



AUSTRALIAN LIBRARY AND INFORMATION ASSOCIATION  
HEALTH LIBRARIES AUSTRALIA

# **Health Librarianship Workforce and Education: Research to Plan the Future**

FINAL REPORT



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## Health Librarianship Workforce and Education: Research to Plan the Future

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### Final Report

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## EXECUTIVE SUMMARY

In late 2009, Health Libraries Australia (HLA) received a small grant to undertake a national research project to determine the future requirements for health librarians in the workforce in Australia and develop a structured, modular education framework (post-graduate qualification and continuing professional development structure) to meet these requirements.

The main objective was to:

Consider the education and professional development framework that would ensure that health librarians have a clearly defined scope of practice and the specific competency based knowledge and skills that enable them to contribute to the design and delivery of high quality health services in this country.

The ALIA/HLA Project Reference Group has consisted of seven health librarians – Ann Ritchie as Project Leader, Cheryl Hamill, Suzanne Lewis, Melanie Kammermann (all members of the Executive of HLA), Patrick O'Connor, Carol Newton-Smith and Catherine Clark, with Gillian Hallam serving as principal researcher.

The research activities built on the ALIA neXus investigations into the LIS workforce in Australia, conducted in 2008-2009. Adopting an evidence-based approach to the project, the research activities encompassed an extensive literature review and environmental scan, a survey of health librarians, a survey of health library managers and a series of semi-structured interviews with the employers of health librarians. The research specifically sought to build a clearer understanding of the composition of the Australian health library workforce, to develop a picture of the areas of professional knowledge and responsibilities that were relevant in the current workplace, and to explore how these might change in the next three to five years.

The final report presents a detailed discussion of the changing Australian healthcare environment and the resulting impact on the health library sector, as well as an overview of international trends in health libraries and the implications for Australian health librarianship education. The research methodology is outlined, followed by an analysis of the findings from the two surveys with health librarians and health library managers and the semi-structured interviews conducted with employers. The Medical Library Association (MLA) in the United States had developed a policy document detailing the competencies required by health librarians. It was found that the MLA competencies represented an accepted professional framework of skills which could be used objectively in the survey instrument to measure the areas of professional knowledge and responsibilities that were relevant in the current workplace, and to identify how these requirements might change in the next three to five years.

The study indicated that there was greater interest in targeted continuing professional development (CPD) for health librarians, rather than for a postgraduate qualification. The majority of library managers would support their staff to participate in CPD, as long as the offerings are perceived to be relevant, affordable and high quality. The findings revealed that 80 percent of individual respondents and 67 percent of institutional respondents (library managers who responded for their library unit as a whole) believed that professional knowledge and responsibility were needed 'often' or 'very often' in the areas of the provision of information services to meet users' needs, the management of health information resources, and the use of technology and systems to manage all forms of information; the areas of responsibility identified as most likely to increase over the next three to five years were the use of technology and systems to manage information and 'management of health information resources' which were rated equally highly. It was also expected that there would be an increased need to understand curricular design and instruction. Overall most respondents reported that current areas of professional knowledge and responsibility would be likely either to remain the same or to increase to some extent over the next three to five years. Fewer than 10 percent of respondents identified any areas of professional knowledge and responsibility that they believed were likely to decrease over the next three to five years.

The research results underscore the imperative for health librarians to engage in regular, relevant professional development activities that will enable them to stay abreast with the rapid contextual changes impacting on their practice. In order to be accepted as key members of the multi-disciplinary health professional team, it is strongly believed that health librarians should commit to establishing the mechanisms for specialist certification maintained through compulsory CPD in an ongoing three-year cycle of revalidation. This development would align ALIA and health librarians with other health sector professional associations which are responsible for the self regulation of entry to and continuation in their profession.

Seven key recommendations are presented:

1. It is recommended that a Working Party be established jointly by the ALIA Board of Directors, the ALIA Professional Services team and the Health Libraries Australia Executive to map out strategies to ensure that LIS workforce issues are included in the reform processes conducted by Health Workforce Australia and to identify appropriate education and professional development pathways. While the strategies may leverage from those being considered for the profession generally, there may also be unique solutions for health librarianship specifically.
2. It is recommended that ALIA, through HLA, continues to work with the Australian Health Informatics Education Council in the common endeavour to have Health Workforce Australia provide census data of the workforce in order to assist with planning.
3. It is recommended that the findings from the research project inform the development of a framework of competency based standards which will delineate the scope of practice for the health library and information profession.
4. It is recommended that the framework of competency based standards forms the basis of a program of study, which would encompass a specialist postgraduate certificate and a three-year cycle of professional development activities.
5. It is recommended that the proposed Working Party works with the ALIA Board to tender for relevant provider(s) of the specified units for professional development.
6. It is recommended that a certification and revalidation program, which aligns with best practice in the health sector, be established and piloted with health library and information professionals, based on member enrolment in the ALIA Professional Development Scheme and a compulsory 3 year cycle for relevant professional development activities.
7. It is recommended that a Project Officer be employed to support the proposed Working Party in the achievement of its agreed goals.

## PROJECT TEAM

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## 1.0 INTRODUCTION

Education and workforce planning are related concepts. Education lays the foundations for the future workforce, and must do so in the context of current and likely future needs of employers. It is critical, therefore, that the two processes are linked through market research and consultation between education providers, employers and practitioners in the field. Sloan (2008, p.35) states: 'Strategic workforce development needs to be managed at all levels – professional associations, peak bodies, regional organisations and in the current workforce.' During the period 2006-2008, a major study of the Australian library sector was undertaken, referred to as the Australian Library and Information Association (ALIA) *neXus* study, to examine the demographic, educational and workforce characteristics of the sector, viewed from the perspectives of both the individual library professional and the institution as employer (Hallam, 2008; Hallam, 2009).

The need for strategic workforce development and, more specifically, the requirement to engage the range of stakeholder groups who have an interest in education and continuing professional development for the future health librarianship workforce are the main reasons why ALIA Health Libraries Australia has undertaken this research project. To date, there had not been any concerted effort from the health library profession in Australia to map out and implement a structured education framework or to undertake research which could successfully facilitate system-wide consultation and collaboration amongst the stakeholder groups. The main stakeholder groups are librarians and the organisations in which they are employed, the professional association, educational institutions and other registered training providers.

Having identified the need to plan effectively for the future, stakeholders in the health library sector in Australia have undertaken this research project to examine the current position of the profession and to investigate the anticipated future workforce requirements. Health Libraries Australia (HLA) received a small grant from ALIA as financial support for the research study. The collaborative project reference group comprises current and past practitioners representing various sectors of the health workforce and employment areas, and members of committees and advisory boards of ALIA. The project has two main aims: to determine the future skills needed by the health librarian workforce in Australia, and to develop the structure for a modular education framework for specialist postgraduate qualifications and for ongoing continuing professional development (CPD).

Over the course of the project, the research team has liaised with the researchers engaged in a parallel project: *Re-conceptualising and re-positioning Australian library and information science education for the 21<sup>st</sup> century*. This national project is funded by the Australian Learning and Teaching Council (ALTC) and involves 11 educators representing the Australian institutions that offer library and information science (LIS) courses at undergraduate and postgraduate levels<sup>1</sup>. The ALTC project aims to establish a consolidated and holistic picture of the Australian LIS profession and identify how its future education and training can be mediated in a cohesive and sustainable manner. The HLA project research team is keen to review the findings of the ALTC project and consider the recommendations it makes about the future options for LIS education when the final report is released in mid 2011.

In the meantime, this report discusses the details of the HLA research project to specifically inform the development and implementation of a system-wide approach to education for the future health librarian workforce. The project is set against the background of some of the major trends in the health sector and the main environmental influences that may act as drivers or enablers for changes in health librarianship as a profession. The report presents the review of the literature and the broader environmental scan, outlines the research methodologies utilised and discusses the research findings, with particular attention paid to the areas of professional knowledge and responsibilities required for current and future practice, viewed from the perspectives of library managers, individual health librarians and employers. A potential framework for education and professional development for the health library sector is proposed.

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<sup>1</sup> *Re-conceptualising and re-positioning Australian library and information science education in the 21<sup>st</sup> century*: <http://www.liseducation.org.au>

## 2.0 LITERATURE REVIEW AND ENVIRONMENTAL SCAN

A search was conducted of the major specialist health library journals (*Journal of the Medical Library Association*, *Health Information & Libraries Journal*), together with major Australian health management journals for the period of January 2002 to December 2009. The authors also drew on individual contacts and their existing knowledge of relevant gray literature to identify publications for review. Throughout the research activities, the project team continued to monitor the literature and shared details of relevant publications. The literature review and environmental scan explores two main areas: the Australian healthcare system and health library sector; and international trends in health libraries and their implications for Australian health librarianship education.

### 2.1 The Australian healthcare system and health library sector

The Australian health library sector is diverse. In early 2010, the Australian Libraries Gateway<sup>2</sup> listed 427 health/medical libraries across Australia. Individuals broadly defined as health librarians were working in hospitals, universities, research institutes, pharmaceutical companies, government departments, regional health services, professional colleges, not-for-profit and community organisations, and parts of public library services. Entry to the profession is via completion of a course of study accredited by the Australian Library and Information Association (ALIA)<sup>3</sup>. Currently there is no Australian health library specialisation and no mandatory requirement for professional registration or for the maintenance of professional skills. ALIA administers a voluntary Continuing Professional Development Scheme<sup>4</sup> which is activity rather than skills/knowledge based. Thus health specific skills and knowledge are principally acquired informally in the workplace.

For all of its strengths, the Australian healthcare system has been described as a complex, fragmented system that is under growing pressure. About seventy percent of health expenditure is in the public sector with the federal government providing the bulk of this funding and the states providing the balance (Australian Institute of Health and Welfare, 2008; Lewis & Leeder, 2009). The overall governance of the public health system is through the Australian Health Ministers Conference (AHMC), which sets national policy and is advised by the Australian Health Ministers Advisory Council (AHMAC). Key drivers within the system include increases in demand for and expenditure on health care, inequities in health outcomes and access to services, growing concerns about safety and quality, improving clinical governance, workforce skills and shortages, and reducing inefficiency due to the complex division of funding responsibilities and performance accountabilities between different levels of government (Australian Institute of Health and Welfare, 2008; Braithwaite & Travaglia, 2008; National Health and Hospitals Reform Commission, 2009). With the current Australian Government review of the health care system, and the fact that the “overdependence” on the hospital system is not sustainable, there is a strong possibility that models of care will change, and there will be increasing emphasis on preventive health strategies and primary care (Australian Government Department of Health and Ageing, 2009a, 2009b).

In June 2009, the Australian government released its blue print for reform, *A Healthier Future for All Australians* (National Health and Hospitals Reform Commission, 2009). As the final report of the National Health and Hospitals Reform Commission (NHHRC), it contained a series of wide-reaching recommendations. Several of these key recommendations are areas of natural and ongoing engagement for health librarians: strengthened consumer engagement and voice, which includes building health literacy; a modern, learning and supported workforce; and knowledge-led continuous improvement, innovation and research (National Health and Hospitals Reform Commission, 2009). In 2011 all the states agreed to revisions which will result in the Australian Government and the states providing an equal share of public hospital funding.

The NHHRC also recommended significant changes to the education and training of health professionals. It advocates a flexible, multi-disciplinary approach, incorporating an agreed competency-based framework as part of a broad teaching and learning curriculum for all health professionals (National Health and Hospitals Reform Commission, 2009). These changes are being facilitated via the National Health Workforce Taskforce<sup>5</sup>, an agency formed to advise on education and training requirements; purchase clinical education placements; promote innovation; foster local implementation models; and

2 Australian Libraries Gateway: <http://www.nla.gov.au/apps/libraries>

3 Australian Library and Information Association (ALIA): <http://www.alia.org.au/education/courses/recognition.html>

4 ALIA Professional Development Scheme: <http://www.alia.org.au/education/pd/>

5 National Health Workforce Taskforce: <http://www.nhwt.gov.au/nhwt.asp>

report regularly on the appropriateness of national professional accreditation standards. The Health Practitioner Regulation National Law Act 2009 came into effect on 1 July, and commencing in July 2010, a single national compulsory registration body, the Australian Health Practitioner Regulation Agency<sup>6</sup>, has assumed responsibility for the registration and regulation of ten health professions (chiropractic, dentistry, medicine, nursing/midwifery, optometry, osteopathy, pharmacy, physiotherapy, podiatry, psychology). In 2012, four more professions – Aboriginal and Torres Strait Islander health practitioners, Chinese medicine practitioners, medical radiation practitioners, and occupational therapists – will be brought under the regulation of the agency. Eligibility for professional registration is dependent upon ongoing skills maintenance and development. AHPRA supports the professions' national boards which register practitioners and students, and approve standards of education and programs of study. CPD is a requirement for all registered health professionals, with details of the numbers of credits/points/hours that practitioners must spend each year on learning activities published in the professions' registration standards.

The risk of not having nationally recognised qualifications and registration for health librarians with ongoing CPD requirements was articulated by Ritchie: "In the context of the Australian health workforce, in which national level registration with requirements for regular CPD are increasingly the norm, health librarians will lose credibility and status if they don't have a structured and regulated CPD system. In addition, and perhaps more importantly, they risk losing competitiveness in the health information professional market" (2008, p. 103).

As health librarians are at present excluded from these national health workforce planning and education programs and are thus without recognition as a health profession, they risk being classified in the clerical or administration streams. Currently the industrial arrangements for health librarians vary across the different states and territories of Australia, with some being classified in professional streams on a par with allied health professionals, while others are classified in the clerical/administration streams which have no educational prerequisites or specialisation.

Already in one state, health librarians have suffered when they were excluded from new industrial arrangements for previously comparable occupations. Besides a loss of working conditions, the librarians were denied significant resources and support for the acquisition and development of new skills and knowledge such as financial incentives for further study, paid professional development leave and allowances, the appointment of dedicated educators for the library workforce, and exclusion from access to research funding/positions (Queensland Industrial Relations Commission, 2008). This decision may be a precedent for other Australian states and territories negotiating national health workforce arrangements.

Publicly funded teaching hospital libraries in Australia have not yet faced closures or severe cuts. Professional colleges and accrediting agencies evaluate teaching hospitals and assess the libraries and other support services to ensure they are suitable for training medical specialists and other health professionals. This supports the services but does not assist with ensuring the workforce is available and skilled to take up positions. There are anecdotal reports about cuts, mergers and closures of libraries in other health departments and hospitals.

In 2008, AHMC endorsed the National E-Health Strategy (Australian Health Ministers Conference, 2008). The initial thrust of this strategy is to create a national shared electronic health record, underpinned by a system of universal identifiers that will streamline various patient record systems to a national standard and basis. The Strategy outlined trends and developments that will potentially impact current and future roles for Australian health librarians. One issue discussed in the Strategy was the "implementation of separate internet based portals for consumers and care providers that will provide access to a set of nationally coordinated and validated health knowledge sources. Although these knowledge sources exist in some form today, they are fragmented, not always consistent or up to date, and involve significant duplicated effort and investment to maintain" (Deloitte, 2008, p.49). The Strategy is consistent with the submission made by Health Libraries Australia regarding the potential for developing national health knowledge portals (Hamill, 2008).

The *Review of the Australian Health Informatics Workforce* (Health Informatics Society of Australia, 2009) used a broad, practical definition of health informatics: 'the science and practice around information in health that leads to informed and assisted health care', stating that this is 'inclusive of all those who work on information-related activities in healthcare' (p.15). Health informatics work comprises overlapping and related areas and roles, and the Report refers to these under 12 'work categories'. These categories and the associated 'job titles' are analysed in the Report (pp.25-50), and health librarians fall into five of the 12 'work categories'.

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6 Australian Health Practitioner Regulation Agency: <http://www.ahpra.gov.au/index.php>

The skills shortage in the health workforce generally has been discussed by numerous authors (Armstrong, Gillespie, Leeder, Rubin, & Russell, 2007; Duckett, 2005) and this shortage, combined with the high median age (and imminent retirement) of many health librarians (Hallam, 2008), will add to the pressure on health librarians to re-position themselves by developing their skills to become more competitive in the e-health information/knowledge workforce.

Developments in e-health, the National E-Health Strategy and the NHHRC's *A Healthier Future for All Australians* may have the combined effect to stimulate health librarians' activities in the national arena. Already there are education initiatives underway in response to the combined effect of these developments. For example, the Australian Health Informatics Education Council seeks to address the supply of health informaticians and to increase the information management skills and knowledge of health workers across the sector.

The research currently being conducted by Health Libraries Australia is in response to the growing awareness of the need to operate nationally as part of the national e-health initiatives and the health professional workforce. Reporting on the HLA Professional Development Day, Lewis (2008) noted that the key focus areas which emerged from the meeting were "strategic positioning within the health environment, workforce planning, professional and personal development, specialist qualifications, evidence-based medicine and evidence-based librarianship, and the digital environment" (p.1).

This research project consequently aims to determine the future requirements for the health library workforce in Australia and develop a structured, modular education framework (post-graduate qualification and continuing professional development structure) for health librarians to meet these requirements. It is intended that the outcomes will provide one of the building blocks to enable health librarians to position themselves in the future health professional workforce.

## 2.2 International trends in health libraries and the implications for Australian health librarianship education

There are many challenges and developments in international health libraries that mirror those facing the Australian health library sector. Several international library organisations have already begun to address the changing skills and knowledge sets required to embrace these challenges. The international trends in healthcare and health libraries that are likely to affect Australian health librarians can be described as follows.

Traditional library work is diminishing, professional boundaries are blurring and emerging areas of work are being claimed by other professional groups (Barreau, Rathbun-Grubb & Marshall, 2009; Booth, 2007; Bosanquet, 2010; Broady-Preston, 2010; Canadian Association of Law Libraries, 2009; Hill, 2008). The health information industry is a rapidly changing environment in which the evolution of technologies and explosion of information available in digital format have created expectations for easy and immediate access to information (Barreau et al., 2009). Consumers of health information, including clinicians, patients and families/carers, have increased expectations and knowledge, and many have high level skills in information management themselves (Canadian Association of Law Libraries, 2009; Hill, 2008). Within the health workforce there is increased emphasis on multidisciplinary team work, partnerships and customer needs (Hill, 2008), with greater concerns about quality assurance, value for money and legal indemnity (Weightman & Williamson, 2005). Education of the health workforce is changing (Hill, 2008), as is the continuing education of health librarians with the development of trends towards competency-based education and continuing professional development programs (Booth, 2007; Chartered Institute of Library and Information Professionals (CILIP), 2010a & 2010b; Houghton-Jan, 2007; Medical Library Association, 2007; Tooley, 2009). These are transitioning from voluntary to mandatory (Chartered Institute of Library and Information Professionals, 2010a; Library and Information Association of New Zealand Aotearoa (LIANZA), 2010a & 2010b). Specialist roles are emerging for health librarians, for example in clinical librarianship, consumer information, research support and "information specialists in context" (Booth, 2007; Hill, 2008), while teaching roles remain dominant (Chartered Institute of Library and Information Professionals, 2010b; Hill, 2008; Scherrer, 2004).

Two major reports from the UK that are especially pertinent to the Australian context are *Future Proofing the Profession* (Chartered Institute of Library and Information Professionals, 2004) and the *Report of a National Review of NHS Health Library Services in England: From knowledge to health in the twenty-first century* (Hill, 2008).

The *Future Proofing the Profession* report (Chartered Institute of Library and Information Professionals, 2004) points to trends in a number of areas that are directly relevant to the Australian context. One traditional area of practice for health librarians, user education, has expanded and "now includes

curriculum-based classroom teaching for academic health librarians, one-to-one and small groups at the point of need [...], development of online and web-based computer aided learning” (p. 21). With this expansion comes increased expectations that health librarians will not only be content experts but also knowledgeable about educational methods and practice. Health librarians’ traditional scope of practice is changing with practitioners moving into more roles outside the library and into new roles which have been created as a result of changes in technology which have affected the delivery of information. Moving outside the library into primary care, the community or consumer health, plus working with other health professionals in multidisciplinary teams have necessitated the development of new skills that include “financial, leadership, influencing, entrepreneurial, project management, negotiating, facilitating and audit and research skills. To succeed as a team member, and to gain the respect of other professionals, librarians must have a skill set that is valued not only by colleagues but is also seen to be valued by themselves” (p. 24). E-library initiatives such as the UK National Electronic Library for Health have “provided opportunities for the involvement of skilled librarians in designing and delivering new services. These include roles in developing and implementing content management systems, using professional skills in metadata creation, creating more effective and efficient search functionality, syndication services and open archives initiatives” (p. 23). Health librarians are also moving into managing knowledge (explicit and tacit) rather than traditional information management (documents and data). “Librarians in many units and organizations are mapping the flow of knowledge and learning in organizations, they are considering the role of knowledge and information in risk management and clinical governance and are actively engaged in setting the quality agenda to ensure that the best evidence is retrieved by the best means possible” (p. 22).

*Future Proofing the Profession* points to opportunities that lie in the following areas: working cross-sectorally across health, social care and education; working in multidisciplinary teams; using traditional skills in new ways; contributing to the development of evidence-based health care and services; playing a role in the development and cascading of critical appraisal skills in the workplace; training and educating users in information skills; promoting the importance of information quality in clinical governance and risk management; supporting rapid decision-making by making better quality information available; and working with a range of information providers, for example publishers and public health information analysts, in developing new services.

An even more recent review, *Report of a National Review of NHS Health Library Services in England: From knowledge to health in the twenty-first century* (Hill, 2008), envisages a huge expansion of the clinical librarian role and posits a workforce of around 800 clinical librarians emerging in due course, plus a move to what are called Knowledge Services librarians. It highlights four key purposes for library and knowledge services in the National Health Service: clinical decision-making by patients or their carers as appropriate and health professionals; commissioning decision and health policy making; research; and lifelong learning.

In 2005, *Vital Pathways: The Hospital Libraries Project* was established by Mary Joan Tooe, the then President of the Medical Library Association in the US, to review the status of hospital librarians, determine the involvement of librarians in medical education and accreditation, and review current and future roles for hospital librarians. The project was instigated to address the apparent difficulties which seemed to threaten the existence of hospital libraries, but instead of focusing on the weaknesses in the sector, the project took a more philosophical direction and looked at issues and opportunities for the future (Tooe, 2009).

