

JOHILA



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EDITORIAL

Daniel McDonald

Librarian, Darling Downs Health | Editor, JoHILA

HLAnewsed@alia.org.au

Welcome to the third issue of the first volume of JoHILA, the 'Journal of Health Information and Libraries Australasia'. This is also my first issue as editor. I would like to thank the Health Libraries Australia executive and the editorial board of JoHILA for entrusting to me the continued evolution and maturation of this important publication. I would also like to pay special tribute to Taryn Hunt, who edited the previous iteration of this publication, 'HLA News', and oversaw the transition to JoHILA. This has been a significant shift and Taryn deserves much credit for handing over processes and a platform and a publication in such excellent shape.

The first known example of medical journalism in Australia was published in the 'Sydney Gazette' on 14 October 1804. Dr Thomas Jamison wrote for public information an article on Smallpox, decrying the misinformation surrounding this deadly infectious disease and striving "to remove prepossessions which, if adhered to, must be productive of the most calamitous consequences to the rising generation of these Colonies" (Cumpston, 1914). At least times have moved on and in 2020 we are no longer threatened by deadly infectious disease and attendant misinformation... unfortunately, of course, untrue. Writing in 'The Atlantic' on August 4 2020 Ed Yong noted:

"Clear distribution of accurate information is among the most important defenses against an epidemic's spread. And yet the largely unregulated, social-media-based communications infrastructure of the 21st century almost ensures that misinformation will proliferate fast... An infodemic of falsehoods spread alongside the actual [corona]virus. Rumors coursed through online platforms that are designed to keep users engaged, even if that means feeding them content that is polarizing or untrue. In a national crisis, when people need to act in concert, this is calamitous" (Yong, 2020).

Clearly in such an environment the role of health librarians and information professionals is of critical importance. To counter the infodemic, and the pandemic, and all disease epidemics, we need to discharge our primary responsibilities with intelligence and integrity and innovation. But we also need to reflect on, and interrogate, our role and its wider context, and to communicate these insights with each other and the broader health professional community. This is the essential purpose of JoHILA. And it needs you. In the first issue of the 'Medical Journal of Australia', published Saturday 4 July 1914, the editor(s) wrote of the MJA's purpose:

"It has to record the progress of scientific medicine, and to assist in rendering the practice of medicine in all its branches of the greatest benefit to the people of Australia. These aims can only be attained by an enthusiastic

cooperation of the whole profession... No journal can be thoroughly satisfactory from a scientific point of view unless the available amount of scientific matter, and especially of original articles, is well in excess of its actual needs... If every practitioner in the Commonwealth will commit to writing the results of special observations or study of hitherto but imperfectly understood pathological processes, or of new methods of treatment, the educational value of the Journal should be greatly enhanced."

The same can be said of this Journal. The work you do as a health librarian is valuable, and essential, and possibly unique, and colleagues would benefit greatly from reading about your splendid ideas and implementations. If you are so enthused consider submitting an article to JoHILA, either through the journal's website or to HLAnewsed@alia.org.au . Providing the planet still exists and is functioning in 2021, three issues will be published in April, August, and December. All the best, and thanks for all that you do to improve healthcare for the benefit of communities in our region.

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CONVENOR'S FOCUS

December 2020

Gemma Siemensma
HLA Convenor
gemma.siemensma@bhs.org.au

Wow – I can't believe that we are almost at the end of 2020. There are moments throughout the year where I thought we would never see 2021!

I hope that you have some downtime over the festive season where you can reflect on the value and impact that you and your colleagues in the health library industry have had during a global pandemic. Our roles are more critical than ever as we find ourselves awash in a world of misinformation and fake news. We know access to the evidence base is of utmost importance and we are often an organisation's only dedicated, secure, permanent, and trustworthy source of authoritative information. Well done to everyone in what has been an extremely challenging year.

This issue of *JoHILA* is the first by our new editor Daniel McDonald. Thanks for taking on this challenge Daniel! Behind Daniel there is an Editorial Board who often work tirelessly without thanks – so thanks to Catherine Voutier, Ann Ritchie, Cheryl Hamill, Jane Orbell-Smith, Peter Murgatroyd, Rob Penfold, Taryn Hunt and proofreaders Helen Giltrap & Patrick O'Connor. Thanks also goes to those on the HLA Executive who voluntarily give their time and energy across the year. Many others also step up to help (like Alex Petrie our e-list administrator), sit on reference groups for projects such as our Guidelines Project or represent HLA in numerous ways such as at Publisher Round Table meetings. Together we are definitely stronger and I thank everyone who helps contribute to this incredible profession.

The last few months have seen some exciting events. We had our July online event ***Now, Next, Beyond COVID-19 – Health Librarians' Experiences***; our November online event ***Health Libraries Australia Seminar: Future Gazing – Innovation, Disruption, Transformation!***; two online ***Automation Tools for Systematic Searching*** events facilitated by Justin Clark (with more to come); and an ALIA Town Hall event on ***Professional Pathways – The Future of Library and Information Science (LIS) Recognition in Australia***. Thanks to everyone who has attended, presented and helped organise these events. Events such as these have really highlighted the breadth and depth of health libraries showcasing innovation, skill development and future directions.

On 12 September 2020, Cheryl Hamill was presented with the **HCL Anderson Award**, ALIA's highest honour. An active member of ALIA for more than 30 years, Cheryl has enjoyed a distinguished career in health librarianship, and has made a significant contribution to ALIA, as an active and long standing member of ALIA Health Libraries Australia (HLA). Congratulations Cheryl on your well deserved award.

HLA are also pleased to announce that the winner for the 2020 Anne Harrison Award is Ms Raechel Damarell, Dr Suzanne Lewis & Professor Jennifer Tieman for their project ***Improving the development and reporting of search filters: An e-Delphi study of international experts in the field.*** The project aims to bring together an international group of search filter developers to discuss and create consensus around filter terminology and development processes.

In case you missed it we announced at our November event that the live literature searches focused on the Australian National Safety and Quality Health Service (NSQHS) Standards have been updated. Following their initial release in July 2018, these [live literature searches](#) have been expanded and updated in October 2020 to reflect the NSQHS 2nd edition. These searches have been developed, tested and endorsed as part of the [Health Libraries for the National Standards \(HeLiNS\) Research Project](#), a joint initiative of [Health Libraries Australia](#) and [Health Libraries Inc.](#) Thank you to the library teams at Austin Health and South Metropolitan Health Service for their collaborative efforts as part of this recent review project.

Finally this issue of *JoHILA* brings a fantastic array of articles together looking at health libraries through different lenses. We hear about a library website chat initiative; a Words for Wellbeing program; moving of a hospital library; an overview from health librarians in New Zealand about their PD Day; and the implementing of a customer relations management system during a pandemic. Other articles touch on outcomes of HLA Awards and look at collaborations with international colleagues. It's safe to say that health libraries are resourceful, inspiring and pioneering!

Have a fabulous break, Gemma

HCL ANDERSON AWARD

Cheryl Hamill

The HCL Anderson Award is the Association's highest honour that can be bestowed on an Associate Member of ALIA. It is awarded in recognition of outstanding service to the library and information profession in Australia and to ALIA; and to either the theory of library and information science or to the practice of library and information services (or to both of these areas).

The award commemorates HCL Anderson, principal librarian of the Free Public Library of New South Wales from 1893 to 1906. Anderson created a collection and service policy to give his infant colonial library a stature of national importance. He worked with DS Mitchell, wealthy collector of Australiana, adding, to the bequest of justice Edward Wise, Mitchell's extensive collections of books, manuscripts and maps, to build and preserve the first collection of national significance. Anderson persuaded Mitchell to finance the housing of the collection in what is now the Mitchell Library of the State Library of New South Wales. In addition to this protracted task, Anderson promoted the education of librarians and the expansion of services to the community, (including those in remote areas), as well as to business and industry. His vision, dedication and achievements provide a model for those nominated for this award.

This award is peer-nominated. Nominations are considered by the Excellence Awards Panel which makes recommendation to the Board of Directors.

Cheryl Hamill is a recipient of the HCL Anderson award for 2020. Cheryl has enjoyed a distinguished career in health librarianship in Australia and has made a significant contribution to the Australian Library and Information Association (ALIA) over more than 30 years. She was awarded a fellowship in 2013 in recognition of her tireless work to 'enhance the professional status of health librarians and the role of health libraries'.

Cheryl has not only been a high achiever in the field of health librarianship on her own account, but has also stepped up to a leadership position, which has shown the way for others. This has taken many forms over the years, including efforts to promote open access, expert searching, research to inform evidence-based practice, advocacy, advances in library and information science education, professional development and recognition.

Cheryl is a model of all that is best in health librarianship, constantly looking for ways to improve the services and resources provided to clinicians and other library users. She demonstrates expertise in her own practice and seeks out the very latest

information in order to drive further improvements – not only for herself and her immediate team, but also for her broader network of colleagues in ALIA Health Libraries Australia. Through her collaborative approach, including committee work, editorial contributions, original research, publications, presentations and papers, Cheryl has helped others develop a greater understanding of the field. Through her persistent advocacy, she has progressed the standing of health librarians in Australia.

She has been described by her peers as knowledgeable, inclusive, supportive, mentoring, generous, collegial, sharing and ultimately, inspirational.

‘Cheryl’s knowledge of health librarianship in all its facets is extraordinary, and she never stops learning. Additionally, she never stops sharing that knowledge. She has contributed her time and expertise to the Australian and international health library community in many ways, including via active and long-standing membership of ALIA Health Libraries Australia.’

‘Cheryl is the ultimate team player, contributing her knowledge and expertise, a practical, common sense approach, and a collegial spirit.’

While her nominators say she does not seek out recognition for herself, the ALIA Board is pleased to recognise Cheryl Hamill’s substantial contribution to the goals of the Association by making her the recipient of the distinction of the HCL Anderson Award, ALIA’s highest honour.

Or, as the JoHILA editor’s feeble attempt at poetic doggerel notes:

There once was a health librarian named Cheryl,
Whose name was not amenable to limerick writing,
Unless she had colleagues named Beryl, or Meryl,
And they co-authored papers, and were diligent in citing.

Still, even if the rhymes elude a limerick,
The HCL Anderson award is worthy of something poetic.
A sonnet in MeSH, perhaps, announced with a gong,
Or NLM classification reworked as the Dockers theme song.

I know. A Haiku. It’s
True, I do know a haiku.
See, told you I do.

But back to Cheryl, and all that she does,
For WA, and HLA, and NLA, and ALIA;
For committees and sub-committees and all their paraphernalia;
And, well, frankly, for all of us.

(Sidenote - ALIA is not the Australian Liquor Industry Association ... although that would explain some MARC records I've seen – boom-tish).

But back to Cheryl, and all that she does,
In collecting and parsing and sharing,
And building and joining and supporting,
And setting an example for all of us.

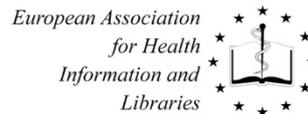
There cannot be a pubmed search string she has not run,
An interdisciplinary comment thread she has not begun,
A publisher price she has not negotiated down,
Or an uppity rep she has not run out of town.

So all hail Cheryl, a paragon of the profession,
A most worthy recipient of the HCL Anderson.
Who knows, if the border is made permanent,
Her next award could be... the WA president!

(Side-note – Nat Fyfe, obviously, would be vice-president; the national anthem would be the Dockers theme song; the national colours would be purple and white; and the constitution will enshrine in law the sequestration of all mining profits to fund health libraries in perpetuity).



Viv Barton, President of ALIA, presenting Cheryl Hamill with the HCL Anderson Award at ALIAWest's "Quench your thirst" event at Curtin University, Perth on 12 September 2020.



International health library associations urge the International Committee of Medical Journal Editors (ICMJE) to seek information specialists as peer reviewers for knowledge synthesis publications

Canadian Health Libraries Association (CHLA/ABSC)

European Association for Health Information and Libraries (EAHIL)

Australian Library and Information Association/Health Libraries Australia (ALIA-HLA)

US Medical Library Association (MLA)

10 June 2020

To the International Committee of Medical Journal Editors (ICMJE)

Dear Colleagues,

We are writing to you to encourage journal editors to actively seek information specialists as peer reviewers for knowledge synthesis publications and to advocate for the recognition of their methodological expertise.

Evidence indicates that few systematic review and other knowledge synthesis publications reflect the participation of information specialists(1-4) despite the recommendations of international knowledge synthesis organizations such as the Campbell Collaboration, Cochrane and the Joanna Briggs Institute.(5-7) There is also a growing body of research suggesting that there is a crisis in the reproducibility of methods reported in these types of publications.(2, 8-10) This is the case despite reporting guidelines like PRISMA having been widely known for a decade (11) and the benefits of information specialists' involvement in the conduct of systematic and scoping reviews having been well documented.(1, 3, 12)

Based on our extensive collective international experience and the published evidence, it is our view that journal editors should more actively recruit information specialists as peer reviewers for knowledge synthesis publications. Information specialists bring to the table a unique set of skills, including considerable methodological expertise that can help address issues of rigour and research waste.(13) In the same way that inappropriate data collection methods for primary research undermine the integrity of research results and conclusions, the quality of the search - the data collection method for reviews - can undermine the integrity of a systematic review. Without robust and thoroughly critiqued methods for

identifying studies for inclusion, knowledge syntheses are subject to potential error and systematic bias. To this end, information specialists are encouraged to ensure that the search strategies for systematic reviews and other knowledge synthesis publications are reviewed by a second expert searcher prior to finalizing the study identification process.(14) This is supplemental to the other aspects of the peer reviewing process which occur immediately prior to publication.

The membership of the associations contributing to this letter represent the most skilled, qualified and experienced expert searchers in the fields of medicine and health care in the world. They are deeply invested in improving the quality of knowledge synthesis publications. These health library associations encourage their members to register as potential peer reviewers for journals in their specialty areas. A recent survey of librarians and information specialists, however, suggests that these professionals are rarely approached to participate in the peer review of systematic reviews or their search strategies at the publication stage.(15) We note that the selection of peer reviewers prior to publication is the responsibility of journal editors, as described in the ICMJE recommendations section II.C.2.c(16) and peer review plays a crucial role in maintaining the quality and trustworthiness of research publications. To this end, journal editors can solicit information specialists to peer review knowledge synthesis search strategies by contacting association leadership for recommendations, by reaching out through professional networks, and via social media.

We ask, therefore, that the ICMJE should recommend to their journal editors that information specialists be approached for methodological peer review. To assist with this, you may find the Librarian Peer Reviewer Database (<https://sites.google.com/view/mlprdatabase/home>) of assistance. This database was created by a group of professional librarians to connect experts in systematic searching with journal editors seeking their input in the peer review process.

Yours sincerely,

Sandy Iverson, President: the Canadian Health Libraries Association (CHLA/ABSC)

Maurella Della Seta, President: the European Association for Health Information and Libraries (EAHIL); *Carol Lefebvre*, MLA Representative to EAHIL

Ann Ritchie, National Manager: the Australian Library and Information Association/Health Libraries Australia (ALIA-HLA)

Lisa Traditi, President: US Medical Library Association (MLA); *Kevin Baliozian*, Executive Director, MLA

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THESE ARE NOT NORMAL TIMES...IMPLEMENTING A CUSTOMER RELATIONS MANAGEMENT SYSTEM DURING A PANDEMIC

Katie McKnight and Barry Nunn
Northern Sydney Local Health District
Katie.McKnight@health.nsw.gov.au

Conflict of Interest Statement

The authors certify that they have no affiliations with or involvement in any organisation or entity with any financial interest, or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

Introduction

Northern Sydney Local Health District (NSLHD), located on the north shore of Sydney Harbour, has a workforce of more than 10,000 staff. The workforce include nurses, allied health, medical professionals and health service managers, serving a community of over 900,000 people. NSLHD Libraries consist of five hospital libraries as well as a well-developed online service. NSLHD Libraries support the NSLHD Strategic Plan 2017-2022, in particular, three of the key themes: Evidence Based Decision Making, Responsive & Adaptable Organisation, and an Engaged and Empowered Workforce. Patient care and supporting clinicians and health professionals in carrying out this care stand at the forefront of all NSLHD Libraries services and activities.

