary considerably across the country from 0.5 FTE to around 5 staff, sitting on average at

2-3 FTE. Library funding varies significantly also, with resource budgets ranging from around $40k to over $1 million NZ dollars for some of the libraries.

The sector Librarians have the opportunity to come together annually via the LIANZA Health Special Interest Group (Health SIG) which co-ordinates a 1-2 day study programme for information sharing. This provides a forum for the sector librarians to work together and support each other while providing relevant professional development opportunities.

There is a trend towards regional consortia access for some resources and the Librarians in this sector are strongly supportive of each other, but there has been no consistency of approach and no support from the Ministry to move consortia access forward on a national basis. Anyone involved in the purchase or management of subscriptions in libraries will understand that this is a complex area, without a one-size-fits-all solution. This is the same in the health sector where we often need to remind the funders that information resource pricing is not based on their more familiar consumable model with its discount for volume.

### The District Health Board libraries

The DHB libraries exist primarily to support the evidence-based practice of the clinical, nursing and allied health workforce within their DHB area.

"*They have a* **direct impact on the quality of patient care**, *by helping physicians, nurses, allied health professionals and researchers to stay abreast of new developments in their specialty areas. They work alongside education providers and trainers to support staff in gaining qualifications and knowledge to strengthen their practice.*" (Carter, 2021)

Research underpins the role of today's clinicians and nurses, tied to their professional status, development, and evidence-based practice. Tertiary hospitals are involved in research and compete for funding. Quality improvement is also integral to corporate and clinical practice in all the DHBs.

The libraries have a role to play in supporting the workforce at corporate and clinical levels, using the expertise of the Librarian to save the organisation time and money.

The 20 DHB Libraries are staffed by small but highly dedicated library teams. They provide a wide range of resources and services to their users, with one of the core services being literature searching – most of these dedicated people would be classified as expert information searchers within the sector and indeed the profession. Additionally, they manage the collections and resources required by their organisation to provide excellent care. This involves navigating constricted budgets,

analysing usage data, and negotiating with multinational vendors to provide the best value for money.

## New Zealand Health Reforms

In 2018 the then Health Minister Dr David Clark announced a wide-ranging review designed to future-proof our health and disability services. The final report was presented in March 2020. Among its recommendations was a reduction of the number of DHBs, to between 8-12, from the current 20, in the next 5 years.

On 21 April 2021, the Government confirmed the details of the health system reforms as a white paper (Department of the Prime Minister and Cabinet, 2021), in response to the Health and Disability System Review (2020).

A new organisation, Health New Zealand / Hauora Aotearoa, is to be created to manage our health system day-to-day.

"Health NZ will manage all health services, including hospital and specialist services, and primary and community care. Hospital and specialist services will be planned nationally and delivered more consistently across the country. Primary health, wellbeing and community-based services will be planned and then purchased through four new regional divisions of Health NZ. Each region will work with their district offices, located closer to local communities, to develop and implement plans based on local needs to improve the health and wellbeing of communities." (Future of Health, 2021)

The Māori Health Authority / Te Mana Hauora Māori will be established alongside Health NZ with shared decision-making, planning and delivery. The Māori Health Authority will have dual responsibilities: it will support the Ministry in shaping system policy and strategy to ensure performance for Māori, and will work in partnership with Health NZ to commission care across New Zealand, ensuring that the needs and expectations of Māori communities are also centred in design and delivery. The future health system will have more deliberate investment in equity of access and outcomes for Māori, increased accountability, and a much greater role for iwi and Māori in shaping service design and provision for Māori communities.

The Ministry of Health will also host a new Public Health Agency responsible for public health policy, strategy and intelligence.

Health NZ will include a national public health service, bringing our Public Health Units together under a national banner. This agency will be better able to coordinate public health services, responding to threats like COVID-19, measles outbreaks, and smoking.

These changes require change to current legislation and the Pae Ora (Healthy Futures) Bill, which sets up the legal platform for the reformed health and disability system, was introduced to Parliament on 19 October 2021. (2021 (85-1))

The Bill will legally establish Health New Zealand as the national organisation to lead and coordinate delivery of health services across the country and the Māori Health Authority as an independent statutory authority to drive improvement in hauora Māori.
It is anticipated that the Bill will be passed in the first half of 2022.

| Final Report \| Pūrongo Whakamutunga | Health Reform: White Paper Summary | Pae Ora (Healthy Futures) Bill (introduced to Parliament 19 October 2021) |
| --- | --- | --- |
| Mar. 2020 | 21 Apr. 2021 | 20 Oct. 2021 |

## Impact on the Health Library Sector

In the short term there is likely to be little difference in how the current libraries operate, however, the organisation and governance changes provide an opportunity to implement changes the Librarians in this sector have been advocating for several years.

To do this, we need to be part of the conversation as we have extensive experience and expertise in both procurement and service delivery and most importantly the information needs of the health workforce. Being part of the conversation includes being able to demonstrate value and return on investment (ROI). The work of ALIA and Health Libraries Australia to calculate return on investment of Australian health libraries, has been utilised by many libraries in the New Zealand health sector over the years as a comparable model of ROI. (ALIA, 2013, 2014, 2017)

Health libraries in New Zealand are valued. A University of Otago review of Health Sciences Libraries indicated …*that Libraries and Librarians are highly valued at all levels of the institutions consulted. There was, however, a clear lack of understanding of the complexities and costs associated with publishing, licensing, and the provision of resources, as well as the variety and value of services provided by librarians.* (University of Otago, 2017)

There is still value in 'library' as place within the hospitals. Offering a space for busy clinicians, nurses and allied health staff to study, research, collaborate and write, away from the pressures and distractions of busy offices, wards, and homelife. "Library space is no longer associated with collections but is linked to study, research, reflection and collaboration. There is evidence of libraries being well utilised by staff

throughout the country... these spaces do not need to be managed as 'Library'... however with 'Library' comes trust, a particular headspace, and neutrality." (Carter, 2021)

Our libraries need to capture and report on the value we bring to the organisation, not just transaction counts, but narrating the return on investment. For data to be meaningful and to be able to communicate return on investment, it should be linked to values which may be associated with the organisation's strategic plan. With the proposed changes, these values are linked to the health workforce, health equity, and the health outcomes of all New Zealanders.

It is not just the number of literature searches performed, but also the purpose of those literature searches... to provide evidence to a service review or audit, and for quality improvement projects; to support patient care; for a presentation or publication; to update or inform policy or guidelines; to support an expert clinical witness in a court case or media interview... these are just a few examples.

### What does a future Health Library Service look like?

A New Zealand health library service is not a new concept. A New Zealand National Library of Medicine was initially recommended as an outcome of the Hodgson Report in 1987, based around a national supply centre for Interloan requests. (Hodgson, 1987)

Regional networks operate informally based around the wider DHB region relationships and the DHB Librarians are collegial and supportive of each other within these networks and more widely.

The LIANZA Health SIG has a working group currently formulating a response to the proposed changes to ensure that Libraries and Librarians are part of the picture. The working group is looking at the proposals and at overseas health library models, translating the information into a New Zealand context that might inform a future model.

Health sector libraries internationally have undergone significant change in recent years. With publications from the USA on closure and consolidation of health sector libraries, and Scandinavian examples of national networks for information provision, there are several international examples to draw upon.

Australia provides some examples at the state level, that indicate how different health library models may work. These include the South Australian Health Library Service (Harris, 2017), and in Queensland, the Clinical Knowledge Network (CKN). (Sayers, 2021)

In Canada, the Winnipeg Regional Health Authority Virtual Library managed by the University of Manitoba Libraries (UML), is another interesting model. (Cooke, 2021)

The UK 's National Health Service, Knowledge and Library Services is an obvious model to look at... in January 2020, in a letter to all NHS library service managers, Sue Lacey Bryant announced that Health Education England had approved an ambitious programme *'to provide NHS staff with a single, coherent national gateway to their trusted library and knowledge service, connecting them seamlessly to quality resources, services and support tailored to their needs'.* (Bingham, 2020)

There are Health Library standards that have recently been reviewed and updated, including Canada (Frati, 2021) and we eagerly await the revised Australian standards. And Health Education England (2020) have a policy statement outlining their recommendations to improve the staff ratio for the number of qualified library and knowledge specialists per member of NHS workforce.

There is no one model that would address the needs of the New Zealand health system, which is why it is important to review and take the best of what is already available and create a service model that is right for New Zealand and Hauora Māori, that is people centric and sustainable.

There are definitely merits for a centrally funded and centralised structure for the provision of health information, and discussion with Ministry of Health and Health Workforce representatives as part of the University of Otago 2015 review, indicated that they were generally supportive of the idea, but unwilling to commit any level of governance or leadership at that time.

There are also barriers to change and definite risk to services currently provided, and to the profession within the sector. To minimise these, we need to be engaged in the process, which is where the work of the LIANZA Health SIG comes into play. Collectively representatives of the DHB Librarians via the LIANZA Health SIG are close to releasing a document that will present a path for equitable access to knowledge and health information in the NZ Health Sector and help to inform members of the Health Reform Transition Unit.