In researching the future roles of hospital librarians, the Vital Pathways Task Force used the results of a survey which identified five “mission-critical” goals of hospital administrators, and related these to the librarian’s role in helping to achieve these goals. These mission-critical goals were: clinical care; management of operations; education; innovation and research; and customer service (Holst, Funk, Adams, Bandy, Boss & Hill., 2009). It is important to note that these were the “mission-critical” goals as articulated by the hospital administrators, and in this way the study looked at how organizational needs could inform future developments in the roles of hospital librarians.

Trends in worldwide education generally are also likely to impact library education. Australia is watching European developments closely, where the Bologna process structure of university education has seen the introduction of a first cycle (Bachelor) qualification, followed by a second cycle (Master) qualification. It appears that “professional” level qualifications will be at the master’s degree level, rather than at the level of the bachelor degree or, as is often the case in Australia, that of the graduate diploma. Several universities in Australia have already moved to a Bologna-style model for professional qualifications, including the University of Melbourne and the University of Western Australia (Australian Government Department of Education, 2006). If, as it has been argued, this model ultimately encourages greater opportunities for specialisation in professional fields, there may be significant benefits for courses in librarianship, specifically health librarianship.

Based upon this literature review and environmental scan it appears desirable that any future development for Australian health librarians' entry level and ongoing education will require the documentation of a set of specific competencies. This is especially relevant when considering the overlap of work skills and functions between librarians and related professions (Broady-Preston, 2009). When itemising the skills required of health librarians Booth observed that "a worrying aspect...is that very little of this territory is the exclusive preserve of our profession. Indeed in most cases other professions are better at fulfilling individual aspects of this composite skill set" (Booth, 2007, p.3).

In the context of library associations internationally, there are already examples of members being required to demonstrate professional proficiency on a cyclical basis. In the United Kingdom, members of the Chartered Institute of Library and Information Professionals (CILIP) are encouraged to apply to become a Chartered Member or MCILIP. The road to chartership can commence two years after graduation from an accredited LIS course. The process involves registering as a candidate, finding a mentor, undertaking a skills audit and preparing a personal professional development plan (PPDP), then developing a professional portfolio to present evidence of learning and development. The portfolio approach requires LIS professionals to collect and present evidence of their professional practice. The criteria for chartership include:

- Breadth of professional knowledge and understanding of the wider professional context
- An ability to reflect critically on personal performance and to evaluate service performance
- Active commitment to continuing professional development
- An ability to analyse personal and professional development and progression with reference to experiential and developmental activities.

The process is explained on the CILIP website (2010a). CILIP declares that chartered membership represents the 'gold standard' for LIS professionals, arguing that the dynamic nature of the information environment requires the development, maintenance and promotion of the highest standards of professional practice. Chartered members therefore have the opportunity to demonstrate their commitment to improve and enhance their professional practice through the Revalidation Scheme. This involves a three year cycle of developing the portfolio of evidence of CPD activities and the demonstration of increased competence in a range of professional and managerial skills. Critical reflective practice is a key dimension of the portfolio.

The chartership and revalidation programs are regarded by CILIP as an important way for communicating professional growth and development which can impact on the profession on three levels: individuals are able to demonstrate their commitment to improving their knowledge and skills to current and future employers; employers benefit from having a workforce that explicitly demonstrates its commitment to continuous improvement, resulting in higher quality work; and the information profession as a whole demonstrates its commitment to CPD, thereby raising the status of the professional body (Chartered Institute of Library and Information Professionals, 2010b).

Closer to home, the Library and Information Association of New Zealand Aotearoa (LIANZA) has introduced a scheme for professional registration based on mandatory, ongoing continuing professional development. LIANZA (n.d.) notes that the registration scheme provides:

- A goal for the ongoing professional development of individual practitioners
- A framework for employers to coach and develop their library and information professional staff
- An assurance for future employers, both in New Zealand and overseas, that a registered member meets professional standards of competency in the body of knowledge and ethics required for professional library and information work
- International benchmarking and recognition of professional library qualifications for New Zealanders wishing to work overseas.

The LIANZA registration process also involves a professional development plan that is developed under the guidance of a mentor, and a learning journal, as well as a three year cycle of revalidation to maintain registered status. Registered members (RLIANZA) are expected to demonstrate their learning and development across all eleven areas of the Body of Knowledge (BOK) (Library and Information Association of New Zealand Aotearoa, 2010a), with at least ten professional development activities undertaken each year (Library and Information Association of New Zealand Aotearoa 2010b). The revalidation process underscores the fact that the LIS professionals are in fact professionals: there is a specific body of knowledge and code of ethics and there is a clear requirement for members of this profession to keep knowledge and skills current. Public acknowledgement is achieved through the Registration Roll that is published on the LIANZA website.

In their review of the two mandatory CPD schemes that are integral to MCILIP and RLIANZA professionals, Broady-Preston and Cossham (2010) clearly acknowledge that “the emphasis on continuing professional development will have a positive impact on the profession, both in terms of the individual levels of skills and knowledge attained, and in terms of the wider understanding of professionalism gained by members of the profession, employers and the general public” (p.13). While the ultimate success of the programs inevitably depends on the level of buy-in from members and from employers, they can be viewed as significant steps towards the definition of new benchmarks for professionalism.

The literature review and environmental scan identified a number of themes that highlight the dynamic nature of health librarianship:

- The changing health industry
- Developments in e-health
- The changing health workforce
- The introduction of registration based on mandatory CPD
- The identification of health specific competencies and scope of practice to guide health workforces
- The diminution of traditional library work.

The literature review and environmental scan clearly demonstrated the need to address the future of the health librarian profession in Australia, specifically focusing on the skills and knowledge required of the profession now and into the future. The literature review informed the research strategy and development of the research instruments.



### 3.0 RESEARCH METHODOLOGY

The research concept was initially developed by the HLA committee, and explored by the Project Reference Group at a professional meeting of health librarians in Brisbane in September 2009. Those attending the meeting represented a diverse range of health libraries, including hospitals, academic and research institutions, welfare and community services, primary care practices, policy organisations, consumer health services and health informatics. The Project Reference Group (the research team) was aware that while there were some points of commonality across these diverse areas of practice, each had its own individual features. It was agreed that it would be valuable to have a clearer understanding of the composition of the Australian health library workforce, to develop a picture of the areas of professional knowledge and responsibilities that were relevant in the current workplace, and to identify how these might change in the next three to five years.

The research team commenced the project with an in-depth review of the literature and environmental scan in order to examine not only the impact of contemporary issues in the Australian healthcare system on library and information professionals, but also the implications of international trends in health libraries for Australia (see Chapter 2.0 of this report). The themes identified through the literature review informed the development of the research instruments.

Three principal cohorts of research subjects were identified: practising health librarians, health library managers, and employers. Accordingly, the research approach involved developing online survey instruments for the first two cohorts. Additionally, questions were prepared for a program of semi-structured interviews with employers in the health sector to explore their perceptions of current and future roles for health librarians.

There was an opportunity to build on earlier studies of the Australian LIS workforce, known as the *neXus* studies. The initial *neXus* project captured demographic, educational and workforce data about individual library and information professionals (Hallam, 2008). This was followed by an examination of institutional perspectives, including issues impacting on recruitment, retention and training and development (Hallam, 2009). As the present study is regarded in Australia as a continuation of the LIS workforce planning research work, the *neXus* instruments were adapted for the new study, with further questions being developed to capture data about current and future professional knowledge and responsibilities, encompassing the Medical Library Association's *Competencies for Lifelong Learning and Professional Success* (Medical Library Association, 2007). While the research team discussed in detail the ways in which health librarian skills could be presented, there was concern that a list could be developed that was overly detailed, complex, and potentially biased. It was decided that the MLA competencies represented an accepted professional 'framework' of skills which could be used objectively in the survey instrument.

The survey development process was rigorous, with considerable debate amongst members of the research team about the scope and structure of the questions. The questionnaires were developed into two web-based surveys which were piloted in early February 2010 (see Appendix 1 and Appendix 2).

Following the pilot, the surveys were made active for a three week period from late February to early March 2010. Invitations to participate in the project were distributed to individual health librarians by email to the HLA e-list, reaching around 450 health librarians, to the members of Health Libraries Inc., a professional group based in the state of Victoria, as well as to a number of regional and local health library e-lists. Information about the institutional survey was sent by email to the managers of health library services across Australia. The survey datasets were captured and processed for detailed interrogation using the data analysis tool Qlikview<sup>7</sup>.

An interview schedule was developed to form the basis of the semi-structured interviews. The schedule consisted of a brief introduction to the project, followed by open-ended questions in two parts: section one – 'how health librarians assist you in doing your job and achieving your goals'; and section two – 'how health librarians contribute to your organisation – now and possibilities for the future'. The schedule also contained prompts for several of the questions for the interviewers to use to probe or extend the subject's response if appropriate. See Appendix 3 for the full interview schedule.

7 Qlikview: <http://www.insideinfo.com.au/whats-qlikview.php>

The interview schedule was based on two pieces of research from the United States. The first was *Vital Pathways: The Hospital Libraries Project* established by the 2005/06 Medical Library Association president Mary Joan Tooley to review current and future roles for hospital librarians and develop strategies to support the profession (Tooley, 2009). The second was *The Value of the Hospital Library Study*, funded by the National Network of Libraries of Medicine, Middle Atlantic Region, which aims to replicate the 'Rochester study' of 1992 (Dunn, Brewer, Marshall & Sollenberger, 2009). The two objectives of this study were: "to investigate the views of hospital administrators about librarians and library services in their institutions and how they make decisions around what services are provided and funded in their hospital" and "to explore the views of health sciences librarians, informed by interviews with hospital administrators on the value of the hospital library" (Martin, 2008). Accordingly, the librarians participating in this project interviewed hospital administrators at their institutions and then participated in focus groups to explore their experience of interviewing their employer and hearing his/her views on the value of the library to the organisation. The ALIA/HLA Project Reference Group drew on the Value of the Hospital Library Study for several of the questions asked in the survey of Australian health librarian employers, to ask about the contribution that the library already made to the organisation and whether there were any untapped opportunities for the library to contribute to organisational outcomes, or indeed whether there were any barriers to this. The interview questions sought to determine the extent of the librarians' current involvement in strategic planning and/or key organisational committees and whether there was the potential for librarians to play a more central role in the organisation.

During October and November 2010, each member of the ALIA/HLA Project Research Team conducted interviews with two or three individuals to generate a convenience sample of employers of health librarians. Health librarians are employed in a broad range of contexts and the research team aimed to reflect this range in the interview sample. Therefore, interviews were sought with health librarian employers in the hospital, academic, research, private, consumer health, professional association and not-for-profit fields. The researchers wrote up the interview notes using a standardised interview schedule and submitted them to the principal researcher who combined the data into one document.

One of the researchers undertook the initial review of the data and development of a non-hierarchical coding scheme. Suggestions for coding were based on three main sources. The first source was the project team's initial environmental scan and literature review, reported in Chapter 2.0 of this report. The second source was the Medical Library Association's *Competencies for Lifelong Learning and Professional Success* (2007), containing seven competencies, plus an additional competency on continuing professional development added by the project team. The third source was two pieces of research from the United States, the *Vital Pathways Project* and the *Value of the Hospital Library Study*. The *Vital Pathways Project* used results from a previous research study by Abels, Cogdill and Zach (2002) which explored the contributions of libraries to hospitals and academic health centres. The Abels study involved twelve semi-structured interviews with library directors and institutional administrators, plus a focus group of administrators from five hospitals. The interview and focus group data was used to develop a taxonomy of five mission-critical goals and fifteen organisational goals to which hospital librarians contributed. This taxonomy was a valuable resource in developing the coding scheme used for the ALIA/HLA study.

Once the first researcher had developed the initial coding scheme and coded the data, two more researchers coded the data independently. As a result, additional codes were identified directly from the data in an iterative process. The three coders and the principal researcher met by teleconference to clarify definitions of existing codes and suggest new codes where thematic gaps were identified, and this process continued by email until no further new codes or amendments to existing codes were identified. The final coding scheme consisted of 52 codes.

Informed by the literature review and environmental scan, the two online surveys and the semi-structured interviews represented the avenues used for quantitative and qualitative data collection. The findings from these research activities are discussed in detail in Chapter 4.0.

## 4.0 RESEARCH FINDINGS

The data collection activities involved two online surveys, with individual health librarians and health library managers as the research subjects, and a series of semi-structured interviews with employers. The findings drawn from the analysis of the data collected are presented, with specific attention paid to the current and future areas of professional knowledge and responsibilities. Professional development issues and the respondents' perspectives on the future of health librarianship are also explored.

### 4.1 Surveys of individual health library and information professionals and health library managers

The survey of individual health library and information professionals attracted 197 responses, of which 36 responses were incomplete. The research results discussed are drawn from the 161 fully completed survey responses. The findings from the individual surveys were augmented by the data collected from the stakeholder groups of employers and managers. From the 77 research participants who accessed the library managers' survey, 69 valid responses were collected. As some of these respondents provided only partial responses, the analysis is based on 51 'useable' responses. The demographic and educational data collected from individual health library practitioners is presented, as well as the picture of the current workforce created from the responses provided by library managers.

#### 4.1.1 Individual respondents

The majority of the individual respondents were aged over 40 years, with 32 percent falling into the age range 41 to 50, and 34 percent in the age range 51 to 60, reflecting the mature demographic profile of the health library workforce (Figure 1). The gender ratio of respondents was 86 percent female and 14 percent male, although 21 respondents left the question blank.

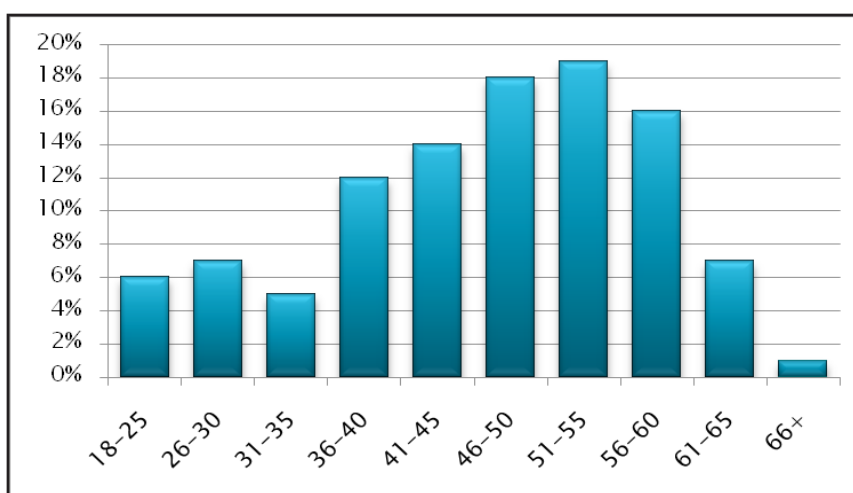


Figure 1: Age of respondents: Individual respondents

The geographic distribution of respondents showed that the strongest representation came from New South Wales, followed by Victoria, Western Australia and Queensland (Table 1).

Table 1: Geographic distribution of respondents: Individual respondents

State/Territory	Percentage
New South Wales	27
Victoria	18
Western Australia	18
Queensland	16
Northern Territory	9
South Australia	7
Australian Capital Territory	3
Tasmania	1
Overseas	1

The respondents were predominantly located in metropolitan areas (Table 2), with the ratio of respondents reflecting the general population distribution in Australia, where around two thirds of the total population live in the capital cities.

Table 2: Regional distribution of respondents: Individual respondents

Area	Percentage
Capital city	71
Regional town or city	25
Rural/Remote area	4

Ninety percent were currently working in the health library sector; of the 14 people not currently working in the sector, four reported that they planned to return to the field in the future.

The vast majority of respondents (96 percent) already held a qualification in library and information science (LIS), with three people currently studying for a LIS qualification and two people having no qualifications in LIS. Twelve percent of respondents indicated that they were "new graduates," having graduated within the last five years. The majority of respondents had a postgraduate qualification in LIS, ie graduate diploma or master's degree (Figure 2).

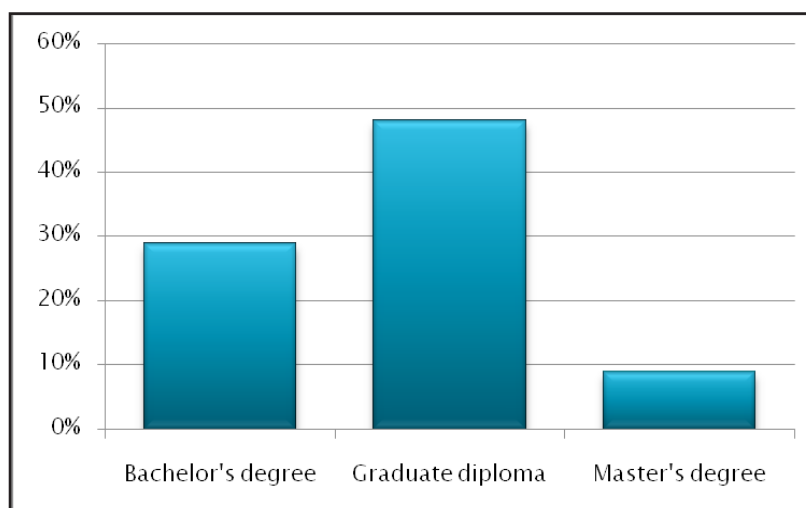


Figure 2: LIS qualifications held: Individual respondents

The perhaps surprisingly low number of health librarians holding a master's degree may in fact correlate with the reported age profile. Until recently, the graduate diploma was the common graduate qualification in LIS, with a number of universities recently moving to a master's program with the goal of extending the length of the course to accommodate the expanding curriculum requirements. Only two people held a master's degree by research in the field of LIS and there were two respondents with a PhD in the LIS discipline. The data revealed that the graduate diploma was in fact the highest academic qualification (in any discipline) for 38 percent of respondents (Table 3).

Table 3: Highest qualification held: Individual respondents

Highest qualification held	Percentage
Bachelor's degree	32
Honours degree	6
Graduate certificate	2
Graduate diploma	38
Master's degree by coursework	8
Master's degree by research	3
PhD	2
Other, or no qualification	9

Almost one quarter of respondents (24 percent) reported that their highest qualification was in a discipline other than LIS, spread across the fields of health, education, science, arts and information technology. Respondents were specifically asked about the academic qualifications they held in the fields of Science/Health/Medicine. It was found that just over one quarter had tertiary qualifications in this area, while four people reported that they had been awarded vocational qualifications (Certificate, Diploma or Advanced Diploma) (Table 4).

Table 4: Qualifications in Science/Health/Medicine: Individual respondents

Qualifications in Science/Health/Medicine	Percentage
None	68
Vocational qualifications	4
Bachelor's degree	15
Honours degree	4
Graduate certificate	1
Graduate diploma	2
Master's degree by coursework	1
Master's degree by research	2
PhD	1
Other	2

The spread of disciplines for these qualifications included the science fields (e.g. chemistry, physics, biology, microbiology) and the health sciences (e.g. public health, nursing, physiotherapy, pathology, speech pathology). One respondent reported qualifications in health information. Beyond this, it was noted that 19 percent of respondents held vocational qualifications in LIS and that a small number of people (14 percent) had acquired vocational qualifications in other fields, including education, arts, business and information technology.

The data presented a picture of a stable employment environment, with almost half of the respondents having worked in the health library sector for more than ten years (Figure 3).

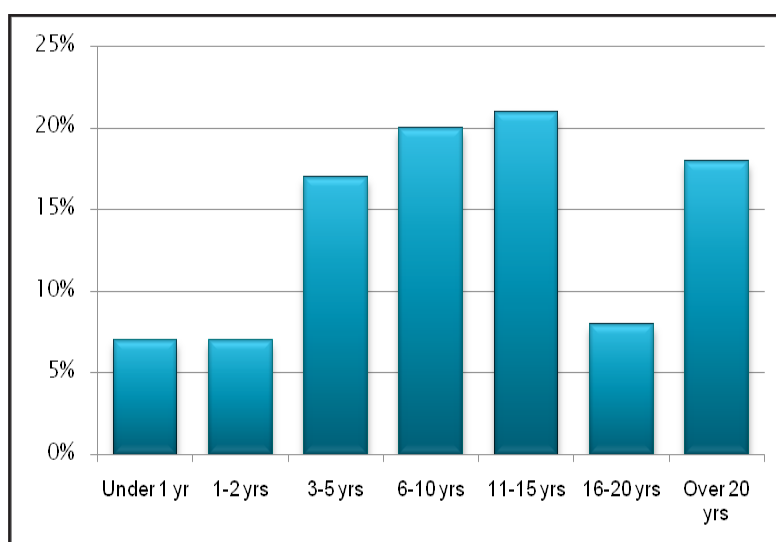


Figure 3: Length of employment in the health library sector: Individual respondents

Nevertheless, almost one third were relatively new to the sector, with less than five years of experience. The pattern of stability was further evident in the figures that showed that 49 percent of respondents had worked in only one health library, and a further 37 percent had worked in only two or three libraries. One person worked in more than ten health libraries.

More than half the respondents (58 percent) reported working in a full-time permanent capacity, while just over one quarter (28 percent) stated that they had part-time permanent employment (Figure 4). Casual and contract employment arrangements were uncommon.

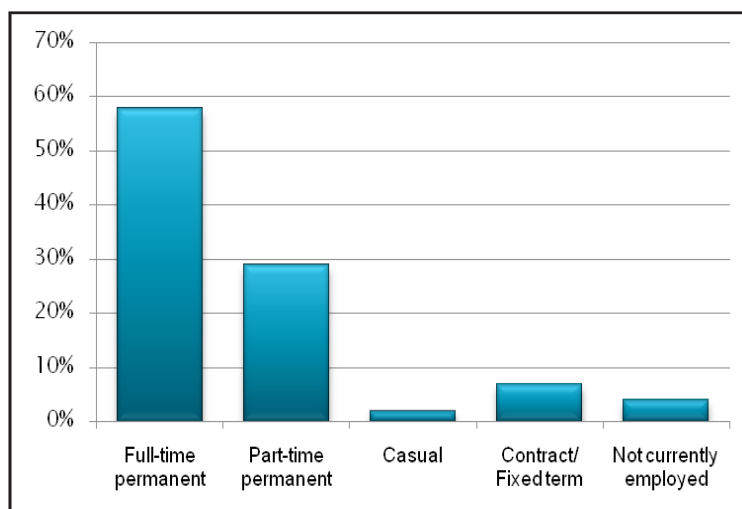


Figure 4: Current employment status: Individual respondents

It has already been noted that the health sector is complex. In response to the question about the general area of health services in which they were employed, almost two thirds of respondents reported that they were with the State or Territory health services agency (Table 5).