The last 10 years have seen significant growth in the range and complexity of library services. There has been an increase in literature searches and research consultations. In response, NSLHD Libraries has had to innovate to meet the demand and continue to support client needs and expectations. The Library provides the traditional services including article and book requests, and literature searches. The Library also provides a systematic review service, one on one, and group training sessions, general reference enquiries and other assistance. These services are supported by online forms underpinned by multiple, sometimes cumbersome, data collection systems, including spreadsheets and an old document requests database. Unsurprisingly, this infrastructure lends itself to inaccurate data collection and errors. A considerable amount of time was required every month to collate statistics and present these in a format usable for reporting, evaluation and governance.

To maintain sustainability and innovate, NSLHD Libraries sought a technology solution in the form of a customer relationship management (CRM) system. It needed to support our client-centred approach to services, as well as capture operational data. We needed to identify and implement a system, a single source of truth, that would support multiple purposes including evaluating services, reporting operational statistics and managing a client's needs.

Methods

Selection of the CRM

Of the CRMs currently available, Altarama's RefTracker came highly recommended. Altarama is an Australian company with over 18 years experience in the library and information sector.

A working party made up of the Library Manager, the eServices Librarian and a Librarian was established and met with the proprietor of RefTracker in November 2019. RefTracker was selected for of the following reasons:

- it is highly customisable and could easily incorporate the services we wished to integrate;
- there is locally hosted support as well as an excellent reputation amongst Australian and international libraries;
- At the time NSLHD Libraries was developing a new remote access platform, Springboard, as well as a new link resolver and Single Sign On (SSO) for remote users. The proprietor was able to demonstrate how RefTracker might fit within this framework and how Altarama could offer support at a time that suited us;
- the price of implementation, support and on the ongoing licensing was reasonable and could be accommodated within the existing budget; and
- RefTracker also offered a Desk Stats module to replace a paper form.

After meeting with RefTracker, a project brief was drafted to ensure the implementation team had a shared understanding of form development and technical requirements. Several stages were required for development and testing of each group of forms. Work commenced on the project in December 2019, with the vendor able to provide access to RefTracker at a time of low demand for library services allowing the project to get under way.

Library forms

The first task was building the required forms. Many pre-determined forms already existed within the software, giving the project team the opportunity to copy and customise them for our needs. The project team audited each of the existing services that the Library offered, and created, reviewed and assessed the new forms to ensure they met the needs of both clients and library staff. Forms for the following services

were identified for inclusion: literature searches, reference requests, desk statistics, including daily head counts, document delivery, book requests, training and online consultations.

NSLHD Libraries also has a register of marketing activities to various hospital teams, staff and students – both continuous and ad hoc. The aim of the register is to capture and identify effective marketing strategies and key individuals who can promote the library, so we can reuse the content, method, format or assistance of the individual at a later date or a different setting. This marketing register was also included in the project brief.

In February 2020, the majority of the initial nine required online forms had been built and were ready for testing. Two of these forms – marketing and training - were for internal Library staff data collection. It was anticipated that additional forms would be developed for other workflows at a later stage.

COVID-19

On March 11 2020, part way through the development of the project, a worldwide pandemic was declared and soon after, on 31 March, NSW went into lockdown. To reduce potential exposure to COVID-19, but at the same time maintain Library services, NSLHD Libraries staff worked part of the week from home and part onsite. This decision presented major challenges in the allocation of work, delivery of services and collection of data in order to be able to demonstrate sustained staff productivity and service delivery during the pandemic. It became more important than ever that staff were able to keep track of the allocated work. At the same time, literature search requests increased by 42% compared to the same period of March/April the previous year. As a result the build of RefTracker and pace of development was accelerated. Whilst working from home, the project team were able to devote additional time to RefTracker development.

Library staff induction and training

Whilst working from home, most Library staff did not have access to shared network drives where most of the information recording service activity was stored. The workaround was a shared Google Drive. Staff were able to complete tasks from home, and still record their tasks. This was far from ideal giving further impetus to work on RefTracker project.

Just prior to the implementation of RefTracker, NSLHD Libraries also introduced Single Sign On (SSO) remote access and a new Discovery platform. This, along with working from home and the movement of many work practices to RefTracker, was asking staff to take on massive changes within a very short period of time. This required creativity and clear communication as to what was taking place, and why, so that all bought into the changes. It required a high level of support from the project

team to give other staff the knowledge and skills they needed to operate RefTracker. Lockdown and social distancing made it impossible to deliver onsite training for staff. Training videos were created for certain aspects of the system and made available on Google Drive. We also held a live demonstration for the NSLHD Library team at the bi-monthly NSLHD Librarians' videoconferencing meeting to allow for staff questions. Staff were also encouraged to contact the NSLHD working party to video conference and share screens to ask questions. Staff were given test exercises to complete, to help familiarise themselves with the new system – they were asked to back date their recent reference enquiries for the earlier part of April and record marketing statistics from July 2019 onwards. RefTracker went live on Monday 20th April 2020.

Results

Library staff

The majority of staff felt that the system would improve their overview of their workload and provide efficiencies including data entry. The library manager was also able to get a broad overview in the supervisor statistics, to ensure that work was being completed in a timely manner. The training videos were well received, as staff could go back and review the videos to ensure that they felt competent doing the particular task required.

Our setup of RefTracker allowed for continuous client contact recorded in the one form. The client is able to request their search with a form developed by library staff, based on years of experience in undertaking literature searches. Once the search or enquiry was completed, the librarian can select a set text known as "Quick Text" from a standard template so that the client receives the information in standard format. Literature searches are sent as MS Word documents with EndNote attachment, depending on client requirements, and are retained in the RefTracker database. A brief satisfaction survey is included with the results sent to the client, which allows them to rate the service. There is an option for a longer survey to obtain more detailed information from the client around the results and what the results were used for, i.e. improved patient care, updated information for policy and procedures. If needed, clients are able to add additional information to their request, to give context to their question.

Initially all new requests were reviewed by one librarian who distributed the requests based on staff availability. Since launch in April we have developed a monthly roster so that all librarians get experience in the management of RefTracker and allocation of requests. This has been very useful for all staff to have a better understanding of the type of requests being submitted. We have also set a target date for fulfilling service requests, aligning with the NSLHD Libraries key performance indicators. Staff are sent reminders as the due date approaches. If a staff member is

unable to complete a task, due to unplanned leave for example, it is easy for another staff member to take over the work as the whole correspondence and request is saved in RefTracker.

A variety of statistical reports can be generated from RefTracker. During the first phase release of RefTracker to Library staff, statistics were checked to ensure data quality and staff compliance. Several issues were picked up, including how the daily head count was added. Due to the design of the online desk statistics form, it wasn't always clear where the staff should enter the data. A brief training video was created and distributed highlighting to staff where they should include the head count at the end of the day.

Previously we had tallied desk statistics and head counts on a hard copy form. This was sometimes forgotten and data was often inaccurate. The new online desk statistics form in RefTracker allowed us to add our statistics on the fly, by left mouse clicking in an interactive form. The time of the statistic is also recorded, allowing us to retrieve peak periods of usage in the libraries. Desk statistics collected include reference citation management assistance, IT support enquiries, library collection and resources information provision and other more general enquiries.

The RefTracker system implementation during April/May of the COVID-19 pandemic, although stressful for staff learning to use a new system, meant that we could get live statistics and have a full overview of staff workloads. Work could then be allocated and distributed to the available staff, resulting in a more equitable distribution of searches and other requests for information from clinicians and staff of the district.

The project was an excellent development opportunity for the Librarian on the project team. She gained confidence and showed an aptitude in the development and troubleshooting of RefTracker forms. She went on to develop forms outside the original scope of the project such as a form to manage and record pursuit of long overdue books.

Technology issues

RefTracker has a number of technological benefits. It uses cloud based technology, is able to integrate and replace existing systems, and required minimal interaction with, and no approval from, the District ICT Directorate. As requests for literature searches and document supply had previously been via Jotform, it was a simple task to replace the link on the Libraries' intranet and internet sites. The only problem experienced was ICT blocking emails sent by RefTracker as they were identified as spam. This was easily rectified.

Library clients

Whilst the main aim of the project was to streamline Library processes, customer service experience was always a consideration throughout the project. The project team aimed to transition to RefTracker seamlessly, with no impact on Library clients and we believe that has been achieved. It is too early to say whether the new system has generated benefits for our clients, but that will be the focus of ongoing evaluation. Anecdotally clients have reported that the system is intuitive and easy to use. Clients are also using the feedback evaluation option, allowing them to provide a rating of service out of five stars with comments around the service. A total of 22 evaluations have been received, with 70% providing an evaluation of "excellent". We will be conducting further assessments of the system in the future to ensure that it is beneficial for client service.

Conclusion

The implementation of RefTracker at NSLHD Libraries in mid-April 2020 has already proven to be worthwhile, ensuring that our service data is effectively captured and that our clients continue to receive the same high quality service. Some staff continue to work part time from home and are able to easily remotely access all the systems and resources they need to ensure service continuity. Should we need to go into lockdown again, NLSHD Libraries' staff now have the skills and infrastructure to manage and deliver requests for service at a high volume.

SOUTH AUSTRALIA COVID-19 EVIDENCE TASKFORCE

Nikki May

SALHN Reference Librarian, SA Health Library Service

Nikki.May@sa.gov.au

This is an adaptation of a presentation given at the online ALIA HLA "Now, Next, Beyond Covid-19" online conference on July 16, 2020. The basis of the presentation was how my work during Covid-19 differed to that in my usual role. My substantive position is as a reference librarian for the SA Health Library Service, known widely as SALUS. I have been with SALUS for just over two years, after moving from a liaison librarian position at Flinders University.

In early March 2020 the South Australian state leadership tasked Paddy Phillips, the Commissioner of the Commission on Excellence and Innovation in Health (CEIH), to pull together a team of experts to synthesise emerging evidence on Covid-19 in order to support the State's leadership executive in developing evidence based public health responses. I was approached to become a member of the newly formed 'SA Covid-19 evidence taskforce'. The taskforce is a multi-agency collaboration between the CEIH, the South Australian Health and Medical Research Institute (SAHMRI) and Health Translation SA (HTSA), led by Professor Caroline Miller at SAHMRI.

Our task was to respond rapidly to requests for evidence, with these requests coming from a variety of sources, primarily from the SA Chief Public Health Officer, but we also received requests from senior clinicians within our hospitals, from the State Minister for Education and from Australia's Chief Scientist. Often we only had a day or two to produce a summary on these requests.

Before Covid-19 I would often partner on review teams, including rapid reviews, so in many regards this was a fairly normal task for me. However in this assignment there were many unique features and challenges. I am a strong follower of methodologies and established processes, and rely on this guidance in my practice; but much of what we were doing in this situation was emerging and undefined. Here I will detail some of the challenges I faced in undertaking rigorous searching and applying evidence based search techniques in the unique environment of a global pandemic. When searching for decision making purposes we are looking for the highest level of evidence. At the start of the pandemic the highest level of evidence available was primarily case studies, modelling studies that were based on limited data, and clinicians' observations; evidence that would not normally be strong enough to base

these vital decisions on. Initially many of these papers were also published in Chinese journals and not in English.

Speed was of the essence and search alerts were much too slow in this environment; PubMed Medline was updating quicker than Ovid Medline, and Google Scholar was faster than PubMed. The journal home pages and the preprint websites were the first spaces to update and the publishers were also attempting to push out information as quickly as possible. However this meant that their article records would usually initially only consist of a title and an attached pdf. Often key evidence was located in the letters to the editors of the key journals, again a resource type that we would often not include in reviews. For me this meant a trawl through each journal website for every topic, opening every pdf to assess the content, which was very slow going. Another issue we had to navigate was that researchers were disseminating their evidence through the media before their research was available in any online spaces; this meant we were often trying to find evidence on emerging topics that were being widely debated but there was no actual evidence to locate. This was demonstrated by the case of anosmia (lack of smell), which we were asked to research after the statement was published by ENT UK (Hopkins & Kumar, 2020). At that primary point we could not find any case studies at all, just a few mentions in epidemiological reviews. Ultimately we wrote three editions of this review and we were struck by the huge increase in available studies between each iteration.

In the meantime I was aware of other evidence teams who were doing the same thing across the world and tried to keep an eye on what they were doing, primarily the CEBM at Oxford University, and McMaster University in Canada. Thankfully Trish Greenhalgh at the CEBM is a prolific tweeter and often commented on their processes, which was invaluable during this time of uncertainty. It did however seem that we were all following a very similar method and using similar resources, which was reassuring.

The database providers and indexers were also playing catch up, which meant search terms were also changing rapidly. The World Health Organization were the first to pull all the Covid-19 papers into a 'global research' repository very quickly in early March, closely followed by LitCovid from the National Center for Biotechnology Information, but both of these data sets were only searchable by full text keyword (WHO 2020, Chen 2020).

A key change from my own usual practice was that I was undertaking the primary screening process. After conducting as comprehensive a search as possible I would then screen through these results, along with a second reviewer, to pull out any empirical evidence, expert consensus, or key descriptive cases. In total during the early months of the pandemic we created 19 full evidence summaries, four updates and a number of smaller evidence responses directly for our clinicians. My

secondment with the CEIH finished at the end of June, but I am still a member of the taskforce. We still receive evidence requests but the frequency is less often and the urgency much reduced.

The secondment to the SA Covid-19 evidence taskforce raised the profile of the SA Health Library Service and we have since been approached by other teams for further collaborations. After the placement ended I was contacted by the Covid-19 State Control Centre (CSCC) and also by the Communicable Disease Control Branch (CDBC). The taskforce including myself have now worked with the CDCB to develop guidelines for best practice in contact tracing and second wave prevention and suppression, which has turned out to be extremely prescient as South Australia is experiencing its first outbreak in seven months as I write this. I also curate an evidence page for the SCSS on topics that they suggest (May 2020), and also escalate topics that seem relevant to the taskforce to their attention. Outside of Covid-19 I am currently working on some new projects with the Office for Research and the Continuous Improvement Unit at one of our local health networks, and other team members are working on other local projects.

Personally I have gained immeasurably from my work with the task force. Due to the circumstances of the situation I was forced to think on my feet and undertake tasks that I previously would not feel qualified to undertake. It also has highlighted some weaknesses in my ability to quickly analyse research data and so I am looking into undertaking some additional study next year.

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TOPIC SEARCH FILTER DEVELOPMENT METHODOLOGY: CAN WE ACHIEVE CONSENSUS?

Raechell Damarell

PhD candidate, Flinders University

raechell.damarell@flinders.edu.au

Suzanne Lewis

Library Services Manager, Central Coast Local Health District, NSW Health

Earlier this year, we were delighted to be awarded the Anne Harrison Award by Health Libraries Australia for our project titled: *Improving the development and reporting of search filters: An e-Delphi study of international experts in the field*. The idea for this project grew out of our work in developing search filters to help retrieve the PubMed research literature in challenging topic areas. This usually means subjects with an imprecise MeSH term (for example, 'Oceanic Ancestry Group' for Australian Aboriginal Peoples) or multifaceted topics that require constellations of search terms to fully describe them (e.g. Integrated Care).

PubMed search filter development differs from regular search development in that it produces a search with an estimated level of performance. Ideally this level should reflect the needs of a targeted and explicitly named end user group. For example, a search filter designed for clinicians is usually expected to retrieve a small set of highly relevant citations, whilst one designed for researchers might be more typical of a systematic review search. The crux of good search filter development, however, is working with a representative set of relevant citations (the 'gold standard') which allows you to identify search terms and iteratively test search performance. How you source the citations for this gold standard set is perhaps the most challenging part of the process and where the quality and reliability of a search filter should be judged. A range of different approaches have been used for this purpose, each with its pros and cons, and it is usually up to the user to determine the potential for biased performance from reading a report of the filter's development.

In 2018, Damarell et al. conducted a systematic scoping review of search filters that retrieve on topic, rather than methodology, to get a better understanding of development approaches. This review revealed a high level of inconsistency in terminology in the field, poor reporting standards making it hard to follow or replicate processes, and considerable variability in methods. This is not surprising given there is no published guidance on how to create filters and even retrieving papers on filter development is challenging. (You only need to try searching on 'search strategy' - a common name for search filters - in PubMed.) We concluded

from these findings that the field needs greater clarity around definitions and firmer understanding of the implications associated with specific methodological decisions.