Librarians will need to be prepared to give up some aspects of their roles and for those aspects to be managed by others, some services and resources can be effectively managed at a central/regional level. There will be a trust component here, that needs to be communicated both ways. Collections and resource access can be managed centrally... although this is not a simple procurement process and needs mahi (work) to remain financially sustainable. There needs to be recognition of regional specialties and tiering of access to some resources.

The DHB Librarians know, and are protective of, "their people". Some believe that their clinical workforce will lose the excellent level of service currently provided if services become regionalised. This could happen, if Librarians are removed from the hospitals they currently serve, however the other side of this is that for hospitals with one Librarian, there are advantages such as working as part of a larger integrated if distant library team, an opportunity to specialise, and cover for when the Librarian is on leave.

It is important not to get too tied up in the detail at the early stages – it is currently about strategy and potential, not about wrangling a core collection of centrally funded resources (that is the longer-term outcome). The mahi of the Health SIG working group is ongoing, producing a briefing document for the stakeholders to outline the complexities and offer ideas and solutions. It's a period of exciting potential, particularly if we get it right!

**Glossary**
DHB - District Health Board
Hauora - Māori holistic view of health and wellbeing
Iwi - extended kinship group, tribe, nation, people, nationality, race
Mahi - work
Wānanga - tertiary institution that caters for Māori learning needs - established under the Education Act 1990.

References

ALIA (2013). Worth every cent and more: an independent assessment of the return on investment of health libraries in Australia. Canberra, ALIA.
http://read.alia.org.au/sites/default/files/documents/worth_every_cent.pdf

ALIA (2014). Putting a value on 'priceless': An independent assessment of the return on investment of special libraries in Australia**: 16.
https://www.alia.org.au/sites/default/files/documents/advocacy/ALIA-Return-on-Investment-Specials.pdf

ALIA (2017). 10 ways that library and information services power the health sector. Deakin, ACT.
https://read.alia.org.au/file/820/download?token=IOtQjWKO

Bingham, Helen (2020). *Moving to regional library management systems: the journey begins.*
https://library.hee.nhs.uk/about/blogs/moving-to-regional-library-management-systems-the-

Carter, K. (2021) *LIANZA Evaluation & Impact Programme survey: Exploring a future Health Library service*. [Data set]

Cooke, C. (2021). *Beyond traditional library spaces: the practicalities of closing hospital libraries and opening a virtual library*. Journal of the Canadian Health Libraries Association/Journal de l'Association des bibliothèques de la santé du Canada, 42(1). Open access
https://journals.library.ualberta.ca/jchla/index.php/jchla/article/download/29434/217
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Department of the Prime Minister and Cabinet. (2021). *Our health and disability system: building a stronger health and disability system that delivers for all New Zealanders*.
https://dpmc.govt.nz/our-business-units/transition-unit/response-health-and-disability-system-review/information

Frati, F., Oja, L.A., & Kleinberg, J. (2021). CHLA Standards for Library and Information Services in Canadian Health & Social Services Institutions 2020. *Journal of the Canadian Health Libraries Association / Journal De l'Association Des bibliothèques De La Santé Du Canada*, *42*(1).
https://doi.org/10.29173/jchla29526

Future of Health (2021, September 27). *How our health system is changing*.
https://www.futureofhealth.govt.nz/about-the-reforms/how-health-system-changing/

Harris, L., & Peterson, M. (2017). *The economic value and clinical impact of the South Australian Health Library Service 2011–2016: A case study in organizational performance and survival*. Business Information Review, 34(1), 18–24.
https://doi.org/10.1177/0266382117692451

Health and Disability System Review. (2020). Health and Disability System Review – Final Report – Pūrongo Whakamutunga. Wellington: HDSR.
http://www.systemreview.health.govt.nz/final-report

Health Education England (2020). *NHS Library and KnowledgeServices in England: recommendations to improve the staff ratio for the number of qualified library and knowledge specialists per member of NHS workforce*. Knowledge for Healthcare Policy Statement, Health Education England**:** 8.
https://www.hee.nhs.uk/sites/default/files/documents/HEE%20LKS%20Staff%20Ratio%20Policy%20January%202020.pdf

Hodgson, P. (1987). *Discussion paper: New Zealand's health and medical libraries*.

Ministry of Health. (2016, July 11). *Funding*.
https://www.health.govt.nz/new-zealand-health-system/overview-health-system/funding

Ministry of Health. (2021, September 7). *District Health Boards*.
https://www.health.govt.nz/new-zealand-health-system/key-health-sector-organisations-and-people/district-health-boards?mega=NZ%20health%20system&title=District%20health%20boards

Ministry of Health. (2021, October). *Public hospitals*.
https://www.health.govt.nz/your-health/certified-providers/public-hospital

Pae Ora (Healthy Futures) Bill 2021 (85-1).
https://www.parliament.nz/en/pb/bills-and-laws/bills-proposed-laws/document/BILL_116317/pae-ora-healthy-futures-bill

Sayers, R. (2021) *Queensland Health's CKN celebrates 20 years of service*. Journal of Health Information and Libraries Australasia, 2(2).
https://www.johila.org/index.php/Johila/article/view/70

University of Otago, Division of Health Sciences. (2017). *Health sciences library services plan*. Unpublished manuscript.

# Motorways to boreens: the story of the Irish Health Sciences Libraries Group virtual journal club

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## Abstract

Boreens (from the Gaelic bóthairín meaning little road) are the narrow roads that twist through the Irish countryside. Travel is slower than the busy major roads that cut straight through, but these routes enable the traveller to easily change course as options arise and to discover hidden opportunities for exploration. It is in this context that we share how we moved from the idea of a journal club for health librarians to the reality of an active knowledge sharing group. Through the story of the governing committee and our first three presenters, we explain what is required to drive this kind of club. At the beginning there were so many options and decisions it felt like moving quickly along a busy motorway, often changing lanes to avoid snarl-ups, and watching out for tolls. However, as we settled in for the long haul, we decided to take

our own quieter but ultimately more interesting route. We found that if you are clear about your destination, ensure you have sufficient resources, plan carefully but are flexible about how you get there, then you may just enjoy the journey.

## Journal clubs

A journal club is a group of individuals who meet regularly to discuss, and critically evaluate, academic articles. Groups commonly share an interest in a topic, and often consist of members of a specific profession or sector, such as health. Journal clubs come in many forms. Sir William Osler started the first recorded medical journal club at McGill University in 1875 (Barsky et al., 2009). Traditionally, members would meet in-person to discuss a chosen article that would be critically analysed to improve understanding of research design, statistics and critical appraisal methods (Barskey et al., 2009). Meetings would also provide an opportunity to network with peers. More recently, online and social media–facilitated clubs, usually using Twitter, have become popular (Chan et al., 2015; Lin & Sherbino, 2015; Roberts et al., 2015; Topf et al., 2017). Developing critical appraisal skills and enabling knowledge translation from research to policy and practice are often the key aims.

Journal club meetings generally involve a presentation by a volunteer or invited speaker who provides a short summary of key points addressed in an article and then leads a discussion (Schwartz, 2007). The goals of the club determine the direction of discussion. Many journal clubs adopt a process-focused approach, with the aim to improve critical appraisal skills. Tools or templates (such as CONSORT or AMSTAR 2) can be used to assess if the evidence presented in the article is true, relevant and sufficient (Chetlen, 2017). Other clubs engage more with outcomes where although the quality of the article is important it is not the focus of the discourse. Members are primarily interested in the findings and what they mean for their context or profession. In either case, evidence-based learning, critical thinking, knowledge sharing and debate is encouraged (Aronson, 2017).

Numerous components of a successful journal club have been proposed, including having designated, trained, and committed leaders; regular and anticipated meetings at appropriate times; literature aligned with clear, long- and short- term goals; allowing participants to select articles that are of special interest, timely, or controversial; circulation and review of materials prior to the meeting; mandatory or incentivized attendance; formalised structures; summarising findings; and, using the internet for wider dissemination (Chetlen et al., 2017; Deenadayalan et al., 2008). The process begins with one or more motivated individuals who take responsibility and drive initial decisions.

## A HSLG journal club

The Health Sciences Libraries Group (HSLG) is a special interest group of the Library Association of Ireland. The HSLG committee manages governance and activities on

behalf of members. We have an annual conference, annual general meeting, email discussion list, e-newsletter, continuing professional development and networking events. Activities have generally taken place in-person, and we enjoy high attendance from a core group of active health librarians. The idea of a HSLG journal club was mooted in 2018 and a brief literature search was undertaken by our research officer. A heavy workload meant it went no further. However, when a virtual journal club (VJC) was proposed by a member again in 2020, the committee, led by our new communication's officer, was keen to make it happen. This was an ideal opportunity to create an informal network to support, encourage and learn from one another. A regular VJC would have social and educational benefits for us all.

