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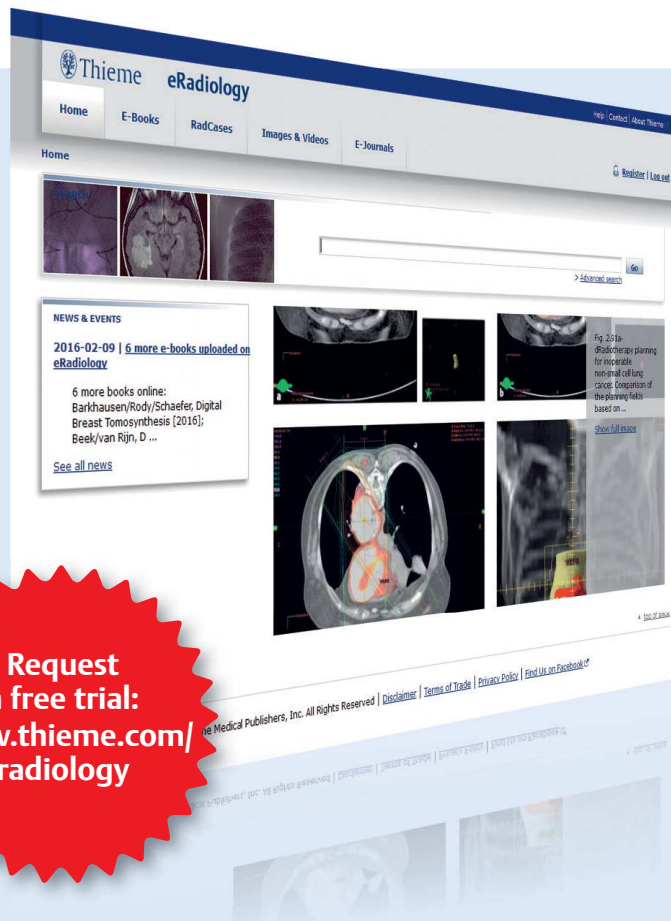
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# Journal of the European Association for Health Information and Libraries

Vol. 12 No. 4 December 2016

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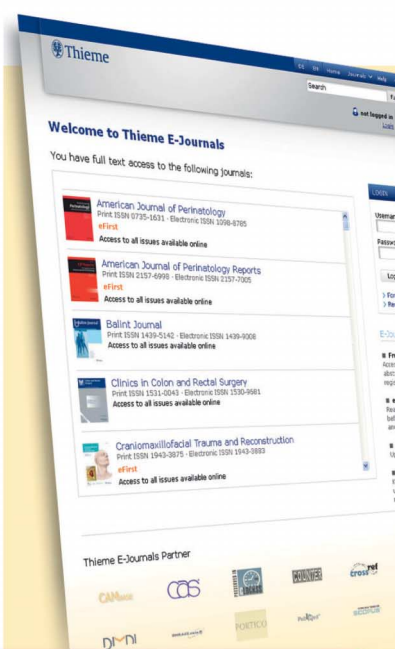
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## EDITORIAL

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### Federica Napolitani

Editor in Chief

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Dear EAHIL friends,

My Editorial this time will be really short, since I wish to leave space to Gerhard Bissels. He is the guest editor of the outstanding monographic section on “Education and training for medical librarians” in the following pages. I believe that education is the key to knowledge, continuing education to progress, and that teaching and learning ensure a good professional achievement. Maybe this has always been true, but now that things are changing so rapidly a “Continuing Professional Development is more important than ever” as Gerhard explains in his Preface presenting all the excellent papers in this issue.

Both the current and this coming year mark an important anniversary for EAHIL which moved its first steps 30 years ago. Marshall Dozier, in her Letter from the President, recalls the First European Conference of Medical Libraries (Belgium, 1986) and introduces two passionate memories from Gabriella Poppi and Valentina Comba. More memories will be hopefully published in the future issues. This is the last Letter written by Marshall as President, since she has completed her terms. I am sure every EAHIL member will join me in saying: Thank you Marshall! and Welcome Maurella! Maurella Della Seta, Director of the Documentation Centre at the Italian National Institute of Health will be our new President next year!

Another year is ending. A new one is around the corner. When I was a child this was a time of great excitement and New Year's resolutions. Everyone has his/her own. Mine, as Editor in chief of *JEAHIL*, is that this journal will continue to grow and serve as a positive reference point for all EAHIL members. The *JEAHIL* Editorial Board is confident that in 2017 the journal will be ready to use a new publishing system and be able to offer more services. I wish to thank each member of the Editorial Board for their incredible support and their constant work for the journal. A big thank you goes also to all the excellent column editors, old and new, that keep us constantly updated and to all of you readers!

### **2017 JEAHIL issues**

<b>Issue Theme</b>	<b>Deadline</b>
1 No-theme	5 February
2 Open science 2: Research data (edited by F. Brown and K. Larmo)	5 May
3 Memories from Dublin ICML+EAHIL Workshop	5 August
4 Providing access through national and consortia licensing (edited by G. Bissels)	5 November

If you wish to send a paper for one these issues, please contact me. I would be delighted to hear from you.

*Happy anniversary EAHIL!*

*Happy New Year to everyone!*

*Federica*

## MONOGRAPHIC SECTION

### Education and training for medical librarians

*Edited by*

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# Education and training for medical librarians



**Gerhard Bissels**

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Education and Training is an area of steadily growing importance for many professions, including medical librarians. We enter the profession usually through some sort of postgraduate course. And while the skills conveyed in general Library and Information Science programmes remain as relevant to medical librarians as ever, the amount of specialist knowledge we need on top of a general LIS background to meet the growing expectations of our clients, has been increasing constantly. Therefore, we have to ask the question if this subject-specific knowledge could be conveyed through some kind of additional postgraduate qualification in “Health Sciences Librarianship”.

But no matter how well the initial training has prepared a new entrant to the profession for the needs of research, education and clinical practice – with Evidence Based Medicine the role of the library, and its staff, evolves constantly, and librarians will only be able to deliver relevant and adequate services if they develop their own skills and knowledge in line with our clients’ expectations. Continuing Professional Development (CPD) is, therefore, more important than ever.

Betsy Anagnostelis, Rudolf Mumenthaler and I have been discussing education of medical librarians privately since the Edinburgh EAHIL workshop, and we decided to use the annual medical librarians’ conference which the Swiss Academy of Medical Sciences organises<sup>1</sup>, to involve others in the debate. This issue of *JEAHIL* brings some papers developed from the conference papers on the topic together, and some others that expand selected aspects. Maria-Inti Metzendorf, Information Specialist at the Cochrane Metabolic and Endocrine Disorders Group at Düsseldorf University, describes librarians’ contribution to research. Heidrun Janka, Subject Specialist Medicine & Life Sciences at Basel University, gives an overview of the wide-ranging involvement of the medical librarian in research, teaching and clinical practice in Basel. Tomas Allen, Librarian at the World Health Organisation in Geneva, complements these two papers with his overview of medical library services in Low and Middle Income Countries. The next papers deal with methods of preparing librarians for their role: Betsy Anagnostelis, Librarian at the Royal Free Hospital Medical School Library (UCL), describes the competencies framework and training and mentoring programme her library has developed to equip new team members with the skills they need. Rudolf Mumenthaler, professor for Library Science at HTW Chur, presents his thoughts about a postgrad programme in “Medical Librarianship”, and explains the on-line survey of medical librarians that his school, with funding from the Swiss Academy of Medical Sciences, is running at the time of writing, the results of

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<sup>1</sup> Conference “Medical Librarians Matter for Evidence Based Medicine: 4th National Gathering (Meet&Greet) of Swiss Medical Librarians”, 2016 Sep 9. <http://www.samw.ch/de/Portraet/Kommissionen/Biomedizinische-Bibliotheken/Tagungen-Meet-Greet.html>

which he will publish in the next issue of this journal. Suzanne Bakker, former EAHIL President and retired librarian of the Netherlands Cancer Institute, adds the historical dimension, reminding us of the development of the profession and the corresponding EAHIL training programmes. And, finally, Claire Powell, Collection Development Librarian for Medicine at Bern University Library, kindly minuted the panel discussion for us which was held at the conference of the Swiss Academy of Medical Sciences in Bern.

In my personal view, our profession now requires such a high level of specialist skills that education and training need more formalised structures. We can look forward to the publication of the on-line survey Rudolf Mumenthaler and his team are currently carrying out. Bern University Library hopes to hold an expert round-table on the topic in Bern before the next EAHIL workshop. And while at least one library school is exploring if a specialist degree in medical librarianship might be viable, as a distance-learning or blended learning programme, an EAHIL working group is launching a pilot programme of webinars. I hope you find the contributions to this issue useful, and I look forward to the next stages of this discussion!

# Why medical information specialists should routinely form part of teams producing high quality systematic reviews – a Cochrane perspective

**Maria-Inti Metzendorf**

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### Abstract

*This article summarizes evidence from recent publications demonstrating that medical information specialists and librarians should routinely form part of teams producing systematic reviews in order to increase value and reduce waste in biomedical research. It additionally describes the involvement and role of the Cochrane Information Specialist during the production of Cochrane reviews.*

**Key words:** librarians; professional role; biomedical research; information storage and retrieval; review literature as topic.

### Introduction

In 2005 we learned from Jessica McGowan, Senior Information Scientist at the Institute of Population Health in Ottawa, and Margaret Sampson, Chief Information Specialist at the Children's Hospital of Eastern Ontario, that systematic reviews (SRs) need systematic searchers and that "expert searchers are an important part of the systematic review team, crucial throughout the review process – from the development of the proposal and research question to publication" (1). While most authors of SRs easily understand why they need to involve a statistician in their publication project, this still does not apply to another important methodologist: the medical information specialist. This article tries to shed light on and provide factual and anecdotal evidence for the continuing necessity of changing this attitude in order to produce better biomedical research.

### Authors of systematic reviews cannot be expected to develop a sound search strategy

Continuously advocating the importance of our profession for the production of sound SRs (2-7) might seem repetitive and even bold to some of us, but – to quote Melissa Rethlefsen, Associate Librarian at Spencer S. Eccles Health Sciences Library, University of Utah – "unfortunately, there

is little reason to suppose that the authors of systematic review articles can be expected to conduct a 'reasonable, peer-reviewed search strategy' " (8) on their own. However, this statement should not be interpreted as a plain reproach, but as an acknowledgement of the fact that a comprehensive literature search is difficult to perform if you lack information retrieval expertise and experience. Therefore, it does not come as a surprise that a growing body of evidence documents that search strategies developed by researchers are sub-optimal and introduce bias (9-15).

In 2015 two well-conducted publications demonstrated that the quality of SRs is improved by including librarians or information specialists in SR teams. Rethlefsen *et al.* (12) showed that the search quality and reporting in SRs still needs improvement and that information specialist involvement correlates with higher quality reported search strategies. It is of particular interest that the 630 SRs which informed the results of this study came exclusively from five high impact journals (Annals of Internal Medicine, BMJ, JAMA, Lancet, and PLOS Medicine) and that four of these journals originally published the PRISMA standards, which also include reporting standards for search strategies. Thus, we can reasonably assume that the situation

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in lower impact journals is even more serious. Jonathan Koffel, Associate Librarian at the Bio-Medical Library of the University of Minnesota, surveyed a broad sample of authors who produced English-language SRs between January 2012 to January 2014 and asked whether and how a librarian was involved and which recommended search methods were used (13). A total of 1560 authors responded and 50% stated that they involved a librarian. Further analysis showed that embedding librarians in SR teams was strongly associated with the utilization of advanced search methods. Despite incessant recommendations of working with an information specialist to improve the quality of search strategies, a recent joint paper by Koffel and Rethlefsen (14) analyzed 272 SRs published in high impact journals of three disciplines (Pediatrics, Surgery and Cardiology) and found that these only involved information specialists in 17% of the cases and that only 13% provided reproducible search strategies for all searched sources.

These articles leave us with the finding that recommendation alone is probably not enough to encourage routine involvement of information specialists in SR production even though apparently it is desperately needed. And while we can assert that a content expert cannot be expected to have the same expertise in confidently conducting a complex search, I believe that sound researchers can be expected to be aware of their own limitations and also of the need to involve an information retrieval expert. But if recommendation alone is not enough, which approaches could foster the meaningful deployment of information specialists' skills? If appealing to the researchers does not have the impact we would like to see, do we need to actively lobby for librarian embedding into the institutions and organs organizing, disseminating, supporting and enabling research?

### **Increasing value and reducing waste in biomedical research**

Starting in January 2014 the Lancet published a critical series of five papers (16) about the current state of biomedical research and how to increase value and reduce waste. In April 2016 the main authors reviewed the impact of the series and asked who was listening and implementing changes (17). Fortunately, our colleague Shona Kirtley, Senior

Research Information Specialist at the EQUATOR Network, noted that the authors had missed to include the biomedical librarians and information specialists as part of the answer (18). She sees our future role beyond the library by being embedded into biomedical research departments and supporting literature searches for the production of SRs as well as providing evidence of research gaps for grant applications. Additionally, she depicts potential for librarian involvement in the editorial processes of biomedical journals, assuring that possible flaws in the search process of manuscripts being submitted to these journals are spotted and scrutinized. And last but not least, she identifies the necessity of medical information specialists being involved during peer review of funding applications in the institutions that receive those proposals, again for scrutinizing the quality of the search that informs these applications. She ends her comment by calling on all stakeholders of biomedical research to recognize and utilize librarians' essential skills so as to increase value and reduce waste. Personally, I am glad to see awareness of our profession so prominently raised and possible future functions specified. Shona Kirtley's suggestions are a step in the right direction.

### **Involving medical information specialists in SRs – a Cochrane perspective**

Having previously summarized publications examining information specialist involvement, I subsequently provide some anecdotal evidence from my daily work as a Cochrane Information Specialist (CIS) for a Cochrane Review Group (CRG).

A Cochrane review (CR) is always preceded by the publication of a protocol, which details the research question, gives information on background and importance of the review question, and explicitly specifies inclusion and exclusion criteria relating to the population/condition and the intervention under evaluation. The protocol also contains the search strategies for all databases to be searched for study identification.

At our CRG we encourage author teams to cooperate with information scientists or librarians who might be available to them locally. During the registration of the review project (this process precedes the publication of the protocol and determines whether the project will be accepted and

supported by the CRG) potential authors are requested to complete a form detailing their expertise and the inclusion of a statistician and information specialist in their team, the latter being rarely the case. As search strategies in the protocol draft submitted for editorial approval are frequently restricted to a Medline search only, and are often poorly designed, all strategies are peer-reviewed by the CIS and in most cases re-developed from scratch for all sources which are mandatory to be searched for CRs. The search strategies are then mutually agreed during communication between the CIS and the contact author.

