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## **Working in the Health Information Profession: Perspectives, Experiences and Trends: the results of an EAHIL-funded 25<sup>th</sup> anniversary project.**

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### **Abstract**

**Aim:** To record the stories and experiences of health information professionals practising across Europe

**Methods:** Interviews, surveys, and focus groups were used to gather data to understand the roles of information professionals, and how they support healthcare.

**Discussion:** The focus groups provided exploratory data to support the design of the survey. The survey produced 513 fully completed responses, predominantly females (429), and 77 males, with 5 not disclosing their gender. Most respondents work in state healthcare (273), and/or in education (186), with 30 working in the charity and voluntary sector, 21 in industry, 17 in private healthcare, and 55 in other organisations. The main user groups are students, doctors, researchers, nurses and allied health professionals. The respondents are engaged in a wide range of roles. Top challenges are shrinking budgets, problems with time and workload, and too many differing priorities. Participants identified a wide range of skills used in their jobs, including LIS-specific skills as well as technical skills, management skills, 'soft skills' and personal qualities. They acquired these skills mainly in the workplace or at library school. Technical skills were high on the list of development needs. Many respondents felt they made an impact on healthcare provision mainly through their evidence-based work, or teaching.

**Conclusions:** Roles have developed, encompassing healthcare challenges, often embracing technologies and pushing the boundaries of traditional library roles. This study enhances our understanding of the complexity of the domain, how it is evolving and impacting on healthcare.

*Key words:* health librarians; roles; skills; training needs; impact.

### **Introduction**

The changing healthcare context presents many challenges for health information and library professionals in terms of their roles and the ways in which they may respond to social, technological, economic and political changes in their working environment (1). Our roles have developed, encompassing these challenges, often embracing technologies and pushing the boundaries of traditional library roles. Information Analyst, Information Governance Manager, Knowledge Manager, Informationist, Clinical Librarian, Informatician, Patient Advice and Information Officer, and Bibliotherapist are just some of the health information roles that sit alongside the traditional Health Librarian and Information Manager roles. This brief list highlights the breadth and complexity of our domain and how it has evolved in recent decades in an information-intensive health sector.

Given the rapid pace of change in the sector, and the diversity identified, do we have a clear picture of the health information professional landscape in Europe? Do we understand how we as health information professionals contribute critically to healthcare? A clear understanding of the changing roles, and the contributions that health library and information professionals make, would help to inform future skills development to meet the needs of healthcare professionals going into the future, and also help library and information professionals to demonstrate the impact they have and evidence their value within the profession.

This paper reports on a project that aims to map the nature of the roles and skills of health library and information professionals working in the sector across Europe, to understand the challenges they face, and to capture examples of the contributions they make to healthcare. The project was funded by EAHIL as one of their 25th anniversary research grants.

### **Related literature**

The health library and information sector is diverse, with opportunities in public, private, voluntary and charitable bodies, and organisations with global reach such as the World Health Organisation and UNESCO. As the world continues to strive to find solutions to healthcare problems – both complex research issues, and ones of simple care provision – the need for health information and sound evidence is increasing. We have communities striving for resilience against a backdrop of political and economic unrest, and social and technological change. The solutions range from services such as bibliotherapy (2-4) to complex meta-analyses to support decision-making within the healthcare context (5, 6). Health library and information professionals can make important contributions to both research and practice. It is important to understand the skills needed to support effective healthcare in this rapidly changing environment. Social networks provide an opportunity to support communities of practice, and provide a platform for the sharing of knowledge, expertise and experiences.

EAHIL has helped health librarians throughout Europe to learn from one another, sharing knowledge and transferring lessons learned in one country to another, supporting change, and encouraging them to develop new roles, and to meet the challenges they face in health and social care (1). Throughout Europe, countries have identified the need for increased skills and professional standards to meet these demands (7, 8), with health library groups calling for librarians to “...*create their future within the health sector*” and “*to apply their specialised skillset to add value and benefit right across the health service, the support of health managers and policy makers was sought to fund essential evidence-based resources, to retain and nurture skilled information professionals, despite the current economic climate.*” (9).

This research contributes to the literature and the evidence base by providing an understanding of the current roles, skills, and skills development needs of health library and information professionals across Europe. It captures the diversity of the profession, and gives a better understanding nature of the profession and the impact that health library and information professionals are having within healthcare.

### **Methods**

Data collection centred around three key methods:

- a. Focus groups with health library and information professionals to facilitate a broader understanding of the landscape.
- b. Interviews with health library and information professionals to explore their skills needs, roles, the changing nature of those roles, challenges,

contributions, the impact they have, and the future of the profession.

- c. Questionnaires to gain a broad data set on which to base any future work, and to inform future decisions.

The data were gathered during 2013. Six focus groups were carried out (Table 1). The aim of these was to provide preliminary evidence for the perspectives and experiences of individuals working within the profession, and to get an indication of key trends. The focus group discussions were recorded, transcribed and analysed thematically.

Table 1. Focus group sites and locations

<i>Focus group location and date</i>	<i>Number of participants</i>	<i>ID</i>
Sheffield 6 <sup>th</sup> March	8 participants	F5
London 23 <sup>rd</sup> April	5 participants	F6
York 16 <sup>th</sup> May	4 participants	F3
York 16 <sup>th</sup> May	3 participants	F4
Stockholm 13 <sup>th</sup> June	3 participants	F1
Stockholm 13 <sup>th</sup> June	7 participants	F2
	<b>30 participants in total</b>	

Eight interviews were carried out at the EAHIL Stockholm Workshop, June 2013. These were again recorded, transcribed, and analysed thematically.

A pilot survey was distributed prior to a full survey being distributed electronically. Forty-seven surveys were completed from the pilot, and the results were used to inform the design of the final survey. Due to practical constraints, and the fact that the main survey mirrored many of the results in the pilot survey, the pilot survey results are not presented in this paper. A few respondents specifically commented that the survey was well-designed; however a few critical comments were made which were taken into account when designing the final questionnaire. Several questions were changed from open-ended to closed-ended in order to facilitate quantitative analysis.