There is a great deal of literature available on setting up a VJC (Chan et al., 2015; Kean, 2013; Lizarondo et al., 2010; Aronson, 2017). A common theme is the need for active, committed leadership and organisation (Chetlen et al., 2017). It was essential that the HSLG committee and potential members had defined roles, and that the VJC had clear and agreed terms. As host, the committee considered some practical and resource issues, such as:

• 	Who can join the journal club?
• 	How can they join?
• 	Are members willing to join a club working group to help facilitate the club?
• 	Would members be willing to present (and how often)?
• 	What is the best day and time for a virtual chat? And how long should the chat be for?
• 	What topics would members like to cover?
• 	Do we only accept open access articles to enable free and easy access to everyone?
• 	Should we make the website VJC page private (password protected) so people can feel freer to comment?
• 	Are members happy for a summary of the comments/conversation, without names, to be made available on the public website and/or in our newsletter, HINT?
• 	Would members be willing to participate in a short research survey at the beginning of the club to evaluate if the club is meeting personal and overall goals?

Each issue that we considered was weighed, and decisions made based on our goal to have a well-attended, long-term VJC where participants could learn in a relaxed, inclusive environment. For example, we believed that although some members would inevitably miss meetings, we should not record sessions in case it discouraged volunteers and stifled free interaction. Similarly, to maintain an informal atmosphere, we thought we should (at least initially) limit participants to those on our email discussion list (which includes members of the HSLG and other health librarians). Although the committee was keen to initially take the driving seat and to host the club, we believed that members must ultimately take responsibility. Therefore, we

organised a virtual coffee morning for potential members and sent invitations to our email list.

Our communications officer led the discussion, proposing ideas by the committee but seeking views and agreement from participants. A modified hybrid journal club model (Chetlen et al., 2017) was suggested to the group. In our case, we would use virtual meetings for presentations and discussion, and our website blog to upload pre-meeting information, questions and documents, and post-meeting comments. We would meet for 45 minutes during a workday morning about once every six-weeks. A volunteer would be recruited at the end of each meeting to present for ten minutes and lead discussion at the next. To encourage presenters, they could choose their topic and date of their meeting. The article(s) and discussion questions were to be submitted to the committee at least 14 days prior so they could be uploaded to the website and details sent to members. A buddy-system was proposed to help those presenting to monitor time and the questions that arose in the chat.

Perhaps the biggest decision to make was the aim of the VJC. This would affect everything from the choice of topics, the content of discussions, and even why people would join. The committee proposed an outcomes-focused approach which would entail some appraisal of the quality of the study, but primarily focus on the outcomes and improving our knowledge-to-action skills. That is, we would learn from the findings of each article, and the related experiences of fellow members, with the ultimate aim of improving our skills and practice. This approach also broadened the scope beyond academic literature to more informal articles of relevance to the group.

Having a plan to present to potential members provides a map of options. Perhaps because we restricted the invitation to our local network of health librarians, we found easy consensus in agreeing our direction. Everyone was in favour of an informal style which could help create new ideas and spark innovation we could apply to practice. We took the decision not to wait and specify the route exactly, but to begin immediately with a pilot approach. We would hold our first few meetings and reassess. That way we could change course as the need arose. Following our coffee morning in February 2021, the committee developed a guidance document outlining the agreed terms of the club (HSLG committee, 2021). This was sent to the email list and uploaded on to a new section of our website for the VJC. We specifically noted that this was to be a 'living' guide and that it should evolve organically over time through collaboration. Having set the wheels in motion, it was now time for the members to take charge.

<span style="color:red">Presenter case studies</span>
*Presentation one: Exploring the 'librarian' Wikipedia trail, by Anne Madden*

As the first presenter, I thought long and hard about what topic to choose as an ice-breaker, eventually selecting the Wikipedia article on "Librarian" (2021). This would be freely available to all prospective participants.

Would it fit with the general aims and scope of our VJC? After a thorough read of the article including the "Talk" section, a number of interesting questions arose that should generate some lateral thinking about who we were and what we do. On that basis, and after a quick chat with the committee, it got the green light.

The next step was to prepare a short presentation, and more importantly, a set of questions to engage participants. The topic and the questions were then circulated to health librarians via the email discussion list. Limiting participants to the list ensured I didn't suffer from presenter nerves, instead an almost festive atmosphere prevailed as we all caught up with each other's lockdown stories. Technology also behaved and my short PowerPoint presentation was soon completed. I had provided ten questions for discussion, but the participants opted for three that resonated most, including highlighting the very meagre health librarian section in the article. As our VJC focus is on outcomes, we made great plans to edit the piece in the not-so-distant future. Another piece of the learning curve was that keeping to the allotted time meant that fewer, more in-depth questions would work best.

This article choice was without doubt a thoughtful meander down a boreen but based on attendance and the liveliness of the ensuing discussion, it fulfilled a need to take an overview of health librarians, our actual and perceived roles, and where our profession was heading.

*Presentation 2: Taking a reflective journey, by Breeda Herlihy*
Our second virtual journal club was delayed by the cyber-attack on the Irish health system. Nevertheless, once I had been tracked down, I was able to identify an article and send it with associated questions to the committee. An article on reflective practice in librarianship piqued my interest as I had heard the term used frequently by learning and teaching colleagues when I worked in a university library. I had recently changed roles to work in the library of a teaching hospital and now encountered entire books written on the topic for healthcare professionals. As well as satisfying my own self-interest, I felt the article: "Elevation through reflection: closing the circle to improve librarianship" (Miller et al., 2020) would nicely match the scope of the club. During the coffee morning, many of us had said that they were interested in practical applications for our working lives.

The prominence of reflective practice in education and now in health and social care was something that I had never quite fully understood. Surely everyone thinks about their work, reflects on where they might have gone wrong with something, learns along the way and tries to modify appropriately for the future? It turns out this does

encapsulate reflection, but it is the intentional use of reflection in work life which can really improve performance. While this solved the mystique of reflective practice for me, I felt that a short presentation on the article would be beneficial for introducing this topic to the journal club. Preparing the slides also enhanced my understanding because I really had to dig into the article and another related article by the same author. In fact, I probably would have posed different questions after preparing the presentation rather than the set I had sent on to the committee and journal club members in advance of the meeting. Even so, the questions I had devised got discussion moving and participants already versed in reflective practice were able to share their experiences and resources. I felt this was really useful because it showed I wasn't introducing a spurious topic to the club. This sharing of experiences and knowledge facilitated by the journal club is really useful for a nationally distributed group of librarians who are often the only library professional in their organisation.

My presentation of this article to the club certainly helped deepen my understanding of the relevance of reflection to my professional practice. Even though I too wandered down a boreen to explore a topic of personal interest, it turned into a nice segue to an online course I signed up for. This course, designed by the National Forum for the Enhancement of Teaching and Learning and the Library Association of Ireland Career Development Group, leads to a digital badge, L2L Joint PACT Digital Badge, and has definitely been more like a reflective practice motorway.

*Presentation 3: Traversing the misinformation superhighway, by Niamh O'Sullivan*
Going third was an advantage as I could follow the lead of the presenters who had gone before. Choosing a topic to discuss was an easy choice for me as I had attended an excellent webinar series earlier in 2021 on the growing issue of misinformation entitled: "Shining a light in the Post Truth Era". My interest was piqued by excellent speakers such as Lord David Puttnam and I wanted to know more about the Covid -19 infodemic.

So with my topic chosen, I just had to find two open access articles to discuss. I decided to choose one article that had more of a theoretical focus and the other one with a more practical lean. The theory article I chose was: "The Covid-19 'infodemic': a new front for information professionals" (Bin Naeem & Bhatti, 2020) and the second more practical article was by a fellow Irish librarian "Infodemic in a pandemic – critical thinking needed" (Patton, 2020).
I created a short presentation with slides on the following topics:
•      Infodemics, types of mis/dis information and the consequences of all three.
•      The role health sciences librarians can play, if any, to stem the flow of misinformation.
•      The best tools and resources to combat fake news and mis and dis information.

I sent article links to the VJC group along with these three questions:

1.      How much impact can health sciences librarians realistically have on the spread of fake news?

2.      What resources and tools do you currently use to help users find authoritative information?

3.      How can we, in the health science libraries community, better prepare ourselves for the next infodemic?

In my presentation, I also included these two quotes that I found in the articles and they set the tone well: "We need a vaccine against misinformation"– Dr Mike Ryan, World Health Organization (Ryan, 2020, as cited in Patton, 2020, p.35) and "A lie can run round the world before the truth has got its boots on" (Pratchett, 2013, as cited in Bin Naeem & Bhatti, 2020, p. 233). I like to use quotes in a presentation as they can provide short dramatic talking points very suitable for an interactive club meeting such as this. They can also sum up a feeling or spark a conversation and can offer a kind of social proof to support what you are saying. As well as being inspiring, quotes from well known and respected people can help to make your message more credible.

I found that the journal club is a really useful forum for highlighting and disseminating the tools and resources found within articles. The part I learned the most from was the list of 'Useful websites and tools for evaluating health information' in the Patton article:

•       Informed Health Choices: https://www.informedhealthchoices.org
•       iHealthFacts: https://ihealthfacts.ie/
•       Be Media Smart: https://www.bemediasmart.ie/
•       CRAP: https://sites.google.com/site/crapcraaptest/
•       SPAT: http://www.spat.pitt.edu/
•       DISCERN: http://www.discern.org.uk/

Health sciences librarians have the knowledge, skills and experience to play an important role in the fight against fake news. It is worth bearing in mind that since the 1980s they have played a leading role in educating people (through information literacy programmes) about how to evaluate facts and how to check the authenticity of information. There is a need now for us, as librarians, to promote dialogue amongst ourselves about how best to develop mechanisms to prevent mis and disinformation and help counteract the spread of fake news.