Table 5: Employment: General area of the health sector: Individual respondents

General area of the health sector	Percentage
Public sector – Commonwealth	12
Public sector – State/Territory	60
Private sector	8
Not-for-profit sector	11
Other	4
No response	5

Of those respondents currently employed, more than half reported that they worked in the specific area of hospital libraries (53 percent), while others were with government department libraries, university libraries or in areas such as pathology, pharmacy and drug companies, health professional associations and colleges, consumer health care and primary care (Table 6). Only one person reported working in the area of health informatics.

Table 6: Employment: Specific area of the health sector: Individual respondents

Specific area of the health sector	Percentage
Hospital	53
Government department	14
University	14
Research institute	2
Other	17

The size of the health library varied, with 15 percent working in one-person libraries and 45 percent having between two and five staff. A further 20 percent had up to ten staff, 12 percent had up to 20 staff and there were three large health libraries with over 50 staff. Respondents were employed in a range of levels of position. Respondents were asked to identify the level of their position as recorded by the ALIA

scale of Grade 1 to Grade 5, which reflected both the levels of seniority and complexity of work. Of those responding to the questions, about one half (52 percent) reported being at Grade 2 or 3. Sixteen percent were at Grade 1 and 13 percent were at the more senior Grades 4 or 5. There was consequently a wide range of salaries, with one half of respondents earning over \$60,000 per year, excluding superannuation or fringe benefits (Figure 5).

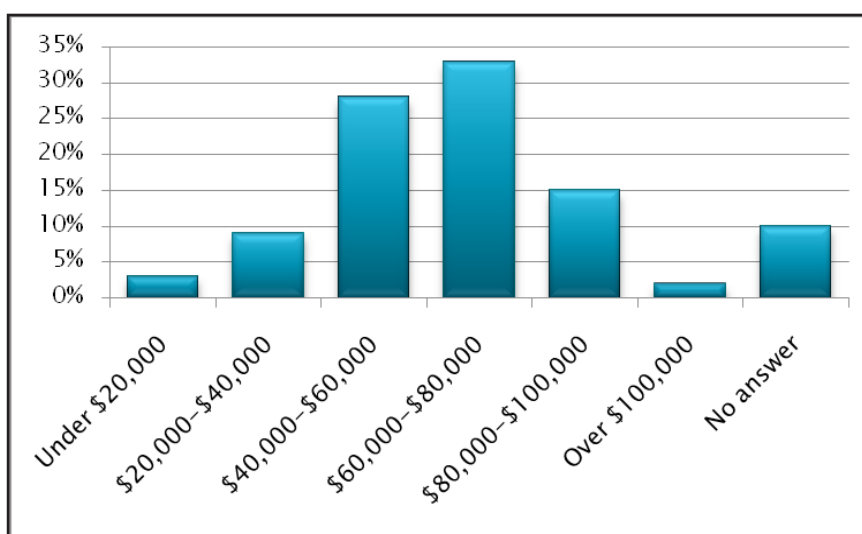


Figure 5: Gross annual salary of respondents: Individual respondents

While there was a general sense of satisfaction that remuneration was appropriate for the work performed (48 percent), almost one third felt that it was not appropriate for the qualifications they had. A relatively large proportion of respondents were neutral on the issue (17 percent).

#### 4.1.2 Health library manager respondents

The library manager respondents were spread across all states and territories (Table 7) and, as with the survey of individual health librarians (Table 1), the results approximated the general proportions of the Australian population. Other factors affecting spread of respondents are likely to be the degree of centralisation evident in Australia in the structures governing the state/territory health and hospital sectors, the mix of federal and state/territory government departments, and the presence (or absence) of medical schools in the various State/Territory-based universities. Almost one third of respondents did not provide an answer to this question.

Table 7: Respondents by State/Territory: Library manager respondents

State/Territory	Percentage
New South Wales (NSW)	20
Victoria (VIC)	14
Western Australia (WA)	10
Queensland (QLD)	9
South Australia (SA)	7
Australian Capital Territory (ACT)	5
Tasmania (TAS)	3
Northern Territory (NT)	1
No response	31

Most respondents were from public sector agencies, with relatively few from the not-for-profit and private sectors (Table 8).

Table 8: Respondents by sector: Library manager respondents

Sector	Percentage
Public sector - State/Territory	37
Public sector - Commonwealth (incl. universities)	14
Not-for-profit sector	10
Private sector	1
Other	5
No response	33
Total	100

In answering the question about the specific health area served by the library, respondents were provided with a list of 16 categories that they could choose from, and they were able to nominate more than one health area. A number of libraries indicated that they had multiple client groups. Overall, the proportions were similar to those found in the individual survey, with most libraries serving the hospital, academic/research, and government department sectors (Table 9).

Table 9: Client groups served: Library manager respondents

Client groups served	Percent
Hospital	42
University	25
Research institute	17
Government department	13
Dentistry	9
Consumer/patient health organization	8
Health professional assn/college	7
Pharmacy/drug industry or company	7
Primary care (GPs, private practice)	5
Pathology	4
Health Informatics	3
Other	8
Total	[148]

In total, there were 148 selections made by the 51 survey participants. The largest proportion served hospital clients (42 percent, 32 libraries) and universities (25 percent, 18 libraries), with 13 libraries serving both of these client groups. Research institutes represented 17 percent (13 libraries) of respondents and government department libraries 13 percent (10 libraries). Smaller groups of respondents included dentistry, consumer health, professional association/colleges, pharmacy/drug companies, primary care, pathology and health informatics. Respondents who selected the option 'other' stated that they served areas such as allied and community health, indigenous health, disability, administration, private complementary/alternative and health sciences education. It was consequently found that many of the libraries served multiple client groups. Table 10 presents a comparative picture of the client groups served by the individual and the institutional respondents.

Table 10: Client groups served: Individual respondents and library manager respondents

Client groups served	Individual	Institutional
Hospital	53%	42%
University	14%	25%
Research institute	2%	17%
Government department	14%	13%

It must be remembered, however, that institutional respondents could report multiple client groups served, as appropriate, whereas individual respondents were associated with one specific client group only.



The highest proportion of health library manager respondents came from libraries with 2-5 paid staff (47 percent). It is also worth noting that a further 1 in 5 (20 percent) fell into the category of 'One person libraries' where there was only one staff member, or a fraction of a staff position, meaning that the majority of respondents (67 percent) represented libraries with 5 or less staff (Figure 6).

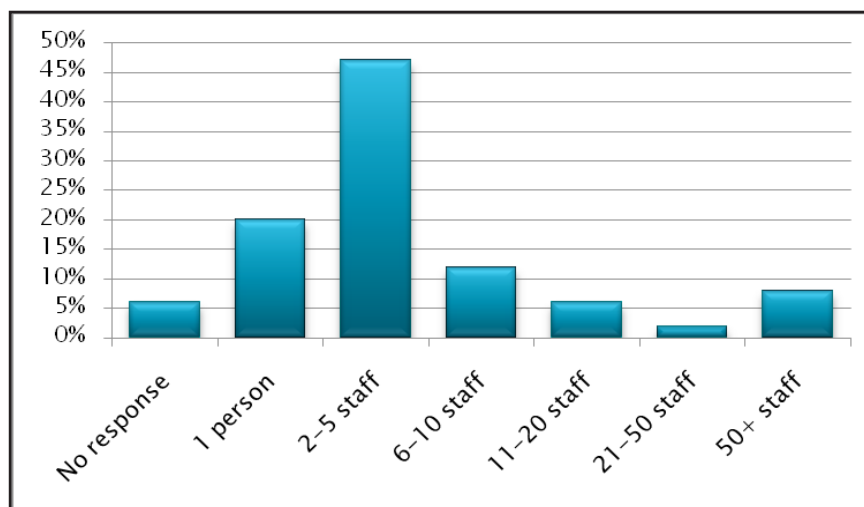


Figure 6: Number of paid library staff: Library manager respondents

Table 11 reveals how the health library sector is dominated by 'small' libraries.

Table 11: Size of library: Individual respondents and library manager respondents

Size of library	Individual	Institutional
One person library	15%	20%
2-5 staff	45%	47%
Total	60%	67%

The employment picture revealed that permanent full-time positions represented the most common staffing model, with half of the respondents (51 percent) reporting that there were permanent part-time positions in the library. While more than three-quarters (76 percent) stated that they did not employ any temporary/casual/contract staff, there were situations where casualisation of the workforce prevailed. In one small library (2-5FTE), the respondent commented: "We have 1 full time temporary contract position and 2 casual librarian positions".

Just over one-third of library managers reported that they employed paraprofessional staff, again generally in full-time positions (19 libraries) rather than part-time positions (10 libraries) or temporary/casual/contract positions (5 libraries). One quarter of library managers reported that they had staff who had non-LIS qualifications. While most commonly the non-LIS staff were in the arena of administration (10 libraries), there were also staff with a background in IT systems (5), web design (3), graphic design (2), finance (1), marketing (1) and human information behaviour (1). Two library managers stated that there were staff on the library team who were health professionals.

With regard to composition and diversity of the workforce, the majority (53 percent) had over 90 percent female staff, and only 39 percent of those who responded indicated that they had staff from culturally or linguistically diverse backgrounds. Only two percent of libraries had staff members who identified as coming from an Aboriginal/Torres Strait Islander background, while 15 percent (eight libraries) reported having one or two staff with a disability.

The demographic and employment information collected in both the individual and the institutional survey provided valuable insights into the make-up of the current health library workforce, and indicated potential areas of concern for the future. One of the main goals of the research study, however, was to examine the professional knowledge and responsibilities of health librarians with a comparison of current and future perspectives.

### 4.1.3 Current and future areas of professional knowledge and responsibilities

The series of questions about professional knowledge and responsibilities was aligned with the seven-point educational policy statement developed by the US Medical Library Association (MLA), published as the *Competencies for Lifelong Learning and Professional Success* (Medical Library Association, 2007). This educational policy statement is presented in full in Appendix 4.

In the two survey instruments, the specific questions related to the extent to which respondents:

1. Understand the health sciences and health care environment and the policies, issues, and trends that impact that environment
  - eg developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues...
2. Understand the principles and practices related to providing information services to meet users' needs
  - eg reference services; information access; document delivery; liaison activities; clinical librarianship...
3. Have the ability to manage health information resources in a broad range of formats:
  - eg collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata...
4. Know and understand the application of leadership, finance, communication, and management theory and techniques
  - eg strategic planning; organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management...
5. Understand and use technology and systems to manage all forms of information
  - eg library systems; web management; network management; mobile technologies; database creation and management; authentication and authorisations; content management; learning management systems...
6. Understand curricular design and instruction and have the ability to teach ways to access, organize, and use information
  - eg educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation...
7. Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines
  - eg qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice...

Given the interest in professional development, an additional 'competency' was added by the research team:

8. The need to maintain currency of professional knowledge and practice
  - eg participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS

The analysis of the data collected through the 161 responses for the individual survey and the 51 responses for the institutional survey has been synthesised to allow both perspectives to provide a comprehensive picture of the likely requirements for educating the future health librarianship workforce.

The three largest groups of respondents in the individual survey were from hospital libraries (96 respondents), government department libraries (25 respondents) and university libraries (24 respondents), while smaller groups of respondents encompassed librarians working in research institutes, primary care, health professional association/colleges, consumer or patient health organisations, health informatics, pharmacy/drug companies, commercial publishers. Data from the three largest groups of individual respondents are highlighted in the analysis. However, as the institutional survey revealed that health libraries often served multiple client groups, it was not possible to review this data from any client-specific perspective. The findings discussed therefore reflect the aggregated institutional data.

The research results presented in this section look at the perceptions of requirements for health librarians for each of the eight areas of the competency framework, both at the current time (Section 4 of the surveys) and how these might change in the future (Section 5). While the individual respondents had been asked to rate how much the various competency areas were used in their own roles, the library manager respondents were asked to focus on the library as a whole unit and to rate 'how frequently the health librarians on your staff are actively involved in the following areas of professional knowledge and responsibility'. The categories provided were: 'never', 'rarely', 'sometimes', 'often', and 'very often' (Section 4). On the same set of competency areas the respondents were subsequently asked to rate 'the extent to which you believe that your staff's involvement might change over the next 3-5 years'. Choices ranged from 'decrease significantly', 'decrease to some extent', 'remain the same', 'increase to some extent', 'increase significantly' (Section 5). Individual respondents had been asked to consider their own roles as they responded to the same questions.

Tables 12 to 15 illustrate the distribution of responses to the current and likely future areas of practice (labelled C1 – Competency 1 to C8 – Competency 8) from the two perspectives of individual respondents and of library managers. Table 12 presents the individual health library and information professionals' current application of the competencies.

Table 12: Current areas of professional knowledge and responsibility:  
Individual respondents

<b>Current areas of professional knowledge and responsibility</b>	<b>Rarely or Never</b>	<b>Some times</b>	<b>Often or Very often</b>
C1 Health sciences and health care environment	5%	28%	66%
C2 Information services to meet users' needs	2%	4%	94%
C3 Management of health information resources	5%	13%	81%
C4 Leadership, finance, communication and management	16%	35%	48%
C5 Technology and systems to manage information	2%	16%	81%
C6 Curricular design and instruction	18%	30%	51%
C7 Scientific research methods; critical examination of the research literature	23%	33%	43%
C8 Maintain currency of professional knowledge and practice	7%	31%	61%

Individual respondents were subsequently requested to indicate the extent to which they believed that their own need to demonstrate these competencies would change over the next three to five years. The responses are shown in Table 13.

Table 13: Future areas of professional knowledge and responsibility:  
Individual respondents

<b>Future areas of professional knowledge and responsibility</b>	<b>Decrease</b>	<b>Remain the same</b>	<b>Increase</b>
C1 Health sciences and health care environment	3%	32%	60%
C2 Information services to meet users' needs	1%	27%	69%
C3 Management of health information resources	3%	20%	73%
C4 Leadership, finance, communication and management	2%	39%	55%
C5 Technology and systems to manage information	2%	12%	82%
C6 Curricular design and instruction	2%	29%	64%
C7 Scientific research methods; critical examination of the research literature	3%	32%	60%
C8 Maintain currency of professional knowledge and practice	5%	46%	44%

Table 14 presents the views of the library managers with respect to the present application of the competencies by all their staff.

Table 14: Current areas of professional knowledge and responsibility:  
Library manager respondents

Current areas of professional knowledge and responsibility	Rarely or Never	Some times	Often or Very often
C1 Health sciences and health care environment	8%	22%	57%
C2 Information services to meet users' needs	0%	2%	80%
C3 Management of health information resources	4%	6%	69%
C4 Leadership, finance, communication and management	10%	29%	44%
C5 Technology and systems to manage information	4%	12%	67%
C6 Curricular design and instruction	8%	26%	49%
C7 Scientific research methods; critical examination of the research literature	10%	31%	41%
C8 Maintain currency of professional knowledge and practice	8%	16%	57%

The library managers' views of the future application of these competencies in the coming three to five years are presented in Table 15.

Table 15: Future areas of professional knowledge and responsibility:  
Library manager respondents

Future areas of professional knowledge and responsibility	Decrease	Remain the same	Increase
C1 Health sciences and health care environment	0%	26%	53%
C2 Information services to meet users' needs	2%	16%	61%
C3 Management of health information resources	2%	6%	71%
C4 Leadership, finance, communication and management	0%	37%	41%
C5 Technology and systems to manage information	0%	8%	69%
C6 Curricular design and instruction	0%	16%	63%
C7 Scientific research methods; critical examination of the research literature	0%	28%	51%
C8 Maintain currency of professional knowledge and practice	0%	39%	39%

Figure 7 compares the individual librarians' and the library managers' perspectives of the areas of professional knowledge and responsibilities, reported as currently applied 'often' or 'very often'.

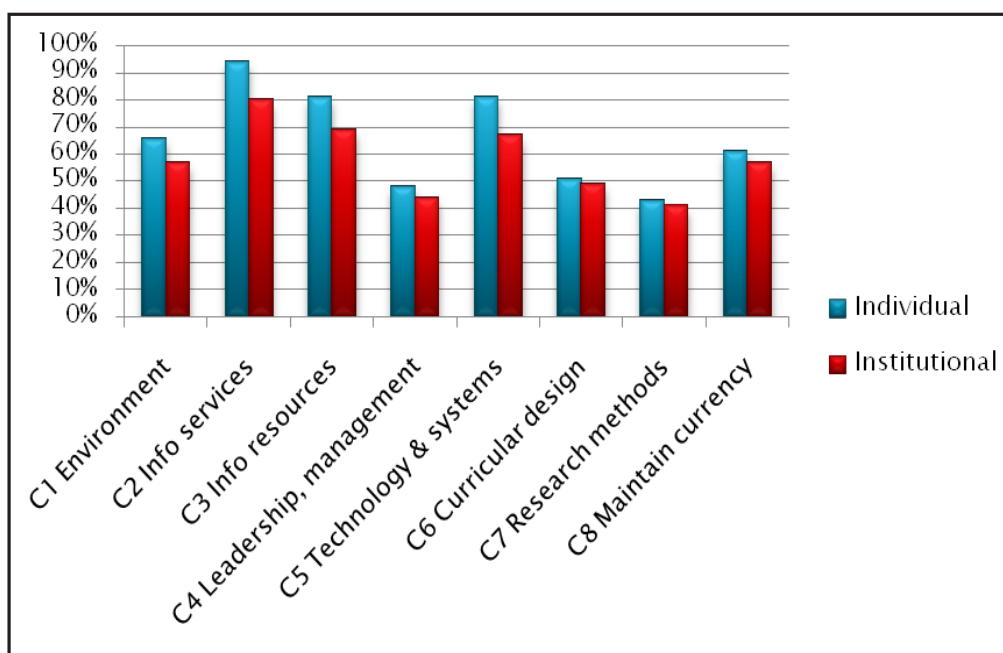


Figure 7: Current application of professional knowledge and responsibilities:  
Individual respondents and library manager respondents

The individual library and information professionals recorded a higher value for all eight competencies, with the highest difference (14 percent) noted for both C2 Information services to meet users' needs and C5 Technology and systems to manage information

The two perspectives of the professional areas that were likely to 'increase to some extent' or to 'increase significantly' over the next three to five years are presented graphically in Figure 8. Again, the values recorded by the individual librarians were consistently higher than those recorded by the library managers. The greatest margins were noted with C4 Leadership, finance, communication and management (14 percent) and C5 Technology and systems to manage information (13 percent).

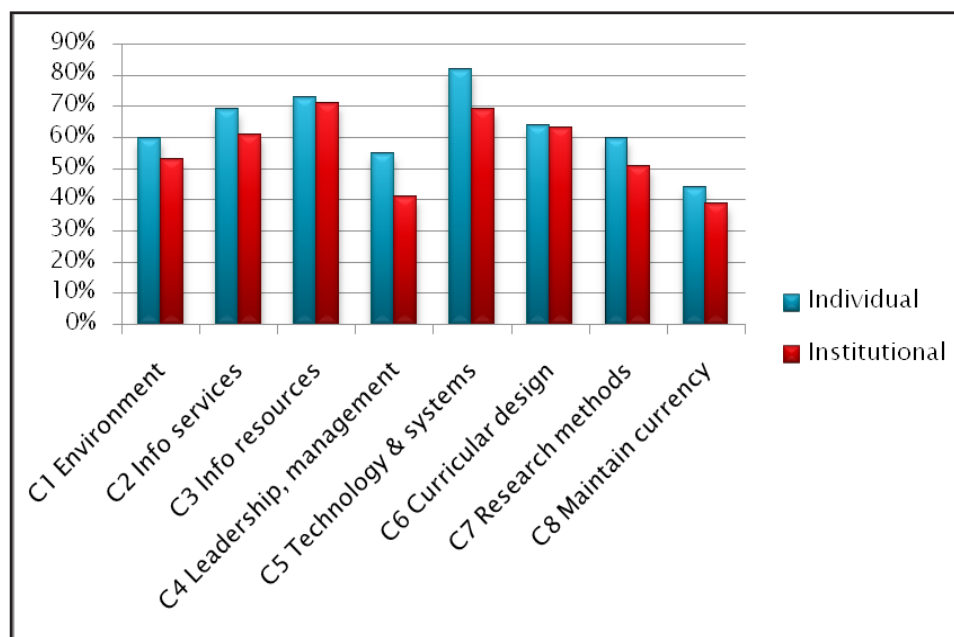


Figure 8: Future increase in professional knowledge and responsibilities: Individual respondents and library manager respondents

The various competencies have been examined in detail to highlight the different viewpoints presented. Comments from both groups of respondents (individuals and institutions) have been included to provide a richer picture and give deeper insight into the meaning of the ratings data. It should be noted, however, that, on average, 22 percent of library managers provided no responses to the questions about current and future competencies. In comparison, the null response rate in the individual survey was less than two percent.

*Competency 1. Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment.*

Overall, 66 percent of individual respondents, and 57 percent of institutional respondents reported that they or their staff were 'often' or 'very often' required to understand the health sciences and health care environment. The strongest figures were recorded for individual respondents in the government department category (88 percent) and the hospital category (67 percent), while only 43 percent of university respondents believed that this was the case. It was interesting to note that 19 percent of respondents from universities reported that they were 'never' or 'rarely' required to understand the health sciences and health care environment, no government department respondents and only five percent of hospital respondents answered 'never' or 'rarely' to the same competency. One respondent indicated that this is an integral part of their role:

*Keep tabs on changes in health policy, issues to do with registration of health professions, government inquiries related to health, nursing, aged care, industrial relations etc. Check daily media for relevant news.*

Respondents in all categories expected that an understanding of the health sciences and health care environment would increase either 'to some extent' or 'significantly' in the future: 53 percent of

institutional respondents and 60 percent of individual respondents reported that this was anticipated, with around 12 percent believing the increase would be 'significant' (Figure 9)<sup>8</sup>.