The final survey was implemented in Limesurvey, and was distributed via various mailing lists, forums, LinkedIn groups, Facebook groups, Google groups and Twitter. It was translated by the research associate into French, German and Italian (and checked by native speakers of these languages) to encourage take-up by speakers of these languages. Unfortunately, the scope of the project did not permit translation into all European languages as this would have necessitated the employment of several external translators. Five hundred and thirteen fully completed responses were received.

## **Results**

The results from the study were extensive, therefore within the constraints of this paper we can only present an overview from across the focus groups, interviews, and survey. The results will be presented thematically, drawing together key points from all phases of the study.

### *Demographics*

To set the context for the discussion it should be noted that certain demographic biases occurred in the responses in all phases of the study. The majority of respondents were non-EAHIL members, from the UK or North European countries, were female, and were in professional roles within the sector. The demographics from the main survey illustrate the biases found (Tables 2 & 3).

Table 2. Gender distribution of survey respondents

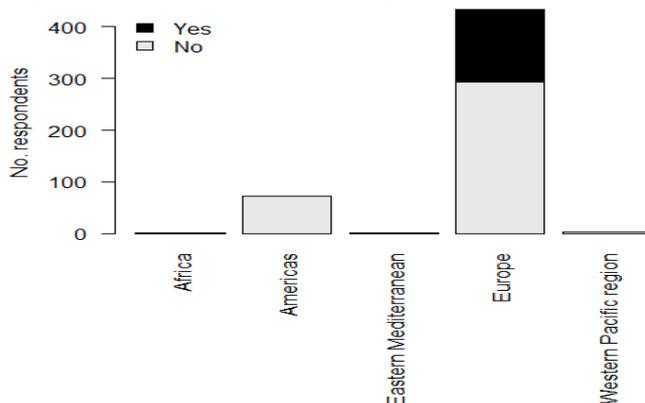
<i>Response</i>	<i>Number</i>	<i>Percentage</i>
Male	77	15%
Female	429	84%
Rather not say	5	1%
Total	513	100%

Table 3. Age distribution of survey respondents

<i>Response (Age range)</i>	<i>Number</i>	<i>Percentage</i>
18-24	8	1.56%
25-34	101	19.73%
35-44	132	25.59%
45-54	142	27.74%
55-64	109	21.29%
65 or older	13	2.54%
Rather not say	8	1.56%
Total	513	100%

The respondents to the survey came from 32 countries around the world, representing five of the six World Health Organisation (WHO) regions: Africa, the Americas, Europe, the Eastern Mediterranean, and the Western Pacific, with only South East Asia not being represented. Many of the respondents were from Europe. The highest number of responses came from the UK (224), France (66), Canada (47), Switzerland (24), USA (24), and Italy (19). Figure 1 shows EAHIL membership status across the WHO regions. All the respondents that identified themselves as EAHIL members work within Europe

Figure 1. EAHIL membership status across the WHO regions



The respondents in the focus groups, interviews and survey showed an active interest in continuing professional development and ‘keeping up to date’. In support of this, they reported membership of over 160 professional organisations in addition to EAHIL. The majority of respondents were not EAHIL members.

#### *Job roles and sectors*

The respondents were employed in a wide range of job roles. A common theme across the focus groups, interviews, and survey was that the vast majority of the respondents were in professional (rather than para-professional) roles and a substantial minority were senior personnel in management roles. The large majority of respondents were very well qualified, i.e. with qualifications at postgraduate level.

An analysis of the job titles from the survey responses demonstrates the continued relevance of the terms ‘library’ and ‘librarian’ in the health information sector, with 330 respondents (64%) having a title including these. One interview respondent was vociferous in his assertion that he was a ‘librarian’ rather than an ‘information specialist’:

*“I like the term librarian... as opposed to information specialist... I think the profession of being a librarian is a whole lot different than just being an information specialist.”* (Interviewee 4, Education sector, Caribbean)

Meanwhile, 131 respondents (26%) had titles including terms related to information, while 35 respondents (7%) had titles including the term ‘knowledge’ or equivalents in other languages. Only one respondent had a title including the word ‘data’. The rise of ‘data management’ roles seen in the academic sector does not yet appear to have penetrated the health sector.

Other key roles were also reflected in job titles such as *education, research, collection and resource management* roles, and *systematic reviews*. Seventeen respondents had clinical library roles (17 respondents, 3%); and a further 15 respondents (3%) were involved in outreach or community engagement. The job titles reflect trends and changes in the sector; however, traditional ‘library’ roles continue to be highly relevant.

Respondents were also asked to identify which sector they work in (Table 4). Respondents could select more than one option, and could also enter free text into an ‘other’ section, which were then manually classified, where possible, into the other categories. The major employment sectors are state healthcare (296 respondents) and education (190 respondents). Small numbers of respondents work in private healthcare, charity or voluntary sectors, or industry. Of those that selected the ‘other’ option examples of employers included a law firm, self-employed, associations, or professional organisations and research institutions. Some respondents (64) work across more than one sector; the majority of these were in state healthcare and education (42 respondents).

Table 4. Employment sectors for the survey respondents

<i>Response</i>	<i>Number</i>	<i>Percentage*</i>
State healthcare	296	57.70%
Private healthcare	20	3.90%
Charity/voluntary sector	30	5.85%
Education sector (e.g. university, college)	190	37.04%
Industry (e.g. pharmaceutical company)	21	3.90%
Other	27	5.26%
Total	584	
* Percentages are relative to all 513 respondents of survey		

#### *User groups*

This distribution across sectors reflects the user groups supported by the health library and information professionals, which are extremely diverse, but dominated by healthcare workers (e.g. doctors, nurses, allied health professionals, healthcare managers) and educational users (e.g. researchers, medical students, student nurses). Results are shown in Table 5, where again a single respondent could select multiple user groups, the percentages therefore not adding up to 100. Proportionally, very few respondents provided services directly to patients and the public.

Table 5. User groups identified by the survey respondents.