### Challenges

Challenges have largely related to the busy nature of our working lives. As suspected, not all members can attend every meeting, and instead of ten meetings per year, they have been held on average every two to three months. We had also thought

that providing a website space for post-meeting comments could extend discussion beyond the meeting, but this has not been the case.

There was also enthusiasm during meetings to follow up with practical activities, such as updating the librarian Wikipedia entry. However, it appears that it is hard to translate this enthusiasm to active change. We may need to focus on defining specific actions and follow-up if we want to have a real impact.

Being evidence-focused we had hoped to undertake a prospective evaluation of the VJC, which would require setting of goals by individuals before we began, with progress in achieving these assessed after a year. Only some members noted their goals in their club registration email so any evaluation may rely on a retrospective approach.

## Conclusion

So perhaps our story will eventually take us from our narrow boreen back towards the motorway as we look at elements that could expand our remit and membership, but for the moment we are happy to explore the more informal, close, collegial approach. We have learned that it takes people with responsibility to drive the project forward. However, although leaders are required to steer, it should be the members who navigate the way. Are we there yet? Perhaps not but we are certainly enjoying the journey.

## Key learning

A VJC needs to be:
- clear about its aims
- adaptable and inclusive
- led by motivated, active people
- relevant and interesting
- fun

## References

Aronson, J.K. (2017). Journal clubs: 2. Why and how to run them and how to publish them, BMJ Evidence Based Medicine, 22, 232-234. http://dx.doi.org/10.1136/ebmed-2017-110861

Barsky, E. (2009). A Library journal club as a tool for current awareness and open communication: University of British Columbia case study, Partnership: the Canadian Journal of Library and Information Practice and Research, 4(2), 1-4. DOI:10.21083/partnership.v4i2.1000

Bin Naeem, S., & Bhatti, R. (2020). The Covid-19 'infodemic': a new front for information professionals, Health Information and Libraries Journal, 37(3), 233-239. doi:10.1111/hir.12311

Chan, T. M., Thoma, B., Radecki, R., Topf, J., Woo, H. H., Kao, L. S., Cochran, A. & Hiremath, S. (2015). Ten steps for setting up an online journal club, Journal of Continuing Education in the Health Professions, 35(2), 148–154. https://escholarship.org/uc/item/9q2017nc

Chetlen, A. L. Dell, C. M., Solberg, A. O., Otero, H. J., Burton, K. R., Heller, M. T., Lakomkin, N., Desouches, S. L., & Smith, S. E. (2017). Another time, another space: the evolution of the virtual journal club, Academic Radiology, 24(3), 273-285. https://doi.org/10.1016/j.acra.2016.08.030

Deenadayalan, Y., Grimmer-Somers, K., Prior, M., & Kumar, S. (2008). How to run an effective journal club: a systematic review. Journal of Evaluation in Clinical Practice, 14(5), 898–911. https://doi.org/10.1111/j.1365-2753.2008.01050.x

HSLG Committee. (2021). HSLG Virtual Journal Club (VJC) guidance document. Dublin: Health Sciences Libraries Group. Available at: https://hslg.ie/hslg-virtual-journal-club/

Kean, E. B. (2013). Creating an online journal club using WordPress.com, AJN American Journal of Nursing, 113(3), 61-65. Doi: 10.1097/01.NAJ.0000427884.18171.b0

Librarian. (2021, November 9). In Wikipedia. Retrieved November 15, 2021, from https://en.wikipedia.org/w/index.php?title=Librarian&oldid=1054259786

Lin, M., & Sherbino, J. (2015). Creating a virtual journal club: a community of practice using multiple social media strategies. Journal of Graduate Medical Education: 7(3), 481-482. https://doi.org/10.4300/JGME-D-15-00070.1

Lizarondo, L., Kumar, S., & Grimmer-Somers, K. (2010). Online journal clubs: an innovative approach to achieving evidence-based practice, Journal of Allied Health, 39(1), 17e-22e. https://www.ingentaconnect.com/content/asahp/jah/2010/00000039/00000001/art00015

Miller, J. M., Ford, S. F., Yang, A. (2020). Elevation through reflection: closing the circle to improve librarianship. Journal of the Medical Library Association, 108(3), 353-363. https://doi.org/10.5195/jmla.2020.938

National Forum for the Enhancement of Teaching and Learning and the Library Association of Ireland Career Development Group. (2021). The L2L joint digital badge – PACT commitment to professional development, L2L. http://l2l.ie/about/

Patton, T. (2020). "Infodemic in a pandemic – critical thinking needed" Forum, December 2020, 35-36.
https://www.icgp.ie/speck/properties/asset/asset.cfm?type=Document&id=36105B7 E-B9D4-
4B8DA9C5D933E48F2833&property=document&filename=Infodemic.pdf&revision= tip&mimetype=application%2Fpdf&app=icgp&disposition=inline

Roberts, M. J., Perera, M., Lawrentschuk, N., Romanic, D., Papa, N., & Bolton, D. (2015). Globalization of continuing professional development by journal clubs via microblogging: a systematic review, Journal of Medical Internet Research, 17(4), e103. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4424319/

Schwartz, M. D., Dowell, D., Aperi, J., & Kalet, A. (2007). Improving journal club presentations, or, I can present that paper in under 10 minutes. ACP Journal Club, 147(1), A8-9. https://ebm.bmj.com/content/12/3/66.2

Topf, J. M., Sparks, M. A., Phelan, P. J., Shah, N., Lerma, E. V., Graham-Brown, M. P. M., Madariaga, H., Iannuzzella, F., Rheault, M. N., Oates, T., Jhaveri, K. D., & Hiremath, S. (2017). The evolution of the journal club: from Osler to Twitter, American Journal of Kidney Diseases, 69(6), 827-836. https://doi.org/10.1053/j.ajkd.2016.12.012

# Review of *Cochrane Interactive Learning: Conducting an Intervention Review*

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*Editor's Note: The [publisher](#) of "Cochrane Interactive Learning" requested independent reviews of this product from health librarians in Australia. This review is from a primarily university-based setting, while pp 88-94 is a review from a primarily hospital-based setting.*

## Background

The Pandemic has changed life so completely in many parts of our lives that we are left to wonder "is this the new normal or a blip?" So it is with systematic reviews (SR). With the Covid restrictions making primary research problematic, the number of SR being undertaken has skyrocketed. Once the purview of well-resourced teams of experienced health professionals, SR are now being undertaken by PhD students with either a kindly supervisor or a fellow student looking for a quid pro quo acting as second reviewer. Indeed, some post graduate students are tasked with performing a systematic review solo, as a learning exercise. Disciplines such as Education, Business, Economics and Engineering are routinely producing systematic reviews and often enlisting the aid of those information specialists best equipped to guide them through the process: the health librarians. With librarian contact hours at a premium, how comfortable would we, as health librarians, feel directing these interested but

very green potential reviewers to Cochrane's Interactive Learning modules? Is this a job well done, perhaps the new normal? We thought we should investigate.

## Objectives

Our team of six academic librarians, one a Cochrane author, with a combined 100+ years of experience in the athenaeumic arts, are seeking to determine if the eleven Cochrane Interactive Learning (CIL) modules (https://training.cochrane.org/interactivelearning), with an assumed fifteen contact hours, are sufficient to lead a novice through the systematic review labyrinth to achieve the goal of publication or presentation.  More precisely: Can the Cochrane Interactive Learning modules take a willing student, with the merest scrap of a clinical question, and who knows that a systematic review is a thing but knows nothing of the required steps, from this position to publication or presentation? In achieving this goal there is also the requirement, or at least the very strong desire, that the participant's passion for the subject remains undiminished and that their mental health is not impacted during the process. Increasingly the role of the information specialist is not merely to assist in choice of databases and refinement of search strategy, but to add reassurance that the path being travelled is the right one. We often answer questions or extract questions from reviewers who may be reticent to ask their supervisors. Can these modules do this? It is far too much to ask that any set of prepared teaching tools can answer the specifics of any given SR topic no matter how sound the pedagogy or epistemology, but can they administer surety in the process? We will investigate.

## Review methods

A scoping search was performed to see if a systematic review of the literature concerning Cochrane Interactive Learning modules (CIL) was possible. Our question: Are Cochrane Interactive Learning modules helpful for a first-time systematic reviewer aiming to achieve a meaningful systematic review, and lead a healthy and relatively stress-free life during that time?

Our PICO describing this:

| | |
|---|---|
| Population | Novice systematic reviewers about to embark on a systematic review |
| Intervention | Cochrane Interactive Learning modules (CIL) |
| Comparison | Other available means of guidance through the systematic review process |
| Outcomes | Publishable systematic review without undue stress |

We selected the following key health databases to investigate: PubMed, EMBASE, CINAHL, PsycInfo and the Cochrane Library. "Cochrane Interactive Learning" was the essential search term for our specific search topic and formed our search strategy for all sources. Search results for CIL produced 0 in PubMed, EMBASE and PsycInfo, with 1 in the Cochrane Library and 2 in CINAHL.