As we do not assume to have all the answers, and possibly have our own idiosyncratic way of approaching this work, we thought it appropriate to try to bring together an international group of search filter experts for the first time to communicate, debate, and hopefully find common ground. The eDelphi method has shown itself to be a flexible approach for doing this. It is defined as an 'iterative multistage group facilitation technique designed to transform opinion into group consensus' (Hasson, Keeney, McKenna, 2000). It involves inviting a group of experts (via email – hence the 'e' in eDelphi) to comprise a 'panel' and getting them to provide answers to open- or multiple-choice questions and/or rating options. In other words, providing both qualitative and quantitative feedback on a range of propositions. Their tabulated and summarised responses are then fed back to them and discussed until a predetermined level of consensus is reached.

The benefits of the eDelphi approach include the fact that it is non-confrontational, those involved can be located anywhere, participants can remain anonymous, and it avoids any one person from dominating proceedings. Furthermore, the consensus obtained carries far more authority than any one expert's opinion. From an administrative point of view, there are also few costs to consider other than the time put in by the facilitators.

We have several hopes for this project. Firstly, we aim to develop clear guidelines for understanding, developing, and reporting search filter development projects. From this, we hope that greater numbers of health librarians may find this activity appealing and may feel more confident to collaborate with clients to solve known information retrieval challenges. In our experience, we have found filter development to be a highly visible way for health librarians to demonstrate to library funders how their considerable search expertise adds value to knowledge and information enterprises. The development of more filters in challenging subject areas may also help move research into practice in a timelier way. Finally, we hope that new quality standards will provide a firmer foundation for systematically extending the methodology of filter development, perhaps to the extent of encompassing new and interesting areas of development such as machine learning and artificial intelligence.

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LIBRARY WEBSITE CHAT: JUST DIVE IN AND SWIM

Alice Anderson, Lauren Whittle and Tanja Ivacic-Ramljak

Monash Health Library Service

Tanja.Ivacic-Ramljak@monashhealth.org

The Monash Health Library Service provides information services and support that enables the health service's employees, particularly health professionals, to access quality information rapidly, at any time and place for patient care and research. While the Library Service stretches across five physical branches along the south-eastern corridor of Melbourne, library patrons predominately access resources online and start their information seeking at the library website.

A tendency towards online access has been increasing in the health service for many years, in line with the growth in online resources. Statistics on this trend skyrocketed when the Library re-designed its website in 2019 to be patron centred and user friendly. The trend has continued since – statistics in the last 12 months alone have shown that library website visits have increased by 279% and there were more than 70,000 unique visits in 2019.

To ensure help is available at this popular point of access, the library implemented a website chat option integrated with the existing LibGuides content management system. The implementation began tentatively in January 2020 until the COVID-19 pandemic and the first working from home order in Melbourne demanded a new approach. With only 3 days warning, the library team had to reshape access points to continue to respond to the needs of library patrons and implement what was needed to deliver the existing range of services remotely. Website chat was brought to the fore as a crucial business continuity measure and the fast tracked project was completed in less than a week. The library team was asked to dive in and swim!

This article discusses the implementation of webchat in a hospital library service, system functionality and resourcing. It also provides an analysis of how webchat is used in a hospital environment, its successes and challenges.

How it works

The webchat feature is hosted on Springshare's *LibAnswers* platform, which library staff access via individual Springshare logins that use personal names and have professional photos attached. For simplicity the team is organised into only one 'Library' group (comprising 8 staff). The chat platform shows all active (logged in) users with two distinct sections – patron chats and internal chats. Logged in library group users can answer patron chats and send messages to the library group or one another.

Website visitors can initiate a chat throughout Library's website via a widget embedded on all pages. This widget indicates when librarians are online and has a single 'chat now' button. When librarians are offline, the button is replaced with an offline message and the library email address. When a chat is initiated by a website user, they are prompted to provide a name (though this is optional) and their question, at which point an alert sounds on the library side of the interface for all logged in users. Whoever is free to claim the enquiry, can do so. Other logged in users can see from a quick glance that the chat has been claimed and by which operator.

Once a chat has been started, it is easy for the chat operator to manage the conversation. Having distinct sections for 'patron chats' and 'internal chats' within the same interface allows the operator to quickly switch to the library group chat to consult or ask for help if needed. Response scripts for the most common questions are available from a 'canned messages' button, ensuring quick and consistent answers. If the patron's question is outside the scope of the operator's knowledge, a transfer option allows the operator to re-allocate the chat to another logged in operator, e.g. a more senior member of the team. If follow up is required by a specific staff member (e.g. for an inter library loan request) there is an option to send the chat transcript by email after the session has ended.

Modifications for COVID-19

As library staff worked from home during Melbourne's 2020 lockdowns, enquiry desks in each branch were unstaffed for weeks and then months. It was no longer feasible for patrons to obtain in person assistance without an appointment. Signage directed on site health care workers to the library website and contact points, including webchat. During this period, webchat was modified to display a pop up box that appeared in the centre of the screen within seconds of a user arriving at the library website. It asked if the user needed help as "Monash Health Librarians are online". The user had to click 'chat now' or 'no thanks' before proceeding. Under normal circumstances, this pop up box might have been seen as invasive. During COVID-19 it signalled that the organisation's librarians were still available to help in spite of their physical absence.

Resourcing

All members of the library team have been provided access to, and trained in the use of, the website chat platform. Staff are expected to be logged into webchat for the duration of their shifts, though they can set their status to 'away' or 'offline' if they are working on tasks that require their full attention without distraction.

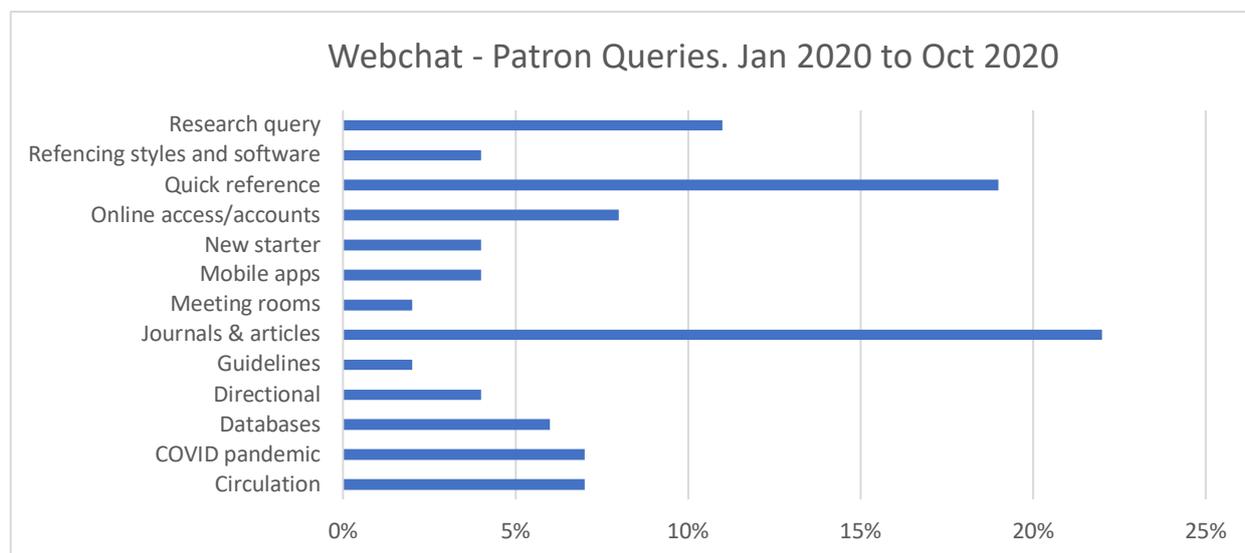
Collaboration and clear communication between staff to ensure seamless operation is essential. A minimum of two staff are required to monitor website chat on any given day, so that there is always one person available to respond to patron queries if the other needs to leave for any reason. Operators negotiate break times to ensure

that it is fair and reasonable for everyone, and an effort is made to ensure that the same person does not answer every incoming request.

Analysis of queries

Patrons have most commonly used webchat to ask about journal access with questions about journal holdings or needing a journal article in full text. Many of these queries were forwarded to the library’s document delivery staff. Quick turnaround reference queries were similarly frequent, where operators point the requestor to a relevant library guide or recommend a suitable resource from the catalogue or database list. Patrons commencing a research study were also regularly inclined to use chat to make an appointment for a research consultation or ask for advice.

The following table provides a summary of the types of queries received from webchat from 1/1/2020 to 31/10/2020.



Successes & challenges

Chatting with patrons and within the library group is a user friendly experience, similar to modern messaging applications with the inclusion of basic text formatting tools, emojis and the ability to attach files. For patrons the inclusion of staff photographs alongside names also turned out to be surprisingly important - it established that the chat connected to a real person in the library team, rather than automatic replies or ‘bots’.

Webchat ensures that health care workers can access assistance with information services at the point of need; they are no longer limited to visiting in person, phoning from a busy ward desk or waiting for an email response. When webchat sessions are initiated by patrons, the response time from library staff is almost

instantaneous. Previously, patrons may have waited up to 1-24 hours for an email response.

From the outset, the team was urged to view webchat as a new form of electronic communication, dissimilar to email where you might finish what you are doing before reading a message and responding. It was important that webchat was viewed akin to an in-person enquiry requiring instant interaction. And yet, at first, the same team members tended to respond to the chat alarm. Library management followed up with individuals to explain that all logged in users were expected to treat the chat alarm as if someone had approached their desk, in person, with a question. This was more of a challenge for staff who typically worked in quiet branch libraries, accustomed to fewer interruptions.

Other concerns expressed early on by some library staff related to inexperience with online communication tools. The sudden response mandated by COVID-19 saw the library team dive in before these worries could be properly explored. The quick implementation allowed everyone to experience the benefits of team chat and observe the quick help provided to patrons who might have otherwise lost time looking for what they needed. These benefits outweighed earlier concerns and everyone in the team was won over by the system's success.

All manner of patron queries are received in webchat, including those better suited to email or phone communication. Questions whose answers rely heavily on detailed instructions (e.g. how to structure a literature search or set up referencing software) are not optimal for the style of communication provided by webchat. When this occurs, operators are encouraged to refer the patron to email or phone communication for a meaningful resolution. This also helped overcome reluctance by some library staff who were wary of picking up complex queries beyond their area of expertise. All operators were encouraged to use functionality for re-allocating chats or to request patron contact details for offline follow up.

Occasionally patrons would move away from the chat window mid-chat and this creates an "abandoned chat" which operators debated about closing. The team devised a script for ending such chats which described how to start a new chat or contact the library by email to complete the query.

The team communication supported by the private library group within the webchat interface was a side benefit of immeasurable value during Melbourne's lockdowns. Operators used the webchat platform to cooperate on group projects in individual chat rooms and to easily exchange documents if needed. Another unexpected and welcome benefit has been a reduction in team emails, as resolutions for many operational issues are now achieved quickly through group or one-on-one chats.

Key takeaways

As the library service continues to respond to the trend towards digital, the webchat platform is here to stay. The system's functionality has brought benefits that were both expected and surprising. It is responsive, easy to use and functional. It makes library expertise available at the most visited service point regardless of the requestor's physical location. Its ease of use and functionality ensured library patrons could begin using webchat immediately - without a launch, any fanfare or training.

The utilisation of webchat beyond its primary purpose of assisting website users has helped the library service overcome burdens arising from the COVID-19 pandemic and working from home. In particular, the team found the group chat useful for an occasional joke exchange, latest news, weather and daily pet reports. It has supported collaboration with zero delay and enabled the flexibility the library needed to continue to operate throughout 2020 in spite of the changed working conditions.

Through collaboration between all members of the library team, and a willingness to dive in and swim, the webchat project became a major success. Its responsiveness and promptness is much needed in a time poor, high pressure hospital environment where easy access to critical information and assistance is key. It signals how library services can be delivered into a digital future.

WORDS FOR WELLBEING: A REGIONAL PROGRAM FOR CONSUMER HEALTH LITERACY

Kim Meers

Redland Hospital, Metro South Hospital and Health Service, Queensland Health
Kim.Meers@health.qld.gov.au

Kim has been a Health Sciences Librarian since 2006. She had a previous career as a Primary School Teacher and teacher-librarian for 15 years. She is based at Redland Hospital, Cleveland, Queensland and supplies library services to the Bayside Health Service. Kim has a passion for education and health literacy. As well as providing library services to the Bayside Health Service staff, she is a member of several clinical education, research and health literacy committees. She initiated the Words for Wellbeing program into Redland Hospital.

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What is 'Words for Wellbeing'

'Words for Wellbeing' is a self-help mental health and physical health literacy project, that is run as a collaboration between health professionals and the local public libraries. The program provides people in the Redland City Council (RCC) area with useful, evidence-based library resources that have been recommended by health professionals to improve their mental and physical health and wellbeing rather than just relying on Google's search results.

There is good evidence from the National Institute for Health and Clinical Excellence (NICE) www.nice.org.uk that self-help books can help people understand and manage common conditions, including depression and anxiety. This is sometimes referred to a 'bibliotherapy', "*Bibliotherapy commonly refers to the use of literature to help people deal with psychological, social and emotional problems*".^[1] There is a wealth of evidence to show that prescribing such books does work, with research published in *Plos One* in 2013 showing that people who used them over a year had measurably lower levels of depression.^[2] Although books can sometimes work on their own, research has shown that self-help approaches work best when there is support from a health professional.

History of Words for Wellbeing



Professor Neil Frude who first developed 'Books on Prescription'

In 2003 a program called *Books on Prescription* was first developed in Cardiff, Wales by Professor Neil Frude, a clinical psychologist. He developed a recommended reading list of mental health books and piloted a partnership with Cardiff Libraries. Neil Frude said "The doctors are already there; the books are already there and so are the libraries. It just needed joining them up" ^[3]. Variations of the program have spread across the world. In 2011 the 'Books on Prescription' program was implemented in New Zealand by WellSouth. This program focused on mental health. A national scheme for England, 'Reading Well', based on Dr Frude's program, was launched in England in 2013 and is delivered by the Reading Agency. It only focuses on mental health and

dementia.

History within Australia

In 2011 *Books on Prescription* was launched in Western Australia (Broome, Derby, Kununurra), a collaboration between Boab Health Services and the Kimberly Public Libraries.

In May 2016, the *Books on Prescription* initiative was launched at several public libraries across Central and Far Western NSW in collaboration with the Centre for Rural and Remote Mental Health.

History within Queensland Health

In mid-2016, the hospital librarian and the Consumer Engagement Officer at Ipswich Hospital heard about the *Books on Prescription* program and decided to adapt and implement it across West Moreton Hospital and Health Service. They partnered with the 4 regional councils to implement the program (Ipswich, Lockyer Valley, Somerset, and Scenic Rim). They called the model, '*Words for Wellbeing*' which is based on the same principle and experience of the *Books on Prescription* initiative and modified for the Australian environment.

Where the *Books on Prescription* model has been focused on mental health, *Words for Wellbeing* caters to both mental and physical health. The [Ipswich collaborative developed two lists](#); one regarding mental health and one for physical health conditions. They had health professionals at Ipswich Hospital evaluate the books.

How did Redland Hospital get involved?

In November 2016 the Ipswich Hospital Library Manager presented the program at the QLD Health Librarians annual conference. As the Redland Hospital Medical Librarian, I was looking for a consumer health literacy strategy that we could implement through the Redland City Council. Metro South Hospital and Health Service (HHS) had just embarked upon Planetree accreditation and all departments/areas were being asked about their service and how it related to person-centred care.

In March 2017 I contacted the Redland City Council (RCC) Public Library. They had already heard about the program and were immediately on board. They had been looking for a health agency to partner with. Over 6 months, we met on several occasions and organised the implementation of the program. The organising group involved the RCC Acquisitions librarian, the RCC Library Web Developer, the RCC Community Programs Project Officer, the Redland/Logan Hospitals Consumer Liaison Officer and the Redland Hospital Librarian. Ipswich City Council Public Library was happy to share the Words for Wellbeing templates that they had already created. The RCC Public Library bought all the books, placed Words for Wellbeing stickers on them, created and printed the marketing materials and designed the Words for Wellbeing web pages on the [public library website](#).

'Words for Wellbeing' was officially launched in the Redland Hospital main foyer on 30th November 2017.



Launch day for 'Words for Wellbeing'



Launch day for 'Words for Wellbeing'

What did I need from Redland Hospital staff?