<b>Response</b>	<b>Number</b>	<b>Percentage*</b>
Students	369	71.93%
Doctors	346	67.45%
Researchers	316	61.60%
Nurses	308	60.04%
Allied health professionals	284	55.36%
Teaching staff	194	37.82%
Management	189	36.84%
Systematic reviewers/guidelines staff	111	21.64%
Librarians and other library staff	91	17.74%
Visiting scholars/readers	61	11.89%
Patients	48	9.36%
General public	45	8.77%
Other	54	10.53%
* Percentages are relative to all 513 respondents of survey		

*Key elements of the job roles*

The range of roles carried out by respondents is diverse. The roles encompass traditional ‘library’ roles such as literature searching and collection development; a range of management skills and administrative work; and technical skills such as website development. Very specialist skills appear less frequently, e.g. bibliometrics, guidelines development, and institutional repositories. Comments were made about the workload, and trying to do ‘everything’ or being a ‘jack-of-all-trades’, whilst others had very specific roles, such as being embedded within a specific clinical team, or supporting guideline development.

Literature searching and teaching were the most frequently identified and discussed roles. Management roles were also prevalent. The management roles can be further divided into library-specific management roles, more generic management roles, and management roles involving technology such as website management, or systems management.

In the interviews, the roles identified fell broadly into two main clusters (Table 6): one around evidence-based work, and one around management skills. The management roles could be further categorised into three areas, (1) generic management skills (2) communication management skills and (3) library service management skills.

Table 6. Key elements of the roles identified by the interviewees

<b>Categorisation of job roles</b>	<b>Key elements of the roles identified in the interview data [interviewee number ID]</b>
<b>Evidence-based practice</b>	Evidence-based practice [1,3,4,5, 7], Information literacy and library instruction [1,3,6,7,8,], Teaching and training [1,2,3,4,5,7,8], Education [1,5,8], Literature searching and information retrieval [1,4,5, 8], Research skills and research support [1,4,6,7,8], Patient information [3,5]
<b>Management</b> <i>Generic management skills</i>	Management [1,2,3,5,6,7], Change management [2,5,7] Quality and accreditation processes [3,6,7,8], Service provision and management [2,3,4,5,7], Staff management [3,6,7], Planning [2,6], Project work [1,3,5,6,7,8], Leadership [1,2,6,7], Strategic management [3,5,7], Management [1,2,3,5,6,7], Budgets and costings [1, 3], Customer service [6,7,8], Supporting users and understanding user needs [1,2,3, 7,8],
<i>Communications management</i>	Communication [6, 8], Marketing and promotion [3,5, 8], Collaboration [1,3,7, 8], Outreach [1,3,7], Liaison [7,8] Knowledge sharing, facilitation of [4,5,6], Writing [1,3], Publishing [1,3,7], Demonstrating impact [3,5], Meetings [1,3], Webmaster [5,8]
<i>Library service management</i>	Collection development [1,3], Circulation [2,4], Digital and e-resource collections management [2,7,8], Acquisitions [1,3,6], Library assistant roles [3,4]

In the survey, literature searching and teaching/training (both of which can be categorised as evidence-based roles) stood out as key elements of the job role, followed again by a range of management roles (Figure 2). Figure 2 shows the percentage of respondents who have selected each job role, where multiple roles could be selected.

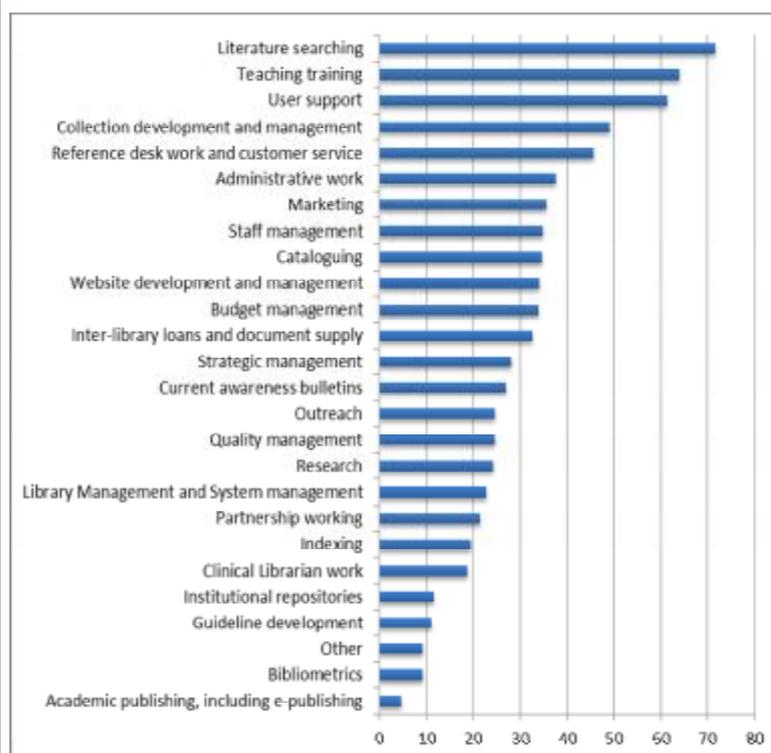


Figure 2. Key elements of job roles identified from the survey

Evidence-based work requires a knowledge of specialist information sources, being able to search those sources using advanced search skills (i.e. having advanced information literacy), being able to critically appraise the evidence, and being able to teach and train others to search the evidence and retrieve quality information sources to support their healthcare work. This category also includes more specialist evidence-based roles such as supporting the development of guidance, policy frameworks and systematic reviews.

### Skills

Respondents identified having a wide range of skills. In the focus groups, respondents identified the need for good communication skills and people management skills, search skills, and technical skills. Focus group respondents identified how the roles were changing. In addition to the above skills identified, the focus group participants identified a number of key personal qualities or ‘soft skills’ that were needed to do their jobs such as flexibility, diplomacy, adaptability, confidence, creativity, being sympathetic, discretion, intellectual versatility, patience, positivity, and being pro-active.

The skills identified by the interviewees were quite broad and disparate with no real themes appearing. In the survey too (Figure 3), the skills identified reflected the diversity in the profession and also the feeling that had been expressed earlier of being a ‘jack of all trades’. One person summed up the diversity of the skills required: *“It does sometimes feel that we are everything and nothing!”* (Respondent #107, State healthcare, UK). In Figure 3, multiple skills could be chosen by respondents, and the majority of respondents took advantage of this, the mean number of skills chosen being 20 (standard deviation of 8). Only six respondents selected a single skill, and two respondents clicked all 34 options.