At this point the CIS' peer review is not confined to the search strategies, but it also comprises a thorough check of the protocol draft, including the research question and inclusion/exclusion criteria. When designing the search strategy, the CIS draws on the information specified in the protocol, and it quickly becomes apparent whether the review question is clearly defined and feasible. Usually this implies communication between the CIS and the author team in order to clarify aspects of the protocol that are unclear or need to be refined further. This is necessary in at least half of the review projects supported by our CRG.

After the protocol is published, and unless the author team involves an information specialist, the search is carried out by the CIS, results are de-duplicated and subsequently sent to the authors for review elaboration. The CIS also documents the search methodology and implements an alert service that runs on Medline (Ovid) using the search strategy developed for the review project. New records added to Medline which are identified by the strategy, are automatically sent to the CR's contact person because we expect our authors to be fully committed to the project and interested in new research related to their review topic. If asked by the authors the CIS also provides information on screening tools and reference management software. The next step during the review production process that actively involves the CIS at our CRG is the assessment of study representation within the review. This happens after the first review draft is submitted for editorial approval. It often presents a challenge for our authors to correctly pull together all information on an included study. It implies

identifying the corresponding trials register record and linking it to all available results of the study (be it as publications or as data from a trials register's results database, such as ClinicalTrials.gov). The CIS routinely checks whether all available information on an included study has been identified and correctly presented in the review. This also comprises checking the numbers detailed in the PRISMA flowchart. Eventually, the CIS performs an update search on all databases. The results of this search are sent to the author team together with the editorial comments for final assessment and incorporation of the newest evidence into the review. Cochrane demands that the search of a CR should not be older than 6-12 months at the time of publication. Given the often long duration of the review's elaboration, conducting an update search is necessary in most cases.

I believe it has become apparent that the CIS is as strongly involved in assuring the systematic elaboration of a Cochrane review as the editors, statisticians and peer-referees who engage in its production. This is the case within Cochrane because we believe that a rigorous search strategy, reference management, and study representation are the absolute foundation for a sound systematic review. One key aspect that ensures the quality for which CRs are well-known is the close collaboration of authors, editors, and methodologists.

## Conclusion

Modesty, in my experience, is widely spread among librarians. And while it can be a virtue in private life I would like to question whether the same applies to professional life. Let me put it in a provocative German way by pointing straight to the problem: Is it possible that our modesty, and our being confined to the library, is one of the many factors hampering biomedical research? Would research not benefit if we were truly embedded right where it is being conducted and shaped: in research teams and departments, funding organizations, journal publishers, and ethics committees?

If you still feel uncomfortable championing our profession, I invite you to consider a specific type of bias that was included in the handout by Jon Eldredge, Evidence-Based and Translational Sciences Collaboration Coordinator at the

University of New Mexico, during EAHIL's 2013 Workshop in Stockholm: "Authority: Differing to an expert or other authority disproportionate to the extent of the expertise of the range of his or her authority. Example: Believing that an expert mathematician also has expertise in literature." Most of us work for an institution that fosters research and we are all surrounded by skilled researchers and content experts. Let us help them become even better and contribute to producing higher quality interdisciplinary biomedical research by putting our profession in the place where it belongs: at the heart of research.

In the future I sincerely wish to see more author teams applying for the elaboration of a Cochrane review which routinely include an information specialist as part of their team. It would be a good indicator of excellence.

*Submitted on invitation.  
Accepted on 14 November 2016.*

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# Library support needs of the Medical Faculty at the University of Basel and the University Hospital

Heidrun Janka

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### Abstract

*At the University of Basel, the Faculty of Medicine and Faculty of Science together represent about 60% of students. In recent years, in particular the Life Sciences have expanded and diversified to a great extent. Close cooperation is fostered between University departments, University spin-offs, the University Hospital, local biomedical institutes and pharmaceutical companies. The complex research landscape in Basel requires a diversity of library services to meet the information needs of scientists and clinicians. An increasing demand for extensive advice on complex literature searches can be observed. We therefore substantially expanded our public training programme. ILT curricula were further strengthened. In addition, we intend to implement a new service for “systematic literature searching” to support our medical researchers and clinicians.*

**Key words:** medical libraries; library services; information literacy; professional competence; evidence-based medicine.

### Introduction

The University of Basel is situated on the Rhine bend, where Switzerland, France and Germany meet. Founded in 1460, it is the oldest university in Switzerland. The first written evidence of the University Library dates from the year 1471. Since 1996 the university has been self-governed while remaining under the jurisdiction of the two cantons of Basel-Stadt (city) and Basel-Land (country). As a full university with seven faculties, it covers a wide spectrum of academic disciplines in which currently around 13,000 students are enrolled. The Faculty of Medicine has a long tradition in Basel, it is one of the four founding faculties. Famous anatomists and physicians have taught and lectured here since the 16th century, including Andreas Vesalius and Paracelsus. Today, the Faculty of Medicine and Faculty of Science together represent about 60% of the students. In recent times, in particular the Life Sciences have expanded and diversified to a great extent. They have been designated as a main strategic focal area at the University of Basel, focusing on molecular and biomedical research, stem cell and cancer research, neurosciences, infection biology, systems biology, clinical medicine,

nanosciences and pharmaceutical science. In these fields, basic research is well connected with biomedical applications. Therefore, close cooperation is fostered between university departments and local commercial partners, resulting in an extensive network of biomedical and pharmaceutical companies, hospitals, university spin-offs, and other research institutes. This network provides very good conditions for interdisciplinary research and exchange.

The complex research landscape in biomedicine in Basel requires a diversity of library services to meet the information needs of scientists and clinicians. In 1978, the medical library was founded as a subsidiary of the university library on the campus of the university hospital and the Department of Biomedicine (DBM). This central location of the medical library, “embedded” on campus, was very advantageous for direct contact and exchange with our library users. Assistance with literature searches in medical databases and the library catalogue could mostly be provided immediately, whenever medical students or clinical doctors came to the library to borrow materials or to photocopy articles. Access to important information sources in those days was

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often limited to the premises of the medical library – nowadays, of course, e-resources are available campus-wide. The library has always been sought for its information services, resulting in substantial footfall.

In 2013 the medical library had to move off-campus to a location in the centre of town due to the urgent expansion needs of the Department of Biomedicine and their plans to build new labs. While this decision was regrettable in many respects for the medical library and its users, the general lack of space on campus made this decision unavoidable. The library's new location in town, however, is considered only a preliminary solution, as in the long run a new library and learning centre for medicine, the pharmaceutical and the life sciences will be established on the grounds of the new Life Sciences campus that is being developed. While the medical students and students of related disciplines followed the library to its new place without hesitation, visits from clinicians, nursing staff and medical researchers however, became more rare. One explanation may be the larger distance to the hospital and university campus, but the other certainly is the considerable increase of e-journals, e-books, databases and other electronic information resources available in the university network. Despite the scarcer presence of clinicians in the medical library, we observe an increasing demand for extensive advice on complex literature searches via email and telephone.

### **Public programme for information literacy teaching (ILT)**

It became obvious that we needed to reform and expand our training programme and enquiry services to become more visible at the new location, and to meet a broad range of information needs from our clients. First, we decided to interview different target groups about their requirements and interests. Who is in need of dedicated training sessions for medical databases, trial registers and other medical information sources? The subject librarian for Medicine and Life Sciences, who is already involved in various curricular courses, frequently received requests for mediated literature searches and the evaluation of search strategies from different target groups:

- students of Medicine, Nursing Science, Pharmaceutical Sciences and the Life Sciences

(BA/MA);

- PhD students;
- Post-Doctorate candidates;
- medical scientists, assistant professors;
- medical doctors, physicians, clinicians, study nurses;
- nurses, physiotherapists and allied health professionals;
- members of the public.

Meetings and interviews with representatives of the different target groups were helpful to categorise the knowledge levels in medical information literacy and familiarity with databases and IT in general. Whereas some of our clients just wish to "refresh" and update their database search skills and therefore attend a basic or advanced training course, others (especially PhD or Post-Doc candidates, and clinical researchers) have very special interests, focused on a clinical research question. For the latter, it is necessary to conduct in-depth, systematic literature searches in individual sessions that need to be well prepared beforehand.

In order to tailor an attractive programme for different target groups, it is essential to have well-trained instructors – information professionals specialising in Medicine and the Life Sciences. However, most institutions have only one or two subject specialists. Usually they already have a broad spectrum of tasks as collection managers in their disciplines and are frequently involved in teaching. The flood of information requests from students, researchers and hospital staff is, therefore, a big challenge for medical librarians and their institutions, especially when they are short-staffed. Although some Swiss university libraries (Zurich, Lausanne, Berne and Basel) are currently making an effort to strengthen the scientific library staff in the Health Sciences, they are facing difficulties due to limited staff resources or even recruitment freezes. In a first step, a training programme focusing on the main medical databases (Medline, Cochrane Library, Embase) was implemented between 2013 and 2016. It is addressed to students of the Health Sciences, scientists, clinicians, nurses, Allied Health Professionals, as well as the general public. The training courses take place several times a year and they are offered to different target groups and performance levels, for beginners and advanced users. The public training programme is continually

being expanded and now also includes e.g. reference management courses, bibliometric methods, open access publishing or research data management. The schedule is published on the university's website for advanced education, on the website of the university library and in the intranet of the university hospital. However, the visibility of the advanced training programme must still be improved, as the websites are not regularly consulted by all of our clients. Direct mailings are not approved by many University departments and the university hospital. In addition to our public training programme, offers for individual systematic literature searches must be substantially increased in the near future.

### **Information Literacy Project in Switzerland**

Between the years 2009 and 2011 a project of the Swiss Universities Conference (Suc-P2) called "Information Literacy at Swiss Universities" was implemented within the framework of the larger nationwide initiative E-lib.ch (Electronic Library Switzerland). The joint project of several universities aimed to support professionals of the Swiss university libraries in their work to promote information literacy and to create a professional network. For this purpose a new platform was implemented to formulate the Swiss standards for information literacy and to introduce different IL models and learning objectives for different target groups. The platform also serves as a repository for ILT materials. They can be accessed under: <http://www.informationskompetenz.ch>

The main objectives in scholarly education were to introduce ILT campus-wide, to integrate ILT into the curricula, to use modern technology for effective instructions, and to focus on problem-based lessons that can be applied to coursework and professional settings. Standards for learning objectives and assessments have been introduced and performance levels were defined for different target groups: for beginners (skills for first year students, bachelor), for advanced groups (skills for students at transition from bachelor to masters) and for experts (skills for scientific research).

Nowadays, information literacy courses in Medicine are well established in medical curricula in Switzerland (1) and in many other European countries, e.g. (2-6). Libraries have turned into "Teaching Libraries" (7) and there are numerous

best practice examples of information literacy instructions at medical libraries (8). In the Health Sciences the importance of information literacy has been recognised early, so efforts to integrate ILT courses into curricula were already made a long time before the Swiss nationwide project was initiated.

### **Information literacy - why is it such an important issue in the health sciences?**

There are many reasons, i.e. the very high publication rates and strong increase of biomedical information as well as the diversification of information sources. New platforms spring up like mushrooms, citation or full-text databases, clinical knowledge bases, point-of care medical resources, search engines etc. Medical students need to distinguish trustworthy, evidence-based and valid information, available in high-quality medical databases, from other information they find e.g. in a quick Google search. These are strong arguments for the needs of professional guidance and critical evaluation of these information sources.

### **ILT curriculum development**

In the early 2000s the university library and the medical faculty in Basel reached out for a collaboration in ILT curriculum development. A lecture on "Information retrieval" in conjunction with computer-based training courses for the first year BA students was soon implemented. Learning objectives for first year medical students encompass the knowledge of all relevant medical information sources, the different publication types, the definition of a clinical question and its translation into a search question for a database, the design of search strategies adjusted to different information sources, the use of different search tools and techniques to limit and specify searches, and the knowledge on how to get access to full-texts from bibliographic references. In 2014 the curriculum for BA Medicine was reformed and information literacy strengthened and complemented by an obligatory self-paced online certificate.

For the 3rd year BA medical students a lecture on EBM-based literature search and accompanying computer-based courses were implemented. They focus on formulating clinical research questions in the PICO format, on the systematic search for publications with best evidence (guidelines,

systematic reviews, meta-analyses, RCTs) and the critical appraisal according to the principles of Evidence-Based Medicine. Additional courses are offered for students in preparation of their master theses in a so-called “Month of Science” where all critical skills for the preparation of the thesis are treated, i.e. scientific writing, citing literature correctly, systematic literature searching and reference management courses with EndNote.

Another important issue is the creation of new learning environments in the health sciences. E-learning and e-assessment are on the rise and form an integral part of ILT curricula. A mix of lectures, hands-on courses, e-learning and e-tutorials will be offered, following the concept of “Blended learning”. Learning content is offered in different forms and students may choose what seems most appropriate for them. Blended Learning corresponds to the different learning habits of students and is therefore more flexible. At the University of Zurich already in 2006 an e-learning module for knowledge transfer was successfully introduced into the medical curriculum (1). In Basel, an e-tutorial on advanced systematic literature search is currently in preparation.

### **Special literature search courses for scientists**

A special literature search seminar for researchers in biomedicine was developed a couple of years ago. It takes place three times a year at different universities in Switzerland (Basel, Zurich and Lausanne) in cooperation between scientific librarians from the university libraries in Zurich, Basel, Lausanne and the ETH library. They developed a learning module for 3Rs searches, i.e. to find alternative methods for animal testing, according to the principles of the 3Rs of animal use in alternative test method development: Replacement, Reduction and Refinement. This literature search seminar is part of the larger “LTK2-Module” offered by the Institute of Laboratory Animal Science at the University of Zurich and it is mandatory for all directors in animal experimentation.

During the past years, the advanced study programme expanded at the University of Basel and quite a few postgraduate Master degree courses were implemented in the Health Sciences, e.g.

Master of Public Health, Epidemiology, Insurance Medicine, International Health, Functional Kinetic Science, Medicines Development, and Spiritual Care. As a result, there is an increasing demand for ILT in the new health care disciplines. Medical scientists and clinical researchers enrolled in the advanced study programme often turn to us when they need assistance in systematic literature searches for their research topics. Therefore we need to increase target-group-specific ILT programs for advanced study groups. Individual literature search sessions are always very effective for our clients but time-consuming for the scientific library staff, as each research topic has to be well prepared before each meeting. Recently requirements for the search protocols became more stringent from the medical faculty as well as from publishers. Search protocols have to be much more detailed and comprehensive, the search methodology has become an important issue. Every single step of a search in a medical database, in a trials register or in grey literature sources needs to be accurately documented to make the search strategy transparent and reproducible.