- **Awareness.** I needed the department teams to know about the program. To achieve this I attended meetings with clinicians and education sessions to talk about Words for Wellbeing.
- **Recommend the program.** Hospital teams are time poor and often don't have time to 'tick and flick' a paper-based 'book prescription' so we asked clinicians to verbally tell patients about the program.
- **To be proactive.** The Public Library needs the recommendations from health professionals at the hospital for Words for Wellbeing. I asked staff to send through their suggestions for consumer health books that they would like on the list.
- **Evaluation help.** I asked the Clinical Directors for a couple of motivated health professionals from mental health and other departments to volunteer to evaluate books as needed.

Staff also made suggestions to improve the program. For example the Mental Health team asked if there were any Words for Wellbeing books available as eBooks as some mental health patients might not be able to get there or some would be incapable of returning a book. Another Director wanted to know if any were available as audio books for indigenous patients and patients with low literacy. I fed these suggestions back to RCC libraries and now they also look to see if the recommended titles are available as eBooks and audio.

Promoting the Program - Public Library Initiatives

An important step in the program was to take awareness of the program out to the local community. An article on Words for Wellbeing was placed in the Council's *'Our Redlands'* magazine that was letterboxed dropped to each house in Redland City at the end of February 2018.



Words for Wellbeing included in 'Our Redlands' magazine

Promoting the Program – Redland Hospital Initiatives

The Hospital Librarian became a proactive member of other health consumer networks to expand and gather ideas for the program such as the Redland Hospital Consumer Partnership Committee, and the local community Redland Dementia Alliance (RDA). The program was presented to multiple departments, especially in Allied Health. There were many recommendations for books received from Dietetics, Occupational Therapy, and Social Work. The program was also promoted in the hospital newsletter.

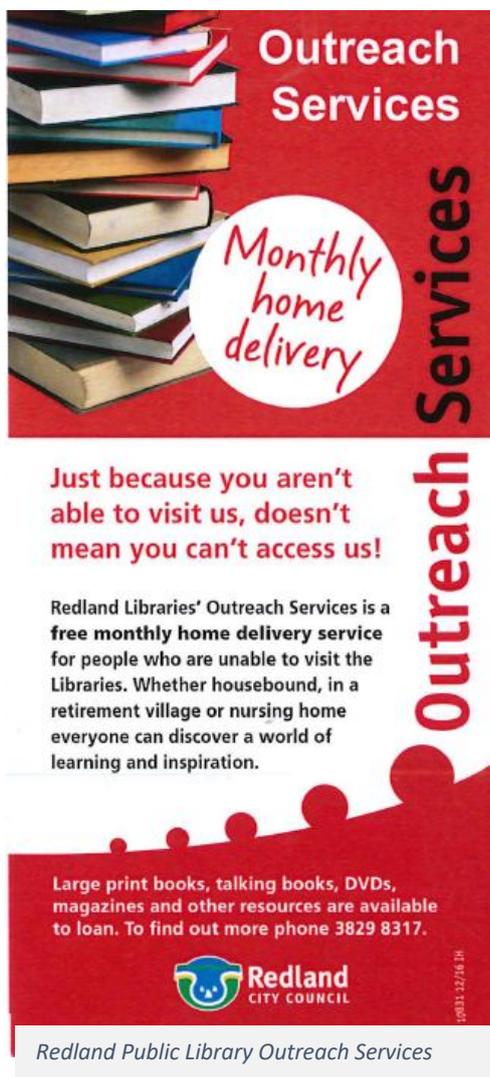
How does it work for the hospital and public libraries?

1. The hospital librarian promotes the program to departments and gathers recommendations. Each department/team allocates a Words for Wellbeing person to liaise with the librarian.
2. The hospital librarian reviews the recommendations (e.g. checks for new editions or a title change). The hospital librarian sends the recommendations to the liaison at the local public library such as the acquisitions librarian or the adult program librarian.

3. The public librarians also do a quick evaluation. They check their catalogue, if they already have the book, they add it to the Words for Wellbeing website and put a Words for Wellbeing sticker physically on the book. If they don't have the book, they order it.
4. Regular meetings are scheduled between both libraries. As the program starts to run on 'auto', meetings may only need to be held twice a year.

How does it work for the consumer?

In a busy hospital environment, it is easier for staff to just provide a verbal recommendation. A health service centre or a GP clinic is probably in a better situation



The flyer features a stack of books on the left. The top section has a red background with the text 'Outreach Services' in white. Below this, a white circle contains the text 'Monthly home delivery' in red. The right side of the flyer has a vertical red bar with the text 'Outreach Services' in white. The main body of the flyer is white with red text. At the bottom, there is a red bar with the Redland City Council logo and the text 'Redland Public Library Outreach Services'.

Outreach Services

Monthly home delivery

Outreach Services

Just because you aren't able to visit us, doesn't mean you can't access us!

Redland Libraries' Outreach Services is a **free monthly home delivery service** for people who are unable to visit the Libraries. Whether housebound, in a retirement village or nursing home everyone can discover a world of learning and inspiration.

Large print books, talking books, DVDs, magazines and other resources are available to loan. To find out more phone 3829 8317.

Redland
CITY COUNCIL

Redland Public Library Outreach Services

to provide a brochure of the program.

The patient goes to their local public library (in Redland City Council there are 3 mainland branches; Cleveland, Capalaba and Victoria Point and 4 remote libraries located on nearby islands) and borrows the books for free. If they are not available, the librarians can reserve the items for the person. Free reservations are available in most libraries.

The books in the library can be easily identified on the shelf with a *Words for Wellbeing* sticker. The public librarians know about the program and can help consumers find the Words for Wellbeing books on the shelves.

They can also search for the program and the books online on the Redland Public Library website through the Words for Wellbeing catalogue. If a consumer is too sick or frail or unable to leave their house the Redland City Council Library has a Mobile library service (van) that can come to their house and deliver books. This is also a nice social aspect for those who live alone (it is a literary meal on wheels!)

Desired outcome – improved health literacy!

In a perfect world, the patient reads the book, thinks about what they could do to improve their health based on health professional advice and further information gained via reading the book. The patient is then empowered to make changes with the support of their health professional. The patient also has a better understanding of their relevant condition and improved health literacy. It may also enable them to have a better conversation with their health

professionals about their condition and ask important questions about their health and management.

Benefits to the Consumer

- **Joining a local public library:** It's quick and easy for consumers to join their local library.
- **Privacy and Confidentiality:** Library book loans and borrower details are treated as strictly confidential.
- **There is no cost!** It's free, and the library is air-conditioned and has a café!
- **Links to other support programs:** Home visits, senior groups, language literacy support (migrants), companion programs in community groups, book clubs, First Five (young and/or new mums), introduction to computers, and so much more! Hopefully these groups also help them on their own 'wellness plan'.

Benefits of the program for the Hospital

- The council buys the books on our recommendations. So, there is no cost to the hospital.
- The council manages and updates the website.
- It helps the hospital with accreditation, Standard 2: Partnering with Consumers (every department/team/individual that participates can put it in their accreditation activities/outcomes) ^[4]
- Improves the value and visibility of the hospital library. Especially regarding accreditation and standard 2 ^[4]
- It meets and aligns with the Metro South HHS Planetree program objectives (person centred care), especially component 3 ^[5]
- It is a health promotion strategy
- It is a health literacy initiative
- Some patients will increase their health literacy and make changes, thus fewer visits to hospital.

Benefits of the program for the council public libraries

- It meets their community literacy objectives
- It encourages more people to join and use their local public library.

- Staff and patients at the hospital become more aware of the public library as a useful service and resource. For example, the public library program, [First Five](#), brochures are now in the Women & Birthing packs and are available in the antenatal waiting room. And a slide about the program has been added to the Women & Birthing slideshow that plays on the TV in the antenatal waiting room.
- Visiting the public library might encourage people to use the other reading options to help them feel better: novels, magazines, poetry and book club groups.

Evaluation of the program

The Redland Hospital Library and Redland City Council Public Libraries have not formally evaluated the program yet, but statistics on the book usage are available on request from the council libraries. Ipswich and Townsville Hospital Libraries have also not formally evaluated the program.

So, while we can't be formally sure the books are making a difference, I refer people to the Reading Well Books on Prescription evaluations that are done every year.

Other evaluations on the program

- In NSW, Central West Libraries are working with the University of Newcastle's Centre for Rural and Remote Mental Health in researching the effectiveness of their [Books on Prescription program](#).
- In 2014 WellSouth in New Zealand conducted its own research to evaluate various aspects of their [local scheme](#).
- The [Reading Well](#) Books on Prescription program has undergone and released an independent evaluation each year since its launch in 2013.

Spreading the word and expanding the program within QLD

On the 15th June 2018 Redland City Council librarian Monique Whitewood and I were invited to talk about the program to the 2018 Health Consumers QLD Forum in



RCC Public librarian Monique Whitewood and Kim Meers at the Health Consumers Queensland Forum

Brisbane. This generated interest from staff attending from Townsville HHS, who later approached us for more information. On the 15th February 2019 I was invited to Townsville to present the program to staff from Townsville Hospital and Townsville City Council. They decided to go ahead with the program. They launched the program in July 2019



Townsville 'Words for Wellbeing' team with Kim Meers, Redland Hospital Librarian





Townsville Hospital and Health Board Chair Tony Mooney and Mayor of Townsville Cr Jenny Hill with books from the collection

Issues

- Despite my efforts I did not receive enough recommendations from the doctors and nurses in the hospital. Mainly due to them being so busy with their clinical work. We are hoping we can get some more doctors and nurses from the community involved such as GP's and community and child health nurses.
- I found the Mental Health and Allied Health departments (social work, speech therapists, dietitians, physiotherapists, psychologists and occupational therapists, etc.) were interested in helping with the program since a lot of them work in rehabilitation and counselling roles and already use books with patients. I have therefore been liaising with them in a larger capacity. One thing I have found useful is to ask each department to appoint a member of staff to be their Words for Wellbeing liaison. That person oversees gathering the recommendations from their team into one list and sending it to the library.
- I found the staff and my liaisons at the public library changed a few times within the two years, which involves scheduling a meeting either in person or by phone to get the new staff member up to speed on how the program operates and their role in the program. This is also the case with the hospital departments' Words for Wellbeing liaison.

Collaboration

We now have 3 Queensland public hospital libraries partaking in the program, Redlands, Ipswich and Townsville. We have found it helpful to create a shared folder that we can each put our recommendations into. As receiving regular

recommendations from busy health professionals can be an issue, by sharing the recommendations with each other, it triples the recommendations that we can send on to our respective public libraries.

Last Word

For any health librarian thinking about implementing the project it has proven so far to work well with small to medium hospitals and city councils as you can build a relationship and rapport between two library services. It has not been attempted in QLD with a large hospital and city council such as Brisbane City Council. Once the program is up and running it is not too difficult or time consuming to manage. The most difficult part is the setting up and promotion. I would allow at least a 6-month time frame.

Where to next?

We aim to spread information about the program to local GP's, medical centres and community health agencies. Also, as expected regularly reviewing the titles for new editions and/or sourcing possible replacements and checking the apps and websites to see if any have altered over time.

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MEDICAL LIBRARY REDESIGN AND REFURBISHMENT: A CASE STUDY FROM PAH LIBRARY AND KNOWLEDGE CENTRE PRIOR AND DURING THE COVID-19 PANDEMIC

Gina Velli

**Library Manager, Princess Alexandra Hospital Library and Knowledge Centre,
Metro South Health**

PAH.Library@health.qld.gov.au

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Introduction

Redesigning a library requires effective communication and compromise because many operational, technological and aesthetic variables need to be considered, and the priorities and knowledge of stakeholders differs. Reflecting upon the process of refurbishing an Australian medical library, located within a large Queensland tertiary teaching hospital, there are many variables to consider. Stakeholder engagement, governance, collection development, ICT and spatial considerations are all important aspects of library redevelopment. Common pitfalls of library redevelopment may be avoided through diligent planning and consistent leadership. Focusing on achieving short-term tasks and maintaining service normality is useful, particularly when a pandemic creates an increasingly hostile global operating environment.

Stakeholder Engagement and Project Governance

Redesign of the PAH Library & Knowledge Centre began with identification of stakeholders, identification and measurement of stakeholder needs and preferences, and some consideration of budgetary allocation. The Guidelines for Australian Health Libraries (Health Libraries Australia, 2008) recommend, "a strategic analysis to identify and analyse its internal strengths and weaknesses against user requirements and external trends and developments." Assessing strengths, understanding the needs of users and building a skilled project team are all important for a successful project (Bassett, 2010). Similarly, Brackenridge Hospital in Austin began the development of a new library service by performing a client needs assessment and identifying activity and collection requirements (Mercer, 2008).

The Metro South Health Study, Education and Research Trust Account (SERTA) committee assessed an application for PAH Library & Knowledge Centre facilities to be upgraded. The SERTA committee approved funding for a library refurbishment project, to be managed through normal project management processes for Princess Alexandra Hospital projects. A project steering committee was formed, consisting of representatives from key hospital services, in order to facilitate decision making processes. Representatives attended from nursing, medical, allied health and administrative areas of the hospital. The SERTA committee was engaged strategically for some decision making processes. A working committee was formed with library staff and project management staff, to facilitate more detailed levels of planning and decision making. The final approval processes received governance from the Executive Director of Medical Services, Princess Alexandra Hospital.

During conceptual considerations, library staff and the project steering committee developed a client survey to engage the broader hospital client base. The survey questions asked library clients about the activities they would like to undertake in the library and their preferences for seating arrangements, facilities, equipment and information resources. Library staff promoted and administered the survey to library clients, analysed the survey results, and reported back to the steering committee. The results of the survey provided insight into client activities and preferences. Pubmed, Medline complete, CINAHL & CKN were some popular resources clients listed that they currently use. Some clients appeared to lack knowledge about information resources already available, and the costs or regulations of licencing electronic resources. Clients most preferred to use the library for working at a PC or laptop, borrowing publications, requesting publications and articles, and working on their laptops. A senior project steering committee spokesperson reported on the results of the client engagement survey to the SERTA committee.

Common stakeholder engagement and project governance pitfalls to avoid:

- Project governance should be initially well defined and transparent, ensuring staff to understand their roles and responsibilities.
- Committees formed need clear terms of reference, enabling participants to understand the scope and responsibilities of their participation.
- Committee participation should be contingent on having adequate time and a project background knowledge to enable full, ongoing and meaningful participation.

ICT Considerations

Refurbishment is an ideal opportunity to upgrade library ICT infrastructure, hardware and software. ICT decisions are informed through stakeholder engagement, to achieve the best value and impact. The use of wireless mobile devices and technologies to access scholarly medical information continues to increase

(Chamberlain, Elcock, & Puligari, 2015). The Guidelines for Australian Health Libraries (Health Libraries Australia, 2008) recommends, "The LIS maximises the use of available networks and telecommunications to enhance service delivery".

A working party of library, ICT and project staff was tasked with investigating conceptual ICT library innovations for the PAH Library & Knowledge Centre redesign. Some concept ideas presented, based on public and academic libraries, were outside of scope, outside of budget or impractical to implement e.g. flying-drones delivering books to locations in the hospital. The working party considered client feedback, captured through the client survey administered to the broader hospital client base. Based on client feedback and suggestions from the project steering committee, a list of ICT recommendations of interest was developed. The list included dual-screens on PC work stations, large display screens, additional hardware and phone charging stations. Aligning with best-practice hospital safety strategies, security cameras were identified as integral and essential to the 24/7 library environment.

Upgrade of the PAH Library & Knowledge Centre EM Tag (tattle-tape) stock control system to an RFID system was included in the initial application for the upgrade of PAH Library & Knowledge Centre. An RFID system was documented in the application as an essential component, and was allocated to the project's working committee to assess, cost and implement. Essential basic components of an RFID system conversion were identified by the working party including: rewritable RFID tags, RFID security gates, RFID desktop reader/writer, software licencing, conversion project management, bulk-tagging equipment, and training costs (Simon, 2008). Additional RFID equipment options such as RFID-enabled returns chute, RFID-enabled returns-shelf and RFID-enabled hand-scanners were not essential to the scope of the project. An RFID shelf-check unit was within the scope of the system upgrade. Quotes for an RFID system were sought, costed and evaluated by the working committee and a vendor selected. RFID tagging of the collection was completed while the collection was in off-site storage as pre-arranged by the project time-line.