Clearly there is a gap in the published literature and insufficient evidence to perform a systematic review on the capacity of CIL to support creation of a systematic review. Running our eyes down the evidence pyramid with our desire attuned to creating the strongest piece of evidence possible, (and given available time and resources), we land at the bottom of the pyramid with expert opinion:
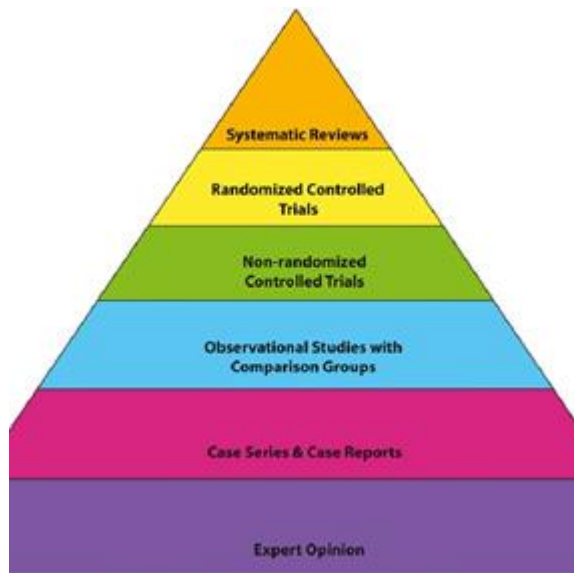


While the term "expert" is a daunting one and one that few librarians wear or tout comfortably, we could without reservation put forward our "experienced" opinion. To inform this, our team of six health librarians undertook a random, non-blinded, mixed methods approach to reviewing the Cochrane Interactive Learning modules https://training.cochrane.org/interactivelearning, courtesy of a 30 day free trial.

## Data collection
Overview of Cochrane Interactive Learning modules
**https://training.cochrane.org/interactivelearning**
Information about each module and their learning outcomes is provided on the Cochrane Interactive Learning webpage, including the following brief description:
*Developed by world-leading experts, this course provides over 15 hours of self-directed learning on conducting a complete systematic review process for both new and experienced review authors.*
A short video is also provided, which recommends Cochrane Interactive Learning *"to gain a more in-depth understanding of the process of conducting a systematic review. Trainers may use it for blended learning, combining the online modules as an introduction to more advanced learning in a face-to-face setting."*
There are a total of eleven modules (with the first module free to access):
1. Introduction to conducting systematic reviews
2. Writing the review protocol
3. Searching for studies
4. Selecting studies and collecting data

5. Introduction to study quality and risk of bias
6. Analysing the data
7. Interpreting the findings
8. Reporting the review
9. Introduction to health economics
10. Network meta-analysis
11. Health equity in systematic reviews

The modules are designed as "Learning resources on key areas of Cochrane review methodology" (https://training.cochrane.org/cochrane-methodology). They provide links to relevant sections of the Cochrane Handbook and other resources to support producing a systematic review, including the following - https://training.cochrane.org/resource/good-practice-resources-new-cochrane-authors

Cochrane provides information about access, including accessibility and purchasing considerations:

- https://training.cochrane.org/interactivelearning/help
- https://training.cochrane.org/interactivelearning/purchase
- https://training.cochrane.org/interactivelearning/about

## Evaluation of modules using the CRAAP test
**https://youtu.be/kMWcxhs8_F0**

Currency:

While much of the information is timeless, some of the interfaces demonstrating processes need revision. Last updated in December 2019, these modules indicate a planned review date for Quarter 4, 2020. There is no indication of the reason for this delay, however this plan may have been impacted by COVID-19, like most things in this post-pandemic world.

Relevance:

The modules are primarily intended for Cochrane authors undertaking an intervention review. There is some content aimed at Cochrane authors only. Non-Cochrane authors, particularly those with limited systematic review experience, will find the first module, "Introduction to conducting systematic reviews", provides a good overview of the systematic review process. In and of themselves, these modules are not stand-alone and require the user to explore the linked resources in order to get an in-depth understanding of the full systematic review process. Module 3, "Searching for studies", has insufficient detail to enable the beginner to complete a systematic search, however it does provide the advice to seek assistance from an information specialist.

Authority:

Cochrane reviews are generally considered the gold standard and the interviewees featured in the modules' videos are experts in their fields.

Accuracy:
The content of the modules is accurate, with tone and language suitable for the intended audience, apart from the previously mentioned currency issues, e.g. the need to incorporate changes in some online interfaces. Each section links to supporting material, particularly the specific sections in the Cochrane Handbook and other recognised authorities, although wandering off into these resources will significantly extend the estimated completion time for the modules.

Purpose:
The purpose of CIL is to educate Cochrane authors. It provides one of several Cochrane training methods to inform its intended audience. Recognising this focus allows the reader/learner to assess its value for their own situation. Should a researcher be undertaking a non-Cochrane, non-intervention systematic review – then perhaps Module 1 is all they would need to complete.

Navigation and online reviews:
One of the failings of the CRAAP test is that it was not designed to do an evaluation of an online platform. This left the team with the need to assess the layout and navigation of the platform. Thankfully Cochrane has kept track of the 432 people (at the time of writing) who felt compelled to provide feedback and highlight their rating of the modules at 4.6 stars (out of a possible 5).

Initial reports from the reviewing team indicated an appreciation for the level of interactivity in these modules. The modules are like an interactive book and the learner is not only gifted with a limited amount of text on the screen, but the information is interspaced with videos and quizzes to support the kinaesthetic learner. Further experience with the modules identifies some frustrations with the navigation between modules and the inflexibility in the content entry features of some quizzes.

Comparison with other available means of guidance through the systematic review process:
An 'Environmental scan and evaluation of best practices for online systematic review resources' was published in 2017 in the Journal of the Medical Library Association (http://jmla.pitt.edu/ojs/jmla/article/view/241) which *revealed that resources include appropriate content but are less likely to adhere to principles of online training design and interactivity*. This paper included evaluation of the earlier version of Cochrane Training "Online Learning Modules for Cochrane Authors" as well as other resources for online training in systematic review methodology.
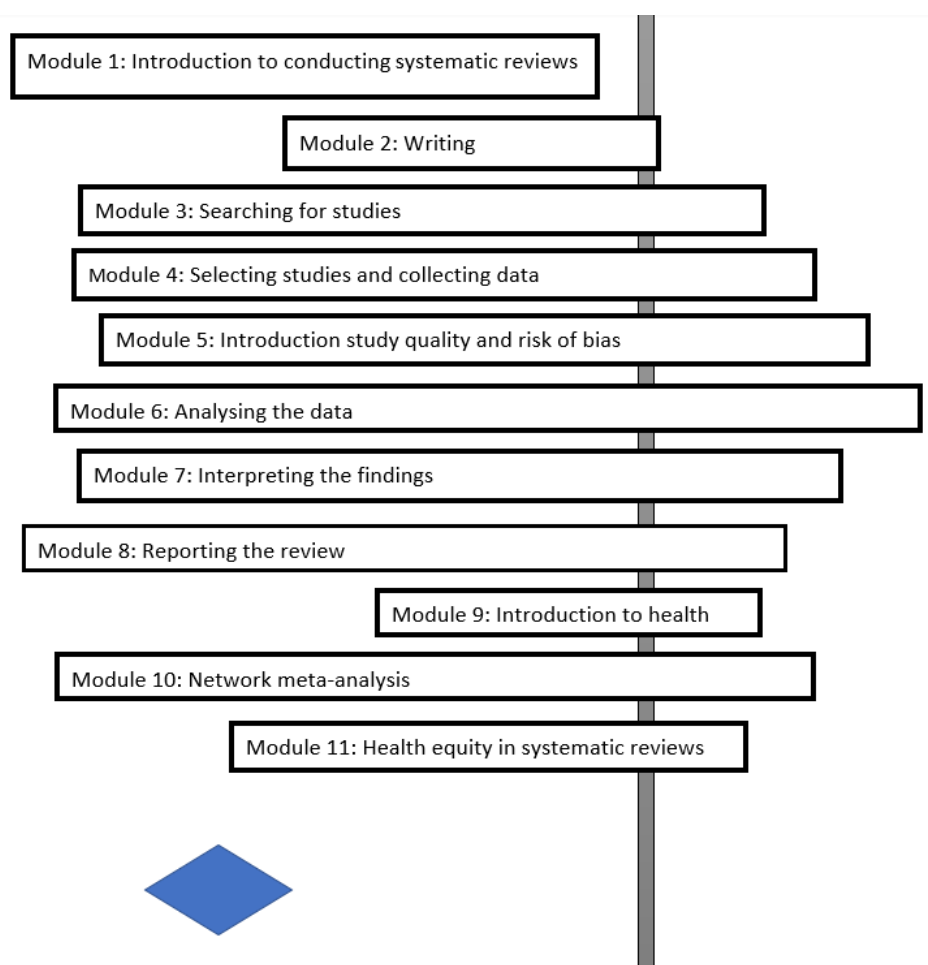
As well as many open access and freely available online resources and guides for producing systematic reviews, there is also Cochrane Evidence Essentials

([https://training.cochrane.org/essentials](https://training.cochrane.org/essentials)) - "a free online resource offering an introduction to health evidence, and how to use it to make informed health choices".