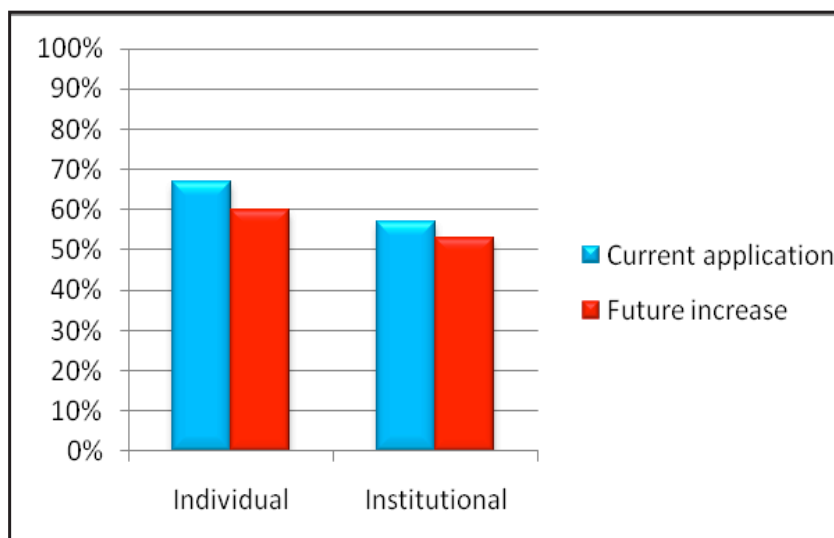


Figure 9: C1 Health sciences and health care environment: Individual respondents and library manager respondents

In the individual survey the projected increase was more marked in hospitals (69 percent) and in government departments (58 percent), compared with universities (38 percent) (Figure 10).

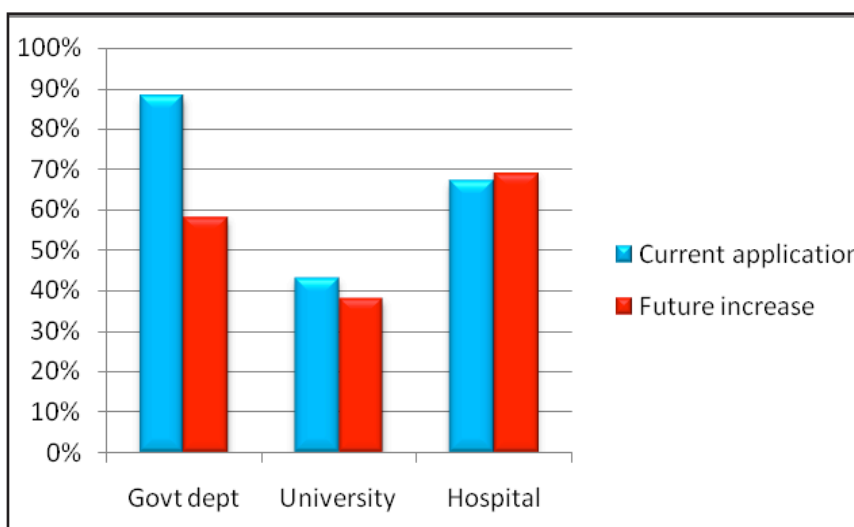


Figure 10: C1 Health sciences and health care environment: Individual respondents from government departments, universities and hospital libraries

Several respondents commented that funding opportunities would require them to be competent in this area:

*Require greater understanding to initiate methods of revenue raising and grant submissions.*

Four percent of individual respondents in academic health libraries reported, however, that they expected this competency to decrease significantly in future. Comments provided by institutional respondents generally indicated that this area of professional knowledge and role was the library manager's responsibility. Nevertheless a number of respondents looking to likely future changes in the health sector noted the increasing need for all health librarians to understand the health care environment:

*The complexity of the environment and likely changes make me think it is going to be even more important to keep abreast of developments.*

8 In interpreting the bar graphs, it should be noted that two concepts are represented: the current application of the specific area of professional practice and the anticipated increase in the application of that area of practice.

*Competency 2. Understand the principles and practices related to providing information services to meet user needs.*

More than 93 percent of all individual respondents reported that they 'often' or 'very often' needed to understand the principles and practices related to providing information services to meet user needs. Respondents working in hospital libraries (98 percent) and government department libraries (92 percent) recorded a higher response than those working in university libraries (81 percent). Comments indicated that respondents saw this as a core competency:

*This knowledge is essential for the effective management of any library service – it should go without saying.*

*These are core to our practice.*

The institutional perspective was similar, with 80 percent of respondents reporting that their staff were required to understand the principles and practices related to providing information services to meet user needs 'often' or 'very often'. Over half indicated that the competency was 'very often' applied. Comments provided again indicated that this is a core professional responsibility for health librarians:

*All still very much key activities in our library.*

It was seen as an evolving domain:

*All these areas have been heavily influenced by change with technology and so the knowledge and responsibilities of all staff have experienced considerable restructure and relearning.*

Almost 70 percent of individual respondents and 60 percent of institutional respondents believed that there would be an increase in the application of this competency in the future (Figure 11).

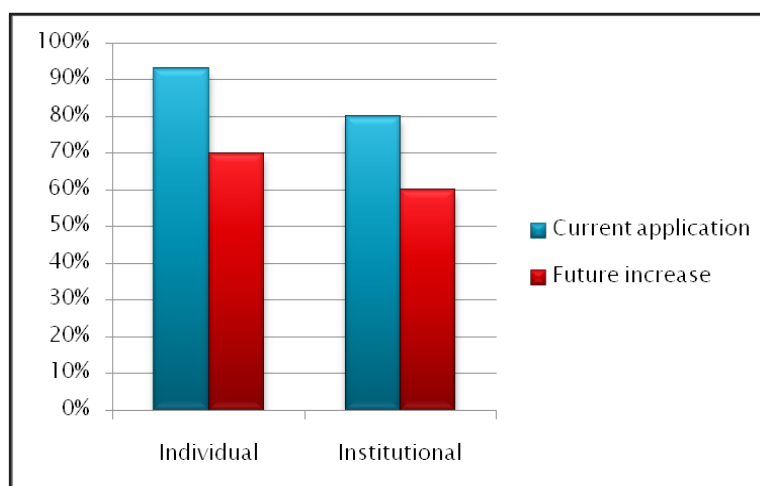


Figure 11: C2 Information services to meet users' needs: Individual respondents and library manager respondents

Once again, the figures recorded were stronger amongst those working in hospital libraries and government department libraries, compared with those in university medical libraries. Respondents commented that they expected changes in a number of areas, including an increased number of information resources, a wider variety of delivery technologies in clinical and evidence-based practice settings, and more significant teaching roles.

*Competency 3. Understand the management of health information resources in a broad range of formats.*

This competency was widely acknowledged to be important, with 80 percent of individual and 70 percent of institutional respondents reporting that it was applied frequently. Individuals working in government departments (88 percent) reported the highest percentage of 'often' and 'very often' responses, followed by hospitals (84 percent) and universities (71 percent). The ratios recorded for these categories of institutional respondents were in the range of 70 to 75 percent. One individual respondent commented that it was the broad principles that were important in understanding this competency:

*It is not so much the technicalities in these areas that are important as the ability to understand the principles and concepts involved, i.e. understanding what classification is about, how it works, why it's useful etc...*

Knowledge and responsibility in understanding the management of health information resources in a broad range of formats were expected to increase in the future 'to some extent' or 'significantly' for just over 70 percent of all respondents, with around three quarters of individuals working in hospitals highlighting the growing need for the competency (Figure 12).

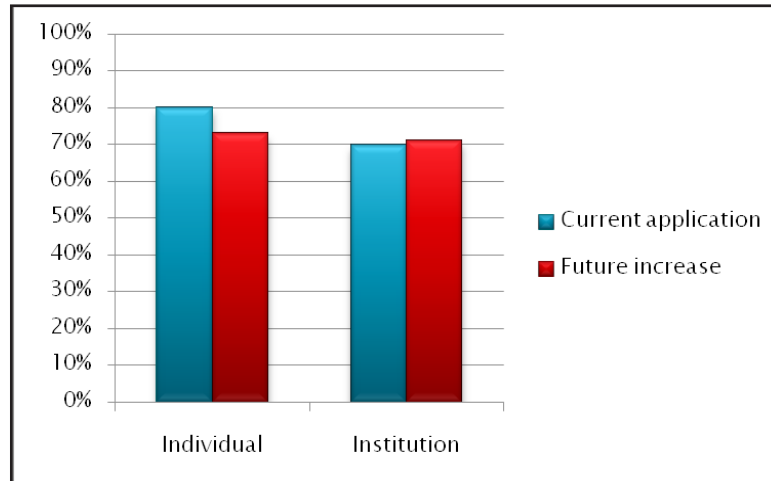


Figure 12: C3 Management of health information resources: Individual respondents and library manager respondents

A number of comments reflected that the shift from print to electronic resources, along with the associated issues of digital repositories, licensing, copyright, web publishing and the implementation of new standards, required a new range of skills within the competency area. The management of digital content was highlighted as an important and increasing area of professional responsibility for health librarians. Institutional respondents noted:

*Some of these issues have required a much higher level of knowledge and responsibility and have resulted in recognition by reclassification to a higher grade reflecting that advanced scope of practice.*

*Repository management for electronic publications is likely to increase for a number of librarian roles and resource formats and types e.g. managing policies and guidelines, managing the department's digital repository, managing an eLearning repository.*

#### *Competency 4. Know and understand the application of leadership, finance, communication, and management theory and techniques.*

The perceived application of this competency was notably lower, with just under half of individual (48 percent) and institutional (44 percent) respondents reporting high frequency, highlighting the fact that this was perceived to fall under the responsibilities of managers rather than staff. While 24 percent of individual university respondents reported that they 'rarely' or 'never' needed to know and understand the application of leadership, finance, communication, and management theory and techniques, the results were lower for hospitals (14 percent) and government departments (13 percent). Nevertheless, some comments indicated that these skills were important:

*I couldn't manage 2 libraries and lead a team without good skills in these areas. Obviously they are essential for any manager and, at some level, for any librarian.*

Over half of all individual respondents (55 percent) expected that their own knowledge and understanding in this competency was likely to increase. This was higher than the recorded views of the library managers, with only 41 percent believing that their staff would be required to apply these skills to a greater extent in the future (Figure 13). Thirty-seven percent indicated that there was unlikely to be any change.



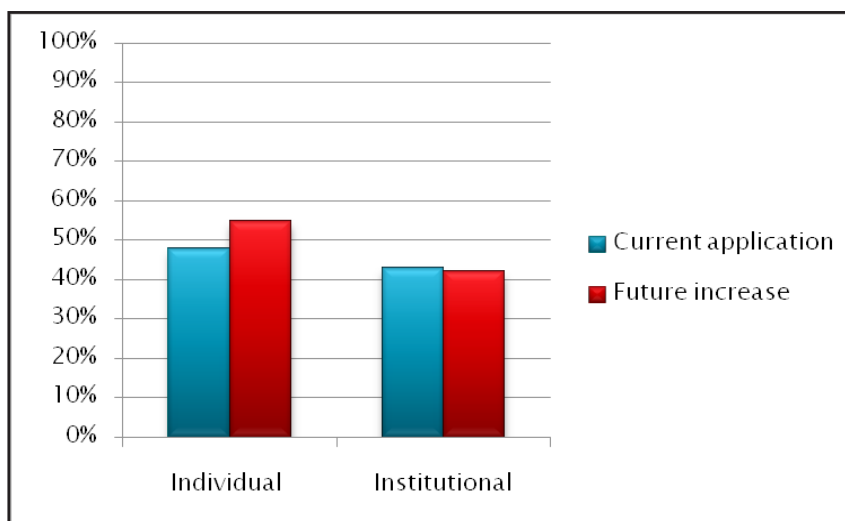


Figure 13: C4 Leadership, finance, communication and management: Individual respondents and library manager respondents

Some respondents were aware of the strategic nature of the competency:

*The library has to continually prove itself to be relevant; have to ensure fit with organisational priorities, and strive for better marketing opportunities.'*

Institutional respondents reported that this area of professional knowledge and responsibility was largely confined to library managers, while noting, however, that 'all staff are involved in strategic planning and projects' and therefore required leadership, finance, communication and management skills to a certain extent. Looking to the future, respondents commented:

*In tough times marketing and public relations and review and evaluation are a high priority.*

*Strategic approaches to collection development, financial management, evaluation, and policy are becoming increasingly important for these roles as budgets remain stable and student and faculty expectations increase.*

#### *Competency 5. Understand and use technology and systems to manage all forms of information.*

Overall, 81 percent of individual respondents and 67 percent of institutional respondents indicated that they 'often' or 'very often' needed to understand and use technology and systems to manage all forms of information. Comments noted the wide range of technologies used in libraries, including databases (creation, management and access), web technologies (eg RSS feeds) and learning management systems.

In terms of the future, individual respondents expressed a stronger belief that the requirement for technological competencies would increase, with 82 percent indicating that there would be an increase 'to some extent' or 'significantly', compared with 69 percent of library managers (Figure 14).

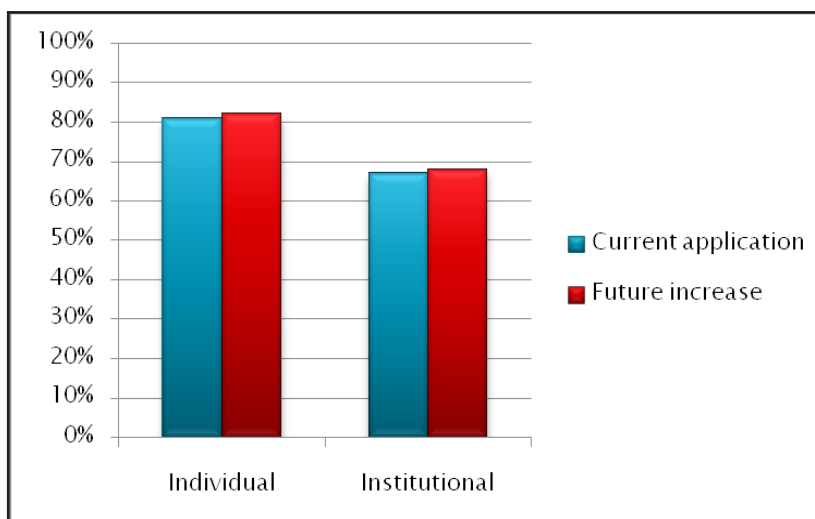


Figure 14: C5 Technology and systems to manage information: Individual respondents and library manager respondents

No respondents identified this as an area where the need for knowledge and responsibilities would decrease. The comments provided stressed that it was critical for libraries to keep up with new technologies, especially mobile technologies:

*I expect that the reliance upon technology will continue to increase – especially mobile technology – and I hope to become more familiar with it and more aware of the possibilities.*

One respondent summed up the current and future roles of health librarians in relation to the use of technology to manage information as follows:

*Everyone uses technology now as an information management tool. The focus on the subject content and providing access through high quality metadata needs to be reinforced, not allowing the technology to become the focus. Working with systems that allow collaboration with clients and interactivity will increase.*

**Competency 6. Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information.**

When considering the current requirements for an understanding of curricular design and instruction, and the ability to teach ways to access, organise and use information, there were clear differences between the various categories of health library. Individual respondents working in the academic sector reported a higher response for 'often' or 'very often' (76 percent), compared with those in hospital libraries (55 percent) and government department libraries (33 percent) (Figure 15).

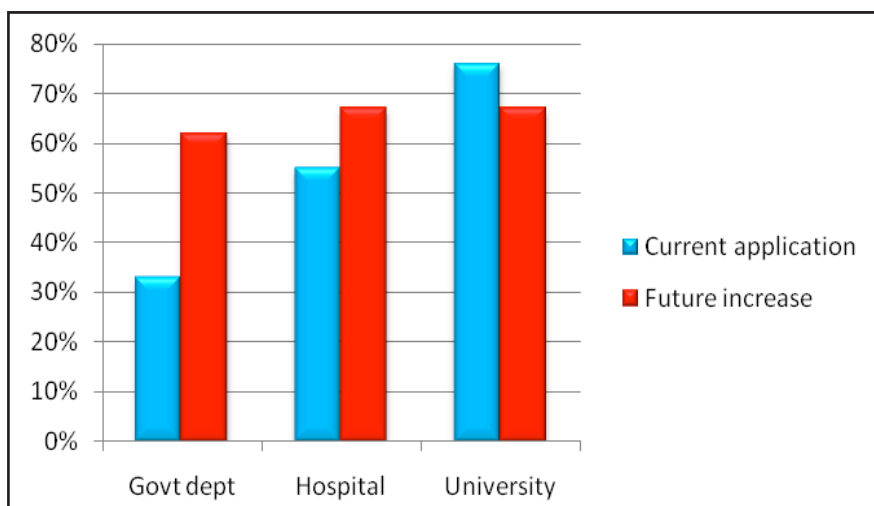


Figure 15: C6 Understand curricular design and instruction: Individual respondents from government departments, universities and hospital libraries

Indeed, almost one third of respondents in government departments reported that they 'rarely' or 'never' required this knowledge. Comments reflected the distinctive viewpoints of academic librarians and government department librarians:

*[I have] responsibility for developing all information literacy programs and for delivering some of them.*

*I do not engage in training/education of the wider hospital population. That is the responsibility of the network library system.*

Two thirds of individual librarians in academic libraries and hospital libraries reported that they expected future involvement in curricular design and teaching to increase 'to some extent' or 'significantly'. A typical comment was:

*As clinicians do more of their own searching for information, they will need more instruction on searching effectively. I think there will be an increasing need for information literacy training.*

Half of all library managers reported that their staff were currently required to have professional knowledge and responsibilities in this competency area 'often' or 'very often'. There was a keen awareness that this was an area that would increase 'to some extent' or 'significantly', with around 63 percent of library managers reporting anticipated growth. It was noted that the institutional respondents representing the smaller libraries were less likely to see any likely increase in this area (Figure 16).

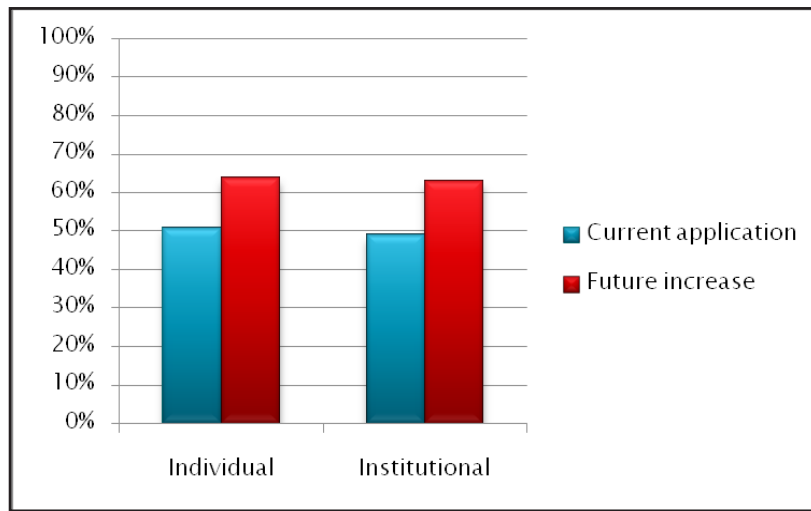


Figure 16: C6 Curricular design and instruction: Individual respondents and library manager respondents

Comments received highlighted the fact that most health librarians did not generally have formal training in teaching skills, despite the fact that information literacy training represents an important part of the current and future professional skill set. One respondent observed:

*This is an area that would benefit from a more focused and formal approach to learning from staff.*

Several respondents identified eLearning as 'an emerging area of interest'.

Another respondent noted:

*eLearning strategy implementation and the library's increased responsibilities in this functional area will require better understanding of formal teaching and learning processes, and increased skills, knowledge in this area. This will be not only regarding health information literacy skills, but also how to work in multidisciplinary eLearning development and delivery units, to ensure that the library's knowledge base is integrated with all teaching and learning programs.*

**Competency 7. Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines.**

The competency encompassing the understanding of scientific research methods and the ability to critically examine and filter research literature from many related disciplines was reported as being 'often' or 'very often' required by around 40 percent of respondents in both the groups of individuals and library managers. Interestingly, the figure was lower for individuals in government department libraries (33 percent) than for library managers in government departments (60 percent). Current involvement was reported as 'rarely' or 'never' by 19 percent of university respondents, 23 percent of hospital respondents and 38 percent of government department respondents (Figure 17).

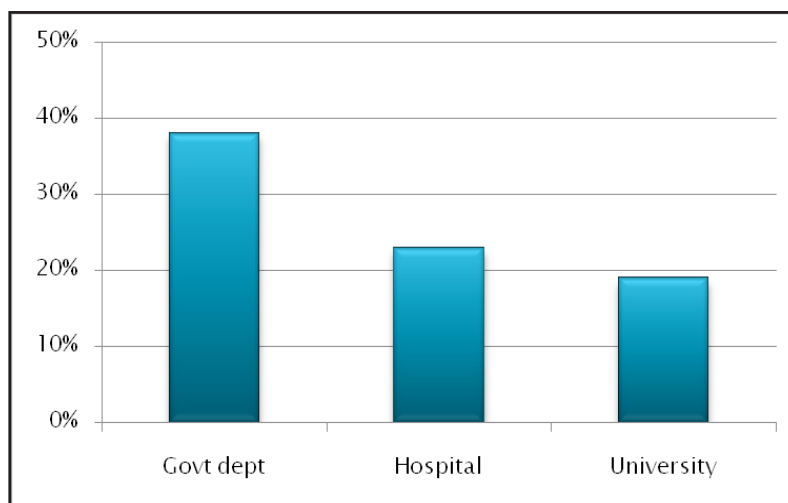


Figure 17: C7 Scientific research methods – ‘Rarely’ or ‘Never’ applied: Individual respondents from government departments, universities and hospital libraries

The comments were principally provided by individual respondents who felt confident about their skills in this area and emphasised the importance of evidence-based practice and research methodology training in developing these skills.

Generally, around 60 percent of individual respondents and 50 percent of institutional respondents believed there would be an increased demand for these research skills in the future (Figure 18).