Common ICT pitfalls to avoid:

- It's useful to clearly define what is an ICT component. e.g. are USB electrical sockets or network switch-boards included?
- It's helpful to isolate a portion of budget initially for ICT components, to define the scope of consideration.
- Having the most appropriate ICT staff comment on aspects of ICT, increases the speed of planning. e.g. networking and desktop software ICT teams may be separate groups.
- Non-essential equipment and features should be given initial consideration and weighting by individuals in key governance positions, to

avoid spending time on broader examination of items that will not achieve acceptance.

Spatial Concepts & Architectural Planning Considerations

A conceptual design period allows time for stakeholder feedback and committee ideas to be collected and collated. Library planning is aligned with institutional priorities, supporting educational needs from all areas (Dexter et al., 2019). James Shedlock of Galter Health Sciences Library commented of the spatial design process, "Architects tend to want to make a statement. Librarians generally want a building that works and one that they can live with for themselves and for the users" (Ludwig, Shedlock, Watson, Dahlen, & Jenkins, 2001). Architectural planning may or may not be engaged initially, depending on internal or external project management models (Bassett, 2010). Developing a layout has many components that require consideration such as: types of spaces, types of furnishings, safety and security, ICT integration, ongoing maintenance and standards compliance (Sannwald, 2016).

In initial conceptual phases of the PAH Library & Knowledge Centre redesign, the working committee located and considered visual materials such as vendor product brochures and 'LookBooks'. Through the client survey, hospital staff expressed preferences for facilities including: PCs, shelves with books, print/copy/scan MFD, water-fountain, self-checkout and sound-minimising partitions. Some clients also expressed interest in phone charging stations, new publications displays, and out-of-hours book returns. Most clients expressed a preference for individual table and chair seating, individual study areas and group meeting rooms.

An architectural drafter was engaged to present some conceptual planning to the project steering committee. Some initial concept ideas were based on examples from public and academic libraries or architectural concepts, for example extending the library foot-print into an atrium. Several versions of architectural designs were considered by the steering committee, and by the working committee, and versions were created from feedback. The membership of the steering committee changed frequently, which made the process more difficult, because new attendees needed to be briefed on aspects of the project to that point.

Library staff highlighted the visual-merchandising aspects of the library space and the operational spatial areas of the library. Library staff highlighted some library standards and guidelines such as the 'Guidelines for Australian health libraries' (Health Libraries Australia, 2008), 'Aboriginal and Torres Strait Islander protocols for libraries, archives and information services' (Aboriginal and Torres Strait Islander Library, 2012) and 'ISO/TR 11219:2012(en) Information and documentation - Qualitative conditions and basic statistics for library buildings — Space, function and design' (Standardization, 2012). A working committee visited The Prince Charles

Hospital Library, a medical library of similar size and scope, which helped to provide a better concept of the operational aspects of health libraries for those unfamiliar with operational library considerations.

A conceptual design was selected and approved by the SERTA committee. An architectural contractor was engaged to consider conceptual plans to this point and to create detailed plans, including full structural aspects, furnishings, materials and detailed costings. A meeting with the architectural contractor and the working committee was consultative, and some additional conceptual features were proposed including: sound-diffusion materials, colour-scapes for carpet and furnishings.

Common conceptual and architectural consideration pitfalls to avoid:

- The services of an interior designer or visual merchandiser are appropriate at a conceptual stage, as these aspects will be of great interest to stakeholders throughout the project, and may inform architectural decisions.
- Essential features should be identified, itemised, and communicated transparently to stakeholders, to indicate areas of budget or costs that may need to be quarantined e.g. budget for painting and carpeting.
- Stakeholders may not know the approximate costs or viability of design features, so making estimates transparent early in the process can focus and rationalise stakeholder expectations.
- Non-essential design features and suggestions can be given initial consideration and weighting by individuals in key governance positions, to avoid spending time on broader examination and itemisation that will not achieve sign-off at later stages.
- Communicating broader ICT considerations to architects is important, because some aspects may influence the spatial layout e.g. widths and wiring for library gates.

Collection Considerations

Refurbishment processes may include the assessment, storage and relocation of library collections. Some new medical school libraries are 'born digital', meaning that their collections are entirely digital (Dexter et al., 2019). Most medical libraries present 'blended learning libraries' of digital and print collections in varying ratios, dependent upon client preferences, budgetary availability, and copyright/licencing considerations (Health Libraries Australia, 2008). Changes to shelving configurations and shelving linear centimetres (LCM) affects the storage and management of collections (Health Libraries Australia, 2008).

Initially a conceptual idea from primary governance was withdrawal of the print collection and sourcing of an entirely digital collection, however with further consideration it was resolved that a 'blended learning library' of digital and print collections was better suited for the scope and objectives of the project. The project consultation survey indicated borrowing publications and 'books with shelves' remained a priority for clients. Some print materials needed to be retained due to archival and copyright requirements and some required publications were not yet available for multiuser eBook purchase. A large proportion of publications had already been made available to clients digitally and did not need to be included in the scope of the redesign project.

The library undertook deselection (weeding) for advised shelving LCM reduction of print collections, to accommodate the architectural designs with reduced shelving foot-print. A collection management policy was written, reviewed and validated to guide deselection, because a current policy was not in effect. Deselection lists were generated from the libraries LMS, based on year of publication and usage formulas and these lists were reviewed as per the new collection management policy. Deselection, deaccessioning and disposal commenced, until the collection was reduced to match LCM specifications communicated to library staff. Changes to shelving LCM to accommodate accessibility was altered at a later stage of architectural design.

Initially the possibility of library staff packing, storing and relocating the library print collection was discussed. Library staff identified the task as too large in magnitude and scope and advised that a professional library mover would need to be engaged. Quotes were sought from professional library movers, responses evaluated and a company engaged for packing, storage and relocation. Tagging of collections with RFID tags was scheduled in project timelines to be completed while the collection was in storage.

Common collection pitfalls to avoid:

- Staff unfamiliar with library collections may not initially be familiar with the processes, costs or considerations of moving/storing print collections.
- Deselection without a current collection management policy is highly inadvisable.
- Changes to shelving LCM after deselection or storage, is not advisable.
- Accessioning/tagging of collections is ideally performed under standard collection conditions.

Relocation, Construction, and Launch

Relocating library collections is a process with many complex factors. When limited staffing and equipment is available engaging and briefing professional movers is a

useful option (Fortriede, 2010). Launching a new or refurbished library ordinarily incorporates social events such as networking-events, library tours, dedication ceremonies and team events (Bassett, 2010; Sannwald, 2016).

In January of 2020 the PAH Library space closed and construction and refurbishment proceeded. The Library PC lab was moved into temporary space for ongoing client access. The Library collection was packed and moved to off-site storage by professional movers. Library staff were relocated into a temporary office for the duration of the construction period. During the construction period RFID tagging of the entire library print collection was completed. In anticipation of an opening launch, the library steering committee selected a name for the library, in conjunction with approval from the organisational communications area.

On the 29 January 2020, the Minister for Health and Minister for Ambulance Services declared the international COVID19 outbreak a public health emergency for Queensland and on the 11th March 2020, the Director-General of the World Health Organisation declared COVID19 a global pandemic ("Public Health and Other Legislation (Public Health Emergency) Amendment Bill 2020 — Explanatory Note," 2020). By 20th March 2020, the Australian international borders were closed. (Scott, 2020). During this period of initial uncertainty many clinical spaces and staff roles were being assessed across Queensland Health, in relation to predictions and models of how the year may progress. Travel and border restrictions were enacted and COVID-19 was effectively controlled in Queensland.

PAH Library & Knowledge Centre space officially opened to clients in June 2020 with a 'soft-launch' and social distancing restrictions. Library staff returned to the library space during April however, due to social distancing impacts on other hospital spaces, some of space was temporarily seconded to accommodate overflow of a seasonal staff influenza vaccination service and a staff counselling service project. As the COVID-19 infection rates improved in Queensland and restrictions on space usage gradually eased, PAH Library & Knowledge Centre was able to resume normal functional capacity. The new 24/7 library featured more meeting rooms, new furnishings, better interior design, more ICT equipment, and indoor Zanzibar plants. General feedback from hospital staff was very positive, and usage of the library steadily increased.

Common relocation and launch pitfalls to avoid:

- It's useful to have a client communications plan for relocation, construction and launch periods.
- It's ideal to install hardy species of indoor plants that require very limited light and water.

- Focusing on achieving short-term tasks and maintaining service normality is useful, when a pandemic creates an increasingly hostile global environment.

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NEW ZEALAND LIANZA HEALTH LIBRARIES SIG STUDY DAYS: 14-15 SEPTEMBER 2020

Tina Verschoor

**Knowledge Advisor for the Health Practice and Te Puna Wānaka Departments,
Ara Institute of Canterbury, Christchurch.**

Tina.Verschoor@ara.ac.nz

Ko Taupiri te maunga
Ko Waikato te awa
Ko Tainui te waka
Ko Waikato te iwi
Ko Ngāti Hine te hapū
Ko Tina Verschoor tōku ingoa
Tēnā koutou katoa

This year's Health Libraries Special Interest Group (SIG) was held at Tūranga, the main branch of the Christchurch City Libraries network in the Square in Ōtautahi, Christchurch. Peter Murgatroyd began with a karakia to set the scene for the day followed by acknowledgements of thanks to Christchurch City Libraries (CCL) for providing the venue for free and to Wolters Kluwer for contributing \$500 towards the sponsorship of two participant registrations and also sponsoring the Study Days Dinner on Monday night. McGraw-Hill also kindly donated 2 book prizes of \$200. A draw to identify the lucky winners was held at the closing of the event on Tuesday.

Erica Rankin, CCL Community Libraries Manager and LIANZA President-Elect then shared the challenges and reflections on the lead up to the opening of Tūranga. As the Establishment Manager of the project she worked as the intermediary between project managers, architects and Library SMEs.

Engagement with the public to inform the library design and development was through a campaign called "Your library Your voice". Community feedback included the desire for open plan, culturally inclusive, outdoor area, "Harry Potter" staircase, espresso bar and aquarium. All these aspects were incorporated in the build with creative modification of the aquarium idea with a virtual fishbowl. Cultural narratives were woven into the building design in consultation with the local iwi Ngāi Tūāhuriri. This was evident in a beautiful artwork embedded into the acoustic panels of our conference room depicting the creation story of Ngāi Tahu. You can read more about the Tūranga cultural narrative on the [CCL website](#).

Challenges were largely around getting the diverse group involved in the development to understand each other's "language". Erin felt her role was often

more as an interpreter. Many still had old-fashioned impressions of libraries. But all hurdles were overcome and the stunning success of Tūranga is evident today.

Next was a presentation to Peter Murgatroyd who was awarded a LIANZA Associateship. Peter is the Library and Knowledge Services Manager at Counties Manukau Health where he also manages the Ko Awatea LEARN e-learning platform supporting 50,000 District Health Board (DHB) staff throughout New Zealand. His experience is wide-ranging spanning law, tertiary, national and special libraries including being a 'barefoot' library volunteer in the Solomon Islands and campus librarian at University of South Pacific in Vanuatu.

This was followed by the ice breaker where 25 of us introduced ourselves revealing where we hailed from including libraries in Ministry of Health, DHBs, Corrections, as well as tertiary and special libraries. With a handful of us from Christchurch others had travelled from Northland, Auckland, Waikato, Bay of Plenty, Rotorua, Gisborne, Wellington, West Coast and Otago.

Next Adele Wilkinson (MHERC) and Jane Keenan of Christchurch City Libraries (CCL) presented on the Reading-in-Mind health initiative which provides books on mental health topics selected and reviewed by health professionals and CCL staff. MHERC also posts books out to those who cannot come into their library to borrow a book. This scheme is promoted on the Pegasus Health website at <https://www.pegasus.health.nz/your-health/useful-links-resources/reading-in-mind/>.

Next Kim Slack (CCL) and Darral Campbell (Manager, Dementia Canterbury) shared about the Dementia Canterbury / CCL initiative supporting small groups of people with dementia in community-based activities based in local community libraries, the Museum, Art Gallery (Artzheimers) and Botanic Gardens. One of the most rewarding activities for Kim is the Life Stories Programme, where the storyteller is paired with a volunteer to record their life story over a 6-week period culminating in a booklet. This finished product becomes a treasured taonga that supports revitalised memories for all the whānau. This short Vimeo video at <https://vimeo.com/454202844> highlights the value of this programme for many families.

Paul Focamp (CCL) shared another initiative designed to attract more men to the Library. It involved a collaboration between CCL, Canterbury Men's Centre and Sport Canterbury to organise an event in 2019 entitled "Focus on Men". Two of the most popular attractions, not surprisingly, included the craft beer / home brew demonstration and the "smoothie bike". This latter experience required the participant to use pedal power on a stationary bike to create their smoothie. It also provided an opportunity for Sports Canterbury to encourage sign up to a "Green

Prescription” funded by Ministry of Health, designed to help people lead more active lives.

After lunch Julie Milne (Hillmorton Hospital Librarian) and Tony Farrow (Manager of Specialist Mental Health Services at Hillmorton (SMHS)) talked about how they approached the task of getting staff to undertake mandatory training so their clinicians applied evidence-based best practices in their day-to-day work with mental health and addictions. Tony was quick to extol the high value work Julie carried out in her Library role to support this initiative. Talking with Julie later in the evening at The George dinner function, I also discovered her further awesomeness. After suffering multiple strokes at a young age, and being told she would never walk or talk, Julie at the age of 60 cycled the length of New Zealand raising awareness and thousands of dollars for the Stroke Foundation. Find her story on [Stuff website, March 13 2018](#) and be amazed!

Next, Angela Broring, Manager of the Waikato DHB Library, talked about how to align Library business with the wider organisation by telling the Library’s story to support new plans. In developing this story, the Library gathered evidence from its users via open questions; surveys; focus groups; useability testing; observation and benchmarking. One genius idea was to get people to finish the “break-up” letter to the Library beginning “I like you but ...” Key areas of focus included customer service; collection development; access to e-resources; health professionals; physical space and library staff. In conclusion flexibility was a top priority to optimise the strategic planning process.

Kareen Carter, Health Sciences Librarian on the Wellington Campus of University of Otago talked about using key performance indicators (KPIs) to inform the quality assurance of the Library for its stakeholders. All KPIs need to be linked to the Strategic Plan. Three key questions to ask in this process are:

1. What is the Library trying to achieve?
2. If achieved what does success look like?
3. And what kind of measurements should be taken?

Kareen recommended the following resources:

Appleton, L. (2017). *Libraries and key performance indicators: a framework for practitioners* (1st ed.). Cambridge, MA: Chandos Publishing.

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NNLM (n.d.). *Valuing library services calculator*. Retrieved from <https://nnlm.gov/mcr/training/program-evaluation/calculator>

Next came our combined reflections from Covid-19 experiences, which included:

- Challenges recognising reliable from unreliable Covid resources
- Library staff were deployed to support in the Emergency Department auditing PPE use and removal etc.
- The hospital was emptied out to pre-empt the influx of 'flu patients and no patients came which meant clinicians had time for other projects meaning library staff carried out more literature searches.
- All staff worked remotely
- Increased number of Covid-related literature requests
- We never closed as we had no capacity to work from home.
- Lots of cleaning
- No Covid requests but increased literature searches for projects
- Seating was removed to enforce physical distancing
- We received 6 emails a minute during Covid lockdown, over 60,000 in total.

Learnings from Covid

- We didn't need to be there 9-5pm
- An "email us" sign sufficed when staffing was not possible.
- Parking was a lot easier
- Recommended read by Porter & Hook (2020) How Covid-19 is changing research culture.

Day 2 of the Health Libraries SIG began with Megan Clark, Academic Engagement Adviser for Faculty of Medical and Health Sciences, University of Auckland providing thoughts on the [Health and Disability Review report](#) released on 16 June 2020. The document recommends creating a new Crown Entity, Health NZ and reducing the number of DHBs from 20 to 8-12 which will require a new look at e-resource procurement and opportunities to partner with the new entity. There is also a need to find a minimum level of access to health information for all health professionals no matter where they work. Ideally Health NZ will recognise the value of working towards having one platform for all health professionals to reduce duplication. For example [Health Info Canterbury](#) and [Health Navigator](#) could become one website as the source of reliable health information. Similar examples prevail regarding learning platforms for health professionals and access to medical literature. How this report will impact will be up to the governing party after the elections this year.