Recognising the key role of information specialists, Module 3 of Cochrane Interactive Learning highlights the role of librarians in supporting systematic reviews: *"A key part of finding eligible studies is knowing what to search for, and where and how to search for it. Information Specialists can help you with this process."*

## Main results

Inspired by Cochrane's logo ([https://www.cochrane.org/about-us/difference-we-make](https://www.cochrane.org/about-us/difference-we-make)), we developed a forest plot to summarise our results. Each horizontal line represents the length of time required to complete each module and our "experienced opinion" regarding their effect. The diamond represents the combined result, our best estimate of whether the modules are effective. The diamond sits clearly to the left of the vertical line representing "no difference", therefore the evidence indicates that the intervention is beneficial. Our forest plot shows that Cochrane Interactive Learning modules are helpful for supporting those conducting a systematic review.



Module 1: Introduction to conducting systematic reviews
Module 2: Writing
Module 3: Searching for studies
Module 4: Selecting studies and collecting data
Module 5: Introduction study quality and risk of bias
Module 6: Analysing the data
Module 7: Interpreting the findings
Module 8: Reporting the review
Module 9: Introduction to health
Module 10: Network meta-analysis
Module 11: Health equity in systematic reviews

## Authors' conclusions

The modules are thorough in their presentation and make good use of experts' opinions and examples. The certificates awarded at the end of each module are a splendid idea, although some of the answers required may be a little pedantic. For the sake of the participants well-being, the transition from knowing, to knowing they know, is an important one and the certificates go some of the way towards that.

There is an opportunity for modules like these to evolve and become key resources for supporting the production of high-quality systematic reviews. This is especially relevant with the rapid shift to online learning and delivery of healthcare – the pandemic has been like a wrecking ball! However, there is no getting past the limited health focus and the price. We exist in times where we need to find budget savings, where resources previously thought sacrosanct are being questioned and even discarded. These decisions are becoming more difficult each year, therefore while a compelling case can be made to subscribe to the CIL modules, what resources can we relinquish to make it so? There are freely available resources that cover the same ground, such as Johns Hopkins' Introduction to Systematic Review and Meta-Analysis, as well as a number of library guides. It is unfortunate that fiscal factors become the point of determination, but it is the world we live in. This obviously is a matter on which each individual library will make up their own minds, and some may well feel that Cochrane Interactive Learning provides sufficient value to warrant some juggling of their subscriptions budget, but it is our feeling that the matter of cost may well be the deciding factor in deliberations around this high-quality resource. If you have the opportunity to try these modules, they are well worth the investment!

# Cochrane Interactive Learning

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*Editor's Note: The [publisher](#) of "Cochrane Interactive Learning" requested independent reviews of this product from health librarians in Australia. This review is from a primarily hospital-based setting, while pp 81-87 is a review from a primarily university-based setting.*

https://training.cochrane.org/interactivelearning
Standard rate for a 1-year individual subscription is US$257 with a 45% discount for Cochrane members. A complete institutional price schedule is included in Appendix 2.
Module 1 is included FREE for all registered users.
Contact CILsubscriptions@cochrane.org for institutional licensing
Cochrane authors, full-time Research4Life authors from group A and B countries, and other specific Archie-based roles have free access to all Cochrane Interactive Learning modules.
https://training.cochrane.org/interactivelearning/purchase

## Introduction

Systematic reviews are characterised by replicable methodology and presentation with the aim of informing clinical practice. Terms like 'rigorous standards', 'unbiased results', and 'robust training' (Ghezzi-Kopel, 2018) are constantly used. But how does a new researcher know which methodology to follow when their obvious first choice – to google "How to do a systematic review?" – turns up so many results. Hopefully they turn to their health librarian for direction. But as the desire to complete a systematic review continues to grow, even librarians are feeling the pressure (Demetres, Wright, & Derosa, 2020). What they both need is a tool with solid methodology created by a trusted source...

Cochrane Interactive Learning (CIL) is a modular, self-directed training course that leads you through all steps required to conduct a complete systematic review following Cochrane methodology. It is aimed at both new review authors and experienced authors who want to update their knowledge. The course is based around the 'Cochrane Handbook for Systematic Reviews of Interventions', 2nd ed. (Higgins et al., 2020).

Cochrane authors have free access to all CIL modules, while non-Cochrane authors can purchase the full course at the standard rate of US$257 for a 1-year individual

subscription. Cochrane members receive a 45% discount on the standard rate, and module 1 is free for all registered users. A complete institutional price schedule is included in Appendix 2.

Although not specifically aimed at librarians, the course provides an overview that would be relevant to anyone collaborating on a systematic review.

### Module Breakdown

Module 1 is freely available – only requiring registration for access. It introduces you to the systematic review as a research design, outlining the elements of a well-defined review question (PICO/S), and explaining the importance of using rigorous methods to conduct a systematic review.

Module 2 explains why a review protocol is crucial to planning and delivering a systematic review. It details the components of a protocol, and how to define eligibility criteria using the PICO format.

Module 3 teaches you how to plan and structure a search using a rigorous and systematic approach, choose sources and run searches to identify published and unpublished studies, how to download results and report the process. This is a really useful overview for anyone working on a systematic review - whether they be researchers or librarians – and probably the module I found most interesting and relevant.

Module 4 describes how to select studies to include in a review - explains the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram, how using the diagram ensures rigor and transparency in documentation, and introduces software tools that can assist to extract and collect data.

Module 5 highlights the importance of determining the quality of included studies – detailing the varied sources of bias that can exist, and identifying ways of incorporating 'Risk of bias' assessment into the analysis – with examples of useful tools.

Module 6 shows you how to recognise characteristics of different types of data; identify non-standard study designs; manage heterogeneity between included studies; and undertake a meta-analysis. It is very long and detailed – and would be extremely useful to researchers who needed to complete statistical analysis as part of their review – but the level of detail feels excessive for a librarian participating in a systematic review. It would act as a valuable reference for future questions.

Module 7 demonstrates how to interpret the results of your statistical analysis – explaining confidence intervals, standardized mean difference, reporting bias, and how to use the GRADE approach to determine the certainty of evidence.

Module 8 presents the elements of effective review reporting: how to discuss evidence, draw conclusions and write up a review – with particular emphasis on creating 'Summary of findings' tables, appropriate vocabulary for 'Plain Language Summaries' (PLS), and how best to present your findings so it can inform healthcare or policy decisions.

Module 9 introduces health economics, identifying factors of resource use relevant to decision making so you can understand the role of economic evidence in a Cochrane review.

Module 10 discusses network meta-analysis (NMA) in the context of a systematic review of randomized trials – the assumptions required, how to plan an analytical strategy, and understanding the results.

Module 11 presents health equity considerations when planning and conducting a systematic review – how to include equity in your systematic review and consider equity in knowledge translation.

### Module Pros and Cons

I found working through the modules more helpful than simply reading a book on the topic. The information is broken into chunks – each module and section building on the previous one, providing background and context to your understanding of what is involved with a systematic review.

Each section is on a specific topic. As you finish a topic it is marked completed with a filled in square – which is a useful place marker, indicating your progress. Unfortunately every time you finish a topic you are sent to the beginning of the module page and have to navigate back to the last finished place marker. This becomes annoying when you try to complete more than one topic in a session – surely a more user-friendly alternative would send you to the next topic.

There are downloadable resources relevant to each module (examples of data collection forms, cheat sheets, and checklists), as well as links to standards, relevant chapters of the Cochrane handbook, websites with further information, additional training modules, videos and tips that add vital content. Under each module there is an indication of the time it will take to complete.

Along the way you complete quizzes that help you engage with the content, and test your understanding. You can stop and restart at any point – and mark pages as 'favourites' for later referral.

There is a search filter, so you can search the entire course by favourites, complete/incomplete pages, and topic tags. This is helpful for returning to specific sections of the course when you have questions.

Each module ends with self-assessment. You get 2 attempts at each question and need to get 100% to 'pass'. After successful completion of a module, you can download a personalised certificate. I found some of the questions confusing, and the provided feedback response 'partly correct' wasn't always helpful – especially when the answers are multiple choice. Although you don't need to 'pass' to continue completing modules, after a few wrong attempts – you end up frustrated, second-guessing which aspect you misunderstood. Provision of a more comprehensive response, clarifying concepts, after several failed attempts – rather than just sending you back to a section to review your understanding – would be really helpful.

There are diagrams and tables throughout each module containing additional explanation points that open when you click on a pin. This allows you to access a lot of detail within the one small space – but it would be more useful if the pop-up explanation didn't open in front of the diagram, covering the thing it was explaining – especially on the more complex statistical topics.

I found several linking errors – either links didn't work or went to archival content – and the PRISMA link doesn't go to the latest version. This is probably due to the fact that the whole course was last updated in December 2019. Several modules state the "next planned review date is Quarter 4, 2020" which has obviously passed. This is disappointing as the course is advertised as a "continually updated resource". According to the 'Help' page (Cochrane Interactive Learning), the modules have been designed to comply with Web Accessibility Initiative (WAI) guidelines to Level AA, and all video/audio content is accompanied by written transcripts.