### **Systematic literature searching - library support for Evidence Based Medicine**

PhD and Post-Doc candidates and medical scientists require more in-depth searches for their research projects in different medical information sources (trial registers, main databases, conference proceedings, grey literature) than other clients, especially when they are working on a systematic review or a meta-analysis. Their aim is to find not only the main published articles on a research subject or clinical question but every single published work related to the question. This requires advanced search skills and a broad overview of the relevant information sources. Clinicians, on the other hand, need to search for literature for their daily work to keep up-to-date with their medical specialty and to find the best evidence available for the treatment of their patients. Evaluating the abundance of information resources for their value and evidence often exceeds the limited time available to clinicians and researchers. Therefore, the ability of librarians to find evidence to address distinct clinical problems becomes more essential (9). A tight cooperation with medical librarians and information specialists therefore seems a very

reasonable and efficient way to select the trustworthy, peer-reviewed and evidence-based information resources for daily clinical practice, as has been proven in many reports. Cobus (10) points out that a collaborative partnership between Public Health educators and librarians can help integrate core competencies and improve Public Health education. According to Dorsch & Perry (11), EBM instruction is an interest shared between medical educators and medical librarians, and co-authorship between the groups and distribution of literature seems a very productive collaboration. Controlled studies measuring the impact of cross-disciplinary efforts have signalled a continuing progress in EBM instruction.

Another essential task is to get acquainted with the various search tools offered in medical databases and platforms, i.e. to make appropriate use of controlled vocabularies (e.g. MeSH, Emtree, CINAHL headings), textword search and search filters. Fortunately, standards for search methodology and search strategies in medical information sources have been introduced along with the growth and acceptance of EBM. The practice of EBM means integrating individual clinical expertise with the best available external clinical evidence from systematic research. It can affect safety by providing a direct link between the medical literature and patient care (9). The worldwide distributed Cochrane Centres for Evidence-Based Medicine and the Cochrane Review Groups (CRG) have defined quality standards for literature search in order to safeguard and distribute empirically significant, highly qualified medical information. These standards are publicly available, e.g. in the Cochrane Handbook for Systematic Reviews of Interventions, chapter 6: searching for studies (12). A main task of the Cochrane Review Groups is to organise medical research information in a systematic way to facilitate the choices that health professionals and policy makers face in health interventions according to the principles of EBM. The CRGs and collaborators conduct systematic reviews from randomized controlled trials of healthcare interventions and diagnostic tests according to the principles of EBM. The resulting Cochrane Reviews are then published in the Cochrane Library (<http://www.cochrane-library.com/>), regarded as the highest standard of

evidence. Since 2016, a National License for the Cochrane Library has been facilitated by the Swiss Academy of Medical Sciences (SAMS). At the University of Basel, at the Basel University Hospital, and at other Swiss universities and hospitals, numerous researchers collaborate with the Swiss Cochrane Centre in Lausanne, the German Cochrane Centre in Freiburg im Breisgau, and with the CRGs to work on systematic reviews. For this purpose they frequently ask the medical library for assistance in systematic literature searching.

As Zipperer (9) reports, there is a need for a multifaceted approach to knowledge collection that librarians are uniquely positioned to undertake. Librarians' participation in EBM is rooted in past practice and most notably in clinical medical librarianship. EBM extends the librarians' role beyond identification of the literature to involvement in practicing and teaching quality filtering and critical appraisal of the literature (13). These activities require librarians to acquire new knowledge and develop new skills. Studies exploring the outcomes of health library services have been undertaken in a number of countries including the US, Spain, Australia and New Zealand. Zipperer (9) reports that in a seminal 1992 study based in the US, 94% of physicians surveyed stated that information from the library contributed to higher quality of care. Also, Rethlefsen et al. (14) reported in their study that the level of librarian and information specialist participation was significantly associated with higher quality reported search strategies in systematic reviews.

This altogether strong level of support should generate efforts to involve more medical librarians in this way. Therefore we intend to implement a new service for "systematic literature searching", where library information specialists support medical researchers and clinicians with their methodological knowledge in developing sound search strategies and in efficiently managing their literature references. Services like that have already been successfully established at the Medical Library of University of Mannheim, Germany (15) and at Zurich University Library. In the near future, a new team of information specialists will deliver systematic literature searches and training courses at the Berne University Library. In Basel there are also plans to establish a new library service for



systematic literature searches. In Great Britain, in the Scandinavian countries and in The Netherlands extensive scientific library services focusing on the needs of EBM research have been established for a long time. Also, the concept of the “embedded” medical librarian in hospitals is very well accepted there. Esparza et al. (16) conducted a large study to determine the effect of a clinical medical librarian (CML) on outcomes of in-patients on the hospital’s internal medicine service. Shipman *et al.* (17) reported on a “Health Information Literacy Project” that successfully surveyed hospital administrators and health care providers regarding their attitudes towards consumer health information, and used the resulting data for developing and evaluating a curriculum to be taught by librarians. This increased awareness of health literacy issues and encouraged the use of National Library of Medicine health information resources such as MedlinePlus. Training by librarians can increase knowledge of the importance of health information literacy. The study showed that a librarian-taught health information literacy curriculum raised awareness about the issue among the target group and increased both the use of NLM health resources and referrals to librarians for health information literacy support (17).

### **Future perspectives: Do we need a postgraduate programme in “Medical Librarianship”?**

Sackett describes EBM as “nothing more than a process of lifelong, self-directed learning in which caring for patients creates the need for clinically important information” (18). The librarians’ tradition of life-long learning and professional development enables us to establish a collaborative relationship with health care professionals and to evolve into new roles in the information process (19).

Due to rising demand for support by medical librarians in Switzerland, the plans for the development of a new postgrad distance-learning program in “Medical Librarianship” come at the right time. Training practices and knowledge transfer in medical librarianship differ substantially from other subjects. In some larger medical libraries extensive training and mentoring programmes for newcomers to the profession are provided, whereas in others colleagues find it hard to acquire the

specialist knowledge they need for their job.

Scherrer (13) describes a professional development programme for librarians at the Library of the Health Sciences (LHS) at the University of Illinois at Chicago (UIC). The programme’s goals were to increase librarians’ skills and support the EBM curricular initiative at the UIC College of Medicine. Classes provide librarians with an overview in clinical study designs, statistical concepts, and critical appraisal of the literature. Other measures included the establishment of an EBM round table. The programme’s success was measured by librarians’ growing involvement in EBM curricula, journal clubs, and morning reports. Librarians gained new skills and professional satisfaction from working collegially with students, residents, and faculty.

At the University of Portsmouth a new postgraduate certificate in systematic reviews in health has been developed in collaboration with Cochrane recently. It is suited to the needs of health librarians wishing to develop and extend their knowledge and skills of systematic reviews and obtain a postgraduate qualification.

So, is there a need for a postgrad program in “Medical Librarianship” in Switzerland as well? If so, what should that include? And how could it be delivered – by distance learning? Or with some residential modules? We’ll follow up on this topic in another article of this themed issue of the *Journal of EAHIL*.

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# Medical librarians educational needs in LMIC: systematic review production as an indicator

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## Abstract

*Access to health literature has radically changed the ways that researchers access and use information. With increased access to health literature through the internet, systematic reviews that synthesize evidence from diverse sources have become an important method for dealing with information overload. Researchers both use and conduct systematic reviews and those researchers in eligible countries have increased free access to the journal articles via HINARI. Given easier access to health literature and the apparent increase in systematic reviews conducted on LMIC topics, can we then assume an increased need for highly skilled medical librarians as well? This article also questions whether librarians in low- and middle-income countries will be involved in the production of systematic reviews (identifying the evidence), and what specialized skills those librarians might need.*

**Key words:** systematic reviews; libraries; librarians.

## Introduction

People's access to information has never been greater since the evolution of the Internet. Regardless of location, any person connected to the Internet can access information with a few quick clicks on a keyboard or touches on a mobile device's screen through use of search engines such as Google. As access to information has evolved, so has the role of the librarian.

In the not so distant past, a librarian's primary role involved obtaining and organizing rather scarce information resources, such as printed books and paper journals in a physical space commonly known as a library. The Internet now provides millions of webpages and other online resources within seconds of any search conducted. Whereas previously a researcher was limited to what was locally available, that same researcher today now has access to countless webpages of information. Rather than trying to find resources, today the researcher's challenge is how to sort through an overwhelming amount of resources and not miss essential information. As researchers' access to information has increased exponentially, the librarian's role in

information seeking has also evolved from being the guardian of information to being the knowledge navigator of the digital world's almost infinite resources online.

Take PubMed as an example: in a pre-PubMed world, librarians acted intermediaries between researchers and the Medline database. Since access was usually subscription based and required rather specialized knowledge of how to search, researchers generally relied on librarians to conduct the searches on their behalf. The release of PubMed in 2007 threw open the doors of information, providing researchers with easy access to a simplified search interface to access the health literature. And that was only the beginning of the information explosion. Over the last ten years the number of citations within PubMed has increased dramatically. In 2005, Medline contained a little over 13 million citations. By 2016, PubMed offered over 26 million citations with almost 800,000 citations being added on a yearly basis (1). A well-constructed search strategy on HIV infections brings back over 350,000 citations.

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These citations refer to articles that can be either open-access or subscription based. Access to subscription based journals usually depended on the researcher's affiliation with an institution able to subscribe to these journals. This put researchers without such access, especially those located in LMIC, at a particular disadvantage. To decrease this lack of access, in 2002 WHO began the Hinari programme that radically increased the access to health research literature.

**The Hinari programme**

The Hinari programme was set up by WHO together with major publishers to enable low- and middle- income countries to gain access to one of the world's largest collections of biomedical and health literature. Hinari includes over 15,000 journals (in 30 different languages), up to 47,000 e-books, up to 100 other information resources and is now available to health institutions in more than 100 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improve world health. As a result, the Hinari programme has dramatically increased access to the health literature for researchers from low and middle income countries that previously was limited largely to researchers who had access to wealthy institutions able to purchase expensive journals (2). But does increased access to health information really make a difference? Increased access can result in information overload (3). How does one deal with this large volume of literature?

**Systematic reviews and the role of librarians**

With the advent of information overload, researchers began looking for methods to manage this massive amount of research literature. Enter the systematic review. Systematic reviews were meant to be conducted at the highest level of methodology. They

have become extremely important in allowing researchers to obtain concise and unbiased summaries of current evidence-informed health interventions. As *Table 1* shows, the number of systematic reviews has increased dramatically over the last ten years. Using the PubMed systematic filter as a guide, 2016 shows over 3 times as many systematic reviews citations as there were in 2005.

As researchers turn to systematic reviews as a necessary tool to deal with information overload, many are also becoming involved in the process of conducting systematic reviews. As the need for systematic reviews increases, the number of researchers conducting reviews also increases. With this increase of both systematic reviews and reviewers, the question of quality arises. Are the high methodology standards for reviews being maintained?

Unfortunately, a recent study shows that the answer is no, the high methodology standards are not being maintained. Although the study did not claim sufficient representativeness, it found the majority of analyzed studies to be "lacking in method and resources". While most institutions involved in the development of systematic reviews recommend the involvement of a librarian or information specialists, many systematic reviews are being conducted without this guidance, a practice that contributes to the lack of quality (4).

Nor is this study alone in finding an important role for librarians in improving systematic review quality. As noted by Hilde Daland and Kari-Mette Walmann-Hidle, "Even though researchers have ways of working that make them self-sufficient in many ways, the librarian will most often be required as an advisor in more complex issues" (5). As another part of their librarian role, "[t]he information specialist identifies relevant literature to answer the review questions (...), creates databases to manage the search results and keeps a log of

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of citations	10,014	11,482	12,799	14,041	15,086	19,746	19,385	22,571	25,675	29,286	31,813	29,513

**Table 1.** Number of systematic reviews citations by year 2005-2016. Based on results from a PubMed search using Systematic [SB] and limited to publishing year.

search results and strategies” (6). In other words, a librarian serves as a walking repository of information about how and where to search and most institutions involved in the development of systematic reviews recommend their involvement in the search process.

So what training and skills are needed by librarians in order to perform in-depth searches at the standard required for a systematic review? According to the MLA Task Force on Expert Searching, an expert search is “a mediated process in which a user with an information need seeks consultation and assistance from a recognized expert”. Ideally this expert should be a skilled and experienced librarian with a master’s level degree from a library school programme accredited by the American Library Association (7). Beyond this fundamental qualification, medical librarianship expertise may be further developed through specialized courses, internships or continuing education programmes offered by library schools, medical school libraries and MLA or other associations. MLA even offers a peer-reviewed credentialing programme, called the Academy of Health Information Professionals (8).

If issues of review quality and search expertise are arising in high-income countries, what is happening in LMICs? Thanks to Hinari, researchers in over 100 countries have been given free or low cost access to thousands of electronic journals, thus facilitating the process of conducting systematic reviews. The number of systematic reviews in PubMed from LMICs or about LMIC issues is on the rise, growing from 263 in 2005 to 2706 in 2015, as calculated by combining the PubMed filter systematic [SB] with the Cochrane Effective Practice Organisation’s LMIC filter (9).

The role of the health-specialized librarian within a research group has been determined to improve the execution of systematic reviews. Given the current interest in systematic reviews and the trend for evidence-informed healthcare, it can be assumed that demand for librarians with specialized training in the health field and performing in-depth searching for systematic reviews will increase. This

holds true for high-income countries and LMICs alike. The need for expert searching skills is an indicator of the need of specialized education of librarians. Given that the Hinari programme has immensely increased access to the journal and other online resources relative for researchers in LMIC, it would only seem logical one would see an increase in systematic review production among this group given the easier access to the health literature. This potentially then translates into an increase in demand of medical librarians specially trained to conduct expert searching. Further research is needed to determine how librarians’ education and training needs are evolving and to identify the best ways to prepare librarians who can respond to the increase demands for more in-depth searching for systematic reviews.