Peter Murgatroyd then shared UK's National Health Service (NHS) Library vision, namely *Knowledge for Healthcare*, with a goal that:

"NHS bodies, their staff, learners, patients and the public use the right knowledge and evidence, at the right time, in the right place, enabling high quality decision-making, learning, research and innovation to achieve excellent healthcare and health improvement."

For more information on *Knowledge for Healthcare* go to <https://www.hee.nhs.uk/our-work/library-knowledge-services>.

Examples of national e-resource portals for health professionals include:

- National Institute for Care Excellence (UK) - <https://www.hee.nhs.uk/our-work/library-knowledge-services>
- NHS Education for Scotland - <http://www.knowledge.scot.nhs.uk/home.aspx>
- Norway e-resources for health - <https://www.helsebiblioteket.no/>

Angela Broring of Waikato DHB Library then shared information about the initiative in New Zealand supporting Open Access to quality research. You can read more in a report by Mandy Henk et al. (2019) called Centring our values: Open access for Aotearoa at <http://hdl.handle.net/10092/17801>

Angela also shared about a new livechat software they have recently adopted at Waikato DHB Library which is user-friendly, economical, easy to install with great technical support. The chat software company is Libraryh3lp. For more information visit <https://libraryh3lp.com/>

The final presentation was by Bernadette Cassidy about reinventing library services following the closure of the Allan Bean Centre (ABC) which was built in 2001 at Burwood Hospital in Christchurch. It was irreparably damaged in the Christchurch earthquakes. In a snap decision by the DHB, Staff were given 15 minutes to vacate the building in 2014 and the building was demolished in 2015. The ABC Library has since been rebranded as the Resource Centre (ABC Library) NZ Spinal Trust and is housed temporarily as a pop-up library in a lounge in the Burwood Spinal Unit. The books are mostly stored in a container awaiting the day, as yet unknown, when they will find new life in a new building. What a day that will be!

We thanked Bernadette Cassidy and Julie Milne for organising a fabulous event and I wish to thank Wolters Kluwer for sponsoring my attendance at this thoroughly enriching two-day event where I have met so many inspiring people, many of whom do amazing jobs in sole charge roles. It is interesting to see that the challenges for health libraries are very similar to the challenges experienced in tertiary libraries as we all seek to prove our value amidst the constant threat of erosion of spaces and services. Nō reira. He waka eke noa. And so, we are all in this together.

DEVELOPMENT AND USAGE GROWTH OF THE POLYGLOT SEARCH TRANSLATOR

Justin Clark¹, Connor Forbes¹, Sarah Bateup², Matt Carter¹

1 Institute for Evidence-Based Healthcare, Bond University

2 Library Services, Bond University

jclark@bond.edu.au

The Polyglot Search Translator (Polyglot) was developed and released in June 2016. The first version of the Polyglot (now known as Phase 1) was designed for internal use at the Centre for Research in Evidence-Based Practice (CREBP), now the Institute for Evidence-Based Healthcare (IEBH). It was designed for internal use by the resident Information Specialist Justin Clark. This meant it was focused on translating his method of creating search strategies. Therefore, this focused primarily on translating single line search strings from PubMed into the Cochrane Library, Embase (via Elsevier), and CINAHL databases.

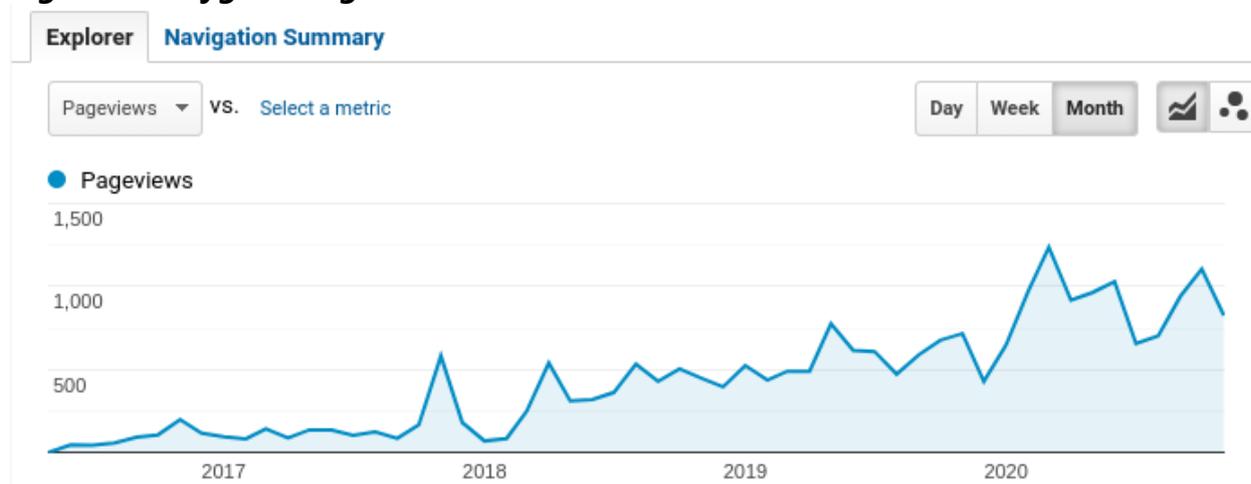
In October 2017, plans to expand the Polyglot and evaluate its time saving potential were devised. A randomised controlled trial was designed, and recruitment for the trial occurred. In November 2017, the trial was launched, and the results were completed in February 2018. The results of that trial were originally published in the Journal of the Medical Library Association, republished with kind permission in this version of JoHILA. During the trial, many small errors with the Polyglot were identified by the participants, as well as opportunities for improvement. These were collated and added into an upgrade program for the Polyglot. Any errors or easy to implement enhancements were rolled out in April 2018 in Phase 2 of the Polyglot by Senior Software Developer, Dr Matt Carter.

In June 2018, the Polyglot won the prestigious Anne Harrison Award and the HLA/Medical Director Digital Health Innovation Award. These awards, and their accompanying prize money, allowed work to begin on Phase 3 of the Polyglot. Phase 3 was designed to increase the Polyglot's usability among those working on search strategies for systematic reviews, with a focus on Ovid users. Phase 3 saw the rollout of many user suggested enhancements, such as 1) the expansion of numbered line searches into single line searches 2) colour coding of Boolean operators and field tags 3) Pop-up hints to suggest when the user should check the translation, such as when translating from MeSH to Emtree terms.

These improvements and enhancements saw a drastic increase in the use of the Polyglot around the world. From its humble beginning in 2016, with 656 pageviews, polyglot has seen substantial growth. In 2017 there was a small increase to 1915 pageviews; a more substantial increase in 2018 saw 4234 pageviews. Polyglot usage

began to really take off in 2019 with 6816 pageviews. Finally, usage exploded in 2020, with 10288 pageviews to date (Figure 1). This accounts for a total of 23909 pageviews on the Polyglot since its release, almost half of those views occurring in 2020 alone.

Figure 1: Polyglot usage from 2016



With so many Polyglot users around the world (Figure 2) many edge cases are reported to us. Although all requests from Polyglot users are incorporated where possible, a significant upgrade is warranted and is currently underway. This upgrade, Phase 4 of the Polyglot's development, will cover a vast number of added translations. Field codes for the databases currently available in the Polyglot are being mapped to most of PubMed's searchable fields and three additional health sciences databases are being incorporated. This upgrade is being led by Bond University Library's Faculty Librarian for Health Science and Medicine, Sarah Bateup. Sarah is supported in this work by IEBH's resident software developer, Connor Forbes, who implemented the Phase 3 enhancements. The Phase 4 developments are scheduled to be finalised and rolled out in April 2021.

The Polyglot team would like to thank the HLA Executive, Medical Director, and the Anne Harrison committee for providing the awards and prize money enabling these Polyglot improvements to happen. This has allowed Australian library research and software development to take its place on the world stage.

Figure 2: Polyglot usage by country



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Justin Michael Clark; Sharon Sanders; Matthew Carter; David Honeyman; Gina Cleo; Yvonne Auld; Debbie Booth; Patrick Condron; Christine Dalais; Sarah Bateup; Bronwyn Linthwaite; Nikki May; Jo Munn; Lindy Ramsay; Kirsty Rickett; Cameron Rutter; Angela Smith; Peter Sondergeld; Margie Wallin; Mark Jones; Elaine Beller. Improving the translation of search strategies using the Polyglot Search Translator: a randomized controlled trial. *Journal of the Medical Library Association*. 2020; April; 108(2): 195-207

Improving the translation of search strategies using the Polyglot Search Translator: a randomized controlled trial

Justin Michael Clark; Sharon Sanders; Matthew Carter; David Honeyman; Gina Cleo; Yvonne Auld; Debbie Booth; Patrick Condron; Christine Dalais; Sarah Bateup; Bronwyn Linthwaite; Nikki May; Jo Munn; Lindy Ramsay; Kirsty Rickett; Cameron Rutter; Angela Smith; Peter Sondergeld; Margie Wallin; Mark Jones; Elaine Beller

See end of article for authors' affiliations.

Background: Searching for studies to include in a systematic review (SR) is a time- and labor-intensive process with searches of multiple databases recommended. To reduce the time spent translating search strings across databases, a tool called the Polyglot Search Translator (PST) was developed. The authors evaluated whether using the PST as a search translation aid reduces the time required to translate search strings without increasing errors.

Methods: In a randomized trial, twenty participants were randomly allocated ten database search strings and then randomly assigned to translate five with the assistance of the PST (PST-A method) and five without the assistance of the PST (manual method). We compared the time taken to translate search strings, the number of errors made, and how close the number of references retrieved by a translated search was to the number retrieved by a reference standard translation.

Results: Sixteen participants performed 174 translations using the PST-A method and 192 translations using the manual method. The mean time taken to translate a search string with the PST-A method was 31 minutes versus 45 minutes by the manual method (mean difference: 14 minutes). The mean number of errors made per translation by the PST-A method was 8.6 versus 14.6 by the manual method. Large variation in the number of references retrieved makes results for this outcome inconclusive, although the number of references retrieved by the PST-A method was closer to the reference standard translation than the manual method.

Conclusion: When used to assist with translating search strings across databases, the PST can increase the speed of translation without increasing errors. Errors in search translations can still be a problem, and search specialists should be aware of this.

See end of article for supplemental content.

BACKGROUND

Systematic reviewers are advised to search multiple electronic bibliographic databases combined with other methods to ensure all relevant studies are identified [1]. However, databases differ in terms of interfaces, field codes, thesaurus terms, and proximity operators. This means that the original search string needs to be translated multiple times into the search syntax required by each database. This process can be laborious and complex, potentially introduce errors, and increase the time spent on the systematic review (SR) search tasks [2–4].

Several groups have worked to reduce the labor and complexity of translating search strings across databases. This work has made the task easier for the groups

involved, but the tools developed lack broad applicability, because they translate search strings into a limited number of databases [5] or are not easily accessed or implemented [6, 7]. These tools include Medline Transpose, which translates search strings between the Ovid MEDLINE and PubMed interfaces [5], and macros in MS Excel and Word to help with the translation of search syntax [6, 7].

The Polyglot Search Translator (PST) [8] was designed to assist with the search translation task. The PST is freely available to people needing to translate database search strings. Accessible via the Internet since 2017, the PST has been accessed over 10,000 times as of September 2019 and has received awards from Health Libraries Australia (HLA) [9, 10].

To perform a translation with the PST, users paste a PubMed or Ovid MEDLINE search string into the "Your query" box and immediately retrieve the translated search string for all the alternative databases. The translated search string should be checked and modified if necessary. In particular, Medical Subject Headings (MeSH) terms in the original search need to be replaced manually when translating to databases that do not use MeSH terminology. Users then paste the translated search string into the appropriate database and run the search. Screenshots and a description of how the version of the PST used in the trial should be used are provided in supplemental Appendix A. In this study, the authors evaluated whether the PST, when used as an aid to translate database search strings across multiple databases, reduces the time taken to perform translations without increasing translation errors.

METHODS

We compared search string translations (from PubMed and Ovid MEDLINE to other databases) performed with the assistance of the PST (PST-A method) to translations performed without the assistance of the PST (manual method). We assessed (1) the time taken to translate the search strings, (2) the number of errors in the translated search strings, and (3) the number of references retrieved by the translated search strings, compared with the number of references retrieved by a reference standard search string translation.

Study participants

Participants (n=20) with very limited or no experience using the PST were recruited via the Australian Library Information Association (ALIA) Health Libraries Australia (HLA) email list (n=16) and our personal contacts (n=4). The recruitment period went from September 2017 to November 2017. The trial commenced in November

2017 and ended in March 2018.

Sample set of searches for translation

Twenty search strings were collected from published SRs, including five Cochrane intervention reviews, two drug intervention reviews, three non– drug intervention reviews, three diagnostic reviews, two prevalence reviews, two prognosis reviews, and three health technology assessments. The numbers and types of reviews were decided a priori to ensure a wide variety of search strings were used. To obtain these reviews, searches were run in PubMed and the Health Technology Assessment Database (supplemental Appendix B). SRs were randomly selected from each search by generating a random number using the Google random number generator. The SR with the search result number matching the random number was selected for further assessment. We reviewed the search string from the SR to identify those that:

- were from an SR or health technology assessment
- were in PubMed or Ovid MEDLINE format
- were provided in full the same as they were used in the database
- were in English
- included subject (MeSH) terms and keywords
- searched for some keywords in a specific field, such as the title and/or abstract
- searched for a minimum of 3 different terms
- searched for synonyms for some of the terms
- were no more than 100 lines in length

If the search string met the inclusion criteria, the search was extracted. If it did not, another random number was generated, and another SR was selected and checked against the inclusion criteria. Of the final set of twenty search strings, five were in PubMed format and fifteen were in Ovid MEDLINE format. A full list of the SRs selected to be used in the study is provided in supplemental Appendix C.

Allocation of the search strings

Each participant was randomly allocated ten search strings from the pool of twenty. Participants who lacked access to Ovid MEDLINE and, therefore, could not translate from PubMed to Ovid MEDLINE were allocated ten from the pool of fifteen Ovid MEDLINE searches that they could translate into PubMed.

Allocation of the translation method

Participants were randomly assigned to translate each of the ten search strings that they had been allocated by the PST-A method (five search strings) or the manual method (five search strings).

Randomization was balanced so that each search string would be translated using both methods an equal number of times over all participants. The participants translated each search string from the original PubMed to Ovid MEDLINE (or vice versa) and into two other randomly selected databases. The potential databases included Embase (via Elsevier or OVID), the Cochrane Library, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Web of Science, and Scopus.

We aimed to balance the number of times each string was translated into each database by each of the two methods. However, as not all participants had access to all databases, their allocations were adjusted to account for this. For example, four participants lacked access to Ovid MEDLINE, while two others lacked access to Scopus. Participants with similar database access were paired together, and translations were allocated to ensure balance across these pairings.

Description of the intervention and comparator

Participants could seek help from any sources while conducting translations by either method. This could include referring to online help guides or consulting colleagues. The only exception was that they were asked not to consult with other participants in the trial.

For PST-A method translations, participants were asked to use the PST as they felt appropriate and to modify the translation done by the PST before running it if necessary. For manual method translations, participants were asked to translate the search string using their usual methods.

Participants were asked to translate the search strings to run as close as possible to the original. Participants were not initially provided with any background to the review question or the number of references retrieved by the original search. A single participant requested the number of references retrieved by the original searches and was provided with them. Information provided to participants about using the PST, trial conditions, and how to record results is provided in supplemental Appendix D.

Blinding of participants and assessors

Participants could not be blinded to the translation method (PST-A or manual). Investigators assessing the translated search strings and the results of those translations were blinded to the participant who performed the translation and the translation method.

Data collection

Participants were provided with a data collection form to record the time taken to translate and run each search string in each database and to record the number of references retrieved by each translation. Translated search strings were saved in the

database or a document. At the end of the trial, participants were sent a survey asking them about their training, work, and SR experience.

Development of the reference standard search string translations

To develop the reference standard set of search string translations, two of the authors translated the twenty search strings independently. The translations were compared, and discrepancies were resolved through discussion until a single, most correct, translation was agreed upon. New translations were created rather than attempting to use the translations from the original reviews since most reviews only provided the original search string.