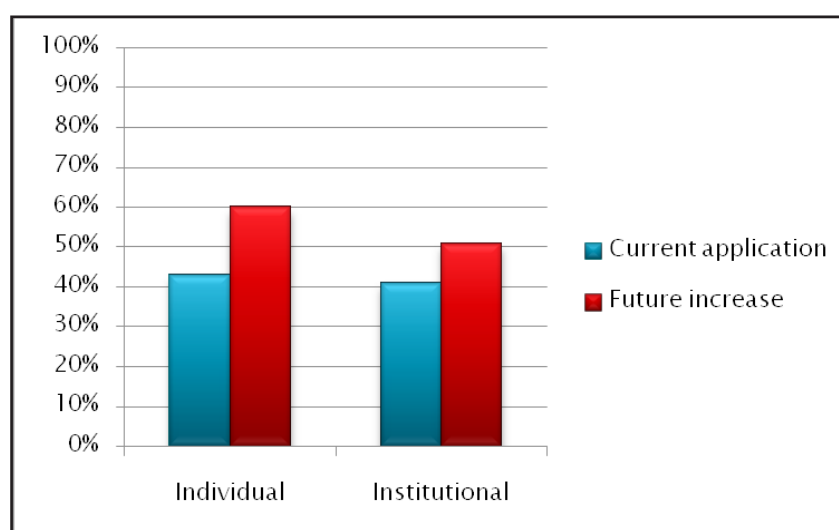


Figure 18: C7 Scientific research methods; critical examination of the research literature: Individual respondents and library manager respondents

Two typical comments were:

*Expect local research to increase significantly and therefore library involvement.*

*Will need to become more proficient in these areas as library services become more clinical.*

Future likely decreases were reported at less than five percent across all categories. It is interesting to note that future involvement in this competency was less keenly anticipated in the more traditionally ‘research’ context of academic libraries than in government departments. Respondents’ comments were divided between regarding an understanding of scientific research methods as essential to reference work in health libraries versus regarding critical appraisal as the responsibility of the clinician or researcher rather than the librarian. Looking to the future, one respondent noted:

*Over the next 5-10 years libraries will continue to expand their role beyond that of gatekeepers or information providers, adding analysis, synopsis and evaluation of the literature to their services more than ever before. So an emphasis on quality will mean that evaluation skills are essential.*

Another respondent commented on the future requirement to apply critical appraisal skills to evaluation of the library and information science literature, stating that it would be necessary for health librarians 'to understand and implement qualitative and quantitative research methodologies for improving service delivery as well as measuring impact of library services'.

### *Competency 8. Maintain currency of professional knowledge and practice.*

More than 60 percent of individual respondents in all categories reported that they were 'often' or 'very often' required to maintain currency of professional knowledge and practice. This was higher in government departments (71 percent) than in and universities (62 percent) and hospitals (59 percent). Slightly lower figures were captured for institutional respondents (57 percent). Around nine percent of individual academic library respondents reported that, for them, this was 'rarely' or 'never' a current requirement. Comments identified a wide range of different types of professional development (eg blogs, conferences, personal contacts, participation in professional organisations), while some commented on lack of funding and other limitations.

*It is difficult to obtain approval to attend conferences and workshops due to costs of airfares. There are limited local opportunities.*

It was interesting to note that there were divided opinions about the extent to which the need to maintain currency of professional knowledge and practice might change in the future. Forty-five percent of individuals felt that this would remain the same, with an equal number believing the need for professional development would increase. Although the figures were slightly lower (39 percent), the views of library managers were equally divided (Figure 19). An anticipated increase 'to some extent' or 'significantly' was reported by 56 percent of hospital respondents and 50 percent of government department respondents and university respondents. Respondents' comments reflected the importance of maintaining currency of professional knowledge and practice, both now and in the next three to five years:

*Will always be important.*

*Critical if we are to remain relevant.*

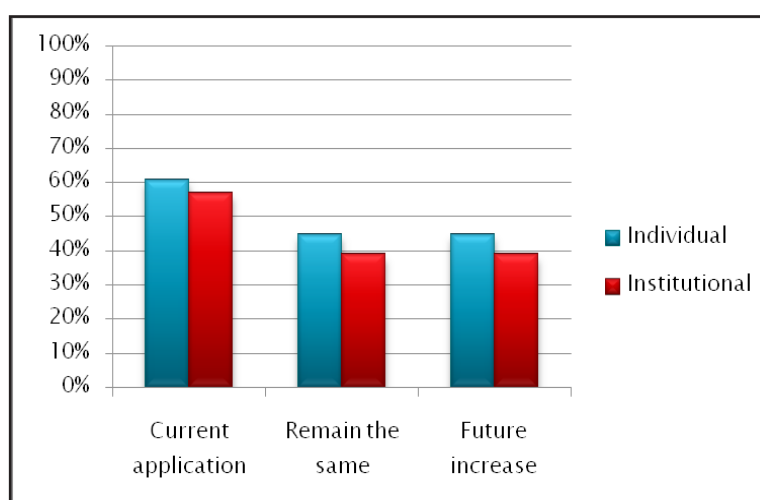


Figure 19: C8 Maintain currency of professional knowledge and practice: Individual respondents and library manager respondents

### *Summary of key competences*

The three competencies which respondents stated were most commonly used in professional practice, with values of over 66 percent, were:

- C2 Providing information services to meet user needs
- C3 Managing health information resources in a range of formats
- C5 Understanding and using technology and systems to manage information.

While these three competencies were also expected to have the greatest increase in importance in the future, there was also an indication that C6 Understanding curricular design and instruction represented an emerging area of practice.

Specific arenas of change included an expected increase in evidence based practice and the introduction of new technologies. The move to online information would require a deeper understanding of electronic resources, digital repositories and mobile technologies, along with associated issues such as “licensing, copyright, advising on prices etc”. It was noted that, in rural areas especially, the LIS staff were seen to play a strong education and leadership role, so that “updating oneself on new technology is a constant task”. The introduction of eResources would lead to an increasing need for information literacy training. The need to increase “our involvement with the education and IT departments to ensure that we input our information knowledge into these systems” was therefore noted. The anticipated developments reflected the range of emerging roles discussed in the literature, including positions in teaching and learning, clinical and multidisciplinary teams, knowledge management and knowledge transfer.

## 4.2 Interviews with employers

Twenty-two individuals were asked to take part in the interviews, and a total of 18 interviews were conducted between October and November 2010. Interviews could not be scheduled with four of the individuals initially approached due to unavailability. Three of the interviews were subsequently excluded from the analysis as they were with health librarians rather than employers. Therefore the final sample consisted of fifteen health librarian employers. The interview subjects represented a wide spectrum of the health sector, and a range of employer positions including:

- Head of Knowledge Management, pharmaceutical company
- University Librarian and Director, Information Management
- Chief Information Officer, state government department covering health and families
- Deputy CEO, Performance Planning and Resources, regional health service
- General Manager, regional health service
- Director of Medical Services, regional health service
- Director of Communications and Development, not-for-profit state-based health organization
- Professor of Primary Care Research and Pro-Vice Chancellor (Research), University
- Director, Clinical Education and Deputy Director, Medical Management Unit, and Emergency Physician, regional health service
- Web Strategy Manager, national consumer health information service, government funded
- Director of Anaesthetics / Co-ordinator Acute Pain Service, regional health service
- Associate Dean (Research), Faculty of Medicine, Dentistry and Health Sciences, university
- Regional Operations Manager – college of medical specialists
- Director of Education, college of medical specialists
- Director Business Development & Support, Forensic and Scientific Services, state health organisation.

While the semi-structured interview questions enabled employers to articulate a range of perspectives on the current and future roles of health librarians, the process of coding revealed that the views expressed were closely aligned with the conceptual ideas explored in the earlier stages of the research project, validating the selection of the sources used for the development of codes. While no statistical examination of the allocated codes was undertaken, all codes were utilised in the analysis of the interview data. Overall it was found that the direct involvement of the three raters over the life of the research project and their collaborative development of the coding schema resulted in a sound degree of consistency in the content analysis.

It was apparent that one rater brought a strong managerial perspective to the analysis, evident for example in the interpretation of the statement “Developing a corporate taxonomy for the organisation”, which two raters coded as METADATA (‘manage cataloguing, classification, abstracting of resources’), but which the third allocated the code KNOWMAN to represent the knowledge management process. A Venn diagram illustrating the notion of “librarians intersecting with all” drafted by one interviewee was analysed by two raters as NETWORK, defined as ‘develop and maintain networks to meet users’

information needs', but again as KNOWMAN by the third, inferring that health librarians can play a role as knowledge managers to link the different elements of a health service. Beyond this, some discrepancies tended to be conceptual in nature, with raters showing their preferences for specific groups of codes, for example when interviewees made reference to information and communication technologies (ICT), eg "knowledge of online technologies". One rater used the code ITSYSTEMS, defined as 'understand and use automated systems including website management systems, networking and IT security', one applied the code COMMSTECH, 'use of technology in communications infrastructure, eg Web 2.0', while the third allocated both these codes. There was also some overlap between the codes INFOACCESS, 'identify appropriate methods of information delivery and access, including for diverse populations' and EACCESS, 'use technology to enable permanent access to electronic information', which highlights the digital nature of contemporary health information.

### *Mission-critical goals*

The interview subjects were asked about their role in their organisation and the mission-critical goals associated with it. The range of responses to this question was broad, but still fitted within the five 'mission-level' goals identified by Abels et al (Abels et al., 2002) and adopted by the Vital Pathways project, namely: clinical care; management of operations; education; innovation and research; and customer service (Holst et al., 2009). This was despite the fact that in the Abels study only administrators from hospitals and academic health sciences centres were interviewed whereas the ALIA/HLA study involved interviews with a wider range of health librarian employers – hospitals, universities, government departments, not-for-profit organisations, colleges of medical specialists and pharmaceutical companies. It is worth noting that for the ALIA/HLA study, the definition of the fifth mission-critical goal – customer service – was expanded to include not only patients, carers and their families, but also students and academics in a university setting, staff of a government department, a non-governmental organisation (NGO) or a private company.

### *Librarians' contributions to the organisation – now and into the future*

Coding of the data revealed groupings of commonly allocated codes, particularly in relation to the following questions:

- 1.3 "Do your librarians assist you in achieving any of [your] goals?"
- 2.1 "What do you consider are the main ways that health librarians contribute to your organisation now?"
- 2.3 "Are there one or two specific things your librarians offer that are especially useful to this organisation?" and
- 2.4 "Are there challenges or opportunities for your organisation where your librarians could be involved in the future?"

These groupings aligned closely with the MLA competencies for health librarians on which part of the coding scheme was based.

One group of codes centered around knowledge of the library's parent organisation and included understanding organisational policies, the clinical care / education / research environment, the economic and legal environment and the organisation's role in the broader health environment. It also encompassed involvement in the organisation's strategic planning processes. These codes correspond to the first MLA competency – "Understand the health sciences and health care environment and the policies, issues, and trends that impact that environment" (Medical Library Association, 2007). In the surveys that preceded the interviews, 67 percent of individual health librarians, and 57 percent of health library managers reported that they or their staff were 'often' or 'very often' required to understand the health sciences and health care environment; and 60 percent of individuals and 53 percent of managers expected that this requirement would increase in the next three to five years. The interview subjects were specifically asked "Does your organisation involve your librarians in strategic planning and / or organisation-wide, mission-critical committees?" Responses ranged from enthusiasm for librarians to become more involved with organisational strategic planning, to "it would depend on capacity of individuals", to "the library needs to become involved in such committees or be left behind", to concern about finding the balance between the health librarian's strategic role and immediate operational needs. The overall perception from responses to this question was that librarians are currently more involved in day to day operations rather than in strategic planning.



Another code grouping that featured strongly in the analysis of the interview data related to management roles for health librarians including marketing, public relations and demonstrating value; leadership, including change management and strategic management; project management; interpersonal qualities such as people skills, flexibility, proactivity and problem solving; and facilities management. These roles correspond to the second MLA competency – “Know and understand the application of leadership, finance, communication, and management theory and techniques” (Medical Library Association, 2007). In the surveys, just under half of health librarians and health library managers reported that they or their staff often or very often needed knowledge and skills in this area of practice; 55 percent of individual respondents and 42 percent of library managers expected that this area of professional knowledge and responsibility would increase in the future. The interview respondents tended to focus on the marketing, public relations and interpersonal skills required of health librarians now and into the future. One employer commented: “A lot of the service’s success is about personal relationships and visibility”. Another noted: “We need to get closer to our academic or clinical role to ‘sell’ our skills to them in a better way”. And another observed: “Technology has taken that personal interface away – a lot of it – but still, that face of the library, that personal touch .... There’s plenty of opportunities”. Despite many comments on the importance of online access to information resources, managing a physical library facility was also regarded as important: “I think the physical space has an important role in the hospital as a place where people can go and have a bit of time out and do some reading, a quiet place to work”.

Not surprisingly, one common grouping of codes reflected the core role of health librarians in searching the literature, facilitating access to information, alerting clients to new information in their field and supporting evidence based practice. The roles represented by this group of codes correspond most closely to the third MLA competency for health librarians – “Understand the principles and practices related to providing information services to meet user needs” (Medical Library Association, 2007). In the surveys conducted prior to the interviews, this was the area of professional knowledge and responsibility cited as most often needed by both individual respondents and library managers. It was also among the top four areas of professional knowledge and responsibilities regarded as likely to increase over the next three to five years. Interview participants stressed the importance of this role for health librarians, particularly their skills in searching and locating information resources which saved their clients’ time, their provision of alerting services to keep their clients up to date with the latest information in their specialty area, and support of evidence based practice. Comments included: “supporting clinical staff [to] access knowledge and information are important and critical”; librarians are “the navigators”, “compilers of information for busy clinicians”; and “their searching skills are critical”. Most interview subjects regarded these roles as likely to increase in importance in the future, with the exception of one person who commented: “If it’s just about accessing information, everyone will know how to do that, my five-year-old grabs my iPhone to find information...” Generally, however, employers saw these roles transforming, with health librarians moving from finding knowledge to facilitating application of knowledge by integrating knowledge resources with clinical systems, and analysing and synthesising information to meet and anticipate particular user information needs.

Another important cluster of codes described the role of health librarians in managing information resources and covered negotiating with vendors; selection, purchase and licensing of resources; managing copyright; managing cataloguing, classification and abstracting of resources; and managing conservation and archiving of resources. These roles relate to the MLA’s fourth competency: “Have the ability to manage health information resources in a broad range of formats” (Medical Library Association, 2007). In the surveys, 81 percent of health librarians and 69 percent of health library managers responded that they or their staff often or very often needed this area of professional knowledge and responsibility; in terms of the future, this area was second only to knowledge of technology and systems in terms of competencies predicted to increase for both groups of respondents. The interview subjects also viewed the management of information resources as an important current and future role for health librarians. Several health librarian employers mentioned the need for skills in this area in a constrained fiscal environment: “opportunities to consolidate and share purchases need to be maximised”; “Some of the national procurement, packaging up of resources, getting some harmonisation of ‘best buys’, work with national librarians is important, better value for money”. In response to “turmoil in the publishing arena” (escalating costs, publishers’ “rearguard action ... in response to open access initiatives” and administrators’ push to cut back on subscriptions), one subject wanted to see “pre-emptive strikes from librarians, not to accept the status quo, to challenge and push for new models of access to information”. The same individual also commented that it is “essential to have seamless access to information whether at uni or in the hospital – licensing provisions are stupid”.

One cluster of codes that emerged strongly from the data related to health librarians' knowledge of technology which enabled them to be the interface between IT and clinicians, not just in the traditional areas of information access and dissemination, but also in relation to e-learning, e-health, integration of clinical decision support tools with the electronic health record, website development and management, and use of Web 2.0 technology. These codes relate most closely to the MLA's fifth competency for health librarians: "Understand and use technology and systems to manage all forms of information" (Medical Library Association, 2007). In the surveys that preceded the interviews, 81 percent of individual respondents and 67 percent of library managers indicated that they or their staff 'often' or 'very often' needed to understand and use technology and systems to manage all forms of information. In terms of the future, individual respondents expressed a stronger belief that the requirement for technological competencies would increase, with 82 percent indicating that there would be an increase 'to some extent' or 'significantly', compared with 69 percent of library managers. The comments provided stressed that it was critical for librarians to keep up with new technologies, especially mobile technologies.

These comments were echoed in the interviews with health librarian employers. One interview subject predicted: "I can see a role with mobile technologies – bedside use in clinical environments... [The librarians will be the] interface between the IT people, the clinicians and health informaticians. They can interpret the two worlds. I am thinking about the use of iPads, search engines, access to health records." Another commented: "Yes I really like the idea that the librarians are like warmware – able to help get the most out of our computer hardware and software". And a third observed: "librarians understand how people interact with systems and language". Clinical decision support was cited by several respondents as an area where health librarians could potentially have a much greater role: "the library has a big role to play because to be effective [decision support] needs to be targeted, relevant and how you integrate some of the decision support tools with the clinical apps is a big challenge, and we're not even in that space yet". The rate of change in this area was predicted to increase, and librarians should be aware that new roles could emerge very quickly: "The speed of change means great opportunities in the next 1-2 years. Information convergence – getting information rapidly and then incorporating patient data into the mix. On the fly with mobile devices".

Another grouping of codes centred around the health librarian's role in education and training and included roles in curriculum design, educational needs assessment, user education, evaluation of learning outcomes and use of technology in design and delivery of training. The one off/orientation role for new staff was also common. These roles correspond most closely to the sixth MLA competency for health librarians – "Understand curricular design and instruction and have the ability to teach ways to access, organise, and use information" (Medical Library Association, 2007). In the surveys, this was one of the top four areas of professional knowledge and responsibility regarded as likely to increase over the next three to five years by both librarians and library managers. The interview subjects also saw this as an area in which health librarians are contributing now and where there is an opportunity for their contribution to increase in the future, particularly in the area of e-learning. Comments on librarians' roles in this area included: "training medical staff and students to be effective searchers"; "supporting the ... teaching and learning core business of the University"; "support[ing] continuing professional development for existing clinical staff"; and "pre-vocational training support for overseas trained doctors".

Interestingly, codes which the researchers interpreted as relating to the additional competency added by the project group ("Maintaining currency of professional knowledge and practice"), were in practice applied to the interview data which encompassed librarians' role in supporting professional development of staff within the organisations. The employers interviewed did not refer to professional development specifically for health librarians, but when prompted by the interviewers, several respondents were enthusiastic about the idea of formal qualifications in health librarianship.

Closely related to health librarians' role in education is their involvement in research, which falls under the MLA's seventh competency for health librarians: "Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines" (Medical Library Association, 2007). Survey respondents were fairly conservative in their thinking about this role, with only 43 percent of individual respondents and 49 percent of managers regarding this as an area where librarians often or very often required skills and knowledge. With regard to the future, 60 percent of individuals and 51 percent of managers regarded this as a role likely to increase. Many of the interview subjects were similarly conservative, describing the current and future role of health librarians in research mainly in terms of providing expertise at the literature review stage of research projects. However several of the interview subjects predicted that health librarian involvement in this area would and should increase substantially. One respondent commented at some length, citing "research skills [and] academic writing skills" being required,

as well as “a new structure to move librarians out of the service/support roles and into academic pathways”, similar to the Canadian model of academic librarians with tenure.

*Librarians are becoming research partners, they are co-authors of academic papers and reports. This is becoming an increasingly important role that they play. Its no longer just about searching for the information (librarian as handmaiden, unacknowledged service provider), it is about becoming a partner in the team. There's an expansion of their roles; a blurring of the margins.*

Two interview subjects mentioned the importance of health librarians having skills in bibliometrics or citation analysis and predicted that this was a role that would increase in importance as librarians became more closely involved in research. Health librarians would need “Excellent knowledge of the various journal ranking systems and ability to compile data from these for a particular research area”.

### *Degree of satisfaction*

The responses to Question 2.2 (“Are you satisfied with the role that your health librarians play in your organisation now?”) reflected a high level of satisfaction with the services currently provided by health librarians – (“with cuts around here... if I had to die in a ditch [the library is] one service that I would do it for”) - but also some uneasiness about how to evaluate satisfaction with library services. One respondent commented:

*Well I'm not dissatisfied, but I don't know how to measure the level of satisfaction.... I don't know what the utilisation is of the library [by] any of our staff to be honest with you.*

Overall there was a strong perception that the library service needed to be more visible, to create and maintain a higher profile within the organisation; “a sense that librarians are too passive – like to see them more active and more proactive, less reactionary. Would like librarians to be more revolutionary”.

### *Future roles and skills*

In response to question 2.6 (“What skills and qualities do you think health librarians will need in order to be able to contribute effectively to your organisation in the future?”), the skills and qualities identified by the interview subjects generally reflected the picture painted in the earlier stages of the research project, in which health librarians and health library managers were surveyed online. There was a keen sense that health librarians could make a greater strategic contribution to their organisations by becoming more embedded in teaching and research, or integrated into clinical systems. Concerns were expressed that library and information professionals were often more reactive than proactive, so there was considerable work to be done to ensure that they were not overlooked or sidelined in a fast changing environment. Many respondents commented on the need for the librarians to be more proactive, “pushing out to survive”. In the interviews it appeared that health librarian employers were generally more ambitious than the librarians themselves when it came to envisaging future roles, skills and qualities for the profession. In the online surveys, respondents generally envisaged “more of the same”. In contrast, health librarian employers talked about “Repackaging traditional librarian skills – data management and curation, web development, citations and bibliometrics” and “extending skill sets”. One interview subject observed that “The important skill sets are any of the hybrid of roles about how you apply information management in the health system, integrating the knowledge with the clinical systems so clinicians use it”.

The open-ended questions posed in the interviews provided the interviewees with the scope to “demonstrate their unique way of looking at the world” (Cohen, Manion & Morrison, 2007, p.151), to provide very individual perspectives about the role and skills of health librarians employed in a range of contexts, and to allow unanticipated issues to be raised. It was valuable to note, therefore, that the content analysis process revealed that the employers, while distant from the operational dimension of the library itself, could confidently discuss the roles and skills of their staff in ways which reflected the MLA's competency framework and the issues and challenges facing the profession that were identified in the literature review and environmental scan

The interviews with employers provided further insights into the current and future skills of health librarians in Australia, augmenting the findings from the environmental scan and surveys of health librarians and health library managers. Not all the interviewees were directly familiar with the library operations, but there was a clear sense of respect for the roles and responsibilities of library staff. It was found that, in the rapidly changing environment of health services, there were opportunities – indeed expectations – for health librarians to play a more active and strategic role in supporting and even driving the change process in their institutions. The employers' own areas of responsibility reflected the five mission-critical goals identified in earlier research and their understanding of the skills the librarians

required could be mapped directly to the seven competencies promulgated by the MLA. To remain viable in the future, however, health librarians need to extend their skill sets and become more embedded in the organisation and more directly aligned with its strategic goals. Areas of practice such as education and training, scientific research and clinical support were highlighted as critical domains of future activity, all requiring a high level of understanding and experience of ICT and eHealth service delivery. These findings resonate with the new and emerging roles discussed in the environmental scan, with an anticipated increase in knowledge and responsibilities in the areas of tailored reference services (eg the role of clinical librarian), advances in technology and systems and the teaching role (understanding curricular design and instruction).