At least two other introductory systematic review courses exist, for example "Introduction to Systematic Review and Meta-Analysis" (Coursera) or "Comprehensive Systematic Review Training Program" (JBIGlobal) - and many libraries offer their own online training courses. The trusted Cochrane brand and option for a yearly subscription are points in favour of CIL, but not every researcher – or every journal they wish to publish in – will require the same high standards.

Thoughts

I found the modules helpful and well written, and have developed some confidence in my understanding of relevant terminology, and the purpose behind each stage of

the systematic review process – which are good building blocks and will be helpful long-term. But as a library technician, with limited experience of the systematic review process, I don't think I could now go away and feel comfortable assisting a researcher to tackle one – even after successfully completing all the assessments. I would need to continually dip in and out of the modules as questions surfaced throughout the review – which would require continued access to the resource. Which brings me to questions of resource cost and who is the audience? Would we buy it for library staff training – so we can improve our skills to assist/collaborate with staff researchers, or as a stand-alone resource for the education of staff researchers? Each individual user requires an account – all tagging, and recording of outcomes is tied to an individual subscription – so it would not be possible to easily share the resource. Individual subscriptions would need to be purchased for each interested researcher or library staff member, and at US$257 for a one year individual subscription – I'm not sure it would be within our budget or that of many Australian health libraries.

I acknowledge that the level of support provided for the review process varies between libraries and organisations, but felt that the promotion of librarian involvement throughout the systematic review process could have been stronger. Module 3 highlights the importance of working with an 'Information Specialist' in the 'search' aspect of the review process, but the inclusion of a librarian in the review team is not mentioned anywhere else. This is especially disappointing as the course aims to educate review authors (both new and experienced) on best practice. As noted by Ghezzi-Kopel in her excellent 2018 review of CIL (Ghezzi-Kopel, 2018), this is a missed opportunity to promote the inclusion of a librarian on a larger scale. Her suggestion that "a separate section on working with a librarian would be a helpful addition" is still relevant even though it hasn't been taken up yet (latest update December 2019).

## Summary

Cochrane Interactive Learning is an engaging, well-designed course, founded on strong methodology – but I question whether it is actually accessible to beginners ("new authors"). It is not an introduction in any sense - it is a full course, and extremely content heavy. It is also organised according to Cochrane standards – which may be too much methodology for the non-Cochrane researcher.
But there are not too many quality training options available, so while the level of detail might at first seem overwhelming to the beginner, the ability to pop in and out of the course throughout your subscription period – allowing you to steer your learning in your desired direction – and repeat any aspect, really appeals.
If you are already involved in writing reviews – or providing assistance to researchers who are – and want to hone your knowledge and skills, it would be a great tool to have on hand. The course provides clear direction and examples to develop an in-

depth understanding of the process of conducting a systematic review – and would leave you feeling confident in the quality of your review.

## References

Cochrane Interactive Learning. Help. Retrieved from https://training.cochrane.org/interactivelearning/help

Coursera. Introduction to systematic review and meta-analysis. Retrieved from https://www.coursera.org/learn/systematic-review

Demetres, M. R., Wright, D. N., & Derosa, A. P. (2020). Burnout among medical and health sciences information professionals who support systematic reviews: an exploratory study. *Journal of the Medical Library Association, 108*(1), 89-97. doi:10.5195/jmla.2020.665

Ghezzi-Kopel, K. (2018). Cochrane Interactive Learning. *Journal of the Medical Library Association, 106*(4), 577-579. doi:10.5195/jmla.2018.516

Higgins, J. P. T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M. J., & Welch, V. A. (Eds.). (2020). *Cochrane handbook for systematic reviews of interventions* (Second edition. ed.). Hoboken, NJ :: Wiley-Blackwell.

JBIGlobal. Comprehensive Systematic Review Training Program. Retrieved from https://jbi.global/education/systematic-review-training

## Appendix 1 | Error examples

In Module 6 you are referred to 'Chapter 9' in the resources. "For more details on the formula used to calculate the SMD, see Chapter 9 of the Cochrane Handbook in Resources." But there is nothing labelled 'Chapter 9' – I think they're referring to 'Calculations with continuous outcome data'.

Module 8 (Plain Language summaries) – link doesn't work: https://methods.cochrane.org/sites/default/files/public/uploads/PLEACS.pdf

A link in Module 9 takes you to an archived version of a clinical event pathway. This page has a forwarding link – but it doesn't take you to a 'clinical event pathway': http://handbook-5-1.cochrane.org/index.htm#chapter_15/figure_15_2_a_clinical_event_pathways.htm -

Module 10 (Resources link) PRISMA extension for NMA reporting guideline – doesn't work.

> *Editor's Note: The Cochrane Training team have confirmed that they will be undertaking a comprehensive quality cycle in 2022 to update the modules including checking currency of material, correcting any broken links, etc.*

## Appendix 2 | Institutional Price Schedule

|  | 2021 List price USD | Range |
|---|---|---|
| 8-15 users | $160 per user | $1,280 - $2,400 |
| 16-30 users | $150 per user | $2,400 - $4,500 |
| 31-45 users | $145 per user | $4,495 - $6,525 |
| 46-60 users | $140 per user | $6,440 - $8,400 |
| 61-80 users | $135 per user | $8,235 - $10,800 |
| 81-100 users | $120 per user | $9,720 - $12,000 |
| 101-120 users | $110 per user | $11,110 - $13,200 |
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# Health Libraries Australia
# Professional Development in 2021

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With COVID again interrupting plans for an annual face to face Professional Development (PD) event, the small PD committee focused efforts on planning a program of online workshops and activities for 2021.

The Automation Tools for Systematic Searching workshops run by Justin Clark were consistently sold-out this year. Demand for professional development in the systematic searching area continues to be high. In addition to Justin's workshops, we were fortunate enough to be able to offer both webinar and small group workshops on systematic searching which were presented by expert searcher Wichor Bramer. Wichor, who is based in Rotterdam at Erasmus MC, publishes regularly on systematic review methodology as well as co-authoring many systematic reviews with colleagues.

Our Lunchtime Smorgasbord sessions proved very popular with over 100 attendees per session. Steve McDonald kicked off the inaugural event taking attendees through the PRISMA 2020 guidelines and important changes relevant to health librarians supporting clients with systematic and other reviews.

The June Smorgasboard session focused on Research Services with presentations provided by our colleagues Sally French, Gemma Siemensma, Beth Flack, Debbie Booth and Suzanne Lewis. Topics ranged from Registered Reports, research profiles, bibliometric and organisational impact, digital archives and the Librarian's role on HREC.

The July Smorgasboard event, All Things Open, was run over two sessions and generated a lot of interest. Catherine Clark (CAUL) and Ginny Barbour (Open Access Australia) co-presented on the work they have been doing at a national level to progress an open research strategy. Danny Kingsley (ANU) challenged the audience to consider the issues associated with identifying and acquiring the skills needed in scholarly communication. Lisa Kruesi presented her research into a conceptual Australasian biomedical repository from a knowledge management perspective. The

second session focussed on open educational resources and practices, open research data and FAIR Principles and OA in health libraries with Kate Davis (CAUL), Fiona Salisbury (LaTrobe/CAUL), Julie Toohey (Griffith University) and Cheryl Hamill (Library & Information Service, South Metro Health Service, WA).

Marketing was the theme for our Smorgasbord event in August. Thanks to Fiona Jensen (Cairns and Hinterland Hospital and Health Service), Katya Henry and Rani McLennan (QUT), Tanja Ivacic-Ramljak (Monash), Blair Kelly (Deakin) and Barry Nunn (Northern Sydney LHD) who covered topics like copyright, social media marketing, market analysis and marketing skills for health libraries and librarians.

We were fortunate to secure the services of Renee Otmar to run Designing Posters and Infographics workshops in the second half of the year. These workshops focussed on teaching librarians how to conceptualise, design and present a poster or infographic to communicate key information in engaging ways.

The My Health Record workshops were run throughout the year in conjunction with the Australian Digital Health Agency. These important workshops provided participants with an opportunity to learn more about the "My Health Record" from both the public or consumer perspective and the healthcare provider perspective. A more detailed description of this program is provided below.

I'd like to thank the Professional Development Portfolio committee for their assistance in developing what proved to be an engaging and informative series of events for 2021. I'd like to thank all those that attended workshops and sessions this year. 2022 is shaping up to be a year that combines online events and with a bit of luck some face-to-face offerings as well. Look out for our PD calendar announcements in early 2022. I hope you all enjoy a well-deserved break over the Christmas period. Thank you for your continued support of HLA events and activities. ~Angela

## Health Libraries Australia and My Health Record

From 2019-2021, ALIA, the Australian Public Library Alliance and Health Libraries Australia (HLA) have been funded by the Australian Digital Health Agency (ADHA) to deliver consumer health education programs through libraries. Health Libraries Australia has made varied contributions to these efforts. Initially several hospital-based librarians attended the "train the trainer" sessions which were coordinated by the State Library of Queensland (SLQ) and delivered in numerous public library settings. Having a health librarian attend these full-day workshops allowed for a different perspective on health information and consumer health to be in the mix. It also allowed health librarians to meet with public library colleagues and explore the potential for collaboration on programs. Fiona Jensen, librarian from Cairns and

Hinterland Hospital and Health Service, describes attending one such session in the first issue of the first volume of the Journal of Health Information and Libraries Australasia.