Number of errors in the search string translations

Each search string translation was marked independently by two authors (Clark and Honeyman), who were blinded to the method used. Professional judgment and the reference standard translation were used to determine errors, with any discrepancies resolved through discussion. Errors were marked leniently; for instance, translating [tiab] in PubMed to .ti,ab. in Ovid MEDLINE was not considered an error. However, field translations that were clearly not good matches (e.g., [tw] in PubMed to .tw. in Ovid MEDLINE) were considered an error.

Types of errors in the search string translations

Each error in each translated search string was assigned to one of thirty-two different error categories (e.g., using the wrong wildcard or truncation syntax, choosing the wrong field such as only searching the title field instead of both the title and abstract). Each error was also classified as an error that impacted recall (missing relevant articles) and/or precision (increasing the number of irrelevant articles) [11]. Recall errors were prioritized; therefore, an error that could impact recall and precision was recorded as a recall error.

Error counts in search string translations

Two error counts were recorded. The first was a count of the total errors made per search translation. For this, an error of the same type occurring multiple times within a search translation was counted each time (e.g., choosing the wrong field for thirty terms would count as thirty errors in that translation). The second was the total of unique errors per search string translation (e.g., choosing the wrong field for thirty terms would count as one error of that type in that search translation).

Differences in the number of references retrieved by the translated search versus the number of references retrieved by the reference standard translation

For each translated search string, the number of references retrieved by the

participant's translation was recorded and compared to the number of references retrieved by the reference standard translation. The difference between these two numbers was calculated, and it was inferred that the greater the difference, the greater the search translation error. The difference in the number of references retrieved was expressed as a percentage and then categorized and scored (Table 1).

The formula for calculating the difference from the expected number of references retrieved (referred to as closeness) was:

$$\text{Closeness} = 100 \times \frac{|\text{Hits} - \text{Hits}_{\text{reference}}|}{\text{Hits}_{\text{reference}}}$$

Thus, if a reference standard translation found 1,000 references, a participant's translation that found 800 or 1,600 references would have a difference of -20% or +60%, respectively. The mean of these scores was calculated (referred to as the categorization score) to give an indication of the comparative performance of the 2 methods.

Sample size

Based on our professional experience, we assumed an approximate time saving of 50% for the PST. Thus, for a study power of 80%, we needed 50 search strings translated by the PST (i.e., a total of 100 search strings). We did not adjust the sample size for clustering, as we did not have a reliable estimate of the intra-class coefficient. We were also unsure of the likely completion rate for translations; therefore, we increased the sample size considerably to allow for a conservative estimate of both these factors. Clustering was accounted for in the statistical analysis using mixed models. We obtained complete data for 364 strings (172 PST-A method, 192 manual method) and incomplete data for 5 search strings (4 PST-A method, 1 manual method).

Table 1 Categorization and scores for the difference from the expected number of references

Deviation from expected number of references	Categorization	Categorization score
Between -50% and -100%	Larger negative deviation (likely to have missed relevant records)	-2
Between -50% and -5%	Smaller negative deviation (may have missed relevant records)	-1
Between -5% and 5%	No important deviation	0
Between 5% and 50%	Smaller positive deviation (some extra records to screen)	1
Greater than 50%	Larger positive deviation (likely to have many irrelevant records to screen)	2

Search complexity

To determine if complexity of the search string affected the results, search strings

were ranked in order of complexity from least (1) to most (20) complex by a consensus process between two of the authors (Clark and Honeyman). The ranking was also shared with participants and their feedback taken into consideration (supplemental Appendix E).

Analysis

Due to participants dropping out and not completing all search string translations, the data were analyzed in two ways: (1) using a descriptive comparison using all the collected data and (2) using mixed models to account for the repeated measures study design and the lack of balance due to missing data. A linear mixed model was fitted to compare time taken for search strings translated with the PST-A method to those conducted using the manual method. Time was log-transformed prior to analysis to reduce positive skew. Similarly, a linear mixed model was fitted to compare the (log) closeness. For analysis of number of errors made, we fitted a generalized Poisson mixed model to account for the counts of number of errors made being highly variable, which ranged from 0 to 121. The search string and translation databases specified were included as covariates in the models, and interaction terms were initially included to test whether the effect of method of translation used (PST-A or manual) differed by search string or by translation databases.

RESULTS

Of the 20 participants recruited, 4 (20%) completed no search translations, 6 (30%) completed some of the translations, and 10 (50%) completed all 10 of their translations. Of the 16 participants who were sent the survey, 15 responded. Participants primarily had a library background, a masters' level education in library science, and were university based. Work experience was more varied, ranging from a recent graduate to a participant with more than 20 years' experience. SR author experience was also mixed, with 5 participants having authored no SRs, 9 having authored 1–9 SRs, and 1 having authored more than 10 SRs (Table 2).

Time taken to translate the search strings

When all collected data were analysed, the PST-A method was faster than the manual method of translating search strings, with a mean time saving of 14 minutes (PST-A method, mean: 31, standard deviation (SD): 39; manual method, mean: 45, SD: 59) (Figure 1). The mean time saving for translating search strings originating from PubMed was 10 minutes and from Ovid MEDLINE was 19 minutes (supplemental Appendix F).

Table 2 Characteristics of participants who performed translations during the trial

Characteristics of trial participants	Participants (n=15*)
Levels of formal training (multiple selections possible)	
Bachelor's and/or master's in library science	10
Bachelor's in non-library science	6
Master's and/or doctorate (PhD) in nonlibrary science	4
Current position	
Librarian	13
Researcher or educator	2
Place of work	
University	14
Hospital	1
Years of systematic review (SR) searching experience	
10+ years	5
3–9 years	7
0–2 years	3
Number of SRs authored	
10+	1
5–9	4
1–4	5
0	5
Years of experience in searching the literature	
20+	6
10–19	4
0–9	5

* 15 of 16 participants who performed translations during the trial responded to the survey.

When analyzing data using the mixed linear model, there was insufficient evidence of an interaction between method and search string ($p=0.37$) or between method and specified translation databases ($p=0.28$); hence, these interaction terms were removed from the model. After adjustment for specified search string and translation databases, the PST-A method reduced the time taken to translate search strings by 32% (95% confidence interval [CI]: 22%–40%), compared with the manual method.

Number of errors in the search translations

When all collected data were analyzed, there was a mean of 8.6 errors (SD: 9) per

translation by the PST- A method versus 14.6 errors (SD: 26) by the manual method (Figure 2). The mean number of errors affecting recall was 7 (SD: 7) with the PST-A method and 8 (SD: 19) with the manual method. The mean number of errors affecting precision was 1 (SD: 7) with the PST-A method and 6 (SD: 18) with the manual method (supplemental Appendix G). The PST-A method made fewer unique errors in 18 of the 32 error type categories, the manual method made fewer unique errors in 8 of the 32 error type categories, and the error rates were the same in 6 of the 32 error type categories (Table 3).

Mixed model analysis showed insufficient evidence of an interaction between method and translation databases specified for number of errors made ($p=0.93$). However, there was evidence of an interaction between translation method and search string ($p=0.003$). This means the effect of method on the number of errors made differed depending on which search string was being translated. In an exploratory analysis, the complexity of the search string was investigated as a possible explanatory variable.

Search strings were ranked from 1 to 20 for complexity, where 1=least complex and 20=most complex (supplemental Appendix E). This variable was centered at the mean and included in the model instead of search string. Adjusting for translation databases specified, on average, translations performed with the assistance of the PST reduced the number of errors by 45% (95% CI: 28%–58%); however, this effect diminished by 9% (95% CI: 4%– 14%) for each increase in complexity by 1 rank score. This result means that the improvement in errors made using the PST-A method was greatest for less complex searches and least for more complex searches.

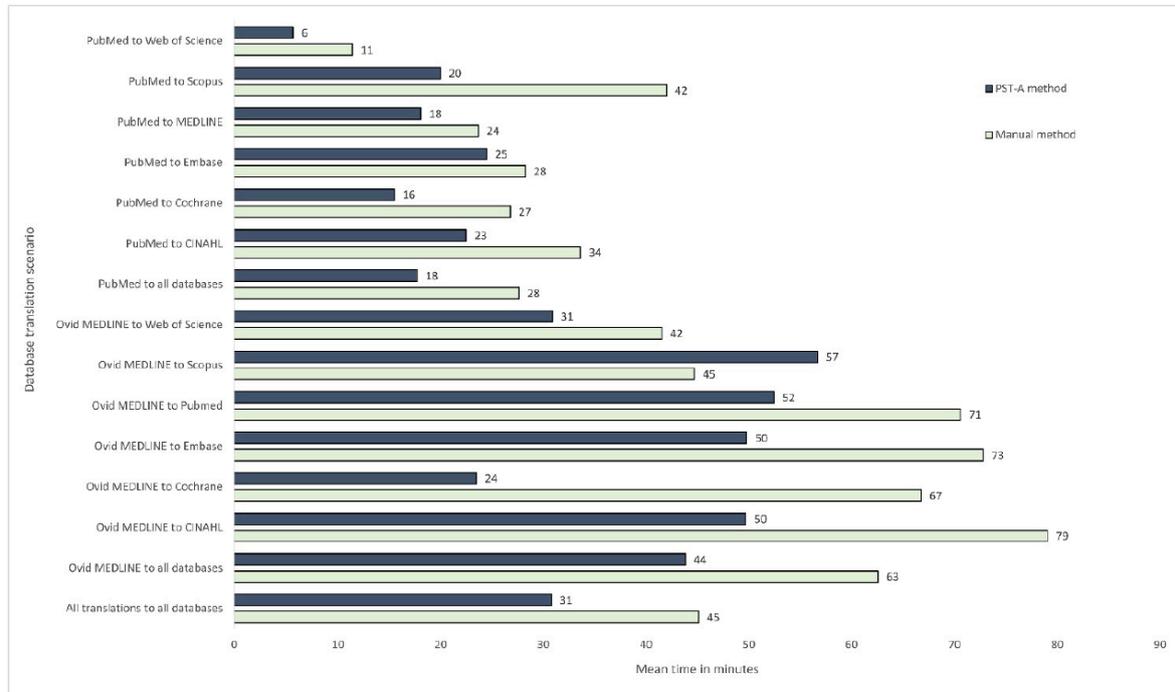
Differences in the number of references retrieved

Large variation in the number of references retrieved made the results reported for this outcome inconclusive. However, we reported the results for completeness and transparency. When analyzing all collected data, the mean of the categorization score was 0.1 for the PST-A method and 0.3 for the manual method (Figure 3). The categorization score represented the deviation in the number of references retrieved by the translated search string from the expected number of references retrieved by the reference standard translation, with a score of –2 the largest negative deviation (likely to affect recall), +2 the largest positive deviation (many extra records to screen), and 0 no deviation. Median scores of numbers, with ranges, are provided in supplemental Appendix H.

The mixed model for closeness showed insufficient evidence of an interaction between method and search string ($p=0.18$) or between method and translation databases specified ($p=0.84$); hence, these interaction terms were removed from the model. After adjustment for search string and translation databases specified, PST improved closeness by 27% (95% CI: 16% worse–49% better), compared with the

manual method (reference), but this improvement was not statistically significant ($p=0.21$).

Figure 1 Mean time taken (minutes) to translate search strings by the Polyglot Search Translator–assisted (PST-A) and manual methods



Abbreviation: PST-A=Polyglot Search Translator–assisted.

Figure 2 Mean number of errors by the PST-A and manual methods

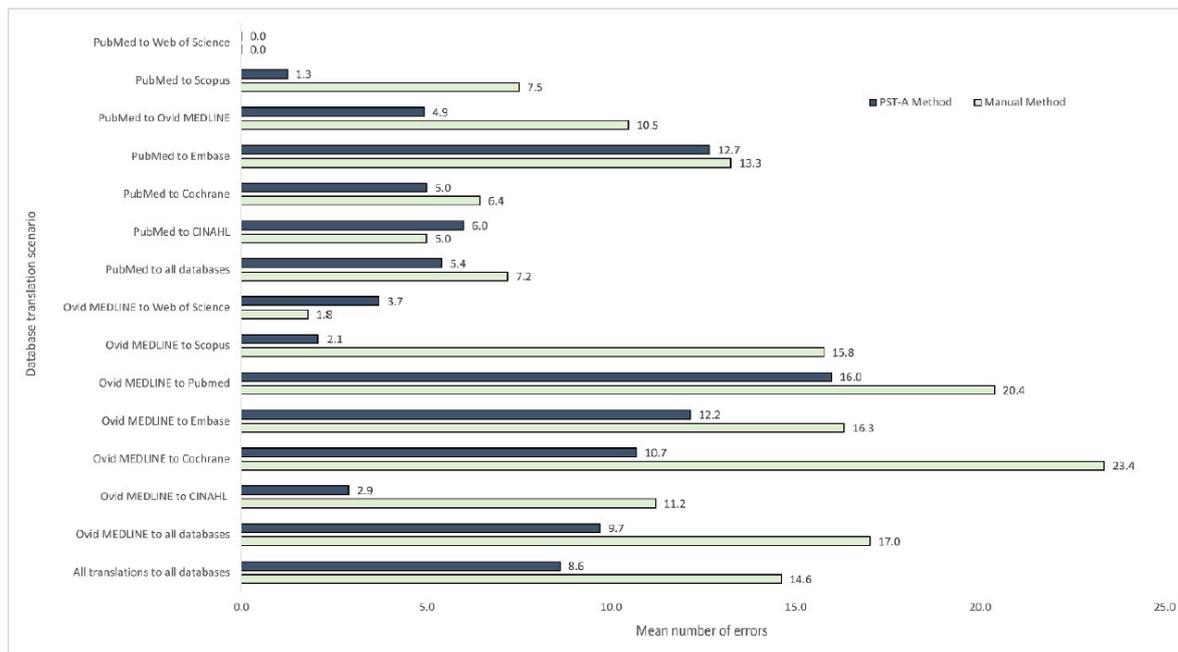


Table 3 Number and percent of unique errors in search string translations

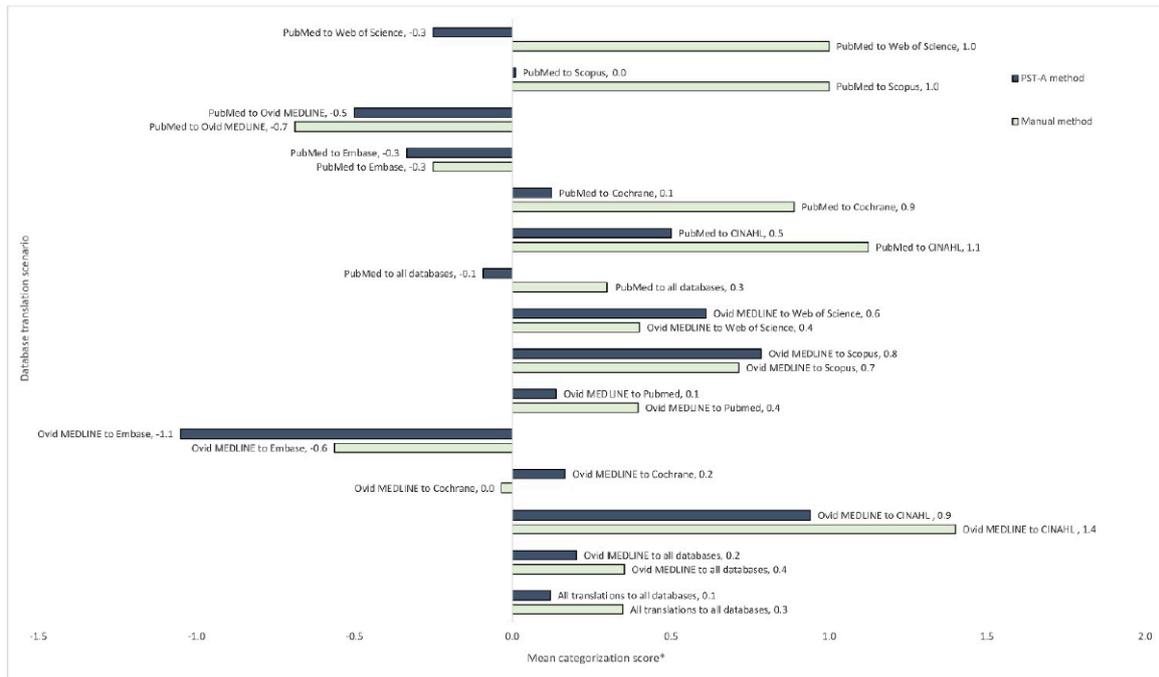
Error category	PST-A method translations (n=174)		Manual method translations (n=192)	
	n	(%)	n	(%)
Wrong wildcard or truncation syntax: recall*	30	(17%)	28	(15%)
Incorrect subject term conversion: recall	16	(9%)	11	(6%)
Not exploding a subject term: recall*	14	(8%)	15	(8%)
Missing or added wildcard or truncation: recall	12	(7%)	25	(13%)
Incorrect field syntax used: recall*	12	(7%)	7	(4%)
Incorrect search structure: recall**	11	(6%)	12	(6%)
Incorrect field chosen: precision*	10	(6%)	31	(16%)
Out of place characters inserted: recall*	10	(6%)	6	(3%)
Incorrect field chosen: recall*	9	(5%)	31	(16%)
Incorrect phrase translation: recall*	9	(5%)	9	(5%)
Missing subject term: recall	8	(5%)	16	(8%)
Spelling mistake in search: recall	8	(5%)	15	(8%)
Missing keyword term: recall	7	(4%)	25	(13%)
Incorrect adjacency syntax: recall*	7	(4%)	1	(1%)
Incorrect subject term conversion: precision	6	(3%)	2	(1%)
Exploding a subject term: precision*	5	(3%)	24	(13%)
Term truncated at wrong point: recall	5	(3%)	12	(6%)
Incorrect phrase translation: precision*	4	(2%)	25	(13%)
Incorrect adjacency used: precision	4	(2%)	9	(5%)
Other error type: recall	8	(4%)	9	(5%)
Other error type: precision	17	(8%)	18	(9%)
Total	206		329	

Abbreviation: PST-A=Polyglot Search Translator–assisted. * Error identified and fixed in the PST after trial completion.