### 4.3 Professional development issues

Individual respondents were asked to consider a number of issues associated with professional development activities for health library and information professionals. Around 80 percent stated that professional development was important to them and that they had a personal commitment to it; almost two thirds reported that they believed it was important to have a professional development plan. Indeed, the vast majority (82 percent) agreed or strongly agreed that professional development was essential to their health library career and contributed to improvements in their performance in their current job. About half felt that professional development was important to their professional status, as perceived both by other professional groups and by society in general. It was noted that almost half (46 percent) believed that professional development should be compulsory, while one third remained neutral on the issue.

Only 19 percent of respondents participated in the professional development scheme coordinated by ALIA, which requires members to track and record their professional development activities. Nevertheless, nearly all respondents reported that they had participated in professional activities over the course of the past year; five percent recorded no professional development at all (Table 16).

Table 16: Hours of professional development undertaken over the past 12 months: individual respondents

Hours of professional development	Percentage
0 hours	5%
1-10 hours	21%
11-20 hours	16%
21-30 hours	14%
31-40 hours	16%
41-50 hours	9%
Over 51 hours	20%

It was notable that 67 percent indicated that their employer supported professional development activities, although less than one third (28 percent) reported that their employer specifically required them to undertake professional development. Only 15 percent felt that the organisation offered any financial incentives to participate in career development. Half the respondents reported that they could manage their work time to accommodate professional development, but it was slightly easier to manage personal time (56 percent) for this purpose.

The major barriers to professional development were time and costs. The majority of comments referred to conferences as the main avenue for professional development, which meant high registration fees, plus travel and accommodation costs, especially for those in regional areas of Australia, and the challenges of small budgets for staff development. However, some respondents also acknowledged the value of informal development activities, "collegial support has been very important," and the emerging opportunities to use eLearning to provide interactive forums at lower cost. Further comments linked the concept of mandatory professional development with the perceived status of library and information professionals in the wider health context: "The health and medical sector have compulsory PD. Mirroring the professionals we serve may gain more respect and credibility."

While only 35 percent felt that there were good quality professional development activities available in Australia, it should be noted that more than half of all respondents either remained neutral (26 percent) or did not answer the question (27 percent). Respondents were divided over whether the costs were "reasonable". About one third felt positive, one third negative and one third remained neutral on the issue.

A series of questions was posed regarding preferred modes of delivery, ranging across a number of physical, virtual, independent and facilitated approaches. In terms of synchronous learning, there was a clear preference for face-to-face activities, including seminars (86 percent), conferences (81 percent) and lectures (71 percent). Block learning was preferred (64 percent) over semester programs (40 percent). Workplace learning activities were seen as having high value (74 percent). There was also a strong appreciation of online learning that is self-paced (77 percent), but with opportunities for interaction (77 percent). Video conferences and audio conferences were considered less appealing than web forums and podcasts, and printed learning guides were more popular than resources distributed on CD-ROM.

A number of critical questions were posed to library managers about the level of support for formal programs of qualifications and continuing professional development (CPD) units. The first question asked 'If a formal post-graduate specialist course in health librarianship was developed and offered by a university or registered training provider, would your library be prepared to support staff gain the qualification?' Overall, almost half (47 percent) said 'yes', but 10 percent said 'no'; the rest either did not respond or were unsure (Figure 20). All questions invited comments about the responses selected, and some of these indicated that it would depend on budget, the quality and content of the courses being offered, and delegation to approve such a request. This was summarised succinctly in the following comment: "Would depend on course content, relevance, cost and demonstrable outcomes".

Respondents were also asked 'If specialist CPD units in health librarianship were developed and offered by a university or registered training provider, would your library be prepared to support your health librarians to upgrade their skills?' In response, 61 percent said 'yes' but 14 percent were unsure. Only one respondent said 'no' (Figure 20).

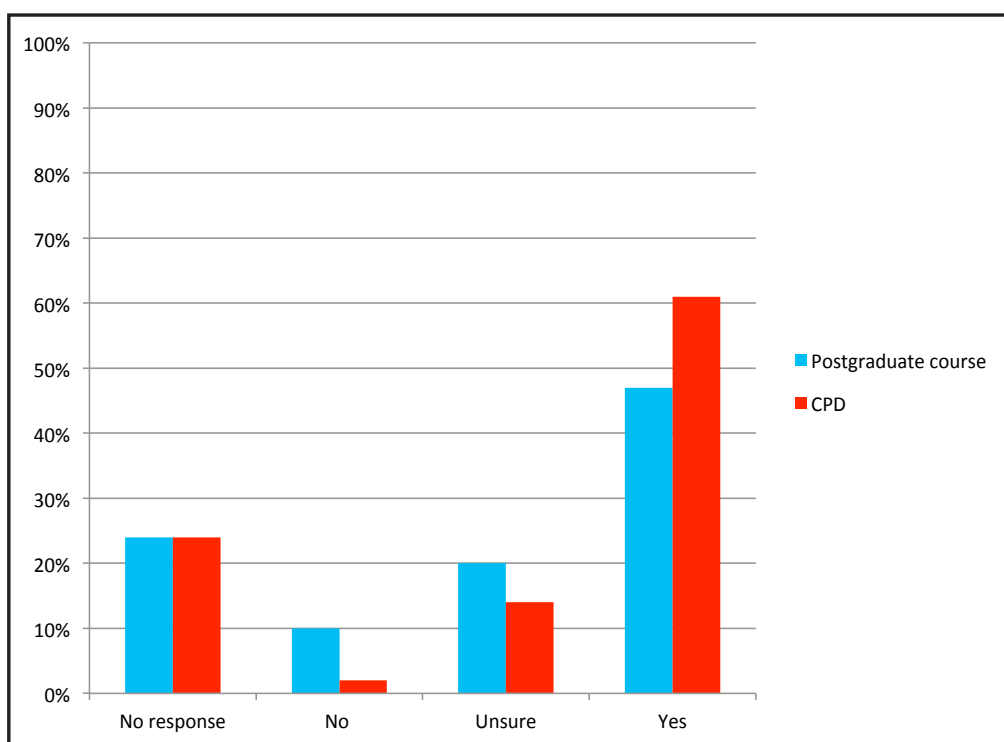


Figure 20: Support for specialist postgraduate and CPD units in health librarianship: Library manager respondents

The data revealed that there was slightly more support for CPD units than for a formal postgraduate course, and respondents commented:

*This is more practical than a formal course - I would think it could include things like medical terminology, evidence-based medicine, critical appraisal?*

*These would be seen as an ongoing requirement and tied in with our formal Work Partnership Plans.*

The relevancy of any future educational framework will naturally depend on the professional knowledge and skills required for successful practice in any future roles that health librarians undertake.

## 4.4 Perspectives on the future of health librarianship

There was a consistently high number of null responses (about one quarter) in the series of questions exploring respondents' attitudes to their jobs and job security, while a high number of respondents had neutral views (about one quarter). Looking to the future, only 23 percent of respondents anticipated that they would stay in the health library sector for another ten years or more, with 27 percent reporting that they would be leaving the sector within five years. Some respondents noted that strategies would be required to fill the knowledge gaps left as older health librarians retired and new people enter the sector without any experience in the field of health information.

Just over half were optimistic that their position was secure for the foreseeable future, although a small number (14 percent) expressed concerns about job security. Twenty-eight percent of respondents were not confident that there would be many opportunities for health library jobs in the future, compared to 18 percent who felt the future was bright. Only 13 percent believed that promotional prospects with their current employer were good; 48 percent were pessimistic. While 36 percent of respondents felt that it would be difficult to move to another health library job, there was a sense that it would be easier to gain a new position in the wider library sector.

Overall, 50 percent of respondents believed that there was a high level of job satisfaction amongst health librarians, with the profession well regarded by others (42 percent). There was ambivalence about whether people were interested in joining the health library profession, with 19 percent agreeing, 19 percent disagreeing and 38 percent remaining neutral. There was a keen awareness that the skills of health librarians were highly specialised, but undervalued. The vulnerability of the profession was highlighted in individual comments which illustrated the major issue of long term underfunding in the health sector and the gulf between the views of clinicians and the views of managers who had no intrinsic understanding of health information and research. Some respondents felt that there would be opportunities for further specialisation, particularly as "clinical librarian", "educational librarian", "elearning librarians", "researcher librarians" or "policy librarians".

## 5.0 EDUCATIONAL AND PROFESSIONAL DEVELOPMENT FRAMEWORK FOR THE FUTURE

The present research study has involved an in-depth investigation into the future workforce and education requirements of health library and information professionals in Australia. The Medical Library Association's seven-point competency framework was used to measure the professional knowledge and responsibilities that were both currently relevant and that might be potentially needed for future practice. The findings reveal that at least 80 percent of individual respondents and 67 percent of institutional respondents indicated that there was a significant requirement for professional knowledge and responsibility in the following areas:

- Understanding the principles and practices related to providing information services to meet users' needs
- Understanding the management of health information resources in a broad range of formats; and
- Understanding and using technology and systems to manage all forms of information.

The area of responsibility identified as increasing most significantly over the next three to five years was, not surprisingly, using technology and systems to manage information, as reported by 82 percent of individual and 69 percent of institutional respondents. However, it was interesting to find that there were also high expectations of increased responsibilities in the competency area 'management of health information resources', noted by 73 percent of individual and 71 percent of institutional respondents. In addition, there was a growing need to understand curricular design and instruction, with 64 percent of health librarians and 63 percent of health library managers predicting an increase in the future. Overall most respondents felt that current areas of professional knowledge and responsibility would either remain the same or increase to some extent over the next three to five years. Fewer than 10 percent of respondents identified any areas of professional knowledge and responsibility that would decrease over the next three to five years. These views concur with the discussions presented in the literature regarding the workplace issues that are likely to affect health librarians. Emerging trends include the evidence-based medicine movement, the increase in clinical librarianship services, the rise of the self-sufficient, sophisticated end-user, increasing concerns for quality assurance and value for money in service delivery. These issues highlight the very tangible shifts in the working environment that will impact on the type of work to be performed by health librarians. The alignment between the research findings and the professional literature underscores the imperative for health librarians to engage in regular, relevant professional development activities that will enable them to stay abreast with the rapid contextual changes impacting on their practice.

There are currently, however, no mandatory requirements for professional registration or for the maintenance of professional skills. In the absence of any structured, systematic CPD opportunities, the relevant knowledge and skills are principally acquired by health librarians informally in the workplace. Sixty-seven percent of individual respondents indicated that their employer supported professional development activities, although only 15 percent indicated that their organisation offered financial incentives for such activities. The comments in the institutional survey generally concur with these observations about employer support. Barriers to CPD participation included time, distance (particularly an issue for regional or rural health librarians in Australia), and cost. Nevertheless, the research has revealed a strong commitment to CPD (80 percent), with almost half of the respondents supporting the notion of compulsory CPD for health library and information professionals.

In terms of entry into the health library profession, there is at the present time no specialist qualification available in Australia. Individuals enter the profession by completing a generalist LIS degree, with their understanding of health information issues acquired through on-the-job training and ad hoc professional development opportunities. Health librarians who hold science degrees or those who have transferred from a career in the health sciences, such as nursing or veterinary science, to that of library and information science are not rare. The survey of individual health librarians (161 respondents) recorded 51 university degrees and 10 vocational qualifications in the area of science/health/medicine, from undergraduate degrees through a range of post-graduate qualifications through to the level of PhD. Importantly these people bring valuable contextual knowledge and skills to add to the professional knowledge and skills attained while completing their LIS qualification. It has been noted that between 60-70 percent of special librarians responding to the *Workforce Issues in Library and Information Science (WILIS)* survey in the US indicated that libraries of the future are likely to hire more subject specialists with advanced degrees (Barreau, Rathbun-Grubb & Marshall, 2009), which can feasibly be achieved through a Bachelor's degree in the field of science/health/medicine and Master's degree in LIS.

As noted in Section 4.3 of this report, almost half of health library managers would support their staff to acquire a formal postgraduate specialist qualification in health librarianship, and almost two thirds would support their staff in upgrading their knowledge and skills through specialist CPD units. The twin

requirements for relevance and quality were emphasised, and it was noted that any potential support from the profession would also depend on what was offered, the applicability of the program to the workplace, and the costs involved. Respondents believed that the framework for a specialist health librarian qualification and ongoing professional development program should encompass both generalist and specialist skills.

Interestingly, in February 2010, a discussion thread began on the ALIA Health e-list, initiated by a library team leader relatively new to health, whose responsibilities included training two librarians with between two and five years reference experience, but no previous experience in health librarianship. The writer asked for help in locating training plans or lists of skills or competencies that they could use as a basis for a systematic training program for these new health librarians. This request prompted an enthusiastic exchange of emails that highlighted the current lack of systematic health librarianship training opportunities in Australia. A few library services have sponsored their health librarians to complete the online course *Evidence-Based Medicine and The Medical Librarian* offered by the School of Information and Library Science, University of North Carolina at Chapel Hill. Participants in the e-list discussion suggested that this course (or its equivalent) be offered through an Australian university or through ALIA, which has already partnered with the School of Health and Related Research at the University of Sheffield, UK, to create the FOLIOz program, which delivers ongoing professional development courses for Australian librarians (Booth, 2009). [A four-day workshop version of the Chapel Hill course is being offered for the first time in Australia at the University of Queensland in November 2011].

Recent national health reforms have included a single national compulsory registration body, the Australian Health Practitioner Regulation Agency (AHPRA) which is responsible for the registration and regulation of ten health professions, with four more to be added in 2012. AHPRA supports the professions' national boards which register practitioners and students, and approve standards of education and programs of study. Continuing professional development (CPD) is a requirement for all AHPRA registered health professionals. As health librarians are at present excluded from this national health workforce registration scheme, they are not formally recognised as a 'health profession' with the risk that they will be 'de-professionalised' and classified in the clerical or administrative streams. Other opportunities may also arise however for currently unregistered professions. In the UK, the Government is proposing a system of assured voluntary registration as a less complex alternative for some professions. This "is intended to improve standards and drive up the quality of care without imposing the costs of mandatory regulation" (Department of Health, 2011).

In order to be accepted as key members of the health professional team, it is strongly believed that health librarians should commit to establishing the mechanisms for specialist certification maintained through compulsory CPD in an ongoing three-year cycle of revalidation. This development would align ALIA and health librarians with other health sector professional associations which are responsible for the self regulation of entry to and continuation in their profession. Most of these associations have, or are implementing, a system of compulsory revalidation, eg Speech Pathology Australia (2011), with some recognising specialisation within the profession, eg Accredited Mental Health Social Workers within the Australian College of Social Work (2011), a subordinate body of the Australian Association of Social Workers.

It is noted that the Chartered Institute of Library and Information Professionals (CILIP) in the United Kingdom and the Library and Information Association of New Zealand Aotearoa (LIANZA) in New Zealand have compulsory registration/CPD arrangements that could be used as a model for ALIA. A certification and revalidation process for health library and information professionals can potentially be developed as a pilot project that is aligned with the current ALIA Professional Development Scheme which encourages members to become 'certified practitioners' with a specialisation of health librarianship.

In analysing the research findings, the project team believes that there is scope to propose that:

1. The detailed findings regarding the knowledge and skills required by health library and information professionals inform the development of a framework of competency based standards which delineate the scope of professional practice.
2. The resulting framework of competency based standards is used as the basis for the curriculum of a formal program of study, for example a postgraduate certificate in health librarianship, comprising four units of study. The postgraduate certificate should be developed as a modular program, with subjects also available as part of a continuing professional development program.
3. The postgraduate certificate serves as the formal avenue for professional certification, to be followed by a three-year cycle of professional development (to be referred to as the processes of certification and revalidation).



4. The Association goes to tender to identify relevant providers of the specified education and professional development program(s).

It is acknowledged that the proposed qualifications and professional development framework will require the support of the Board of Directors of ALIA. Ideally, a dedicated working party should be established, to include representatives of the Board, the ALIA Professional Services team and the Health Libraries Australia Executive to ensure that the appropriate processes are established and desired outcomes are achieved. As the Australian health workforce enters a period of significant ongoing reform, it is also proposed that strategies are developed to ensure that the interests of the health library workforce are not overlooked.

## 6.0 SUMMARY AND RECOMMENDATIONS

The ALIA group Health Libraries Australia (HLA) has conducted a comprehensive research project that has aimed to:

- Determine the future skills requirements for the health library workforce in Australia
- Consider the education and professional development framework that would ensure that health librarians have a clearly defined scope of practice and the specific competency based knowledge and skills that enable them to contribute to the design and delivery of high quality health services in this country.

The research activities built on the ALIA *neXus* investigations into the LIS workforce in Australia. The project team was committed to an evidence-based approach to the project, which encompassed an extensive literature review and environmental scan, a survey of health librarians, a survey of health library managers and a series of semi-structured interviews with the employers of health librarians.

To avoid stagnation – and even potential extinction through the closure of library and information services – it is argued that health librarians need to be accepted as true health professionals with a highly valued area of specialisation. Health librarians need to ensure that their professional practice is directly aligned with the core business activities of, and makes a proven contribution to, the strategic goals of the parent organisation. To demonstrate their high standards of professional practice, it is strongly believed that they should commit to the process of registration as professional health librarians, with the accompanying requirement for a three-year cycle of CPD to achieve revalidation. ALIA itself, as the national professional association which manages the Professional Development Scheme for certified practitioners and accredits academic and vocational programs for the LIS profession, is called upon to provide the mechanism for certification of health library and information professionals.

A number of recommendations are presented:

1. It is recommended that a Working Party be established jointly by the ALIA Board of Directors, the ALIA Professional Services team and the Health Libraries Australia Executive to map out strategies to ensure that LIS workforce issues are included in the reform processes conducted by Health Workforce Australia and to identify appropriate education and professional development pathways. While the strategies may leverage from those being considered for the profession generally, there may also be unique solutions for health librarianship specifically.
2. It is recommended that ALIA, through HLA, continues to work with the Australian Health Informatics Education Council in the common endeavour to have Health Workforce Australia provide census data of the workforce in order to assist with planning.
3. It is recommended that the findings from the research project inform the development of a framework of competency based standards which will delineate the scope of practice for the health library and information profession.
4. It is recommended that the framework of competency based standards forms the basis of a program of study, which would encompass a specialist postgraduate certificate and a three-year cycle of professional development activities.
5. It is recommended that the proposed Working Party works with the ALIA Board to tender for relevant provider(s) of the specified units for professional development.
6. It is recommended that a certification and revalidation program, which aligns with best practice in the health sector, be established and piloted with health library and information professionals, based on member enrolment in the ALIA Professional Development Scheme and a compulsory 3 year cycle for relevant professional development activities.
7. It is recommended that a Project Officer be employed to support the proposed Working Party in the achievement of its agreed goals.

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## APPENDICES

### APPENDIX 1

#### INDIVIDUAL SURVEY

# neXus3 – ALIA Health Libraries Australia – Individual Survey

## Introduction

This questionnaire represents a key component of the *neXus* research project which has encompassed an examination of workforce, education and professional development issues in the library and information services (LIS) sector in Australia.

The present study, supported by ALIA Health Libraries Australia (HLA), seeks to specifically examine the future education and workforce requirements for health librarianship in Australia. The target respondents for this part of the study are *individual* 'health librarians'. For the purposes of the research, this term broadly encompasses library and information professionals who are, have been or will be employed in the health sector in Australia. The respondents' employment may be in a health library or in another capacity within the health sector. There is also a survey for the managers of health library services, which considers the *institutional* perspectives of education and workforce issues.

There are seven sections in the survey, with questions that seek your responses:

- 1 Demographic information
- 2 Education and qualifications
- 3 Employment information
- 4 Current areas of professional knowledge and responsibility
- 5 Future areas of professional knowledge and responsibility
- 6 Training and development
- 7 Some final questions

Please take the time to complete this survey and encourage as many of your colleagues as possible to participate as respondents. It should not take you more than 30 minutes to complete.

## Participation

Your participation in this survey is completely voluntary.

If you do agree to participate, you can withdraw from participation at any time without comment or penalty.

Your decision regarding participation will not impact on your current or future relationship with ALIA or HLA.

## Confidentiality

All responses will remain completely confidential and anonymous. The survey concludes with the option to provide your contact details, should you be interested in contributing to the research through focus groups or interviews that may be conducted in the future, but it remains your own decision as to whether or not you provide your contact details.

The research findings from the *neXus3* study may be published in the research report prepared for HLA and more broadly in the LIS literature. The final project reports will be made available on the ALIA and/or HLA website.

## Concerns or queries regarding the study

If you have any questions about this survey, please contact the project leader, Dr Gillian Hallam ([g.hallam@qut.edu.au](mailto:g.hallam@qut.edu.au)).

**Warning:** Time-outs can be a problem on the internet, so we strongly recommend you download a [printable copy of this survey](#) to assist with data collection before entering the data into the survey online.

There are 85 questions in this survey

## Consent to participate

Your participation in this survey is completely voluntary. If you do agree to participate, you can withdraw from participation at any time without comment or penalty. Your decision regarding participation will not impact on your current or future relationship with ALIA or HLA. All responses and comments will be treated confidentially.

### 1 Consent \*

Please choose **only one** of the following:

- Yes, I consent
- No, I do not consent and will not continue the survey

## Part 1. Demographic information

### 2 1.01 Your Gender

Please choose **only one** of the following:

- Female
- Male

### 3 1.02 How old are you?

Please choose **only one** of the following:

- 15-17
- 18-25
- 26-30
- 31-35
- 36-40
- 41-45
- 46-50
- 51-55
- 56-60
- 61-65
- 66+

### 4 1.03 Are you from a culturally or linguistically diverse background?

Please choose **only one** of the following:

- Yes
- No

### 5 1.04 Are you of Aboriginal/Torres Strait Islander descent?

Please choose **only one** of the following:

- Yes
- No



### **6 1.05 What State or Territory do you live in?**

Please choose **only one** of the following:

- Australian Capital Territory
- New South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania
- Victoria
- Western Australia
- Overseas

### **7 1.06 What region do you live in?**

Please choose **only one** of the following:

- Capital City
- Regional Town or City
- Rural/Remote Area

## Part 2. Education and qualifications

### 8 2.01 What is your current library and information service (LIS) qualification status?

Please choose **only one** of the following:

- Already hold a formal qualification in LIS
- Currently studying towards an educational qualification in LIS
- Don't have an LIS qualification / Not studying LIS

### 9 2.02 Are you a new graduate (ie graduated in the last 5 years)?

**Only answer this question if you answered "Already hold a formal qualification in LIS" to question 2.01**

Please choose **only one** of the following:

- Yes, I graduated within the last 5 years.
- No, my qualification was completed more than 5 years ago.

### 10 2.03 What is the highest level of LIS qualification at TERTIARY level, that you hold / you are currently studying towards?