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# Developing specialist skills: a training and mentoring scheme for new professional staff joining the Royal Free Hospital Medical Library

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### Abstract

*The Royal Free Hospital Medical Library, part of UCL Library Services, is located on an academic campus within a large teaching hospital and supports excellence in education, research and clinical practice across the campus and hospital locally. Using the model of legitimate peripheral participation, a competency framework was introduced in 2010 that has been used to train new professional staff in developing and applying evidence-based skills. The framework has enabled new professional staff gradually to move from being peripherally involved to becoming masters of defined areas of competence, by learning on the job under the mentorship of more experienced staff. With plans to validate the framework, it is hoped that this will become internationally applicable.*

**Key words:** Great Britain; librarians; libraries, medical; professional competence; staff development.

### Background: about the Royal Free Hospital Medical Library

The Royal Free Hospital Medical Library is located on an academic campus within a large teaching hospital: the Royal Free Hospital, which is one of three main hospital sites of the Royal Free London NHS Foundation Trust. The Library is a part of UCL Library Services. All four faculties of the UCL School of Life and Medical Sciences (SLMS) are represented on campus, with an expanding portfolio of new programmes being rolled out especially by the UCL Faculty of Medical Sciences. Both the School and the Hospital have a long tradition of pioneering innovation and excellence in medical education, research and clinical practice. The Royal Free Hospital Medical Library is a joint library, funded by both the School and the Trust, and serves all staff and students of the School and the Trust based locally. Further information about the Royal Free Hospital Medical Library may be found at <http://www.ucl.ac.uk/library/sites/royal-free>

### Specialist skills of health information and library professionals

The contribution that health library and information professionals make in the healthcare environment has been the subject of many studies, including a recent systematic scoping review undertaken by Brettelle and Maden (1). In reporting the results of an EAHIL survey in 2014, Sen *et al.* mapped out two broad areas of health library and information professional roles: evidence-based roles and management roles, and identified the importance particularly of evidence-based skills in determining the contributions that health library and information professionals make to healthcare (2). These include searching skills, information literacy skills, teaching and training others to access and search the evidence base, current awareness, and more specialist evidence-based skills, such as critical appraisal and working on systematic reviews, research skills and research support and patient information.

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Sen *et al.* go some way towards identifying the roles and skills associated with evidence-based practice. However, in their 2015 review, Lawton and Burns assert that “no common definition for LIS competencies exists in the literature” (3).

At the Royal Free Hospital Medical Library (RFHML) (Figure 1) it has been necessary for staff to acquire and develop varied specialist skills over time in response to the pressures of user demand, as well as the need to align with local strategies and national standards. Although the range of skills that have been identified locally as being important for the team have been wide-ranging and varied (e.g. including bibliometrics and IT skills), the majority coincide with those described in the Sen *et al.* survey of 2014 as “evidence-based” skills, especially literature searching and training skills.

The long tradition at the RFHML of providing services based on the development and continual improvement of staff specialist skills has been recognised by others, e.g. through a 2014 visit to the Library for job-shadowing purposes via the Erasmus scheme (4).

### **The Royal Free Competency Framework: a training and mentoring scheme for developing specialist skills**

The importance of on-the-job training to develop and continually improve specialist skills had been recognised since the introduction of specialist posts at the RFHML (precursors of today’s posts of Clinical Effectiveness Librarian, Information Skills Trainer, Evidence Services Librarian and Outreach

Librarian), which gradually evolved into existence over time since 1999.

Traditionally, skills acquisition has mainly been through a combination of education (for the acquisition of generic skills) and experience (for the acquisition of specialist skills). Sen *et al.* confirm that the workplace is an important (the most important) place where skills are acquired – with over 90% of respondents giving this as one of their answers in the 2014 EAHIL survey. Lawton *et al.* also found that specialist learning was primarily gained “on the job”, albeit without a defined framework through which competencies were developed (3).

The Royal Free Competency Framework (RFCF) was developed in 2010 with the intention of providing a more formalised way of mapping the training needs of new professional staff joining the Library and documenting progress in the acquisition of relevant skills. Clarke *et al.* explain how the theory of legitimate peripheral participation underpins this model (5). This approach expands the concept of learning on the job to include learning alongside others, through participation in communities of practice.

The RFCF has been developed for three domains: literature searching, training and teaching, and knowledge of research methodology, drawing on competencies identified in the literature. Simple checklists provide clear step-by-step guidance allowing staff to benchmark their progress, through several different levels, from novice to expert, for each domain. The framework documentation includes self-reflection and peer observation forms,

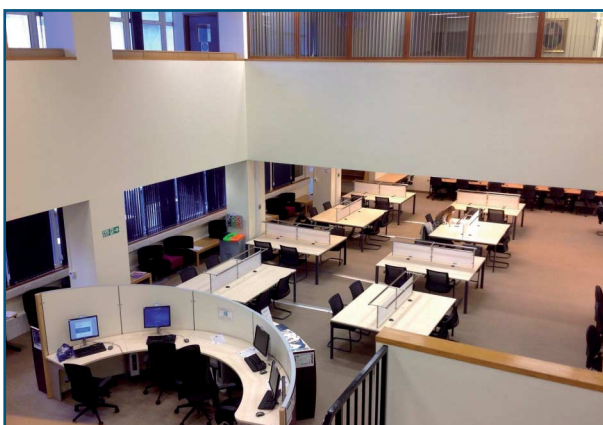


Fig. 1. The Royal Free Hospital Medical Library.

which enable staff to work through the checklists on their own or with their mentor; the progressive levels of competence outlined in the checklists allow individual members of staff to assess their current skill level and identify areas for further development. As Clarke *et al.* indicate: “from a practical perspective, to develop competence, trainees are introduced slowly to key concepts and ideas, advancing from the easier concepts to the more difficult ones” (5). The new professional begins by observing more experienced members of staff undertaking tasks such as literature searching or training, and gradually works towards becoming more involved in the tasks and taking a more active role in their implementation, “moving from the level of novice through to becoming an expert practitioner”. The aim is to move towards “mastery” within health librarianship, with full competence in the domains described.

#### **Possible future challenges**

Plans are afoot to validate the Royal Free Competency Framework further for possibly wider use. Once validated, and its applicability tested in an international environment, it is hoped that the RFCF could potentially be used to provide the basis of a formalised training programme for library and information professionals newly joining health libraries.

However, in an environment where funding may be reducing for both specialist staffing posts and the training to underpin the acquisition of specialist skills, it could become a challenge to be able to operate an approach such as that promoted by the RFCF. Demonstrating the impact of individuals and teams developing the skills and expertise outlined in the competency framework is likely to provide an additional challenge.

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# Do medical librarians need a specialist degree program?

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## Abstract

*This article outlines the background of a survey conducted by several partners about the demand from medical librarians for both a degree programme, and for ongoing training. It reflects discussions about the need for further education in the field of Library and Information Science in general and in medical librarianship especially. Is there a need for a postgraduate programme in “Medical Librarianship”? If so, what should that include? And how could it be delivered – by distance learning? Or with some residential modules? These questions should be answered by a survey among medical librarians.*

**Key words:** librarians; library science; libraries; professional competence/standards; staff development.

## Introduction

Most librarians agree with the statement that libraries are evolving fast. On the one hand there is a real revolution in information technology going on that has also direct impact on libraries, and on the other hand user needs and expectations are changing rapidly. Libraries try to face these new challenges taking on new tasks, especially for new ways of providing access to information for their patrons. This is a general development that equally affects public and academic libraries.

I often give talks about challenges and new trends in libraries. At the end – after presenting a lot of relevant topics and developments – always arises the question: who should do all these new things in libraries? What do librarians need to know to be able to fulfil the new roles? Which skills are needed today and maybe tomorrow?

## A challenge for all libraries: new roles and skills

“Rethinking the Roles and Skills of Librarians” is one of the “difficult” challenges according to the Horizon Report Library Edition 2015 (1). In a Delphi process the experts of the Horizon Report define the most relevant challenges impeding technology adoption in academic libraries, and in 2015 these were the following:

- *solvable challenges: those that we understand and know how to solve*

- embedding academic and research libraries in the curriculum
- improving digital literacy
- *difficult challenges: those that we understand but for which solutions are elusive*
- competition from alternative avenues of discovery
- rethinking the roles and skills of librarians
- *wicked challenges: those that are complex to even define, let alone address*
- embracing the need for radical change
- managing knowledge obsolescence.

All these challenges have a direct or indirect impact on the roles and skills of librarians. In the report the challenge “Rethinking the Roles and Skills of Librarians” focuses much on understanding and supporting research as a new task that demands new skills of librarians. There is also broad discussion on new models for reference librarians, like embedded librarians (2).

## The demand for, and provision of, continuing professional development in Library and Information Science

The discussion on new roles and skills for librarians leads to the question about the need for further education for librarians. But which is the ideal form of such training? And which content should be provided?

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In the planned survey we would like to get to know the background of current medical librarians. We assume that most have a first education in science, maybe even medical science and then got a second or further education in Library and Information Science, plus some training on the job. This is at least the model we see in most Swiss libraries. There are several programmes for further education in LIS that are attended by current or future academic librarians. These courses are expensive, because they are not supported by the government as it is the case with bachelor programmes. In Switzerland a full Master program (MAS)<sup>1</sup> costs around 20,000€.<sup>2</sup> Usually these programs last two years with lectures on two days a week. So it is also a challenge to handle a full time job with this demanding form of further education.

The question arises if there are models that could be better combined with a full or part time job. In Switzerland HTW Chur and HEG Genève (both Universities of Applied Sciences) offer together summer schools that last one week with one topic as a focus (i.e. research data management or digitization). The Swiss Library Association (BIS) has a broad-ranging programme of one day seminars on current topics.<sup>3</sup> And various universities, professional bodies and commercial providers offer courses and seminars on general topics like human resource management, project management, didactics, copyright, IT topics and much more.

Analyzing the current situation in further education we can say that there are many options for courses and programmes in generic skills, general topics and in Library and Information Science, but only few for specific skills in medical libraries. And there is a

demand for smaller modules on specific topics, also in general LIS, i.e. short courses the credits for which could be combined to a degree or certificate.

The concept for an MAS at the University of Applied Sciences in Lucerne gives an example for a modular system consisting of small modules that can be combined to a CAS (Certificate of Advanced Studies) which then can be combined to a MAS (Figure 1). For an international programme it would be essential that modules from several universities can be combined.

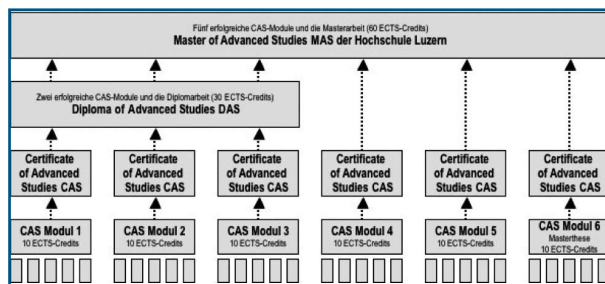
**Course formats**

Current courses are provided in various methods and formats. Classic face to face-courses give the opportunity to teach in classes, allowing for lively exchange between teacher and students – and for social contacts among students. But in order to give students easy access to courses at any time and from any place, they are often provided as distance learning courses. Because students do not have social contacts with classmates and no (or limited) contact to the teacher, self-motivation is very important. Webinars, online seminars and hang-outs are used as tools. A combination of these two formats is called blended learning. And a special format is the flipped classroom, that consists of online modules with videos and other materials that have to be viewed and digested in advance and with discussions and workshops afterwards in the classroom. Which of these formats suits the needs of medical librarians best?

**Needs and requirements of medical librarians regarding further education**

This outline leads us to the question about the situation in medical libraries. The discussion about degree programmes and further education has been led at conferences and in communities for quite a long time, also at EAHIL conferences. Out of these debates the idea emerged to get to know the needs and requirements for medical librarians: What kind of further education do they need? Which topics are relevant to them? What kind of formats for courses would they prefer? These are questions a small working group discussed with interested participants at a conference at Berne University in September 2016.<sup>4</sup>

The working group (consisting of Betsy Anagnostelis, Royal Free Hospital Medical Library,



**Fig. 1.** Example of a Master of Advances Studies (MAS) programme at Hochschule Luzern (Christoph Wagener – own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=7384411>)

## Do medical librarians need a specialist degree program?

UCL; Gerhard Bissels, University of Berne Library; and the author of this article) decided then to conduct a survey in order to get answers to these questions.

The questions asked in the survey are based on several assumptions:

- there are enough options for education (or further education) as an academic librarian in general (MAS LIS, MSc);
- but there is no specific training/education for medical librarians;
- for universities the market for these specific topics in one country is too small;
- medical librarians want and need special training for important new skills;
- (medical) librarians need possibilities for specific modules depending on the requirements of their job;
- librarians prefer a modular system with smaller modules (1 week, 2-3 ECTS) that can be combined to a certificate or diploma (CAS/MAS);

- librarians want a blended learning programme combining distance learning with face-to-face teaching and discussing.

After a first draft we set up a discussion board on which interested colleagues could contribute topics or questions. As a basis for the questions for the survey about the content needed in a future training program served a survey about the skills in health information professions (3, 4) and on competencies (5, 6). We categorized these skills in generic skills (like information management or marketing), LIS skills (like information literacy or databases) and specific skills for medical librarians (EBM-related like systematic literature searching or critical appraisal). Soft skills were not included in the survey, although they play an important role in practice – but they are not in the focus of the training programme. In the survey the question is asked in which skills medical librarians think they need further training and programs (*Figure 2*). Furthermore, we expect to get answers to the question which form of further

In which fields do you think you need further education? How useful would be training and education in the following topics? generic skills:						
	very useful	somewhat useful	useful	not very useful	not useful at all	don't know
Knowledge and information management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ethics, confidentiality, online security	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scientific/scholarly publishing practices and processes & trends	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pedagogics and educational technologies/pedagogical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Marketing and communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Statistics and visualisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Which kind of (additional) education would be useful for your work?			
	somewhat useful	not very useful	don't know
Master's degree in medical librarianship	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smaller modules that can be combined to make up a Master's degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific topics with diploma/certificate (e.g. certificate of advanced studies)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Specific topics without formal certificate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Standardized modules without certificate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Fig. 2. Screenshot of the survey with two questions on the content and format of needed further education.

education is required by medical librarians and which kind of formats they prefer.