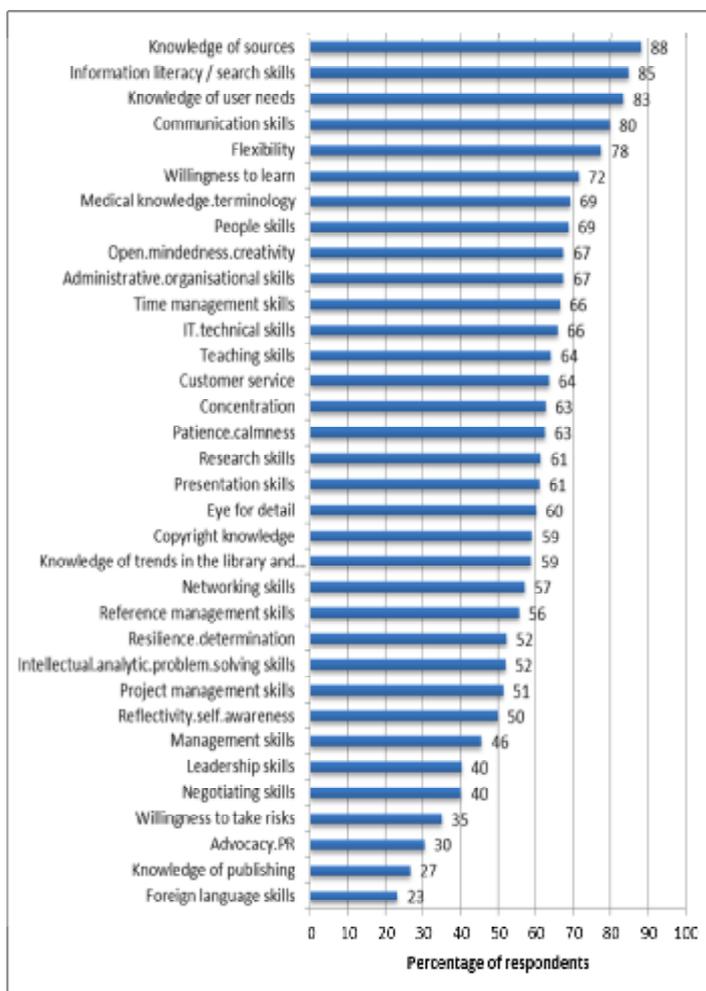


Figure 3. Skills identified by the survey respondents.

### *Skills acquisition*

There was general agreement across the focus groups, interviews, and the survey that the main methods for acquiring skills were through a mix of education and experience. The LIS degree forms a foundation, with health-specific knowledge and skills developed in the workplace and through experience. Figure 4 gives the results from the main survey illustrating the approaches to skills acquisition (multiple options could be chosen).

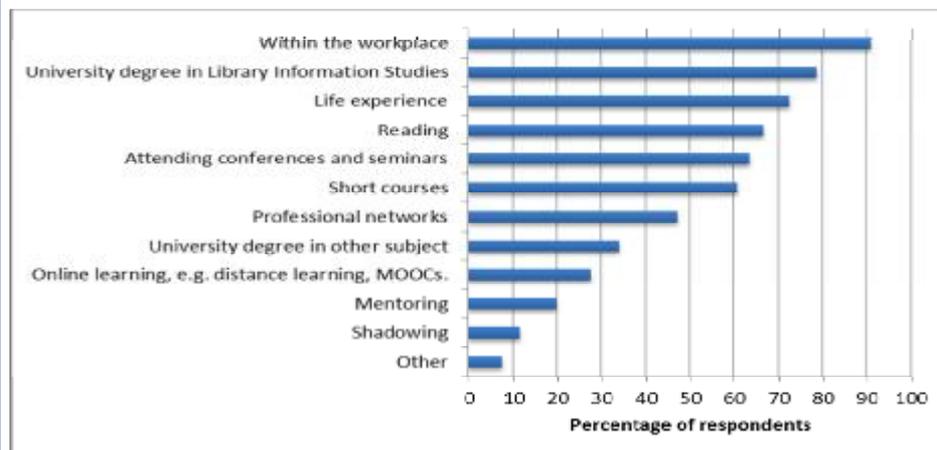


Figure 4. Approaches to skills acquisition from the survey

Within the workplace was the most popular learning approach, following by a degree in library/information studies and life experience. Relatively little use of mentoring, shadowing and online learning was found.

The respondents were keen to keep up-to-date and engage in continuing professional development and valued the support of colleagues, peers, and regional and professional networks. They identified being members of over 160 different library and other professional bodies, many of which provided support, training and events (such as EAHIL).

Respondents engaged in a wide range of development opportunities, both formal and informal, as they were conscious that they needed to continue learning and develop their skills in order to meet the challenges within the profession.

### *Skills development*

The focus group respondents identified that they had ongoing training and development needs, with one respondent commenting, “*I’m still learning now...*” (Participant FG28, Education sector, Switzerland). The focus group participants identified a few skills training needs: advanced database search skills, knowledge of clinical study designs, critical appraisal, marketing, mobile learning and mobile technologies for access to information, positive thinking, research analytics, social media and systematic reviewing. All these skills were mentioned just once apart from systematic reviewing which was identified in two focus groups [F1, F2].

The training needs identified reflect new developments and changing trends:

“*Technology has moved so rapidly...the Internet... and now... web 2.0 sources, social media*” (Participant FG11, Self-employed consultant, England).

Another participant observed:

“*In the job I do now which is systematic reviewing, working on systematic review teams, there’s definitely a trend towards not just searching, but also sifting and appraisal...*” (Participant FG21, Government health organisation, England).

The interviewees felt they had skills development and training needs. Interviewee 7 (Education sector, Ireland) commented, “*I’ll always have training needs*”. Training needs identified by interviewees included authoring skills, research data management skills [2 interviewees], research methods skills, language skills, and technology skills [2 interviewees].