DISCUSSION

Across all translations, the PST-A method reduced the time taken to translate search strings by 14 minutes, which equated to a time saving of approximately 30%. The PST-A method also resulted in fewer errors, with a mean of 8.6 errors per translation versus 14.6 errors per translation by the manual method. Translation errors were still common, irrespective of the method used. As the complexity of the original search increased, the difference in the number of errors occurring between the translation methods reduced. In addition, the number of references retrieved by search strings translated by the PST-A method was closer to the number of references retrieved by the reference standard translation compared to the manual method, although wide variation in the data for this outcome made this finding an unreliable indicator of search translation quality.

Figure 3 Mean categorization score for the number of references retrieved by translated search strings compared to the reference standard translation



* The smaller the score (and the smaller the bar) the closer the number of references retrieved by the translated search to the number of references retrieved by the reference standard translation.

Identifying studies to include in an SR involves searching multiple databases [1, 12], which can be time consuming and error prone [2, 3, 13–15]. The results of this study suggest the PST, when used as an aid to translate database search strings, can help with this problem. The time saving seen with the PST offers a substantial benefit for those performing searches for SRs. For an SR searching four databases [16], in which three database search string translations are required, use of the PST can save almost forty-five minutes of search time.

Across the databases, the PST-A method consistently saved time, with it being faster in 14 of the 15 search translation scenarios, the exception being translations from Ovid MEDLINE to Scopus. This might be due to Scopus not being as commonly used by clinical search specialists, meaning that any time-saving benefit of the PST could have been lost during the checking of the PST search for errors, something that is quicker and easier in a database with which a user is familiar. Time savings were more pronounced when translating searches from Ovid MEDLINE than when translating searches in PubMed format. This was most likely because Ovid MEDLINE searches tend to be more complex than PubMed searches. The most complex Ovid MEDLINE search had around 145 search terms, while the most complex PubMed search had 40 search terms. In other words, with more search terms to translate there is a greater time saving when automatically translating them.

Errors in search strings can have significant implications for recall (missing relevant studies) and precision (irrelevant studies need to be screened), both of which can substantially impact the findings of the SR and the resources required for its completion. This is an ongoing issue, with 73% of Cochrane reviews having at least 1 error in 2015 [13]. Errors in non-Cochrane reviews are harder to determine due to problems in the reporting of searches [17].

This study shows that the PST can reduce translation errors, as it made fewer errors in thirteen of the fifteen search translation scenarios; however, translation errors still occurred. The errors made by the PST in the trial (e.g., the use of an incorrect wildcard) have been fixed (highlighted by an * in Table 3), meaning the errors in future PST-A searches should be reduced. The last of the errors were fixed during the latest upgrade to the PST in October 2019. However, upgrades to the PST will not fix human-made errors, such as incorrect translations of MeSH to Emtree terms, so searchers need to be aware of this. Future ways to deal with these errors would be to make the PST alert searchers where manual translation is required, such as translating thesaurus terms, by highlighting them in the translated search string.

The PST appears to be particularly effective for reducing the number of precision errors. As SRs become more complex, the searches for them also become more complex, and these searches tend to return more references to screen. Therefore, precision errors can translate into substantially more irrelevant references to screen, meaning more work for authors, so any reduction in precision errors should translate into a time saving for SR authors.

In this study, the number of references retrieved by the translated search strings compared to the reference standard translation was originally considered to be an indicator of translation quality because it commonly is used to test searches [18–21]. However, variability in the data makes it difficult to draw useful conclusions, and the results for this outcome should be read cautiously. A main cause of this may be due to certain types of errors causing a far greater deviation from the numbers that should be found than others. For instance, if there is a missing bracket in a search string, this will normally cause a far greater impact than choosing the wrong field would.

Despite this unreliability, a couple of the findings are worth noting. For instance, when translating from Ovid MEDLINE to Embase, both methods produced translations that retrieved fewer studies than the number that was expected to be found; although this is a similar outcome, it was for different reasons. The PST-A method seems to have found less than it should have due to a single type of error: an incorrect wildcard translation that has now been corrected. The manual method seemed to find less than it should have due to many types of errors, such as focusing subject terms, applying database specific limits, and choosing the wrong fields. When translating from Ovid MEDLINE to CINAHL, both methods tended to find more than the number that was expected to be found. This was possibly because CINAHL

searches tend to contain more brackets than searches in other databases, and a single wrong bracket can have a large impact on search results.

An important consideration when reviewing the results of this trial is that the participants were working in an experimental environment with search strings that they had not developed. In practice, participants would normally be translating searches that they designed themselves. Having designed the search, they would understand its logic and probably be more likely to spot errors in the translations. This means the error counts found in this study might be higher than what would occur in practice. Familiarity with the search strings would also impact the number of references retrieved due to the similarity between numbers of references retrieved being used as a guide to translation quality. How this familiarity with the search string might impact time saving is more difficult to determine, as it could either reduce or increase the benefit.

Other tools for translating searches exist [5–7] but have yet to be tested outside of the groups that developed them; therefore, their benefit is difficult to determine. The considerable effort put into developing these tools suggests that the search string translation step is one area where the quality and speed of SRs can be improved. Feedback from trial participants and users who were not involved in the trial is being used to improve the PST's usability and reliability. Other larger initiatives, such as automatically generating single line search strings from numbered line searches and highlighting translations that require attention from the user, have been completed and will be included in version 3 of the PST, which was implemented in late 2019.

Strengths and limitations

This study had several limitations. Most participants were from a library and information science background, making it difficult to generalize study applicability to other types of specialists. Loss of search string translations meant that the data were not completely balanced, and the search strings were translated out of the context of the original research question, meaning participants lacked the usual background knowledge that they would have on the topic and benchmarking numbers from the original search. In addition, the study was designed and run by the creators of the PST, but external recruitment of participants, random selection and allocation of search strings and methods, and blinding of the assessors was done to minimize bias as much as possible. Study strengths include the randomization of participants to the method of translation, recruitment of participants from outside of the group that developed the PST, random selection of published search strings, variability in the experience of the participants in conducting searches for SRs, and sufficient power of the study to reveal an effect of the intervention.

CONCLUSION

The PST, when used as a tool to assist in the translation of search strings across multiple databases, can increase the speed of translation without an increase in errors. Errors in database search string translations remain a problem regardless of the assistance of the PST, and search specialists should be aware of this. These findings underpin the design philosophy of the PST: that the PST is *not* designed to replace the need for skilled people to translate search strings but rather to help skilled people translate search strings faster.

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DATA AVAILABILITY STATEMENT

Data are hosted on the Bond University repository:

<https://research.bond.edu.au/en/datasets/the-polyglot-search-translator-pst-evaluation-of-a-tool-for-impro>.

COMPETING INTERESTS

Author Justin Michael Clark has received awards, with prize money, to continue developing the Polyglot Search Translator from the Australian Library Information Association. All other authors declare that they have no other competing interests.

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SUPPLEMENTAL FILES

- Appendix A: [Description of how the Polyglot Search Translator \(PST\) \(intervention\) works](#)
- Appendix B: [Results of searches conducted to find systematic review search strings used in the trial](#)
- Appendix C: [Systematic reviews whose search strategies were used in the trial](#)
- Appendix D: [Instructions provided to trial participants](#)
- Appendix E: **Table S2** [Search strings ranked by order of complexity \(1=least complex, 20=most complex\)](#)
- Appendix F: **Table S3** [Mean time, standard deviations, and mean differences in](#)

all times in minutes in search translations

- Appendix G: **Table S4** Totals, means, mean differences, and standard deviations in all errors in search translations; **Table S5** Totals, means, mean differences, and standard deviations in all recall errors in search translations; **Table S6** Totals, means, mean differences, and standard deviations in all precision errors in search translations; and **Table S7** Full list of number and percent of unique errors in search string translations

Appendix H: **Table S8** Median percentage difference in the number of references retrieved relative to the number of references retrieved by the reference standard (with ranges)

AUTHORS' AFFILIATIONS

Justin Michael Clark (corresponding author), jclark@bond.edu.au, <https://orcid.org/0000-0003-0133-1613>, Institute for Evidence- Based Healthcare, Bond University, Robina, Queensland, Australia

Sharon Sanders, ssanders@bond.edu.au, Institute for Evidence- Based Healthcare, Bond University, Robina, Queensland, Australia

Matthew Carter, macarter@bond.edu.au, Institute for Evidence- Based Healthcare, Bond University, Robina, Queensland, Australia

David Honeyman, d_honeyman@hotmail.com, Bond University Library, Bond University, Robina, Queensland, Australia

Gina Cleo, gcleo@bond.edu.au, Institute for Evidence-Based Healthcare, Bond University, Robina, Queensland, Australia

Yvonne Auld, Yvonne.Auld@health.qld.gov.au, Gold Coast Health Library Service, Gold Coast University Hospital, Southport, Queensland, Australia

Debbie Booth, debbie.booth@newcastle.edu.au, University Library, University of Newcastle, Callaghan, New South Wales, Australia

Patrick Condron, p.condron@unimelb.edu.au, University Library, University of Melbourne, Melbourne, Victoria, Australia

Christine Dalais, c.dalais@library.uq.edu.au, University Library, University of Queensland, Brisbane, Queensland, Australia

Sarah Bateup, sbateup@bond.edu.au, Bond University Library, Bond University, Robina, Queensland, Australia

Bronwyn Linthwaite, blinthwa@bond.edu.au, Bond University Library, Bond University, Robina, Queensland, Australia

Nikki May, nikki.may@sa.gov.au, Sturt Library, Flinders University, Adelaide, South Australia, Australia

Jo Munn, Joanne.Munn@scu.edu.au, Centre for Teaching and Learning, Southern Cross University, Coffs Harbour, New South Wales, Australia

Lindy Ramsay, Lindy.Ramsay@acu.edu.au, University Library, Australian Catholic University, Banyo, Queensland, Australia

Kirsty Rickett, k.rickett@library.uq.edu.au, University Library, University of Queensland, Brisbane, Queensland, Australia

Cameron Rutter, c.rutter@qut.edu.au, University Library, Queensland University of Technology, Kelvin Grove, Queensland, Australia

Angela Smith, Angela.Smith@hnehealth.nsw.gov.au, Hunter New England Health Libraries, New South Wales (NSW) Health, Hunter Region, New South Wales, Australia

Peter Sondergeld, p.sondergeld@qut.edu.au, University Library, Queensland University of Technology, Kelvin Grove, Queensland, Australia

Margie Wallin, jam232@gmail.com, University Library, Southern Cross University, Coffs Harbour, New South Wales, Australia

Mark Jones, majones@bond.edu.au, Institute for Evidence-Based Healthcare, Bond University, Robina, Queensland, Australia

Elaine Beller, ebeller@bond.edu.au, Institute for Evidence-Based Healthcare, Bond University, Robina, Queensland, Australia

MEMBER SPOTLIGHT - JULIA HOUSE -

<i>Name:</i>	Julia House
<i>HLA Member Since:</i>	2018
<i>First Professional Position:</i>	Library Cadet
<i>Current Position:</i>	Librarian and Research Governance Officer, Mt Isa Hospital, North West Hospital and Health Service, Queensland Health
<i>Education:</i>	Cert IV TESOL; Bachelor of Education (Primary); Masters of Information Studies.
<i>Favourite Website or Blog:</i>	While not technically a website, I enjoy ALIA Weekly and their PD Postings popping into my inbox. When I feel like a giggle, I also scroll through the Fake Library Stats Twitter page.

What do you find most interesting about your current position?

Talking with clinicians about their work challenges is fascinating given our remote location, patient populations and dispersed service provision. In these conversations there is always the question of 'how can the library help' which can lead to interesting literature search requests, book purchases or support with research proposals.

Currently, the Nurse Researcher and I are working on ways to support research beyond those only doing postgraduate study. Staff have difficulty finding time to do research as they are often wearing multiple 'hats' in our resource limited environment. At the moment, we're developing policies and support resources on research collaboration to support our clinicians to undertake research with the assistance of universities, having recently received \$50k from HIRO to fund translational research projects lead by staff in our district.

What has been your biggest professional challenge?

Ensuring continual engagement with library services is an ongoing challenge. Like most rural and remote areas, we have high staff turnover. Loads of locums, a rotating door of agency staff and most permanent clinicians only stay two years before moving on. The library champions who know and spruik our value come and go.

Therefore, it's never been more important to have the elevator speech ready, because you will bump into someone who did not even know we had a library service, despite the small size of our hospital campus.

How did you join Health Librarianship?

As one of the few librarian positions in Mount Isa, when the Librarian & RGO job was advertised it was serendipitous that I was moving to Mount Isa at the same time, so I felt it was meant to be.

I never thought I would be in the health librarianship space coming from education, but I'm so glad I've had the opportunity to experience it. Health librarians are truly unique, they need to understand a clinician's speciality (and all the language that comes with it) without being clinicians themselves. They have loads of knowledge about evidence-based practice, systematic reviews, health research tools ... the list goes on. Having this insight has made me appreciate the extent of a health librarian's dedication to their area of expertise.

What was your previous employment background?

After graduating to become a primary school teacher and dipping my toe in the casual teaching pool, I jumped ship to library studies after moving to Melbourne and volunteering in a small not-for-profit early childhood community library. I immediately knew that I had 'found my people' in libraries. I was lucky enough to work at the University of Melbourne engaged in their cadetship program before moving into some casual work and then coming to Mount Isa.

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

I would be working in another type of library – they are all fabulous. When I have been sitting in front a computer for too long though I long to be a horticulturalist working at a beautiful rose garden.

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

It seems like health librarians must really become embedded within their health service to avoid budget cuts or being cut altogether, which is difficult to do if there is a lack of culture that supports continued education and research.

I feel that I am lucky here that our library and my position is jointly supported between a University Department of Rural Health and a hospital. It's a mutually beneficial venture whereby we function as both an academic and health library, increasing our value to the health and university communities in the region.

What is your favourite non-work activity?

I enjoy the challenge of trying to have zero food waste by finding and making delicious recipes out of leftover food in our fridge. Last weekend I made some dried chilli flakes from some shrivelled birds eye chillies that had been lying dormant in our fridge door. Soon I plan to give pulled banana skins a go!

What advice would you give to a new member of Health Libraries Australia or a new graduate information professional?

As someone still relatively new to the profession myself, I would say don't be afraid to ask questions and reach out. Librarians are generous with their knowledge and usually very happy to support new information professionals as they develop their own skills. In my experience, some of the best tips and tricks I have picked up are by chatting with librarians, not by looking at a database help menu.