In November 2016 medical librarians all over the world were invited to contribute to the survey in posts to several relevant mailing lists:

*"Dear Colleagues*

*We would like to invite you to participate in an on-line survey on the topic of 'Training and Education of Medical Librarians' which the library school of HTW Chur (Switzerland) is carrying out on behalf of the Swiss Academy of Medical Sciences.*

*[Link to the survey]*

*Medical librarians have developed a large and complex repertoire of knowledge, skills and expertise in support of Evidence Based Practice. While some medical libraries provide extensive training and mentoring for newcomers to the profession, other colleagues find it hard to acquire the specialist knowledge they need for their job. So, is there a need for a postgraduate programme in 'Medical Librarianship'? If so, what should that include? And how could it be delivered - by distance learning? Or with some residential modules? Discussions on the occasion of various conferences showed broad and strong interest in a part-time modular postgraduate distance learning degree program in Medical Librarianship.*

*Apart from a degree programme – what role does Continuing Professional Development have for us medical librarians, and how is it best delivered?*

*With this online survey we would like to thoroughly gauge demand from medical librarians for both a degree programme, and for ongoing training. HTW Chur has developed this survey together with the Biomed Libraries Committee of the Swiss Academy of Medical Sciences and colleagues from University College London. The school will also run it and subsequently compile and evaluate its results, which will then be published in an Open Access format (article in the Journal of EAHIL plus parallel publication of the survey data as csv file or similar). Thank you for your participation! The survey closes on Monday, November 22*

*Rudolf Mumenthaler, HTW Chur  
Gerhard Bissels, Bern University  
Betsy Anagnostelis, UCL"*

The results of the survey will be analyzed and published in the next issue of JEAHIL in early 2017.

*Submitted on invitation.*

*Accepted on 14 November 2016.*

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(1) MAS is a non consecutive master degree provided in Switzerland: [https://de.wikipedia.org/wiki/Master\\_of\\_Advanced\\_Studies](https://de.wikipedia.org/wiki/Master_of_Advanced_Studies)

(2) <http://www.igwbs.ch/berufsbild/ausbildung/mas-ch/> with a comparison of different programs in Switzerland.

(3) <http://www.bis.ch/weiterbildung.html>

(4) Conference "Medical Librarians Matter for Evidence Based Medicine". Berne, September 9 2016.

# A short history of EAHIL's Continuing Education Courses

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## Abstract

*Ever since the founding of EAHIL, the focus of the association was cooperation and exchange of knowledge and experiences. Medical librarianship was in the forefront of using computers for search and retrieval. Over the years an extensive course programme developed reflecting the changes in information technology and clinical practice and the changing role of the clinical librarian.*

**Key words:** librarians; education, continuing; history of medical librarianship; EAHIL.

*“Over the years Continuing Education Courses (CEC) have been part of the EAHIL Conference programme. In an ever changing and developing profession, pushed by information technologies and pulled by user demands, librarians need opportunities to improve professional skills and knowledge. (...) attending courses is a very good start of the conference week: the small CEC groups are better suited to getting to know your colleagues and to exchange ideas and experiences. Course attendants will benefit more from the following conference days”.*  
[Invitation to the courses in: *Flyer EAHIL Conference, Cologne, 2002*]

## Characteristics of EAHIL events

Of course, flyers of conferences will try to convince the reader of the importance of attending by using strong words and very positive qualifications. But by experience and observation I know the statement *Course attendants will benefit more from the following conference days* is true. After a one or half day discussion in a small group session it is much easier to meet again and to talk to each other the next days during coffee break and over lunch. The future of EAHIL depends on cooperating in committees and projects. Personal contacts and social networks facilitate these activities. Over the years several colleagues have told me that they prefer the EAHIL meetings over other professional events. Within EAHIL there is a tradition of combining friendship

with professional interest in an informal style, but well focused on interesting subjects and in good spirit. The first-timers meetings are a warm welcome to new attendees and a very good introduction to and integration in the EAHIL community.

## Sharing

Ever since the founding of EAHIL, cooperation and the exchange of experiences are the core of the association<sup>1</sup>. I remember the first President of EAHIL, Marc Walckiers, strongly supporting the idea of sharing resources among medical libraries in Europe by using ARIEL<sup>2</sup>. In that period of time (late '80s) facsimile-techniques became available for use in libraries, not only as a copier, but also to send copies to other libraries: fax-machines could be connected by phone lines and electronic document delivery had a start.

Lynn Fortney (3ECML, 1992)<sup>3</sup>: *“Telefax has made an important difference in response time, but the quality of the image is sometimes unacceptable. However, a new system called ARIEL allows libraries to send and receive high-quality bit-mapped images of journal articles over electronic networks, thus insuring a very efficient system combining both speed and image quality. Publishers are watching these developments with a very critical eye”.*

During the second conference in Bologna in 1988 (the first organized by EAHIL, the association being founded the year before by medical librarians

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attending the IFLA meeting in Brighton), continuing education courses were scheduled. Course leaders were invited from the USA, UK, France and Italy. They were teachers active in their (medical) library associations: MLA, ASLIB, ADBS and AIB. It would take a couple of years before EAHIL was in the position to organize courses and hands-on practice with EAHIL members as leaders. In 1994 in Oslo there were 14 courses scheduled with leaders from different countries.

### Language issues

Interestingly, it was announced that some courses could be in two languages (English and Norwegian or Swedish) depending on the number and background of participants. Languages were an issue: during the first conference in 1986 organized with the support of the European Commission, presentations and proceedings could be in English, German or French and oral presentations were translated simultaneously. The conference in Bologna offered simultaneous translations, not only in English and French, but also in Italian. The Utrecht Conference in 1996 was the last to offer such simultaneous translations in French/English and English/French, for oral presentations only. During the conferences and workshops in later years, some local organizers decided to offer simultaneous translation to and from the national language (Italian, Portuguese) and often at least one continuing education course in the local language was scheduled. In 2004 the two-day course *English for Librarians* was held. The aim of this course was not only to make participants more familiar with library-related terminology and improve their skills in giving library instruction in English, but also to stimulate discussions among the conference participants.

Originally, the association had two official languages, French and English. The *Newsletter* was bilingual. By the end of the 20th century it was agreed that the official and only language of the Association would be English.

### Format

An analysis of the format of the annual meetings, conferences and workshops, shows that gradually more interactive sessions were taking place, including courses, hands-on practices, workshops,

walk-and-talk and empowerment sessions. The exchange of ideas, experiences and best practice were seen as the way forward to improving the quality, efficiency and effectiveness of medical library and information services and the professionals providing these services. Of course there is research going on within our field, but the main responsibilities of most EAHIL members are library management, user education, literature searching and information services. One of the reasons for alternating between the conference and workshop formats for the annual meetings relates to the fact that there are simply not enough “new” findings to report each year to be able to maintain a high quality conference programme. Interactive and instructional sessions, on the other hand, facilitate and support the spread of knowledge.

### Technology

The themes of the conferences and workshops, as well as the subjects of the continuing education courses, reflect the developments in technology and library tools. The Index Medicus as well as the *Excerpta Medica* publications were available in almost all medical libraries all over Europe. These subject bibliographies, especially their thesauri and indexing rules, were the main tools for medical librarians, both for information retrieval and for local indexing projects, such as national medical bibliographies, national catalogues and integrated library systems. MEDLARS centres in Europe cooperate with the NLM in Bethesda, Md. by indexing European publications with NLM's MeSH and by contributing the data. Also translations of MeSH in local languages were set up to integrate search & retrieval tools in different languages and for multi-language catalogues and collections. As soon as the Medline database (the online version of the Index Medicus) was published online and made accessible via computer terminals connected to the data net, instructions on how to use MeSH for information retrieval were organized. The Karolinska Institute in Sweden and DIMDI in Germany were among the first to host Medline in Europe, soon followed by DataStar in Switzerland. These hosts differed in their command languages, and were also different from Dialog, the most important American online host server in the last decades of the 20th century. Dialog originated and was developed from

## A short history of EAHIL's Continuing Education Courses

the Lockheed information system; and yes, there is a link with the military and defense industries, like the origin of the NLM, which is part of the Office of the Surgeon General of the United States.

Embase (the electronic version of Excerpta Medica, which started in 1947 in the Netherlands and was later taken over and published by Elsevier) is the major competitor to Medline. Embase distinguishes itself from Medline by a very good coverage of pharmacology and pharmacy literature and is especially strong in indexing pharmaceutical subjects with a detailed systematic chemical and pharmaceutical thesaurus.

Unsurprisingly, medical librarians in the '80s and '90s were far ahead in comparison to their colleagues in other academic and technical institutes in using terminals, computers, online connections and local CD-ROM systems. A better knowledge and understanding of medical literature searching was necessary; courses were offered by hosts (Karolinska, DIMDI, DataStar) later also by secondary publishers of CD-ROM systems (EBSCO, Ovid) or Elsevier. The first generation of information mediators who specialized in doing online searching and literature retrieval consisted mainly of biomedical academics of whom most did not have a library background.

### Quality, impact and evidence

Another important difference between the medical library and information arena and other academic faculties is the fact that the information professionals not only deal with students and faculty but also with patients and the general (lay) public, nowadays called the consumers [of health

information]. The difference between health professionals and consumers regarding information behaviour is the format and the kind of answer sought from the library: a (long) list of references and/or the [copies of the] documents and publications for the professional as opposed to the clear cut direct and simple answer to the consumer's question: "What is best for me?"

Furthermore what discriminates medical librarianship from many other subject areas is the importance and impact of high quality information on the outcomes of patient care, both in costs, risks and survival. Best practice in medicine includes up-to-date information, preferentially at the point of care (in the clinic, at the bedside, in the office). Evidence-based medicine emerged, also as a side effect of the proper evaluation of new treatment options, diagnostics and new technology. Developments in research methodology and information analysis bring into focus: critical appraisal, randomized clinical trials, systematic reviews, meta-analyses, treatment outcome and quality indicators. All these aspects come together in a new field of medicine: clinical epidemiology in which a strong component of data analysis and statistics emerge together with new publications (journals) and databases (tertiary sources like the Cochrane Library, UpToDate, Dynamed and Clinical Key). For the medical librarian this presented a whole range of new roles and challenges.

### New technology

Desktop computers, Internet connections, free access to PubMed with "simple" browser techniques and menu-driven command language, personal



Fig. 1. Word cloud of terms enlisted in the tentative requirements in medical librarianship (Bakker et al. 1992)



Fig. 2. Word cloud of terms found in the training modules for clinical librarianship (Gerrebrands et al. 2003)



**Fig. 3.** Word cloud of the terms found in the titles of EAHIL CECs (1988-2016)

reference and data management systems became available to end-users, both students, research and clinical faculty and consumers. These end-users cannot keep up with the technological developments, owing to lack of time as well as the lack of basic search skills, and on top, often a lack of structured information behaviour. This was a time for librarians to offer new services ranging from database management to search and research methodology. Depending on the library tradition in the different countries in Europe and North America, the professional responsibilities and positions of medical librarians changed towards higher academic levels, including teaching of information behaviour, literature searching and bibliographic management. In many job descriptions for medical library positions good educational and presentation skills are mandatory: didactics, communication and analytical skills are important and understanding the information needs of end-users are paramount. Wherever evidence-based medicine is emerging, clinical librarians and information professionals now have an important role to play in information management, critical appraisal and supporting systematic reviews as well as in providing the infrastructure for best clinical practice procedures, performance measurement and quality indicators.

### **New areas of work**

Collection management, cataloguing, archiving, indexing, interlibrary loans are no longer in the forefront of medical library practice, but they are embedded in the many aspects of information services. Licences and copyright issues are nowadays much more complicated for electronic publications



**Fig. 4.** Word cloud of descriptors for the EAHIL CECs (1988-2016)

than they ever were in the world of print. Data-archiving, data-protection, privacy, network safety procedures, open access publishing, journal evaluations and citation analyses, are just a few of the many information related subjects on which end-users will seek advice from their medical librarians.

### **The profession**

The core of the library profession is managing information sources and by doing so, adding value to the organization. In a fast changing environment, the aims of the library do not change, but the tools and challenges on how to pursue these aims do. Most obvious is the new and fast changing technology in information and communication. But at the same time clinical epidemiology is emerging and well-documented decision making is top priority in medicine.

In order to keep up with these developments presentations at conferences and workshops are important in raising awareness. In interactive sessions these developments are explained, discussed and annotated. As soon as first adopters have implemented and integrated new insights in their information services, it is time to spread the knowledge and skills to all by special interest meetings and courses. The mixture of sessions in different formats as developed in EAHIL events forms an effective and efficient induction of new members into the medical library community. At the same time knowledge, skills and experience are shared and spread. Fun and joy stimulate and motivate participation in the events and at the same time guarantee further dedication to best practice in medical librarianship.



# A short history of EAHIL's Continuing Education Courses

## Acknowledgements

Patricia Flor and Diewwke Brand were so kind to read the manuscript and I would like to thank them for their critical comments and valuable amendments. Furthermore I would like to thank the many colleagues who have been active in organizing EAHIL events, especially the members of IPCs and CEC-committees as well as the many course leaders who have contributed to the impressive series of EAHIL courses. This article is meant to be a modest contribution to documenting the history of EAHIL. I am convinced it is worth publishing not only the proceedings of the (oral and poster) presentations, but the content of the courses are of future interest as well. In the digital age hardly any announcement, maybe a programme but certainly no proceedings will be printed on paper anymore. Let's be prepared to copy and save conference websites in toto, including the slides and full-text of all presentations and courses, for later reference. It is only two decades from now till EAHIL's 50<sup>th</sup> birthday!

*Submitted on invitation.*

*Accepted on 14 November 2016.*

## Suggested bibliography

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## Supplementary Material published online only

- Appendix I: List of tentative requirements in medical librarianship. Source: Bakker *et al.* 1992
- Appendix II: Table of subjects of course modules to be included in a certified post-graduate course on clinical librarianship in The Netherlands. Source: Gerrebrands *et al.* 2003
- Appendix III: Listing of CEC titles and course leaders at EAHIL events (1988-2016). Source: EAHIL meeting announcements, proceedings and websites.

## About the author

Ever since her presentation in Bologna (1988) Suzanne has been an active member of EAHIL, both as chair or member of IPC's or as member, President or Past-President of the Executive Board till 2013. This article gives a short summary of her memories on the subject over this period.

<sup>1</sup> It is not surprising that the theme of the First European Conference of Medical Libraries in Brussels in 1986 was: *Medical libraries: Cooperation and new technologies. The formal decision to found an European Association was made in the closing session of that conference; the Association (the later EAHIL) would:*

- unite health librarians of the member states of the Council of Europe;

- promote cooperation of health libraries in Europe, especially by coordinated use of new information technologies.

<sup>2</sup> Walckiers, M Ariel. *Interlibrary document delivery on the Internet*. In: S. Bakker (editor). *Health Information Management: What Strategies?* Kluwer Academic Publishers, 1997 (Proceedings of the 5th European Conference of Medical and Health Libraries, Coimbra, 1996).