The survey respondents were also asked if there were any areas in which they needed to develop their skills; responses are shown in Figure 5 (multiple options could be chosen). These results also show the influence of new technologies, with m-libraries (use of smartphones and tablets in libraries) being the most frequently selected (45% of respondents), followed by research skills (including evaluation, statistics, etc.), social media, e-learning, and EBLIP (evidence-based library and information practice). The majority of participants selected multiple skills (mean number of skills selected was 5.4, standard deviation of 3.7) showing that most respondents had skills development needs in a number of areas. Only 46 respondents (9%) selected a single skill from the list, with 24 participants selecting over 12 options and one participant selecting all 24 options.

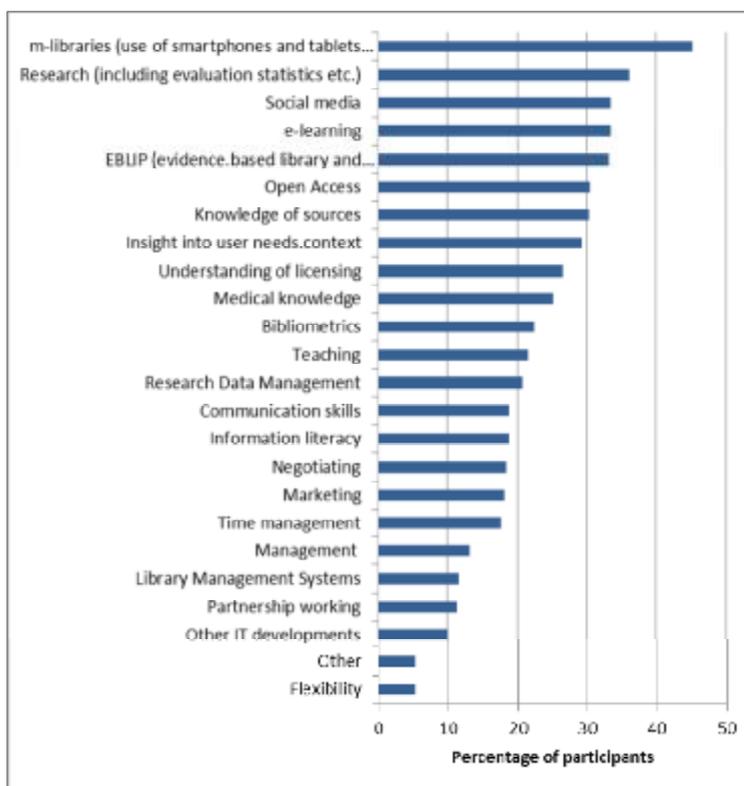


Figure 5 Training needs identified by the survey respondents

### Challenges

There were a broad range of challenges identified throughout the phases of the study. No over-arching themes emerged until the survey results were analysed, in which recurring themes emerged. Budget and funding issues were the most frequently cited challenge, followed by time and workload issues (Figure 6).

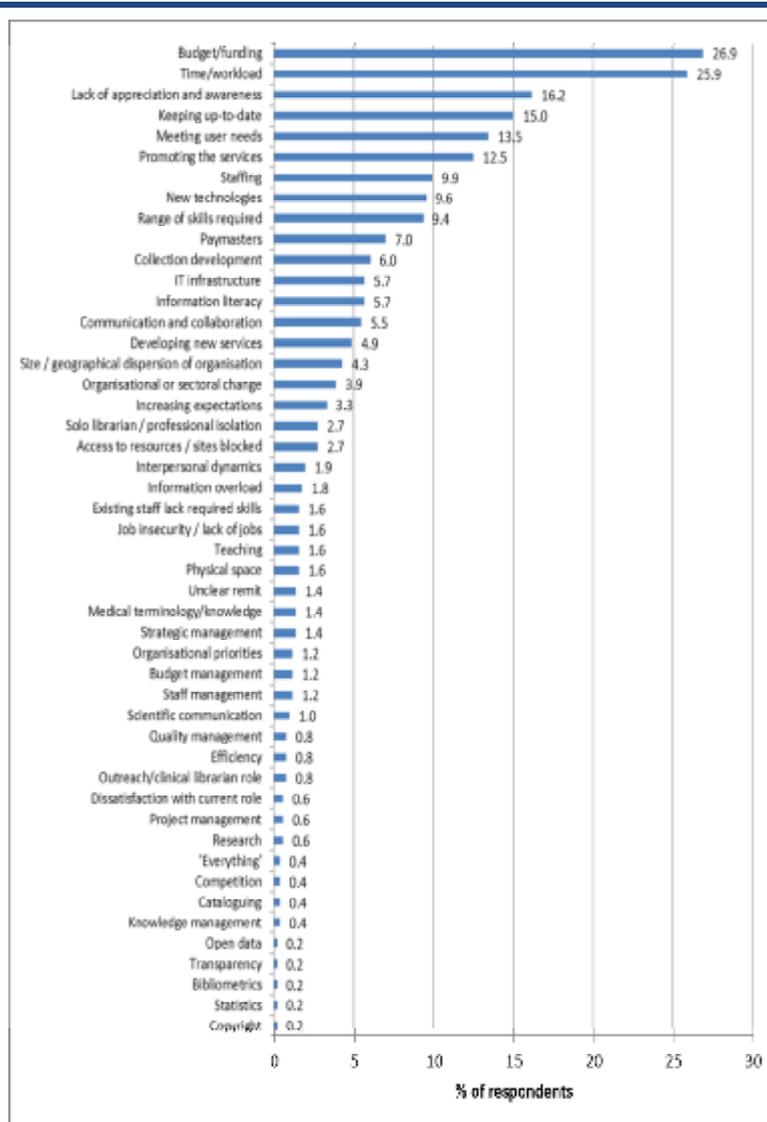


Figure 6. Challenges experienced in the workplace

Budget was the most frequently-mentioned challenge, cited by 138 respondents (27%). This figure is all the more striking in view of the fact that the question was open-ended, with no prompts but only a write-in text box for answers. Thirty-six respondents (7%) specified that budgets were being reduced:

*“Meeting the needs of our customers on an ever dwindling budget and workforce.”*  
 (Respondent #255, State healthcare, UK)

Thirteen referred to the increasing cost of journal subscriptions and other resources:

*“Budget restrictions, Journal costs continually increasing.”* (Respondent #110, State healthcare, England)

Seventeen respondents referred to increasing and/or unrealistic expectations from users. Twelve of these co-occurred with mentions of budget constraints, leading to a feeling of ‘doing more with less’:

*“Doing more with less: 1) Dramatic downsizing over the last decade in library & information personnel; 2) cuts in content/collection budget; 3) increasing size of organization; 4) increasing appetite for information among employees.”*  
 (Respondent #58, Industry, UK)

Time and workload issues were also key challenges, mentioned by 133 respondents (26%). Again, it is striking that so many people mentioned this unprompted.