In addition to these "train-the-trainer" sessions, and the subsequent online modules delivered to many public library staff across Australia, it was felt that "My Health Record" education sessions targeted more specifically for library staff working in the healthcare sector could be beneficial. After piloting a proof-of-concept test event among executive members of HLA, four 90 minute sessions were held in June, July, August and September of 2021. These were delivered via zoom. Each session offered the same content, but took on its own characteristics depending on the questions asked. Daniel McDonald or Ann Ritchie from HLA "hosted" each event, providing introductory remarks and coordinating the Q&A. The bulk of each presentation was delivered by Briana Meawad, adoption lead and educator with the ADHA. The unique element of the content Briana covered, and how it differed from that which was delivered by SLQ, was that this training addressed "My Health Record" from both the public or consumer perspective and also the healthcare provider perspective. This allowed attendees to more fully appreciate how "My Health Record" is used across the care continuum. It also reflects the unique position health-oriented librarians occupy at times in serving the information needs of clinicians while also considering the health literacy needs of the broader communities in which they are situated. It is hoped this more comprehensive overview of "My Health Record" will allow attendees and their colleagues to tailor local solutions to improving awareness and understanding of "My Health Record" among the clinicians and communities they serve.

Each session was free to attend. Moreover, a support pack of "My Health Record" and digital health literacy resources was offered to all those attending. Funding from the ADHA grant was used to purchase these resources. Across the four sessions 102 people registered to attend. Tables 1 and 2 depict more details about the participants.

| Table 1 – Participant Library Type | | Table 2 – Participant Location | |
|---|---|---|---|
| Health | 40 | Victoria | 34 |
| Academic | 27 | New South Wales | 26 |
| Public or State | 16 | Queensland | 14 |
| Students / Unidentified | 19 | South Australia | 6 |
| | | Western Australia | 5 |
| | | Australian Capital Territory | 5 |
| | | Tasmania | 4 |
| | | Northern Territory | 2 |
| | | Unidentified | 6 |

Feedback regarding the sessions was very positive overall. All bar one participant providing feedback rated the session overall either very good or excellent. All bar one participant either agreed or strongly agreed that they understood the main features and functionality of the digital health tools described in the session. All participants either agreed or strongly agreed that they feel more confident in addressing stakeholder questions about the digital health tools described in the session.

Each of the sessions had very lively questions and discussions. The presenter, Briana, commented how engaged the audience always was and how much she enjoyed presenting to the HLA group. A selection of indicative additional comments from participants left in the feedback include:
•        It was a good session and very useful thanks.
•        Thank you for making this available and live so that we could have immediate interaction.
•        Nice, clear and well paced session. Presenter was very knowledgeable.
•        I was hitherto unaware of access codes or that I could upload records to my own file so this training was enormously helpful.
•        Thank you for organising this session. It's a year since I did the training so it was useful to learn about more recent changes and issues.
•        Even though I don't work in the health area, and was not sure if I should activate a My Health Record, I found the presentation answers my questions. I am glad that the presentation will be available so I can share with my work colleague what My Health Record is all about.
•        The information provided identified more questions and has encouraged me to read the relevant legislation. I am concerned that it is assumed that everyone has easy access to online resources.

This suite of training has been very successful in upskilling health-oriented librarians about "My Health Record" and where it fits in the broader digital health landscape. It is anticipated that health librarians will continue to adopt and adapt and articulate the tools and strategies of digital health as it becomes a more integrated part of Australian healthcare.

# Health Library Staff Member Spotlight

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## When did you first start working in a health library?
I started as the Faculty Librarian for Health Sciences and Medicine (HSM) at Bond University in January of 2020.

## How did you join health librarianship?
The position for Team Leader, Electronic Services at FSS became vacant while I was working in a similar role in the Queensland Police Service library.

## What was your previous employment background, prior to health libraries?
I had previously worked as a reference librarian (back when we had reference librarians!) for the Law Library at Bond. Before that, I worked in a few other teams for Bond Library Services. I started in the circulation/document delivery team. I had a short stint in the Copyright & Scholarly Publications team, and I have worked as the project office for the Library-led implementation of Ex Libris Leganto at Bond.

## How do you describe your current position?
My current position is very versatile! As the sole librarian for HSM, I get to do a wide range of activities, from maintaining Leganto resource lists, HSM LibGuides and providing literature searching and referencing support to students in undergraduate through to higher degree research programs. Several health sciences subjects have a systematic review project as the assignment, and I give a lot of support to students in those subjects for the design, translation, and execution of their search strategies.

## What do you find most interesting about your current position?
The challenges that arise when I am helping students to develop their systematic review searches are very interesting. The student's research topics are so varied, and each has its unique quirks to work through. Explaining information management concepts so that students can quickly understand and apply them is a fun activity in problem-solving. For example, at some point I started referring to subject heading terms as being similar to hashtags. This explanation seems to help bridge the gap between what students are familiar with and the new concept of subject headings systems.

## What has been your biggest professional challenge?
I had some pretty big shoes to fill coming into the role after the previous HSM Faculty Librarian, David Honeyman. I wanted the HSM staff and students to continue to enjoy the high level of Library services provided by David. Upskilling in the first

year of my role was my main challenge. I was able to find a few good resources to help during that period, and I was lucky to call on David for help.

I took some courses and read books as self-guided professional development. Here is my list of particularly helpful resources:

**Courses:**

- Evidence-Based Practice and the Medical Librarian (8 Weeks – UNC School of Information and Library Science)
- An Introduction to Health Sciences Librarianship (4 Weeks - Library Juice)
- Troubleshooting Systematic Reviews Webinar Series (7.5 Hours – Medical Library Association)
- How PubMed Works (6.5 Hours – NIH National Library of Medicine)
- Research Data Management (16 Hours – Research Data Management Librarian Academy)
- Scopus Certification Program 2020 (4 Weeks – Elsevier)
- Automation Tools for Systematic Searching (2 Hours – Justin Clark, Bond University)

**Books:**

- Boland A, Cherry MG, Dickson R. Doing a Systematic Review: A Student's Guide. 2nd ed. SAGE Publications; 2017.
- Huber JT, Tu-Keefner F, Roper FW. Health Librarianship: An Introduction. Libraries Unlimited; 2014.
- Hoffmann T, Bennett S, Del Mar C. Evidence-Based Practice Across the Health Professions. 3rd ed. Elsevier Australia a division of Reed International Books Australia; 2017.

I have been fortunate to seek guidance from Justin Clark (Senior Research Information Specialist, Institute for Evidence-Based Healthcare, Bond University; Cochrane Information Specialist). Justin has been extremely generous with his time in answering questions I had about systematic review searching and introducing me to his academic colleagues at Bond's Institute for Evidence-Based Healthcare.


What would you do if you were not a health librarian?
I have always been interested in graphic design and web development. If I had not studied librarianship, it would have been interesting to get into software development, as it is an evolving field and focuses on technical skills.

What is your greatest achievement?

It is hard for me to pinpoint the greatest achievement. I have worked hard to consistently prioritise the needs of the HSM Faculty's students and staff in my day to day work, and to me, this is the cornerstone of my role as a Faculty Librarian.

I am quite proud of my work as the project officer for the Leganto project. I was part of the project from beginning to end; from the initial literature review I conducted in digital asset management, creating the Leganto LibGuides, teaching staff to use the software, lots of software testing and juggling project management responsibilities. Being part of that project team was a great experience; I had the unique pleasure of working with many academic staff from each faculty at Bond and professional staff from IT Services and Bond's Office of Learning and Teaching.

Before the library, while studying for my undergraduate and master's degrees, I worked part-time jobs in retail. I think those experiences helped develop my customer service skills.

<span style="color:red">Do you have a favourite website or blog?</span>
I found a lot of helpful information about searching from Amanda Wanner's blog 'Expert Searching: Not Your Mother's Search Strategy' – particularly around the value of PMIDs to help develop and analyse a search strategy.

<span style="color:red">What is your favourite non-work activity?</span>
I always enjoy learning how to do something new, and lately, I have been learning about illustration.
I also love playing electric bass. I was part of a local Gold Coast band for a few years, which was great fun, and now I am working on slowly filling in the many gaps in my musical knowledge!

<span style="color:red">What advice would you give to a new member of HLA or a new graduate information professional?</span>
I think it is essential to attend as many professional development days/webinars/conferences as possible. The HLA organise excellent professional development activities. There are so many roles in libraries depending on the organisation's size and type, whether it is a public, academic or a special library. By joining in professional development activities, new grads may discover an exciting role that, as a student, they didn't even know existed!

I would encourage new grads to say yes to any library-related projects or secondments that come their way - you can learn so much more about our industry through these types of experiences.

My third tip doesn't need to be mentioned, as anyone reading this article has already discovered JoHILA :)