<sup>3</sup> Fortney, Lynn M. *Management of health sciences libraries in the twenty first century*. In: S Bakker, MC Cleland (editors). *Information Transfer: New Age - New Ways*. Kluwer Academic Publishers, 1993 (Proceedings of the 3rd European Conference for Medical Librarians, Montpellier, 1992).

# Minutes of the Panel Discussion held at the 4<sup>th</sup> National Gathering of Swiss Medical Librarians: “Medical Librarians Matter For Evidence Based Medicine”, held at the University of Bern, Friday, 9<sup>th</sup> September 2016

**Claire Powell**

Bern University Library, Bern, Switzerland

### Abstract

*This year's annual medical librarians' conference organised by the Swiss Academy of Medical Sciences (1) 2016 had a series of talks and a panel discussion on “Education and Training of Medical Librarians”. A video recording that the organisers intended to publish on-line, was rendered useless by technical faults. Therefore, these minutes which are based on hand-written notes, and complemented from the audible parts of the recording, try to convey the gist of the discussion.*

**Chair:** Gerhard Bissels, Academic Lead, Bühlplatz Library, Bern University Library

**Panel:** Thomas Allen, Librarian, WHO, Geneva; Gerd Antes, Director, Cochrane Germany; Betsy Anagnostelis, Librarian, Royal Free Hospital Medical Library, University College London, London; Rudolf Mumenthaler, Professor for Library Science, HTW Chur

Gerhard Bissels introduced and welcomed the panel to the discussion. He noted that the subject of education for medical librarians had proved to be a popular topic with colleagues worldwide. An online noticeboard (2) set up by himself had been flooded with posts from all over the world with suggestions re. professional training and CPD which had led to an online survey on medical education for librarians that would be launched in November 2016 with results published in *JEAHIL* in March 2017. There would also be a symposium in Bern in May 2017 supported by the Swiss Academy of Medical Sciences and the University of Bern Library.

**GB:** Question to audience: Did you feel prepared for your job as a medical librarian after your library qualification?

Question from audience: How many in the room have a library qualification?

Question repeated by GB to audience

*From vote by audience almost everyone in the room had a library qualification.*

**GB:** Question to audience: How many feel they would benefit from specialist training after their first degree?

*Again large vote by audience in favour of the question.*

**GB** question to **GA:** You come from the research angle. How easy is it to recruit librarians with specialist training e.g. searching for systematic reviews?

**GA** reply: We started about 10 years ago. We are very privileged, and have a strong interest in working with

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librarians. However librarians are scientists' slaves and have to deliver results, but they are not seen as co-operators or equals in the search process. That has to change!

**GB** question to BA: And when we ask library managers how difficult is it to recruit experienced librarians? You are recruiting at the moment?

**BA** reply: I have – and so are you Gerhard. We have made an appointment from a very strong field of applicants. The number of applicants for jobs in the medical area are few but those that apply do demonstrate the right skills. Some training will be necessary as challenges of each workplace are different. RFH manages to recruit good information professionals – we had a strong field of candidates.

**GB** question to TA: On the online noticeboard we had a lot of feedback from Eastern Europe, South America etc. What is the situation in the world outside Western Europe and North America?

**TA** reply: The WHO has a programme called Hinari giving access to scientific journals at low cost. It also provides training resources for systematic review searching. There is a lack of people with relevant skills due to cost and availability of training. I have anecdotal evidence from Brazil where one researcher conducts systematic searches although she only speaks Portuguese – and she is overwhelmed by work. There is a need for training in developing countries.

**GB** question to RM: How does medical librarianship differ from mainstream librarianship? You have the best overview as you have summarized the content of the online noticeboard?

**RM** reply: There are some common challenges for all fields of academic libraries. There is very specific support for researchers and medical practitioners – Medicine is different from Chemistry and Biology but many challenges are common to all fields: IT skills, teaching skills, research data management, big data, data mining etc. But working in a hospital you know where to search – in other disciplines no one knows.

**GB:** We have a far more standardized tool kit in Medicine than other disciplines – but we also have very high expectations of what to do with these tools, and how to use them appropriately. Where do we go from here? Is there a need for librarians to acquire specialist skills e.g. to deliver EBM library services? Question to audience: How many libraries offer EBM library services? Vote from audience revealed under half of libraries represented offered EBM services.

**GB:** My library (Bern University Library) does not offer these services but will start with the recruitment of qualified staff. In Germany the situation is probably worse.

**GB** question to audience: Who is planning to introduce these EBM library services?

*Vote from audience revealed quite a few were planning to introduce EBM library services.*

**GB** question: How do we acquire these skills? Our online survey will produce some results but what does the audience think?

Question to audience: Who of you is keen on a Masters' programme? Who would do a full distance-learning Masters programme alongside working?

*Nobody voted from audience*

**GB:** Assuming it was a modular programme? Doing modules when you can find time, add them up and get a Masters' then? Is that more palatable to colleagues?

**RM** reply: From my contact with stakeholders: no one can afford two more years in college so modules and summer schools are popular.

*Two thirds of audience voted for a modular approach to an additional Masters' qualification.*

Question from audience (Karen Berger from National Office of Statistics):

Should medical education be broader allowing people from different backgrounds, e.g. medical statisticians to pick out modules they need or modules closer to their own interests?

*GB forwarded question to RM*

**RM** reply: Information/Library science courses are already open to people from other backgrounds, e.g. from documentation and archives – courses should be open enough not only for Medicine but to all interests.

**GB** question: What are the needs of colleagues working in libraries in the developing world? Their training needs are different from those in the developed world?

**TA** reply: Providing librarianship training in developing countries faces many challenges: There are the technology gaps – they may have access to Hinari but if their computer systems do not work then they have no access, after all. Language is also a problem, and getting further education – they need training in basic research skills. Online courses are easy to provide in Europe but a real challenge in Africa, etc. The big challenge is who librarians are working with in developing countries – some researchers have basic skills while at the other end of the spectrum we are dealing with people with advanced skills. There is a big need for training: WHO training is oversubscribed. Skills such as systematic review searching is a priority.

**GB** question: What about the language aspect which both of you have mentioned?

**GA** reply: We are becoming more aware of problems with foreign languages in Germany. We have a background in science knowledge (car manufacturing and engineering) but have to import medical knowledge. (This is a problem that medical publishers such as Springer and Thieme realise.)

**GB:** Some medical libraries in Germany do not buy English language e-book bundles because students cannot read them.

**GB** question to TA: How is the situation in third world countries?

**TA** reply: A great deal of medical information is published in Spanish, Portuguese, Chinese, and Japanese but is missed due to the language skills gap and remains untranslated. For the questionnaire – are we asking new entrants to the profession whether they have to choose between a library science degree or a medical library science degree?

**GB** question to BA: How about new entrants to the profession?

**RM:** I had a discussion in a break with a student about to start a MAS course in Chur whether to wait for a new LIS programme with a specialisation in Medical Science but the best option would be to have a new module within the existing MAS course. It is important for courses to have a mixture of students – new entrants and people who have worked in libraries for a number of years.

**GB:** Following our discussion yesterday, do we feel we need a specialist Medical Library Science degree following a general first library degree? Is that achievable or are we asking too much?

*Vote from audience not feasible to do extra Medical Library Science degree*

**BA** reply: People are limited by cost but a modular approach is the best way forward – flexibility of timescale and a spread of relevant modules would be better to form a certificate or MA.

**GB:** No loss of course quality but a longer timescale as offered by Birkbeck College, University of London.

**GB** question: How would courses be open to colleagues in low income countries who find attending conferences difficult – they would benefit from the qualification but have a problem with costs that are beyond the means of librarians in the developing world?

**TA** reply: The WHO already has partners in the developing world collaborating on health issues. Some income from the Hinari project is used for training programmes: The “Train the Trainer” approach provides opportunities for colleagues in the developing world.

**GB** question: How close are we to the Masters’ programme? How would collaboration on medical degree work across institutions?

**RM** reply: Up to me co-operation with other institutions should be quite easy but there are other players in

the game who need to be convinced. Someone needs to take the lead and achieve agreement between schools and universities, but this is not an easy process.

**GB** question to BA: Can you explain how far you have got at UCL (University College London) with exploring options for a programme?

**BA** reply: The concept has been discussed at UCL but not researched in any great depth – we are having to cross a lot of barriers before we can deliver medical library education and look at opportunities across Europe. There is a requirement for variety of delivery methods e.g. distance learning might be best across European boundaries.

**GB:** Institutions in the UK seem to be more market savvy than institutions in Europe. Programmes such as ERASMUS seem to be the hope for funding for colleagues in Eastern Europe (mentioned on online noticeboard) due to lack of funds in their own countries. Programmes could be led by a British university e.g. UCL with modules provided as alternatives by other institutions.

**GB** question to RM: Could you explain how collaboration between universities could work?

**RM** reply: An institution in Stuttgart introduced a new programme that works on these small modules. They are ready to work with other universities. This could be used as model for us. My institution is working on a refresher course for our MAS programme. I am talking to colleagues about introducing smaller modules but there are administrative obstacles, e.g. if UCL is the lead institution for the course, where do the fees go? It can become complicated when you want to set up a cooperative programme amongst partner institutions.

**GB:** There is a need for practical modules e.g. a searching for systematic review course online?

**GB** question to audience: How many would prefer this option?

*Half of audience voted in favour of this option.*

**GB** to audience: Who would prefer hands-on modules? Block modules or two week summer school at a participating location, Chur for example?

*A few hands from audience*

**GB:** Block seminars are not popular with the audience – online modules appear the better choice.

**RM:** We have had a discussion at HTW Chur about distance learning and blended learning – the popular choice is blended learning because if there is no face to face teaching or social contact then people do not feel part of a class and the drop out rate is very high. A combination of online and face to face teaching is best. The language barriers could be overcome. An example could be an online module teaching systematic reviews and a follow-up practical course in Bern for discussion and exercises.

**GB** question to TA: Is there a network for Hinari participants?

**TA** reply: Most of the training with Hinari is an online course, with the incentive of a week's training in Geneva. Face to face deals with the problem of online courses having a high dropout rate. You have to be imaginative with online courses especially for developing countries due to gaps in training.

**GB:** I had a response from a colleague working in Santiago de Chile – she is networking with other South American colleagues and trying to build up a structure there.

**GB:** What other aspects do we need to cover? We are just launching into this topic today. We have no concrete course proposal and will try to find out what the demand is and what our colleagues need through the on-line survey. Are there opinions in the audience?

*No response from audience*

**GB:** Everyone is happy with what we propose.

Comment from audience (Eric von Elm): It would be good for the Cochrane groups to have a specialist

qualification for medical librarians. More than 50 Cochrane Research Groups have their own information specialists. There is an opportunity for a diploma or other standardized qualification for librarians working within these Cochrane groups.

**GB:** We should be collaborating with organisations such as the Cochrane Collaboration to define the standards for our course. There have been a lot of posts from a number of Cochrane collaborators on our noticeboard which is a good sign. This session has launched the topic of medical education, and the online survey will be sent to all relevant mailing lists and guide the future development of the project. Some topics were not covered today – e.g. CPD (Continuing Professional Development). EAHIL has currently no structure for CPD but there is interest in forming a framework for training, and they are trialing Webinars. Funding is another concern for discussion.

**GB** thanked the participants in the panel session, the SAMS for hosting and organising the event, the conference sponsors for their support, and everyone in the audience for attending.

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Please mark your contribution with your name, and leave your email address on the grey sticky list on the right.

**Areas of Knowledge to be taught**

- Searching for systematic reviews (Gerhard)
- Searching for rapid reviews (Gerhard)
- Research data management (in medical science)
- Critical appraisal (Elika/Stephane)
- Mapping references
- SR software tools and workflow
- marketing skills presentation skills
- Collection development in medicine + health sciences
- Practical training in literature searching, critical appraisal, journal club provision, Nursing revision/revision support, Clinical setting support
- Methodologies in literature searching, types of searches, purpose of searches research, Evidence Based Practice, Education, evaluation of evidence, Networks and networking Basic epidemiology study designs, Equivocal de jure
- Basic epidemiology study designs, epidemiological measures to be able to understand what researchers talk about

**Target Audience**

- Medical librarians in health care, hospital librarians
- Reseachers (systematic reviews)
- Continuing education for trained librarians now working in a medical setting (Elika)
- Librarians working in the health sector: Academic or Clinical (Abi)
- New/early career health sciences librarians
- Teaching and training librarians to work in a clinical setting as a specialist in Health Sciences and Research
- Teaching in the whole process of the systematic reviews etc. From start to finish, not only the searching. else.johanna@ucl.ac.uk
- Basic module for all health librarians as Degree/ Diploma level with requirement for ongoing CPD to maintain currency and relevance

**Course Format**

- On-line only (Gerhard)
- Some modules as block-courses – in English on several national languages, in various locations (Gerhard)
- Blended learning: combination of on-line courses and input ("flipped classroom") with students in the real classroom (more discussions)
- Face to face courses or blended learning between theory and practical work (see to face face)
- Online with at least one hands-on workshop. Knowledge retention is enhanced by actually doing. Abi
- Opportunity to "shadow" at health sciences library would be good...
- Exchange program: to spend working time with a librarian from other institution for 2 weeks - 1 month
- Many hands on workshops, starting from a clinical scenario, using open access resources and teaching Cochrane methodology: step by step
- Blended learning with live face-to-face interaction via video link, webinar, and twitter chats etc.
- Required for continued membership of competent awarding body

**Qualification**

- Hospital diploma, MSc, or M.S. with thesis (Gerhard)
- Modular (Gerhard)
- PG diploma or MA/MSc in LS with evidence of specialty or proficiency in health (Kazakeviciute)
- Some kind of final test online and diploma or certificate M.S. with thesis or participating as author into a medical team. Systematic Review

**CPD (Continuing Professional Development)**

- Continuing education for trained librarians now working in a medical setting (Elika)
- Librarians working in the health sector: Academic or Clinical (Abi)
- New/early career health sciences librarians
- Teaching and training librarians to work in a clinical setting as a specialist in Health Sciences and Research
- Teaching in the whole process of the systematic reviews etc. From start to finish, not only the searching. else.johanna@ucl.ac.uk
- Basic module for all health librarians as Degree/ Diploma level with requirement for ongoing CPD to maintain currency and relevance