*“I'm working the job of at least two people, we are under staffed, we don't have enough professional librarians. Also we have no funding for CPD so I have to keep up to date myself, sometimes during my own personal time.”* (Respondent #84, State healthcare, Ireland)

Ten respondents (all of whom were female) mentioned that they were part-time, which led to difficulties in getting all the work done in the time available:

*“I work 3 days per week and in that sense, it is very challenging to get through the amount of work that needs to be done.”* (Respondent #99, Charity/voluntary sector, Ireland)

Fifty-one respondents (10%) cited insufficient staffing. This obviously relates both to budget issues (in that budget cuts may lead to reduced staff numbers) and to time and workload (in that reduced staff numbers will lead to higher workloads for the remaining staff members).

*“Staff shortages in the team due to budget cuts thus putting time pressures on remaining staff.”* (Respondent #278, State healthcare, England)

This logical connection between budget, time/workload and staffing was confirmed by quantitative analysis. Table 8, below, shows the number of co-occurrences of the three categories in respondents' comments:

Table 8: Co-occurrence of key challenges from the survey responses

		No. of co-occurrences		
		Budget	Time/workload	Staffing
No. of co-occurrences	Budget	138	33	34
	Time/workload	33	133	20
	Staffing	34	20	51

### *Contributions to healthcare*

Participants in Focus Groups 1 and 3 felt that their main contribution to healthcare was through their evidence-based practice:

*“...you know, interrogate the evidence, you know, critical appraisal, interrogate the evidence...”* (Participant FG23, Education sector, England)

Focus Group 6 participants discussed the problem of demonstrating impact. They felt that they often impacted on healthcare through the evidence found in their literature searches, which contributed towards “*saving lives*” (Participant FG13, Charity/voluntary sector, England) but acknowledged that it could be difficult to gather evidence to prove this:

*“It's very difficult to know how much... how much of an impact...”* (Participant FG11, Self-employed consultant, England).

The contribution made by the interviewees was quite diverse with no themes present. When survey respondents were asked to give an example of a time when they had made a critical contribution to healthcare, 379 respondents gave qualitative responses. The contributions identified in the data could be categorised into the following five skills areas, with skills 1, 2 and 4 being library and information specific skills, and 3 and 5

being generic skills:

1. Contributions made by their information literacy skills development, training, or teaching. For example, *“By teaching students EBM and embedding it into their day to day practice as tomorrow’s doctors.”* (Respondent #59, State healthcare and Education sectors, UK).
2. Contributions made through search skills, or carrying out literature searches or reviews. For example, *“Providing the evidence required to save a child’s life who was in A&E”* (Respondent #74, State healthcare, UK).
3. Contribution made by their own research. For example, *“Any time a user of our materials writes to tell us of what a difference having the access to information has made in their professional activities.”* (Respondent #4, International organisation, Switzerland).
4. Contributions made by providing access to resources, collection and evidence. For example, *“Research which identified a better way of implementing an IT system for collecting data.”* (Respondent #320, State healthcare, UK).
5. Contributions made through management. For example, *“Developing a rapid search and synthesis service for use within the clinical area – specifically tested in an ICU.”* (Respondent #12, State healthcare, Scotland).

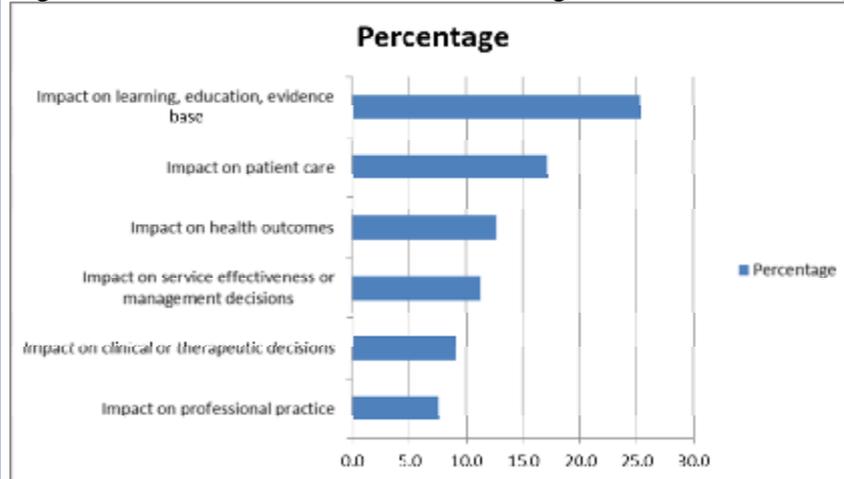
Professional skills such as evidence-based skills were identified as being critically important when making a contribution to healthcare (Table 9). The majority of respondents felt that their critical contribution to healthcare came from their ability to carry out literature searches and reviews of the literature (235 respondents, or 45.8%). This was followed by providing access to resources, collections or evidence through managed collections or services (80, 15.6%), and then through information literacy skills development, or other training or teaching support given to users (38, 7.4%).

Table 9. Skills used most when contributing to healthcare impact

<i>Contribution made by specific skills</i>	<i>Number</i>	<i>Percentage*</i>
Research	10	1.9%
Management	16	3.1%
Information Literacy skills development, training or teaching	38	7.4%
Providing access to resources, collections and evidence	80	15.6%
Literature searching or reviews	235	45.8%
No response	134	26.1%
* Percentages are relative to all 513 respondents of survey		

To a lesser degree, there were contributions made through the application of the generic skills of management (16 respondents, 3.1%) and research (10, 1.9%). The contributions identified were categorised according to the impact they had (Figure 7).

Figure 7. Contributions to healthcare categorised from the survey



### Summary

The results of the focus groups, interviews and survey present an overview of the nature health library and information profession, the challenges experienced, and the contributions made to healthcare.