Please choose **only one** of the following:

- None
- Bachelor degree
- Honours degree
- Graduate Certificate
- Graduate Diploma
- Masters by coursework
- Masters by research
- PhD
- Other

**11 2.04 What is the highest level of qualification in any discipline at TERTIARY level, that you hold?**

Please choose **only one** of the following:

- None
- Bachelor degree
- Honours degree
- Graduate Certificate
- Graduate Diploma
- Masters by coursework
- Masters by research
- PhD
- Other

**12 2.05 In what discipline is your highest TERTIARY level qualification?**

Please choose **only one** of the following:

- Library and Information Studies
- Health/Medicine
- Law
- Education
- Arts
- Engineering
- Science
- Business
- Information Technology
- Other

**13 2.06 Please provide details of any qualification at TERTIARY level that you hold in the fields of Science/Health/Medicine.**

Please choose **all that apply**:

- None
- Bachelor degree
- Honours degree
- Graduate Certificate
- Graduate Diploma
- Masters by course work
- Masters by research
- PhD

Other:

**14 2.07 Please indicate the specific discipline area(s) for the Science/Health /Medicine qualification at TERTIARY level that you hold (eg nursing, biotechnology, chemistry).**

Please write your answer here:

**15 2.08 Comments on TERTIARY education.**

Please write your answer here:

**16 2.09 What is the highest level of LIS qualification in VOCATIONAL education and training (VET) that you hold / you are currently studying towards?**

Please choose **only one** of the following:

- None
- TAFE Certificate
- TAFE Diploma
- TAFE Advanced Diploma
- Other

**17 2.10 What is the highest level of qualification, in any discipline, in VOCATIONAL education and training (VET) that you hold?**

Please choose **only one** of the following:

- None
- TAFE Certificate
- TAFE Diploma
- TAFE Advanced Diploma
- Other

**18 2.11 In what discipline is your highest qualification in VOCATIONAL education and training (VET)?**

Please choose **only one** of the following:

- Library and Information Studies
- Health/Medicine
- Law
- Education
- Arts
- Engineering
- Science
- Business
- Information Technology
- Other

**19 2.12 Please provide details of any qualification in VOCATIONAL education and training (VET) you hold in the fields of Science/Health/Medicine.**

Please choose **all** that apply:

- None
- TAFE Certificate
- TAFE Diploma
- TAFE Advanced Diploma
- Other:

**20 2.13 Please indicate the specific discipline area(s) for the Science/Health/Medicine qualification in VOCATIONAL education and training (VET) that you hold (eg nursing, biotechnology, chemistry).**

Please write your answer here:

**21 2.14 Comments on VOCATIONAL education and training (VET).**

Please write your answer here:

## Part 3. Employment information

### 22 3.00 Are you currently working in the health library sector?

Please choose **only one** of the following:

- Yes
- No

### 23 Comments on 3.00

Please write your answer here:

### 24 3.00 If you are not currently working in the health library sector, do you plan to return to this field in the future?

Please choose **only one** of the following:

- Yes
- No
- Unsure

### 25 Comments on 3.00

Please write your answer here:

**26 3.01 How long have you been / were you employed in the health library sector?**

Please choose **only one** of the following:

- Between 00 and 01 year
- Between 01 and 02 years
- Between 03 and 05 years
- Between 06 and 10 years
- Between 11 and 15 years
- Between 16 and 20 years
- Over 20 years

**27 Comments on 3.01**

Please write your answer here:

**28 3.02 Please indicate the total number of health libraries you have worked in throughout your career.**

**NOTE: Various branches of the same organisation are counted only once.**

Please choose **only one** of the following:

- 01
- 02-03
- 04-05
- 06-07
- 08-09
- 10+



### 29 Comments on 3.02

Please write your answer here:

### 30 3.03 What is the status of your current employment in the health library?

Please choose **only one** of the following:

- Full-time permanent
- Part-time permanent
- Casual
- Contract/Fixed term
- Volunteer
- Not currently employed

### 31 3.04 In what *general* area of the health sector are you currently employed?

Please choose **only one** of the following:

- Public sector – Commonwealth (Note: this includes universities)
- Public sector – State/Territory
- Private sector
- Not-for-profit sector
- N/A

### 32 Comments on 3.04

Please write your answer here:

**33 3.05 In what specific area of the health sector are you currently employed?**

Please choose **only one** of the following:

- Hospital
- Dentistry
- University
- Research institute
- Government department
- Primary care (GPs, private practices)
- Health professional association/college
- Consumer or patient health organisation
- Health informatics
- Pharmacy and drug industry or company
- Pathology
- Biotech industry
- Veterinary
- Consulting firm
- Commercial publisher
- Self-employed e.g. consultant, researcher, trainer
- N/A
- Other

**34 Comments on 3.05**

Please write your answer here:

**35 3.06 How many paid staff are currently employed in the health library service/workplace where you work for the majority of the time?**

**NOTE: This question refers to the library/information service specifically, not to the parent organisation.**

Please choose **only one** of the following:

- 00-01
- 02-05
- 06-10
- 11-20
- 21-50
- 50+
- Unsure
- N/A

**36 Comments on 3.06**

Please write your answer here:

### 37 3.07 What is the current level of your position?

The levels presented are based on *Contemporary Salary Standards 2009-2011* published by ALIA.

See: <http://www.alia.org.au/employment/salary.scales/roles.and.pay.html>

Please choose **only one** of the following:

Librarian Grade 1

Provides professional library and information services and/or assists in the development of library and information services and systems.

May co-ordinate discrete library and information management projects or assist in the operations and systems of a unit, team or library service.

Librarian Grade 2

Provides complex or specialist library and information services

May co-ordinate/supervise a discrete library and information management project, or the operations and systems of a unit, team or library service.

Librarian Grade 3

Manages and/or provides complex or specialist library and information services.

May manage substantial library and information management projects, or the operations and systems of a unit, team or library service.

Librarian Grade 4

Leads and manages significant organisational service/s, project/s or program/s, and/or provides authoritative highly-specialised advice to senior management, the organisation as a whole, or external parties. May initiate and implement a major library and information management project or program, or oversee the operations and systems of a significant unit, team or library service.

Librarian Grade 5

Leads and directs a branch or program or library service of strategic significance to the organisation and/or provides authoritative advice of the highest order in an area of specialist expertise of significance to the organisation, industry or profession.

N/A

**38 3.08 What is your current job title?**

Please write your answer here:

**39 3.09 What was your gross annual salary in your health library position in 2009?  
(Excluding superannuation and before taxes and deductions.)**

Please choose **only one** of the following:

- Not in paid employment
- \$1 to \$9,999
- \$10,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$69,999
- \$70,000 to \$79,999
- \$80,000 to \$89,999
- \$90,000 to \$99,999
- \$100,000 or more

## Part 4. Current areas of professional knowledge and responsibility

In the next 8 questions, please indicate how frequently you are required to have professional knowledge of or responsibility for the given areas.

(1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)

**40 4.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment. (eg developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**41 Comments on 4.01. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**42 4.02 Understand the principles and practices related to providing information services to meet users' needs. (eg reference services; information access; document delivery; liaison activities; clinical librarianship...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.02 Understand the principles and practices related to providing information services to meet users needs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**43 Comments on 4.02. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**44 4.03 Understand the management of health information resources in a broad range of formats. (eg collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata...)**

Please choose the appropriate response for each item:

**never                      rarely                      sometimes                      often                      very often**

4.03 Understand the management of health information resources in a broad range of formats

**45 Comments on 4.03. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**46 4.04 Know and understand the application of leadership, finance, communication, and management theory and techniques. (eg strategic planning; organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.04 Know and understand the application of leadership, finance, communication, and management theory and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**47 Comments on 4.04. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**48 4.05 Understand and use technology and systems to manage all forms of information.**

**(eg library systems; web management, network management; mobile technologies, database creation and management; authentication and authorisations; content management; learning management systems...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.05 Understand and use technology and systems to manage all forms of information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



**49 Comments on 4.05. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**50 4.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information. (eg educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**51 Comments on 4.06. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**52 4.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines. (eg qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**53 Comments on 4.07. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

**54 4.08 Maintain currency of professional knowledge and practice. (eg participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.08 Maintain currency of professional knowledge and practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**55 Comments on 4.08. Please elaborate on your current professional knowledge and responsibilities in this area.**

Please write your answer here:

## Part 5. Future areas of professional knowledge and responsibility

For the next 8 questions, please indicate the extent to which your professional knowledge of and responsibility for the given areas will change over the next 3-5 years.

(1= decrease significantly, 2=decrease to some extent, 3=remain the same, 4=increase to some extent 5=increase significantly)

### 56 5.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment (eg developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues...)

Please choose the appropriate response for each item:

decrease  
significantly

decrease to  
some extent

remain the  
same

increase to  
some extent

increase  
significantly

5.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment

### 57 Comments on 5.01. In what ways do you think your professional knowledge and responsibilities might change?

Please write your answer here:

### 58 5.02 Understand the principles and practices related to providing information services to meet users' needs (eg reference services; information access; document delivery; liaison activities; clinical librarianship...)

Please choose the appropriate response for each item:

decrease  
significantly

decrease to  
some extent

remain the  
same

increase to  
some extent

increase  
significantly

5.02 Understand the principles and practices related to providing information services to meet users needs

**59 Comments on 5.02. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**60 5.03 Understand the management of health information resources in a broad range of formats (eg collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.03 Understand the management of health information resources in a broad range of formats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**61 Comments on 5.03. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**62 5.04 Know and understand the application of leadership, finance, communication, and management theory and techniques (eg strategic planning; organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.04 Know and understand the application of leadership, finance, communication, and management theory and techniques	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**63 Comments on 5.04. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**64 5.05 Understand and use technology and systems to manage all forms of information (eg library systems; web management, network management; mobile technologies, database creation and management; authentication and authorisations; content management; learning management systems...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.05 Understand and use technology and systems to manage all forms of information	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**65 Comments on 5.05. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**66 5.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information (eg educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation...)**

Please choose the appropriate response for each item:

decrease significantly

decrease to some extent

remain the same

increase to some extent

increase significantly

5.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information

**67 Comments on 5.06. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**68 5.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines (eg qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**69 Comments on 5.07. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:

**70 5.08 Maintain currency of professional knowledge and practice (eg participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.08 Maintain currency of professional knowledge and practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**71 Comments on 5.08. In what ways do you think your professional knowledge and responsibilities might change?**

Please write your answer here:



## Part 6. Training and development

### 72 6.01 Do you participate in the ALIA PD scheme?

Please choose **only one** of the following:

- Yes
- No

### 73 Comment on 6.01

Please write your answer here:

### 74 6.02 Approximately how many hours of professional development have you undertaken in the past 12 months?

Please choose **only one** of the following:

- 0 hours
- 01-10 hours
- 11-20 hours
- 21-30 hours
- 31-40 hours
- 41-50 hours
- 51+ hours

### 75 Comment on 6.02

Please write your answer here:

**76 6.03 Please indicate the extent to which you agree or disagree that the following modes of delivery are beneficial to your own learning.**

Please choose the appropriate response for each item:

	strongly disagree	disagree	neutral	agree	strongly agree
Semester-long learning program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intensive or block learning program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facilitated learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-paced learning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual learning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group learning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Synchronous learning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Asynchronous learning activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Printed learning guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CD-ROM learning guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online learning guides	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Face-to-face (F2F)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lectures	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seminars	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online classroom with learning resources and communication tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online interactive programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Web forums	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Video conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audio conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Podcasts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online group collaboration tools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hybrid (F2F and online)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**77 Comment on 6.03**

Please write your answer here:

**78 6.04 Please indicate the extent to which you agree or disagree with the following statements about professional development (PD).**

Please choose the appropriate response for each item:

	strongly disagree	disagree	neutral	agree	strongly agree
There are good quality PD activities available for health library and information professionals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ongoing PD is essential to my health library career	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PD should be compulsory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is important to have a PD plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a personal commitment to PD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My employer supports PD activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My employer requires me to do PD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PD improves my performance in my current job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can manage my work time to accommodate PD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can manage my personal time to accommodate PD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The cost of PD activities is reasonable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation offers a financial incentive to undertake PD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PD enhances my status with professionals in other fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PD enhances the status of the profession with society	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
PD is important to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**79 Comments on 6.04. Please add any comments you may have about professional development.**

Please write your answer here:

**80 6.05 What kind of training and development do you feel would best meet your own current needs as a health librarian?**

Please write your answer here:

**81 6.06 What ideas do you have about training and development that you would like to discuss with your manager, to support your future career path?**

Please write your answer here:

## Part 7. Some final questions

### 82 7.01 How long is it until you anticipate that you will leave the health library workforce?

Please choose **only one** of the following:

- Between 00 and 01 year
- Between 01 and 02 years
- Between 03 and 05 years
- Between 06 and 10 years
- Between 11 and 15 years
- Between 16 and 20 years
- Over 20 years

### 83 7.02 Please indicate to extent to which you agree or disagree with the following statements.

Please choose the appropriate response for each item:

	strongly disagree	disagree	neutral	agree	strongly agree
My current position is secure for the foreseeable future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My promotional prospects are good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It will be easy to move to another health library job	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It will be easy to move to a library job outside of the health sector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organisation is well funded for the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My remuneration is appropriate for my educational qualifications	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My remuneration is appropriate for the work I do	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job satisfaction in my profession is high	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My profession is well regarded by others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe people are interested in joining the health library profession	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There will be lots of opportunities for health library jobs in the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**84 7.03 Do you have any further comments to add about the future education and workforce requirements for health librarianship?**

Please write your answer here:

**85 7.04 If you wish, you may provide your name and contact details for future follow-up, to possibly be invited to participate in focus groups or interviews to discuss some of the preliminary findings from the research.**

**Providing your contact details is entirely voluntary.**

Please write your answer(s) here:

Submit Your Survey.  
Thank you for completing this survey.

## APPENDIX 2

### INSTITUTIONAL SURVEY

# neXus3 – ALIA Health Libraries Australia – Institutional Survey

## Introduction

This questionnaire represents a key component of the neXus research project which has encompassed an examination of workforce, education and professional development issues in the library and information services sector in Australia.

The present study, supported by Australian Library and Information Association (ALIA) Health Libraries Australia (HLA), seeks to specifically examine the future education and workforce requirements for health librarianship in Australia. This questionnaire focuses on the institutional perspectives, rather than the individual.

For this survey, we seek the active participation of library management, to be able to obtain data at the organisational level. We require only ONE response to be submitted by each organisation that participates, with the institutional data compiled by the manager of the health library or information service.

Therefore the target respondents for this part of the study are managers who are largely responsible for the recruitment and development of 'health librarians'. The study aims to canvass the views of directors and/or senior managers of health services through a series of semi-structured interviews. For the purposes of the research, this term broadly encompasses library and information professionals who are eligible for Associate membership of ALIA and who have been or will be employed in the health sector in Australia. Employment may be in a health library or in another capacity within the health sector. In this survey, the term 'health library service' is used to include, in the widest sense, health libraries and information services within the health sector. The term paraprofessional refers to staff who have qualified as a library technician (Diploma of Library/Information Services or equivalent) and are eligible for Library Technician membership of ALIA. Library officers, library clerks and library assistants are regarded as administrative staff. If your health library service encompasses a number of different branches, please provide collective responses for the whole service.

There are six sections in the survey, with questions that seek your responses:

- 1 Details about your health library service
- 2 Staff information – staff breakdown
- 3 Staff information – staff categories and salaries
- 4 Current areas of professional responsibility
- 5 Future areas of professional responsibility
- 6 Staff training and development.

Please take the time to complete this survey. The survey is available both online and as a printable document. You will need to print off this document and work offline to collect and collate the requested data. The document will serve as a worksheet that you can refer to as you complete the survey online. Please note that we do require you to submit the responses online to ensure we manage the collection of data efficiently.

Please try to use this project as an opportunity for discussion and reflection on professional issues within your own organisation. We encourage you to work with your senior management colleagues to explore some of the questions - the qualitative information you collectively provide in response to some of the questions will be invaluable to the health library profession.

## Participation

Your participation in this survey is completely voluntary.

If you do agree to participate, you can withdraw from participation at any time without comment or penalty.

Your decision regarding participation will not impact on your current or future relationship with ALIA or HLA.

## Confidentiality

All responses will remain completely confidential and anonymous. While the survey does ask for your own contact details, confidentiality is assured. The research team may contact you for clarification about the responses you have provided or to invite you to contribute further to the research through focus groups or interviews that may be conducted in the future. Any further involvement would be voluntary.

The research findings from the neXus3 study may be published in the research report prepared for HLA and more broadly in the LIS literature. The final project report will be made available on the ALIA and/or HLA website.

## Concerns or queries regarding the study

If you have any questions about this survey, please contact the project leader, Dr Gillian Hallam (g.hallam@qut.edu.au).

**Warning:** Time-outs can be a problem on the internet, so we strongly recommend you download a [printable copy of this survey](#) to assist with data collection before entering the data into the survey online.

There are 81 questions in this survey

## Consent to participate

Your participation in this survey is completely voluntary. If you do agree to participate, you can withdraw from participation at any time without comment or penalty. Your decision regarding participation will not impact on your current or future relationship with ALIA or HLA. All responses and comments will be treated confidentially.

### 1 Consent \*

Please choose **only one** of the following:

- Yes, I consent to participate
- No, I do not consent and will not continue the survey



## Part 1. Details about your health library service

### 2 Q1.1 Contact details

Respondents should be managers of a health library / information service, with responsibility for the recruitment and development of 'health librarians'. \*

Please write your answer(s) here:

Name:
Position:
Health library service:
Email:
Phone:

### 3 Q1.2 In what State/Territory is your health library service based?

Please choose **all** that apply:

- Australian Capital Territory
- New South Wales
- Northern Territory
- Queensland
- South Australia
- Tasmania
- Victoria
- Western Australia
- Overseas

### 4 Q1.3 In what *general* area of the health sector does your library service sit?

Please choose **only one** of the following:

- Public sector – Commonwealth (Note: this includes universities)
- Public sector – State/Territory
- Private sector
- Not-for-profit sector
- N/A
- Other

### 5 Comments on Q1.3

Please write your answer here:

### 6 Q1.4 What *specific* area(s) of the health sector does your library serve?

Please choose all that apply:

- Hospital
- Dentistry
- University
- Research institute
- Government department
- Primary care (GPs, private practices)
- Health professional association/college
- Consumer or patient health organisation
- Health informatics
- Pharmacy and drug industry or company
- Pathology
- Biotech industry
- Veterinary
- Consulting firm
- Commercial publisher
- Self-employed e.g. consultant, researcher, trainer
- N/A
- Other

### 7 Comments on Q1.4

Please write your answer here:

## Part 2. Staff information – staff breakdown

In this section you are asked to provide details about your staffing levels, including the different categories of employment (eg full-time, part-time etc). Note that the first question asks about staff numbers expressed as full-time employees (FTE), while the remaining questions ask you to express the staff numbers as headcount.

### 8 Q2.01 As at 1 January 2010, what was the total number of paid staff (expressed as FTE) in your library service?

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

### 9 Q2.02 Please indicate the number of full-time permanent health librarians (expressed as headcount).

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

### 10 Q2.03 Please indicate the number of part-time permanent professional health library staff (expressed as headcount).

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**11 Q2.04 Please indicate the number of temporary / contract / casual professional health library staff (expressed as headcount).**

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**12 Q2.05 Please indicate the number of full-time permanent paraprofessional health library staff (expressed as headcount).**

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**13 Q2.06 Please indicate the number of part-time permanent paraprofessional health library staff (expressed as headcount).**

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**14 Q2.07 Please indicate the number of temporary / contract / casual permanent paraprofessional health library staff (expressed as headcount).**

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**15 Q2.08 Please indicate the number of non-LIS staff (expressed as headcount). (e.g. those with qualifications and experience in fields other than LIS, such as IT/Systems, Web design, Graphic design, Educational design, Human information behaviour, Marketing, Management, Finance, Administration etc.)**

Please choose **only one** of the following:

- 0
- One person (or fraction of one person)
- 2-5
- 6-10
- 11-20
- 21-50
- 50+

**16 Q2.09 If your health library does employ non-LIS staff (Q2.08), please indicate the discipline areas that these non-LIS staff represent.**

Please choose **all** that apply:

- Health professions
- IT/Systems
- Web design
- Graphic design
- Educational design
- Human information behaviour
- Marketing
- Management
- Finance
- Administration
- Research

Other:

**17 Q2.10 If you wish, please leave a comment about the non-LIS discipline areas in your institution.**

Please write your answer here:

**18 Q2.11 Please indicate the *percentage* of female staff employed in the library.**

Please choose **only one** of the following:

- 0% - 10%
- 11% - 20%
- 21% - 30%
- 31% - 40%
- 41% - 50%
- 51% - 60%
- 61% - 70%
- 71% - 80%
- 81% - 90%
- 91% - 100%

**19 Comments on Q2.11**

Please write your answer here:

**20 Q2.12 Please indicate the *number* of staff employed in the library who have culturally or linguistically diverse backgrounds.**

Please choose **only one** of the following:

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11+
- Unsure

**21 Q2.13 Please indicate the number of staff employed in the library who have Aboriginal / Torres Strait Islander backgrounds.**

Please choose **only one** of the following:

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11+
- Unsure

**22 Q2.14 Please indicate the number of staff employed in the library who have a disability.**

Please choose **only one** of the following:

- 0
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11+
- Unsure



## Part 3. Staff information – staff categories and salaries

### 23 Q3.01 Please indicate whether your library uses an official salary scale for the remuneration of staff.

Please choose **only one** of the following:

- Yes  
 No  
 Unsure

### 24 Comments on Q3.01

Please write your answer here:

### 25 Q3.02 If you chose 'yes' for 3.01, please indicate the salary scale used.

Please choose **all** that apply:

- Federal Government: Departmental Collective Agreement  
 State Government Award  
 Crown Employees (Public Sector) Award (NSW) [NB this is the basis for the ALIA Salary Scales]  
 ACT Public Sector Certified Agreement, 2008-2010  
 Northern Territory Public Sector Certified Agreement 2008-2010  
 Local Government Officers (Western Australia) Award  
 Local Government Employees Award (SA)  
 Queensland Local Government Officers Award (QLGOA)  
 Local Government Community Services Tasmania Award  
 Local Government Collective Agreement  
 Higher Education Worker (HEW)  
 Enterprise Agreement

Other:

### 26 Comments on Q3.02

Please write your answer here:

### 27 Q3.03 On the scale below, please indicate the extent to which you agree/disagree with the following statement about the competitiveness of the salary levels.