**Best Practice Examples**

- M.A. Institute '5-day intensive research training (http://www.institut.org/2006/research-into-evidence-training-course/)
- M.A. AHIP certification programme (http://www.institut.org/ahip-certification-programme/)
- M.A. Education Programme Development (http://www.institut.org/education-programme-development/)
- Shona Krieger: Increasing value and reducing waste in biomedical research librarians are listening and are part of the answer. The Lancet 387, no. 10028, 16 April 2016
- Required for continued membership of competent awarding body
- Required for continued membership of competent awarding body

**Other notes and text boxes:**

- Teaching (re)health literacy skills including patient education
- Health and healthcare systems - awareness of impact
- Peer-reviewing skills
- How to write learning objectives and match them to medical competencies & EM process
- How to facilitate and assess us getting research (http://daybook.org.uk)
- General improvement methodology
- How to plan development (http://daybook.org.uk)
- trends in including open access, open science, open data
- Customer health information services/ sources, health literacy
- Reading & understanding medical literature
- Space planning and learning environments
- Search Strategies for Clinical Practice, Patient or Population centered.
- Ethics, confidentiality, online security.
- Systematic Search and Search Strategies using medical Theasaur (EM Format)
- Medical Librarians able to work with clinical staff in Clinical Practice and in Research - different profiles within information management
- Identified librarians working within biomedical research departments.
- Tools to list all the resources (http://daybook.org.uk)
- Intended librarians working within biomedical research departments.
- Shona Krieger
- Teaching in the whole process of the systematic reviews etc. From start to finish, not only the searching. else.johanna@ucl.ac.uk
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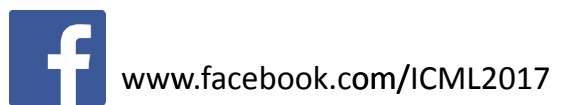
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## Schedule:

- Programme Announcement: January 2017
- Early Bird Registration : January 2017
- Start of regular registration : March 2017

## Key Note speakers include:

**Michelle Kraft:** Library Director at Cleveland Clinic's *Floyd D. Loop Alumni Library* and former MLA president, also known as the 'Krafty Librarian'

**Richard Corbridge:** Chief Information Officer in Ireland's *Health Service Executive* and CEO of *eHealth Ireland*

**Graham Love:** CEO *Health Research Board*, Ireland



## Social Programme:

**Welcome Reception:** Wednesday 14 June in the historic Dining Hall, Trinity College Dublin

**Library tours:** We will have limited tours across a range of historic and medical libraries in Dublin. Availability is limited so remember to book early!

**Gala dinner:** Thursday 15 June in The Mansion House Round Room for a gala dinner followed by a '**Ceili Mór**' – an evening of traditional Irish dancing and music. Bring your dancing shoes!



### Letter from the President



**Marshall Dozier**

Information Services  
University of Edinburgh  
Edinburgh, UK  
Contact: [marshall.dozier@ed.ac.uk](mailto:marshall.dozier@ed.ac.uk)

Dear Colleagues,

In 2016 and 2017 EAHIL is having its 30th anniversary!

In this issue you will find two letters of memories from two colleagues who participated in the organisation of the First European Conference of Medical Libraries in Brussels, Belgium, in 1986. It was in 1987 that EAHIL as an association was formally established, but the event in 1986 set the essential precedent. Gabriella Poppi's letter gives us a persuasive account of the context in which EAHIL was established, the motivations and aims, and Valentina Comba reminds us of the origins of EAHIL in the fifth ICML and the important convictions and visions for international cooperation which remain just as important today. Gabriella and Valentina highlight barriers that needed to be overcome for the greater good of health information provision. Although time has obviously moved on, it is not at all obvious to me that all barriers have gone, or that the need for collaborating and learning from each other has diminished: quite the opposite. I hope you will also enjoy reading these memories sent by Gabriella and Valentina, and that you will also find them as energising and affirming as I have: they contributed to a valuable piece of work in establishing EAHIL, and we continue to benefit from their efforts.

I was fascinated to see the topics covered in 1986 in Brussels - you can also look at the programme for the First European Conference of Medical Libraries, scanned and uploaded to the EAHIL website at [eahil.eu/wp-content/uploads/2016/11/programme-1986.pdf](http://eahil.eu/wp-content/uploads/2016/11/programme-1986.pdf). The theme of the Conference was Cooperation and New Technologies – a theme that feels perfectly relevant for today.

We see visits to libraries in different types of organisations to allow exchanges of experience, the importance of which is highlighted by Valentina Comba. In the programme structure, we see a mix of plenary sessions, oral presentations, workshops, and a reference to a poster exhibition.

The topics of the presentations would still be relevant at a conference this year, for example: the roles of medical libraries in supporting and furthering the aims of their associated institutions; integrating new information technologies and improving access to information; cooperation between libraries; user education; information systems.

I had not been aware that integrated workshops have such a history within EAHIL – but I know from speaking to members that the workshop format is still considered a crucial part of what EAHIL offers, so it is interesting to learn that the workshop element is such a firmly established tradition.

We see continuing education courses on themes that we easily recognise today – database searching, user education and *Designing and implementing continuing education for medical librarians*. This makes me think of the theme of this issue of JEAHIL you are currently reading: *Education and training for medical librarians*.

I have mixed feelings about recognising the topics of the conference as matters of current interest too: it could appear that we have not really developed as a profession. Can this possibly be the case? The more I think about it, the more I think that although the overarching topics haven't changed dramatically, I do see change in the substantive content. Where the focus used to be on how to search particular electronic databases, maybe now there is emphasis on systematic review methods, text mining and the semantic web. Where we had user education, we may have more focus on integrating information skills with evidence-based practice. Where we focussed on information systems to move our catalogues to electronic databases, we now work on research data management and open access repositories for improving access to the latest research. Fostering the continuing development of our profession is one of the core missions of EAHIL, so it's unsurprising that this continues to be a strong theme for us: we continue to see a wide variety of qualifications, roles and professional practice across Europe, and as an association we need to be as accommodating and supportive as possible of a wide variety of levels of expertise and career trajectories.

My next thought: how can we ensure EAHIL continues to be as relevant as ever to the next generation of health information professionals? I think that is for you, as a member, to let us know: write to your Council members or anyone on the Board to share your ideas. We welcome your input!

As my term of office will end with the close of 2016, this is my last letter as President. I warmly welcome Maurella Della Seta as our new President, and look forward to working with her as I move into the role of Past President. I would like to thank Peter Morgan and Anna Kagedal, who will depart from the Board with the start of 2017. We will miss both of them very much: Peter has been instrumental in strengthening links with our sister organisations and improving our organisational processes, and during her term on the Board, Anna led the project to establish and maintain our fantastic new website. We will also welcome two new members of the Board in 2017 – Witold Kozakiewicz and Eirik Reiirth. We are currently in the process of Council elections for the new term, so I would like to thank those Council members whose terms are finishing with the close of 2016. I look forward to seeing the new ideas and visions our new Board and Council members will bring to the future directions of EAHIL.

I would also like to thank all our members and supporters who make working with EAHIL such a joy and who have made my terms as President a wonderful experience. I would particularly like to thank Federica Napolitani and Sally Wood who have been Editors in Chief of this Journal and their Editorial Board members; IPC and LOC members and presenters and workshop leaders, who worked so hard to make the conferences and workshops over the last four years such successful and inspiring events; and members of our Audit committee, our Nominations and Elections committees. There are many other members who have contributed time, work, or ideas in informal capacities and who help keep EAHIL a lively organisation. My thanks to all of you!

*All best wishes for the holiday season and for 2017,*

*Marshall*

### Biomedical information and EAHIL: a life-long passion



**Gabriella Poppi**

Retired

Formerly, Biblioteca and WHO Documentation Center,  
Istituto Superiore di Sanità, Rome, Italy

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My first contact with the biomedical information dates back to 1973, when I was in charge of the periodical section of the Central Library of the Istituto Superiore di Sanità (Italian National Institute of Health, ISS). In those days the access to biomedical and scientific holdings of the Italian libraries required an integration of the resources at national level, integration already existing in other European countries like the United Kingdom, Germany and France.

In the seventies, the Italian scientific community relied, for the information retrieval, on structures like the ISS Documentation Center which was the Italian Medlars Center according to an agreement with the US National Library of Medicine (NLM). Marcella Magliola and Adriana Dracos were in charge of the Center and I would like to remember them both here. Other structures were the ISS Library, the Library of the Università Cattolica del Sacro Cuore (UCSC) and the Library of the Consiglio Nazionale delle Ricerche (National Research Council), the pharmaceutical companies and the University libraries, that collected important biomedical journals, but did not work in cooperation.

The awareness of such a dispersion of resources on the territory and the introduction of new technologies gave origin to a revolution in this area, similarly to what had already happened with other institutions which had gathered in national and international associations (for instance: AIB, IFLA and FID).

At that time, the Istituto di Studi per la Documentazione Scientifica (ISRDS/CNR) promoted the project of a union catalogue. Under the technical leadership of Antonio Petrucci from the ISRDS, the ISS and UCSC started to work together on a collective catalogue of biomedical journals in the area of Rome, whose UDC classification was assigned to Ofelia Masciotta of ISS.

The project was presented in 1984 at the Conference for biomedical libraries and documentation centers, sponsored by and held at the ISS, and organized in cooperation with the World Health Organization (WHO) Library and the newly constituted Biomedical Group of the Italian Library Association (AIB). The participation of international institutions laid the basis for a stronger cooperation.

We became aware of the need to form an association where librarians and information specialists could work together. A substantial contribution was given by Valentina Comba involved, from the very beginning, in the complex situation of biomedical libraries at national, European and international level. I have to thank her for introducing me in the fascinating and complex world of biomedical libraries and information systems. Moreover, a big impulse was given by Paul Weiss, a colleague of former East Berlin. His presence to the long lasting and strenuous meetings of the working group was fundamental. Here I would like to remind his forward-thinking paper, published in 1986 by WHO: "Health and biomedical information in Europe".

In October 1986 Brussels saw the organization of the First European Conference of Medical Libraries held on the premises of the European Commission. What an emotion sitting with hundreds of librarians in the Conference Hall of the European Community! The conference in Brussels was the “Big Bang” for the foundation of EAHIL, which took place physically in Brighton in 1987.

In Bologna, in 1988, the promises of the last decade became true: an event joining the EAHIL Conference and the annual meeting of the Medlars Centers. Twenty nations from Europe, USA and Africa participating in the event gave evidence to the WHO 35th Regional Target: Global Strategy for Health for All.

We were on board!

In 1989 the Berlin Wall fell, along with many other barriers. Connecting via Internet facilitated communication and to sharing of documents and the development of EAHIL registered an exponential growth in its membership. Furthermore, a new vision started under the Presidency of Arne Jakobsson: a virtual association, no longer papers and fees but digital cooperation. And EAHIL went on!

After that enthusiastic start, my cooperation with EAHIL never stopped. I served in the Council and the Board, organized several events, workshops and conferences together with the local and scientific committees.

Today, after only 30 years, this adventure which had started with few irreducible pioneers, linked by their friendship and by their devotion to a beloved profession, seems head and shoulders above. My big print journals' collections are being swept away, the “Big Bang” has destroyed the dinosaurs.

What cannot be destroyed is the memory of the wonderful colleagues I met from all over Europe, who became in the years very good friends.

I wish that EAHIL continues its mission:

- to overcome national and linguistic barriers, geographical differences, local peculiarities and prejudices;
- to build cooperation, professional and cultural development and to facilitate global health for all.

*Thank you EAHIL and Happy Anniversary!*

*Gabriella Poppi*

## Brussels's Medical Libraries Conference: the beginnings of a fruitful collaboration



**Valentina Comba**

Retired

Formerly, Managing Director of the E-Learning Centre  
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Head of Medical Libraries at the University of Turin, Italy

I could not start writing without browsing the blue volume containing the proceedings of the First European Conference of Medical Libraries. Thinking back to that event, the colleagues, the meetings and, most of all, our enthusiasm, I cannot refrain to recall our passion and our commitment.

We cared to the maximum of institutional visibility of our project: the European Commission involvement was strongly pursued. The World Health Organisation (WHO) was also crucial, but that was an easy task, as Beryl Ruff and Deborah Avriel were passionately supporting medical librarianship worldwide.

The list of participants is the most important evidence of the wide international attendance: we got even colleagues coming from Israel (Barbara Aronson and Liliane Frenkiel would attend also the Second Conference in Bologna, Barbara herself will have a crucial role in the WHO Library and for the developing countries information access later), US (Lois Ann Colaianni, who was one of the most important promoters of the free access to Medline in the nineties), Turkey, Morocco, Yugoslavia and USSR.

But let me add a personal note to this short contribution.

I was one of the 26 medical librarians meeting at the Fifth ICML in Tokyo, thanks to Mrs Takada who made the reservation of a room in the Conference Centre for us. Before that memorable day I had the opportunity to meet the British medical librarians group (Library Association: Medical Health and Welfare Libraries Group), got to be a member of the Library Association, participated to their conferences; and previously, in 1981, I travelled to visit medical libraries in France, Germany (just Hannover) and England, where I started to understand the main aspects of medical librarianship. I would not be so much convinced of the importance of our project – creating a European Medical Libraries Association – without that background. The quality of our service and the libraries organization were better finalized in the international context: like research and medical care, also medical librarianship should also be driven by an international framework of best practices.

And now? *Where have all the medical libraries gone ? Digital information replaced all of them ? (I am joking with Peter, Paul and Mary lyrics).* I think that there is still need for medical information specialists, and the future is rich of exciting perspectives, new developments and international collaboration. Buon lavoro!

*Buon lavoro!*

*Valentina Comba*

## US Medical Library Association report for EAHIL



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### **Focus on MLA '17: "Dream Dare Do", Seattle, Washington State, 26-31 May 2017**

<http://www.mlanet.org/p/cm/ld/fid=996>

The next US Medical Library Association (MLA) Annual Meeting will be held in Seattle, Washington State, from 26-31 May 2017. It will be held at the Washington State Convention Center, the same venue as in 2012. Seattle has many attractions not least the possibly unique "fish-throwing" at Pike Place Fish Market (check it out on YouTube).

On a more serious note, a link to the Meeting Overview as a one-page "**Schedule**" is available as a PDF from the home page: <http://www.mlanet.org/page/mla-17-general-information>

Following the success of the **Special Content Session** format developed for Mosaic '16, this new format will be repeated and offer the opportunity for 90-minute special content sessions to be presented.