### Discussion

The focus groups, interviews and survey have generated a large volume of quantitative and qualitative data. However, statistical and thematic analysis has enabled the identification of some areas of particular interest.

Perhaps the most immediately obvious finding is the broad variety of roles performed and skills possessed by health information professionals – both across the sectors and also within the context of individuals' jobs. Comments on this theme recurred throughout the data, not only in response to the questions which specifically addressed roles and skills, but also in discussions of challenges and future training needs. This reflects the diversity of professional roles captured by Brettle and Urquhart in their overview of the sector (10). Research participants also served a diverse range of users, although it should be noted that relatively few respondents provided information directly to patients or the general public. This raises a question as to who is providing health information to these substantial user groups, particularly at a time when increasing attention is being paid to patient choice and empowerment through information (11-13).

The skills used most frequently among survey respondents were LIS-specific skills such as 'knowledge of sources' and 'information literacy/search skills'. These were selected by a large majority of respondents (88% and 85% respectively). The importance of 'traditional' LIS skills (albeit in a rapidly-changing context) was reflected in participants' job titles, the majority of which included the words 'library' or 'librarian'. In addition to the LIS-specific skills, participants also had skills in other specialist areas, such as technical skills and pedagogical skills; management skills; and 'soft skills' or personal qualities. This broadly corresponds to Corral's three-tier competency framework for LIS professionals, which places LIS skills and technical skills at the core, supplemented by management skills and more generic personal and interpersonal skills (14, p. 35)

However, it was interesting to note the difference in responses between the qualitative focus group and interview comments and the quantitative survey data, where respondents were asked to tick boxes. In the latter, as noted above, LIS-specific skills such as 'knowledge of sources' and 'information literacy/search skills' were the most frequently-used skills, selected by a large majority of respondents. In contrast, in the

focus groups and interviews participants found the 'skills' question quite challenging, often leaving a lengthy pause before answering and then usually mentioning soft skills first. Interviewee 3 (Public health organisation, Wales) commented that: "...you forget to some extent that you've got that core library skills, and that information, and your values, ....that becomes inherent, it's, it's sort of part of what you do, you don't think about it." LIS-specific skills, which in the Corral model (14) are seen as the core of the information professional's competencies, were usually mentioned only as an afterthought or in response to a prompt. We hypothesise that participants found it difficult to clearly identify their professional skills and knowledge, and/or that they saw these as a 'given'.

The majority of participants had acquired their skills through a combination of library school and on-the-job learning. Focus group discussions suggested that the library degree was seen as a necessary foundation on which to build, while learning in the workplace developed skills and knowledge specifically relating to the health information context. Comments reflecting participants' commitment to continuing professional development recurred throughout the data and a broad range of training needs was identified, reflecting areas of change within the profession as well as the desire to further hone existing skills such as literature searching. These findings support Petrinic and Urquhart's observation that continuing professional development in more specialist areas is necessary for health librarians as a supplement to the LIS degree, particularly in a rapidly changing context (15).

The complex and changing environment was another key theme emerging from the data. A number of different variables play a role here, perhaps most notably the issue of tight and ever-decreasing budgets, cited as a challenge by a substantial number of respondents. The fast-moving nature of technology also posed a challenge, and specific areas such as m-libraries, social media and e-learning fell among the most frequently-mentioned training needs. Other challenges and changes discussed by participants included developments in the medical field, which by its nature is always changing; changes in modes of information provision; new search tools; and sector changes in both the higher education and healthcare sectors. These findings have implications for LIS education and continuing professional development, recalling Cleveland's assertion that "*education for health information professionals must be based on a solid foundation of the changing paradigms and trends in health care and health information as well as technological advances*" (16, p.68).

Other challenges mentioned by a substantial number of participants included a lack of awareness and appreciation from management or colleagues, and the related challenge of promoting the service, which has been identified as an important aspect of service delivery in the health information sector (17-19). Ashcroft discusses the need for marketing skills in the wider LIS sector:

*"Recent years have witnessed a change in job markets and working environments, with short-term contracts being more prevalent, and company 'downsizing' providing a challenge to individual departments to justify their existence. In light of this, another aspect of marketing that information professionals should consider is self-promotion."* (20, p. 84).

In the light of this, it is interesting to consider participants' struggle to identify their core LIS skills when asked in the focus groups and interviews about the key skills required to do their jobs. This suggests that they may also be failing to adequately express the value added by their specialist skills in other contexts within the workplace.

Despite this, the majority of participants were able to give one or more examples of a time when they felt they had made a critical contribution to healthcare. These examples

included both indirect impacts through teaching or contributing to the evidence base, and more direct impacts on health outcomes, clinical decisions and patient care. Moreover, thematic analysis of the responses showed that these contributions drew heavily on traditional LIS skills such as literature searching. These findings are in line with previous research: Brettle, Hulme and Ormandy (21, 22) found that both mediated searches and information skills training were rated as useful by health library users, while systematic reviews (23, 24) and a randomised controlled trial (25) of library and information services in healthcare contexts have identified impacts on patient care and clinical decision-making, among other measures.

## **Conclusions**

This mixed-methods research project has provided an overview of the roles, skills and training needs of health information professionals across Europe and beyond, as well as the challenges facing these professionals and their critical contributions to healthcare.

Roles and skills were diverse and wide-ranging. The majority of respondents were in professional posts and primarily carried out evidence-based roles such as literature searching and teaching/training. Many had management responsibilities. The skills used to carry out these tasks could similarly be divided into LIS-specific skills; other specialist skills such as technical and pedagogical skills; management skills; and soft skills or personal qualities. However, it was notable in the focus groups and interviews that participants tended not to mention their LIS-specific skills until prompted, suggesting that they take these skills for granted and/or struggle to express their 'unique selling point'.

Skills were acquired through a range of methods, primarily on-the-job learning and LIS degrees. The library school degree was seen as a foundation, with continuing professional development and workplace experience providing more specialist skills specific to the health information context. Participants showed a strong commitment to CPD and identified a range of training needs, many of which related to new technologies.