Please choose the appropriate response for each item:

	strongly disagree	disagree	neutral	agree	strongly agree
The professional LIS staff salaries are highly competitive with professional salaries in other disciplines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 28 Comments on Q3.03

Please write your answer here:

**29 Q3.04 What proportion of your library's total budget is allocated to staff salaries?**

Please choose **only one** of the following:

- 0% - 25%
- 26% - 50%
- 51% - 75%
- 76% - 100%

**30 Comments on Q3.04**

Please write your answer here:

**31 Q3.05 How many of the staff in your health library are not funded through the library budget but through other sources (ie not covered by question Q3.04)?**

Please choose **only one** of the following:

- 0
- 1
- 2
- 3
- 4
- 5
- 6-10
- 11-20
- Over 20

### 32 Comments on Q3.05

Please write your answer here:

### 33 Q3.06 Does your health library have a specific budget allocation for staff development activities (including registration fees, travel and accommodation)?

Please choose **only one** of the following:

- Yes
- No
- Unsure

### 34 Q3.07 If 'yes', what proportion of your library budget is allocated to staff development activities?

Please choose **only one** of the following:

- 0.0% - 0.4%
- 0.5% - 0.6%
- 0.7% - 0.8%
- 0.9% - 1.0%
- 1.1% - 1.5%
- 1.6% - 2.0%
- 2.1% - 2.5%
- 2.6% - 3.0%
- 3.1% - 3.5%
- 3.6% - 4.0%
- 4.1% - 4.5%
- 4.6% - 6.0%

**35 Comments on Q3.07**

Please write your answer here:

## Part 4. Current areas of professional knowledge and responsibility

For the following set of questions, please indicate how frequently the health librarians on your staff are actively involved in the following areas of professional knowledge and responsibility.

(1=never, 2=rarely, 3=sometimes, 4=often, 5=very often)

### 36 Q4.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment. (eg developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues...)

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

### 37 Comments on Q4.01. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.

Please write your answer here:

### 38 Q4.02 Understand the principles and practices related to providing information services to meet users' needs. (eg reference services; information access; document delivery; liaison activities; clinical librarianship...)

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.02 Understand the principles and practices related to providing information services to meet users' needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**39 Comments on Q4.02. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**40 Q4.03 Understand the management of health information resources in a broad range of formats.  
(eg collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.03 Understand the management of health information resources in a broad range of formats.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**41 Comments on Q4.03. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**42 Q4.04 Know and understand the application of leadership, finance, communication, and management theory and techniques.**  
**(eg strategic planning; organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.04 Know and understand the application of leadership, finance, communication, and management theory and techniques.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**43 Comments on Q4.04. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**44 Q4.05 Understand and use technology and systems to manage all forms of information.**  
**(eg library systems; web management, network management; mobile technologies, database creation and management; authentication and authorisations; content management; learning management systems...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.05 Understand and use technology and systems to manage all forms of information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**45 Comments on Q4.05. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:



**46 Q4.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information.  
(eg educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**47 Comments on Q4.06. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**48 Q4.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines.  
(eg qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**49 Comments on Q4.07. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**50 Q4.08 Maintain currency of professional knowledge and practice. (eg participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS...)**

Please choose the appropriate response for each item:

	never	rarely	sometimes	often	very often
4.08 Maintain currency of professional knowledge and practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**51 Comments on Q4.08. Please elaborate on the current professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

## Part 5. Future areas of professional knowledge and responsibility

For the next 8 questions, please consider the areas of professional knowledge and responsibility and indicate the extent to which you believe that your staff's involvement might change **over the next 3-5 years**.

(1= decrease significantly, 2=decrease to some extent, 3=remain the same, 4=increase to some extent 5=increase significantly)

### 52 Q5.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment (eg developments in the health sector; health care policy; health sciences profession; medical education; ethical and legal issues...)

Please choose the appropriate response for each item:

decrease significantly      decrease to some extent      remain the same      increase to some extent      increase significantly

5.01 Understand the health sciences and health care environment and the policies, issues and trends that impact on that environment.

### 53 Comments on Q5.01. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.

Please write your answer here:

### 54 Q5.02 Understand the principles and practices related to providing information services to meet users needs (eg reference services; information access; document delivery; liaison activities; clinical librarianship...)

Please choose the appropriate response for each item:

decrease significantly      decrease to some extent      remain the same      increase to some extent      increase significantly

5.02 Understand the principles and practices related to providing information services to meet users' needs.

**55 Comments on Q5.02. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**56 Q5.03 Understand the management of health information resources in a broad range of formats. (eg collection development and management; electronic licensing; copyright; digital repositories; digitisation of collections; cataloguing; classification; metadata...)**

Please choose the appropriate response for each item:

decrease significantly

decrease to some extent

remain the same

increase to some extent

increase significantly

5.03 Understand the management of health information resources in a broad range of formats.

**57 Comments on Q5.03. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**58 Q5.04 Know and understand the application of leadership, finance, communication, and management theory and techniques. (eg strategic planning; organisational policy, planning and decision making; financial management; marketing and public relations; review and evaluation of library services; human resources planning and management...)**

Please choose the appropriate response for each item:

decrease significantly      decrease to some extent      remain the same      increase to some extent      increase significantly

5.04 Know and understand the application of leadership, finance, communication, and management theory and techniques.

**59 Comments on Q5.04. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**60 Q5.05 Understand and use technology and systems to manage all forms of information (eg library systems; web management, network management; mobile technologies, database creation and management; authentication and authorisations; content management; learning management systems...)**

Please choose the appropriate response for each item:

decrease significantly      decrease to some extent      remain the same      increase to some extent      increase significantly

5.05 Understand and use technology and systems to manage all forms of information.

**61 Comments on Q5.05. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**62 Q5.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information. (eg educational needs assessment; health information literacy; instructional methodologies; eLearning management; program development, delivery and evaluation...)**

Please choose the appropriate response for each item:

decrease significantly      decrease to some extent      remain the same      increase to some extent      increase significantly

5.06 Understand curricular design and instruction, and have the ability to teach ways to access, organise and use information.

**63 Comments on Q5.06. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**64 Q5.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines. (eg qualitative and quantitative methodologies; data analysis; reporting and disseminating research findings; quality improvement; evidence-based practice...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.07 Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**65 Comments on Q5.07. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:

**66 Q5.08 Maintain currency of professional knowledge and practice. (eg participation in professional organisations; attending formal conferences and workshops; participating in informal workplace learning activities; research and publishing in LIS...)**

Please choose the appropriate response for each item:

	decrease significantly	decrease to some extent	remain the same	increase to some extent	increase significantly
5.08 Maintain currency of professional knowledge and practice.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**67 Comments on Q5.08. Please elaborate on the future professional knowledge and responsibilities of your staff in this area.**

Please write your answer here:



## Part 6. Staff training and development

### 68 Q6.01 Which of the following statements best fits your library service?

Please choose **only one** of the following:

- The organisation has a planned staff development program
- The organisation has an informal approach to staff development
- The organisation regards staff development as primarily the responsibility of individual staff members

### 69 Comments on Q6.01

Please write your answer here:

### 70 Q6.02 What are the major themes and priorities in your library's staff development program for the coming year?

Please write your answer here:

### 71 Q6.03 What are the major themes and priorities in your library's planning for staff development over the next 2-3 years?

Please write your answer here:

**72 Q6.04 Please indicate the extent to which you believe that new graduate, internship or traineeship programs are, or could be, valuable as recruitment strategies in the health library sector?**

Please choose the appropriate response for each item:

	not at all valuable	not very valuable	neutral	valuable	very valuable
New graduate/ internship/traineeship programs are valuable as recruitment strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**73 Q6.05 Does your health library currently offer a new graduate, internship or traineeship program?**

Please choose **only one** of the following:

- Yes
- No
- Unsure

**74 Comments on Q6.05**

Please write your answer here:

**75 Q6.06 Would you consider the introduction of a new graduate, internship or traineeship program in the future?**

Please choose **only one** of the following:

- Yes
- No
- Unsure

### 76 Comments on Q6.06

Please write your answer here:

### 77 Q6.07 If a formal post-graduate specialist course in health librarianship was developed and offered by a university or registered training provider, would your library be prepared to support staff gain the qualification?

Please choose **only one** of the following:

- Yes
- No
- Unsure

### 78 Comments on Q6.07

Please write your answer here:

**79 Q6.08 If specialist CPD units in health librarianship were developed and offered by a university or registered training provider, would your library be prepared to support your health librarians to upgrade their skills?**

Please choose **only one** of the following:

- Yes
- No
- Unsure

### **80 Comments on Q6.08**

Please write your answer here:

## **Final question**

**81 A further stage of the neXus3 ALIA Health Libraries Australia research project will involve canvassing the views of directors and/or senior managers with responsibility for health information services through a series of interviews. If you believe that your director/senior manager would be interested in being interviewed, please provide the name and contact details below:**

Please write your answer(s) here:

Name
Position
Health library/information service
Email
Phone

Submit Your Survey.  
Thank you for completing this survey.

## APPENDIX 3

### INTERVIEW QUESTIONS

HLA Workforce and Education Research

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#### **Interview schedule: Future roles for health librarians**

Date/time of interview:

Interviewer: [insert name] [insert contact email/phone]

Interviewee: [insert name: contact email: phone: position: name of organization]

---

Thank you for agreeing to be interviewed today – I hope that this will take about 30 minutes – is that ok?

For background information:

- Health Libraries Australia is a subgroup of ALIA - the professional association for all librarians in Australia.
  - We are conducting some research into the workforce requirements for health librarians and exploring what roles they might be doing in organizations such as yours in the future.
  - We then intend developing a post-graduate qualification and professional development program which will educate librarians for these roles and allow them to continually update their skills.
  - So far – we have conducted 2 surveys – one of health librarians and the second of health library managers, and we are now seeking the opinions of employers of health librarians in different types of organizations – hospitals, universities, research institutes, government departments, not-for-profit organizations, health professional associations and colleges, consumer health organizations etc.
- 

Structure of the interview:

We are interested to find out about your views about health librarians and will be asking you a few questions in two sections:

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May 22, 2011

## **Section 1.**

### **How health librarians assist you in doing your job and achieving your goals**

## **Section 2.**

### **How health librarians contribute to your organization – now and possibilities for the future**

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#### Questions

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#### HLA Workforce and Education Research

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### **Section 1: How health librarians assist you in doing your job and achieving your goals**

1.1 *I understand that your position is [insert position title] – is that correct?*

1.2 *Can you tell me a little about your role please – and I'm especially interested to find out what the main objectives of your job are*

(or as a prompt – what are the 'mission-critical' goals that you absolutely have to achieve or you would not be doing what you are supposed to be doing in your role)?

List goals:

1.3 *Do your librarians assist you in achieving any of these goals? (yes/no)*

○ *If yes – which ones and how?*

○ *If no – can you reflect for a moment and consider how a librarian could help you achieve any of these goals?*

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## **Section 2. How health librarians contribute to your organization**

2.1 *What do you consider are the main ways that health librarians contribute to your organization now?*

List:

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### HLA Workforce and Education Research

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2.2 *Are you satisfied with the role that your health librarians play in your organization now? (yes/no/maybe)*

- *So on a scale of 1 to 10, where would you place your health librarians?*

Response:

Any comments:

2.3 *Are there one or two specific things your librarians offer that are especially useful to this organization?*

[insert 1]

[insert 2]

2.4 *Are there challenges or opportunities for your organization where your librarians could be involved in the future?*

(Examples for prompting– think up a few in your organizations which have come out of our competency research so far – Comments on Q5.01-5.08 e.g. ehealth implementation and point-of-care resources; clinical guidelines; implementing elearning; research and data management; consumer health portals performance improvement initiatives, or length of stay, or patient satisfaction; ...)

- *If yes – in what ways?*

- *If not – can you reflect for a moment and consider how a librarian may be able to contribute in the future?*

*2.5 Does your organization involve your librarians in strategic planning and/or organisation-wide, mission-critical committees?*

- *If yes – in what ways?*

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- *If not – why not? What might make the librarian more central? What would enhance the librarian's value to such committees?*

*2.6 What skills and qualities do you think health librarians will need in order to be able to contribute effectively to your organization in the future?*

List:

*2.7 Is there anything else you'd like to add or any points you'd like to emphasise?*

---

*THE END – THANK YOU VERY MUCH FOR YOUR TIME AND THOUGHTS If there's anything else you think of that you'd like to add, please let me know.*



## APPENDIX 4

# MEDICAL LIBRARY ASSOCIATION: EDUCATIONAL POLICY STATEMENT COMPETENCIES FOR LIFELONG LEARNING AND PROFESSIONAL SUCCESS

## Competencies for Lifelong Learning and Professional Success:

### The Educational Policy Statement of the Medical Library Association

#### Executive Summary

*We must educate for the problems of a generation hence, not for the problems of today ... librarians must be imbued with the psychological ability to handle change and to live with ambiguity. Without this they will be performing tomorrow's tasks with yesterday's concepts.*  
—Estelle Brodman, 1979 [2]

Today, the management of information and knowledge in the health care environment is a national priority with increasing attention paid to evidencebased health care, patient safety and privacy, health literacy, and creation of electronic patient records. Technology has become central to the operation of every library.

The advancing biosciences research enterprise makes it necessary for professionals fulfilling health information roles to manage increasingly complex knowledgebases and data sets. These professionals may have a variety of titles including health information professional, health information specialist, informationist, medical librarian, informatician, or health sciences librarian. This policy statement refers to these professionals as health sciences librarians or health information professionals.

#### A Challenging Work Setting

MLA believes that lifelong learning must be a cornerstone of every individual's professional development plan to achieve success in the health sciences environment and that individuals must assume greater personal responsibility for defining their ongoing learning goals, increasing their competencies, and improving their professional performance. Consequently, the association has been offering professional continuing education courses for almost fifty years and has been involved in professional development programs and services for much longer [3].

Since this policy's precursor, "Platform for Change: the Educational Policy Statement of The Medical Library Association," the world of health information and health sciences librarianship has changed dramatically. The work of health sciences librarians takes place in an increasingly broader spectrum of settings and across a broad range of biosciences and health-related disciplines. Health sciences librarians function in ways shaped by a number of significant factors including: changing elements and structure of medical knowledge; rapid introduction of new technologies and techniques for information processing and dissemination; altered patterns of institutional organization, management, and governance; and the drive to maintain excellence. Health sciences librarianship stands apart in ensuring that knowledge about advances in the science and technology of health care research and practice is readily accessible to health care professionals, educators, students, researchers, and the public.

Following are the seven professional competency areas needed by health sciences librarians today along with recommendations for actions that individuals and professional organizations, health sciences librarians, MLA, employers, graduate programs in library and information science, and the National Library of Medicine (NLM) can take to promote professional development and lifelong learning. In some competency areas, such as technology and systems management, new knowledge and skills have been added, while in others, specific knowledge and skills have been broadened to include, for example, diversity issues. Recommendations from the previous policy statement that were either acted upon or that are no longer relevant have been eliminated in this edition. Individuals cannot achieve mastery of all knowledge and every desirable skill in each competency area, but will emphasize different areas at different points in their careers and in different institutional settings.

## Professional Competencies for Health Sciences Librarians



1. Understand the health sciences and health care environment and the policies, issues, and trends that impact that environment including:

- current management and business practices
- the parent organization's (academic medical center, hospital, government, corporate, etc.) major policy and program sources
- the health sciences professions
- the clinical care, research, medical education, cultural, ethical, economic, and legal issues and environments
- various health and health-related organizations



2. Know and understand the application of leadership, finance, communication, and management theory and techniques including:

- understanding the institution's mission and planning processes and the role of the library in the institution
- forging and maintaining alliances with universities, public libraries, public health services, community-based organizations, and others to meet users' information needs
- human resources management including recruitment, retention, staff development, and mentoring
- facilities planning and space allocation
- budgeting, cost analyses, and fund-raising
- public relations, marketing, and advertising
- library programs and services administration



3. Understand the principles and practices related to providing information services to meet users' needs including:

- the information needs of health practitioners, researchers, administrators, educators, students, patients, consumers, and the general public
- the institution's information policies
- methods of information delivery and access including consideration of the specific information needs of diverse populations
- information services management



4. Have the ability to manage health information resources in a broad range of formats including:

- selection, acquisitions, and control of resources including the licensing of resources
- scholarly publishing, copyright, licensing, privacy, and intellectual property issues
- conservation, preservation, and archiving of materials in all formats
- cataloging, classification, abstracting, and thesaurus construction and knowledge representation
- national and international standards and conventions
- trends in information formatting, production, packaging, and dissemination



5. Understand and use technology and systems to manage all forms of information including:

- basic principles of automated systems, data standards, and systems analysis techniques including design and evaluation
- acquisition, use, and evaluation of information technologies
- integration of systems and technologies
- technological solutions for permanent access to electronic information
- applications in emerging areas of biomedicine computational biology and health information, including electronic health care systems and records
- communications and information infrastructure including the Internet and Web



6. Understand curricular design and instruction and have the ability to teach ways to access, organize, and use information including:

- adult learning theory and cognitive psychology
- educational needs assessment, analysis, and evaluation
- instructional methodologies, technologies, and systems design
- management of education services



7. Understand scientific research methods and have the ability to critically examine and filter research literature from many related disciplines including:

- using quantitative and qualitative methodologies and techniques and their interpretation
- locating, organizing, and critically evaluating the research literature
- using principles of evidence-based practice to support decision making
- conducting research and reporting and disseminating research findings either individually or in interdisciplinary research teams

## Summary Recommendations for Action

Individuals and professional organizations

1. develop strategies to recruit a diverse and talented cadre of information professionals
2. provide new opportunities in the continuum of learning
3. continue educating the educators

Health sciences librarians

1. aggressively seek lifelong education and professional development opportunities from a variety of sources and design and implement a plan for continuing professional development
2. exercise leadership in and contribute to the professional development of the field
3. uphold and advocate for the values of the profession and apply them to changing information environments

#### The Medical Library Association

1. sets the standards for professional competency to assist employers in recruiting and retaining individuals who will be successful in the changing arena of health sciences librarianship
2. continues its leadership role in creating a vital and responsive professional development program and a dynamic set of coordinated education opportunities
3. collaborates with all participants in the educational arena
4. promotes adoption or development of staff development programs for information professionals by employers
5. maintains its formal liaison with the graduate schools of library and information science education
6. designs and implements a research agenda that advances the professional knowledgebase

#### Employers of health sciences librarians

1. recruit competent and promising individuals and involve them in meeting the information needs of the institution
2. place a high priority on staff development

#### Library and information science educators

1. lay a broad foundation that stresses theory over application, places librarianship in context with other related disciplines, fosters professional values, and prepares students to design their own learning program throughout the length of their careers
2. support students who desire to work in a health sciences setting by offering flexible options for students to gain necessary skill sets
3. provide a range of programs and opportunities that meet needs throughout a professional career, rather than focus solely on the master's degree
4. provide the impetus and forum for continued education of the educators

#### The National Library of Medicine

1. continues to identify future directions and priorities for its activities to support the educational needs of health sciences librarians
2. provides additional training opportunities for health sciences librarians to acquire new knowledge and skills, such as through identifying and funding centers of excellence for advanced training in health information at strategic points across the country

#### References

2. Brodman E. Keynote address: pragmatism and intellection in medical library education. In: Proceedings of Allerton Invitational Conference on Education for Health Sciences Librarianship. Monticello, IL; 2-4 Apr 1979. Chicago, IL: Medical Library Association, 1979:viii.
3. Roper FW. The Medical Library Association's professional development program: a look back at the way ahead. J Med Libr Assoc 2006 Jan;94(1):8-18.

## APPENDIX 5

### RESEARCH DISSEMINATION ACTIVITIES

- Hallam, G., Lewis, S., Ritchie, A., Hamill, C., Clark, C., Kammermann, M. & O'Connor, P. (2011). *Positioning health librarians in the health professional workforce: new directions in education in Australia*. Paper to be presented at the IFLA Health and Biosciences Section Satellite Conference, 'Developing health science librarians expertise: From graduate school curriculum, to post-graduate training, and to professional development offered by employing libraries'. San Juan, Puerto Rico, 12 August 2011.
- Hallam, G., Ritchie, A., Hamill, C., Lewis, S., Newton-Smith, C., Kammermann, M. & O'Connor, P. (2010). Australia's health libraries: A research-directed future. *Library Trends*, 59 (1-2), 350-372.
- Hamill, C., Hallam, G., Ritchie, A., O'Connor, P. & Lewis, S. (2010). *Access health librarianship: Mapping, scoping and developing the health librarian of the next decade*. Health libraries stream, ALIA Access 2010 Conference, Brisbane, 2 September 2011. <http://conferences.alia.org.au/access2010/program.html>
- Lewis, S., Hallam, G., Ritchie, A., Clark, C., Hamill, C., Kammermann, M. & O'Connor, P. (in press). Employers' perspectives on future roles and skills requirements for Australian health librarians. Paper presented at the 6th Evidence Based Library and Information Practice Conference, Manchester, 27-30 June 2011. Full paper to be published in the December 2011 issue of *Evidence Based Library and Information Practice*.
- Ritchie, A., Hallam, G., Hamill, C., Lewis, S., Foti, M., O'Connor, P. & Clark, C. (2010). Collaborative research to develop a specialist, post-graduate, competency-based education curriculum and continuing professional development structure for health librarians in Australia. Paper presented at *Cooperation and Collaboration in Teaching and Research: Trends in Library and Information Studies Education*, IFLA-ALISE-EUCLID satellite conference, 8-9 August 2010, Borås, Sweden.
- Ritchie, A., Hallam, G., Hamill, C., Lewis, S., Kammermann, M., O'Connor, P. & Clark, C. (2010). Designing a specialist post-graduate qualification and continuing professional development structure for the health librarian workforce of the future. *Australian Academic and Research Libraries*, 41(3), 276-299.

#### HLA News

- HLA's Workforce and Education Research Project 2009. *HLA News*, December 2009.
- Update on ALIA HLA's Workforce & Education Research Project. *HLA News*, March 2010.
- Update on ALIA HLA's Workforce & Education Research Project. *HLA News*, June 2010.
- Update on ALIA HLA's Workforce & Education Research Project. *HLA News*, September 2010.
- ALIA HLA's Workforce & Education Research Project update. *HLA News*, December 2010.
- Certification and revalidation for Australian health librarians, *HLA News*, March 2011.