Participants faced a range of challenges in their jobs, with the most frequently-mentioned challenges relating to budget, time/workload and a lack of awareness and appreciation of the information professional's role from other staff. Marketing was also a challenge, and participants' failure to identify and value their LIS-specific skills may suggest that there is room for improvement in terms of self-marketing.

However, the majority of participants were able to identify ways in which they made critical contributions to healthcare. Participants had an indirect impact through teaching and contributing to the evidence base, but also made more direct contributions which affected health outcomes, clinical decision-making and patient care.

The findings of the study will enable organisations such as EAHIL to further support the profession in a targeted way, and will also be of use to library schools and other training providers in meeting the development needs of (future) health information professionals. They also contribute to the evidence base on the value and impact of health information provision and can be used to advocate the work of information professionals within the sector.

## **REFERENCES**

- (1) Urquhart C, Bakker S. The changing context of health for library and information professionals. In: Brettle A, Urquhart C, editors. Changing roles and contexts for health library and information professionals. London: Facet; 2011. p. 3-14.
- (2) Fanner D, Urquhart C. Bibliotherapy for mental health service users Part 1: a

- systematic review. *Health Info Libr J.* 2008 Dec;25(4):237-52.
- (3) Fanner D, Urquhart C. Bibliotherapy for mental health service users Part 2: a survey of psychiatric libraries in the UK. *Health Info Libr J.* 2009 Jun;26(2):109-17.
  - (4) Brewster L, Sen B, Cox A. Legitimising bibliotherapy: evidence-based discourses in healthcare. *J Doc.* 2012 Mar;68(2):185-205.
  - (5) Lavis JN, Oxman ADO, Grimshaw J, Johansen M, Boyko JA, Lewin S, et al. SUPPORT Tools for evidence-informed health Policymaking (STP) 7: finding systematic reviews. *Health Res Policy Syst.* 2009;7 Suppl 1:S7.
  - (6) Chambers D, Wilson PW, Thompson CA, Hanbury A, Farley K, Light K. Maximizing the impact of systematic reviews in health care decision making: a systematic scoping review of knowledge-translation resources. *Milbank Q.* 2011 Mar;89(1):131-56.
  - (7) Tsalapatani E, Kalogeraki E. Training needs of health science librarians in Greece. *J EAHIL.* 2010 Nov;6(4):10-14.
  - (8) Robu I, Bakker S. The EAHIL register of professional competences. *J EAHIL.* 2010 Nov;6(4):15-16.
  - (9) Health Sciences Libraries Group [Internet]. Dublin: Library Association of Ireland Health Sciences Libraries Group; 2010. Press release, Health libraries report is a call to action; 2012 Jan 26 [cited 2014 Apr 13]. Available from: [http://www.hslg.ie/wp-content/uploads/2012/01/SHELLI\\_PRESS-RELEASE.pdf](http://www.hslg.ie/wp-content/uploads/2012/01/SHELLI_PRESS-RELEASE.pdf)
  - (10) Brettle A, Urquhart C, editors. Changing roles and contexts for health library and information professionals. London: Facet; 2011.
  - (11) NHS Choices: your health, your choices [Internet]. London: Department of Health; c2013. About us; [reviewed 2013 Aug 30; cited 2014 Apr 14]. Available from: <http://www.nhs.uk/aboutNHSChoices/aboutnhschoices/Aboutus/Pages/Introduction.aspx>
  - (12) Househ M, Borycki E, Kushniruk A. Empowering patients through social media: the benefits and challenges. *Health Informatics J.* 2014 Mar;20(1):50-58.
  - (13) Huber JT, Shapiro RM, Burke HJ, Palmer A. Enhancing the care navigation model: potential roles for health sciences librarians. *J Med Libr Assoc.* 2014 Jan;102(1):55-61.
  - (14) Corrall S. Developing models of professional competence to enhance employability in the network world. In: Genoni P, Walton G, editors. Continuing professional development – Preparing for new roles in libraries: a voyage of discovery. Sixth World Conference on Continuing Professional Development and Workplace Learning for the Library and Information Professions; 2005 Aug 10-13; Oslo, Norway. München: Saur; 2005 (IFLA Publications, 116). p. 26-40.
  - (15) Petrinic T, Urquhart C. The education and training needs of health librarians – the generalist versus specialist dilemma. *Health Info Libr J.* 2007 Sep;24(3):167-76.
  - (16) Cleveland, AD. Miles to go before we sleep: education, technology and the changing paradigms in health information. *J Med Libr Assoc.* 2011 Jan;99(1):61-9.
  - (17) Sen B. Market orientation: a concept for health libraries. *Health Info Libr J.* 2006 Mar;23(1):23-31.
  - (18) Bridges J. Marketing the hospital library. *Med Ref Serv Q.* 2005 Oct;24(3):81-92.
  - (19) Allen CW, Allen BH. Outreach marketing in a community health library: creating and delivering value through target marketing. *J Hosp Librariansh.* 2007 Jan;7(2):17-29.
  - (20) Ashcroft L. Developing competencies, critical analysis and personal transferable skills in future information professionals. *Libr Rev.* 2004 Feb;53(2):82-8.
  - (21) Brettle A, Hulme C, Ormandy P. The costs and effectiveness of information-

- skills training and mediated searching: quantitative results from the EMPIRIC project. *Health Info Libr J.* 2006 Dec;23(4):239-47.
- (22) Brettle A, Hulme C, Ormandy P. Effectiveness of information skills training and mediated searching: qualitative results from the EMPIRIC project. *Health Info Libr J.* 2007 Mar;24(1):24-33.
- (23) Weightman AL, Williamson J. The value and impact of information provided through library services for patient care: a systematic review. *Health Info Libr J.* 2005 Mar;22(1):4-25.
- (24) Brettle A, Maden-Jenkins M, Anderson L, McNally R, Pratchett T, Tancock J, et al. Evaluating clinical librarian services: a systematic review. *Health Info Libr J.* 2011 Mar;28(1):3-22.
- (25) Mulvaney SA, Bickman L, Giuse NB, Lambert EW, Sathe NA, Jerome RN. A randomized effectiveness trial of a Clinical Informatics Consult Service: impact on evidence-based decision-making and knowledge implementation. *J Am Med Inform Assoc.* 2008 Mar/Apr;15(2):203-11.