**Networking Events** offered as part of the "Meeting Registration" package are listed on the one-page Schedule and include:

- Welcome Reception and Opening of the Hall of Exhibits
- New Members' Program
- International Visitors' Reception
- President's Awards Dinner

**Registration** will open in January 2017 and early-bird discount for registration will end on 20th April 2017. There will be a discount for EAHIL members through EAHIL's association with MLA. For those of you not able to attend the conference in person, there will be an **Individual e-Conference rate and Institutional e-Conference Licences**, as in previous years.

**Continuing Education Courses** will take place on Friday 26 May and Saturday 27 May. There will be no CE courses again this year on the following Wednesday.

### **Lightning Talks**

Once again, the conference is offering the opportunity for "Late Breaking Lightning Talks". These are very short (c. five-minute) presentations on new research or service implementations, using very few slides (limited to just three last year)! Submissions open in early 2017, for a relatively short period. This later deadline (c. 5 months after the standard deadline for oral presentations and posters) can be beneficial for

## News from US MLA

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international visitors who may not have had their funding confirmed well enough in advance to commit to submitting under the general call for abstracts, so please do consider this option.

The **MLANet17 Blog** is already up and running:

<http://www.mlanet.org/p/bl/et/blogid=82>

Additionally, you can follow the meeting on *Twitter* with the official hashtag **#MLANet17** and follow the MLA more generally on *Facebook* at: <https://www.facebook.com/MedicalLibraryAssn>

**Future MLA annual meetings** - dates for your diary:

MLA Atlanta, Georgia, 18-23 May 2018

MLA Chicago, Illinois, 3-8 May 2019

### Membership of MLA

MLA offers International Membership to individuals at a reduced rate. This category applies if you work or have worked in a health- or health information-related environment and live outside the US or Canada. The current annual subscription rate for International Membership is 130 US dollars or 25 US dollars for those from Hinari -eligible Group A or Group B countries.

<http://www.mlanet.org/p/cm/ld/fid=447>

### News and publications from MLA

The latest issue of the *Journal of the Medical Library Association (JMLA)* (Volume 104(3) July 2016) is now available (open access) at:

<http://www.ncbi.nlm.nih.gov/pmc/journals/93/latest/>

Open access to back issues of the JMLA (and its predecessors back to 1898) is available from: <http://www.ncbi.nlm.nih.gov/pmc/journals/93/>

Preprints of forthcoming issues of the Journal of the Medical Library Association (JMLA) are available (for members only) by selecting *JMLA Journal* then JMLA Preprints under the Publications option when you login to the MLA web site with your username and password.

**MLA News** is MLA's members-only newsletter, featuring the latest resources, professional advice, and association news. It is published ten times per year and is accessible under Publications when you login with your username and password. **MLA-FOCUS** is MLA's members-only email newsletter, published at least twice a month.



## The role played by the Association of Health Information Professional in developing a Health Information Science Curriculum: The African perspective



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### Abstract

*The hybrid Ordinary Diploma programme in Health Information Science is a three-years programme, which has been developed to suit the needs of the health sector, labour market demands, and professional needs that exist in our country. It is one of the initiatives carried out to modernise and specificity qualifications within the health sector. Development of this programme is aimed at rewarding individual achievement in learning and competence gained in different ways and contexts. The introduction of this programme is geared towards establishing a new cadre in Health Information Science, providing a climbing ladder for higher learning opportunities and competencies, and achieving a more responsive education and training system, aligned with health sector employment needs. It is thus, intended to produce creative, innovative and flexible Health Information Science personnel who will contribute to the national health sector by utilising appropriately their health information management skills.*

**Key words:** health science librarianship; health information science; health specialists; information professionals; health information specialist.

### Introduction

The Association for Health Information and Libraries in Africa (AHILA) is involved in the establishment of a Diploma in Health Information Science (HIS) training program in Tanzania. Through an understanding the roles of any professional's association in any given field, various AHILA members were invited by the Government of Tanzania to participate in all activities related to the establishment of an HIS course. From February 2014 to the present, AHILA members involved in the planning stage, conducting a situational analysis, developing of qualification standards, the actual development of the HIS curriculum, and sharing it with stakeholders. The development of this curriculum was informed by the situational analysis conducted in 2014 (1). After AHILA conference

held in October 2014, some members from the region participated in the discussion of initial planning of the development of a HIS curriculum in Tanzania. As in many developing countries, health information services in Tanzania are not well established due to a lack of specialisation in health sciences librarianship (2, 3). This project is being conducted by the government under the Ministry of Health in Tanzania, with generous support from the International Office of the US National Library of Medicine.

The main objective of this project is to establish an HIS programme, so as to meet the needs of the current status of health information services in Tanzania and Africa in general. Based on the National Council for Technical Education (NACTE) standard, an HIS curriculum was

developed in accordance with Competence-Based Education and Training. In Tanzania, the adoption and implementation of the National Technical Awards (NTA) system is a mandatory requirement for technical training programmes to be accredited by the NACTE. As such, this Diploma in HIS curriculum covers three-years, with each year being divided into two semesters. Thus, three curricula sets were developed, covering three NTA system levels as per the NACTE standards.

In this way, AHILA members played a great and essential role in providing their technical requirements in the curriculum in meeting health information needs and services in Africa (4). As association of professional health librarians, AHILA will take lead by ensuring that health information is accessible and used effectively and ethically by health professionals and general public by working closely and in partnership with government in the region. HIS program in Tanzania is the role model for other AHILA members in the region. It is therefore, AHILA will promote this programme to the governments in the region so as to adapt and implement in their respective countries. For instance, in this programme apart from involved other members from different chapters such as Uganda, AHILA Tanzania Chapter showed their expertise during developing of HIS curricula. This paper presents the competencies covered in the hybrid HIS curriculum that AHILA members were engaged.

**Development of qualification standards for a Diploma in the HIS program**

The first activity was to develop qualification standards for an HIS program. Since the program will be at an ordinary diploma level, based on the NACTE curriculum development process, we developed three curricula sets in the form of an NTA level, which level 4 stands for Basic Technician Certificate, Level 5 stands for Technician Certificate, and Level 6 stands for Ordinary Diploma. However, in this program there is no exit point until level 6. We divided up into three groups, with 7 members per group with multidisciplinary expertise composed of health, medical record, and information professionals. Groups were assigned to work in various activities based on level 4, 5, and 6 that last for six days. Each level, has its own qualification standards (Table 1). A basic certificate has eight qualification standards, while a technician certificate and ordinary diploma both have five. The qualification standards represent the foundation for the development of the curriculum.

**Actual HIS curriculum development**

The actual curriculum development for a Diploma in a HIS has since commenced taking four weeks. Participants worked in group activities based on the assigned level and had plenary discussion where they presented their group work in order to get comments from other members. Thereafter, all groups were given time to refine their work to

<b>Basic Technician Certificate (NTA level 4)</b>	<b>Technician Certificate (NTA level 5)</b>	<b>Ordinary Diploma (NTA level 6)</b>
<ol style="list-style-type: none"> <li>1. Provide front desk support</li> <li>2. Maintain safety and security in a health information environment</li> <li>3. Provide health information services</li> <li>4. Maintain legal and ethical principles in delivering services</li> <li>5. Demonstrate basic computer skills</li> <li>6. Maintain health records and information</li> <li>7. Use life support skills and self-management in provision of health information services</li> <li>8. Organize health information materials</li> </ol>	<ol style="list-style-type: none"> <li>1. Maintain client relationships</li> <li>2. Develop and manage collections</li> <li>3. Use ICT in health information management</li> <li>4. Preserve and conserve health information resources</li> <li>5. Communicate using biomedical terminologies</li> </ol>	<ol style="list-style-type: none"> <li>1. Market Health Information Services</li> <li>2. Conduct operational research</li> <li>3. Manage a health information resource centre</li> <li>4. Organize health data</li> <li>5. Provide Training to clients</li> </ol>

**Table 1.** *Diploma in a Health Information Science Professional Standards*

incorporate inputs provided during plenary discussion. During the 4 weeks, participants accomplished the following qualifications: Basic Technician Certificate, Technician Certificate, and Ordinary Diploma in HIS. Along with the developed curricula, each qualification came up with a job summary and various professional responsibilities. These are as follows:

*Basic Technician Certificate in Health Information Science*

The qualification for this level is Basic Technician Certificate in Health Information Science. The qualification is intended for a person who will perform basic functions in managing health information in health training and care settings. Competence involving application of skills and knowledge at routine level. The main job summary of the basic technician certificate graduate is “to assist health clients in providing health information in health training and care settings”. This job summary has eight primary professional responsibilities: to provide front desk support; to maintain safety and security in health information environments; to provide health information services to clients; to maintain legal and ethical principles in delivering services; to demonstrate basic computer skills; to maintain health records and information; to use life support skills and self-management in the provision of health information services; and to organize health information materials (5). In the first year, Basic Technician Certificate comprises a total of 11 Modules that are spread across two semesters (Table 2). Each semester lasts a total of 20 weeks of which 18 weeks are for class study and practice, and 2 weeks are allocated for end of semester examinations. Students will be required to work in

practical areas under supervision as an important learning method and for gaining hands-on-experience in the provision of Health Information services. They will write reports using practical log books, noting clearly what they will have learnt in their practical sessions.

*Technician Certificate in Health Information Science*

The qualification for this level is Technician Certificate in Health Information Science. This qualification is meant for person who will play role in maintaining health information system to health institutions and other members of the health care team in the provision of health care services to clients. Competence involving application of skills and knowledge in the range activities, some of which are non-routine. The main job summary for a technician certificate graduate is “to maintain a health information system for a health institution and support other members of the health care team in the provision of health care services to the clients”. A health information technician has six primary professional responsibilities; including to provide online client support services, to handle health library customer complaints, to evaluate collection development and acquire information resource materials, to develop and manage simple health information databases, to provide digital library services, and to develop health information backups (6). Table 3 shows the modules to be covered in a year two by Technician Certificate students that is spread in two semesters.

*Ordinary Diploma Programme in Health Information Science*

The qualification for this level is Ordinary Diploma in Health Information Science. This qualification is meant for a person who will play an integral role in

Modules for semester 1	Modules for semester 2
Fundamentals of communication skills	Ethics and professionalism in health information provision
Basics of first aid and personal protection	Cataloguing
Occupational health and safety	Classification
Basic computer application	Basics of health records
Personal development skills	Basics of health library operations
	Practical field training

**Table 2.** Modules Developed for HIS Basic Technician Certificate

Modules for semester 1	Modules for semester 2
Customer care	Health information system design
Biomedical terminologies	Application of biomedical terminologies in health information services
Application of ICT in Health Information Services	Collection development
Preservation and conservation of health information resources	Disaster management
	Health information management
	Practical field training

**Table 3.** Modules Developed for HIS Technician Certificate

health training and care team in managing health information services in health and training care settings. Competence involving application of skills and knowledge in the broad range of work activities, most of which are non-routine. The main job summary of an ordinary diploma graduate is “to organise and manage health information services in broad activities at all levels of managing a health information system”. Graduates will have 7 primary professional responsibilities: to market health information services, to conduct operational research, to manage a health information resource centre, to organize health data, to provide training to clients, to develop business and project plans, and to compile Health Information Management System reports (7). The modules for year three that are covered for the award of an Ordinary Diploma following two semesters are indicated in *Table 4*.

**Sharing of HIS curricula with stakeholders**

Upon completion of the first draft of the curricula, for the next step we shared the developed sets of curricula and progress with various stakeholders in the field of health and information sciences. The

main intention for sharing with stakeholders was to solicit their views, comments, and suggestions about the programme. Both local and International stakeholders were invited to participate through various approaches. In the case of International stakeholders, we sent them the draft package of the HIS curricula through their e-mail addresses; whereas local stakeholders participated in face-to-face meetings. Thereafter, their views were used to refine the curricula for improvement in preparation for further procedures, including submission to NACTE for validation and approval.

**Conclusion**

At AHILA, we feel privileged to be involved in the whole process of the HIS curriculum development, as we made sure that it would comprise all the required competencies. We produced a hybrid curriculum that includes multidisciplinary fields, mainly in the areas of health, medical records, and information. To our knowledge this is the first ever diploma in an HIS programme in Tanzania that is intended to produce health sciences librarians who possess multidisciplinary skills. Some AHILA

Modules for semester 1	Modules for semester 2
Introduction to leadership and management	Quality management
Marketing of health information services	Teaching methodology
Entrepreneurship	Health information literacy
Biostatistics	Statistical applications in data analysis
Demography and health surveillance	Research
Project management	Practical field training

**Table 4.** Modules Developed for HIS Ordinary Diploma Programme

colleagues from other countries have showed interest in adapting and implementing a similar HIS program in their countries. Lately, the curricula have been approved by the NACTE accreditation body. Our future activities will be to develop learning contents and pilot the program for the first cohort of students for three years. The HIS Diploma Programme intends to produce health sciences librarians who will address the existing challenges facing health information services (3, 8). Graduates will be placed in and work in various health sciences training institutions and care service delivery settings country-wide. Moreover, since this program will be taught through both face-to-face and online methods, AHILA members will also be involved, in order to facilitate teaching and learning the programme. Finally, we will assess the efficacy of the programme regarding the value and impact the graduates have with regard to changes in the effective use of health information in healthcare service delivery.

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[collected during August 1st to November 2016]



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**The goal of this section is to have a look at references from non-medical librarian journals, but interesting for medical librarians.** Acknowledgement to **Informed Librarian Online**

#### FREE ACCESS

**1. Tabatha Farney. Google Analytics and Google Tag Manager**

Library Technology Reports v. 52 no. 7, October 2016

*Libraries are actively using Google Analytics to monitor the usage of their various websites and online tools. This issue of Library Technology Reports (vol. 52, no. 7), "Google Analytics and Google Tag Manager," recommends several Google Analytics features, including the useful Google Tag Manager that all libraries should be using. It also tackles the challenge of enhancing Google Analytics' tracking ability for a variety of library-specific online tools, including link resolvers, online catalogs and discovery services, Springshare's LibGuides, digital repositories, and social media websites. These best practices will optimize your Google Analytics to provide you with better data for improved website assessment.*

<https://journals.ala.org/ltr/issue/view/613>

**2. Elameyi Susan Unobe, Abu Yusufu (Ph.D), Nansoh Shehu. Use of Online Information Sources in Federal University Medical Libraries in North West Geo-Political Zone of Nigeria**

The Information Manager v. 15 no. 1-2, 2015

*This study investigates the use of on-line information sources in Federal Universities' Medical Libraries in North West Geo-Political Zone of Nigeria. Survey research method was adopted for the study and the total populations studied were three thousand five hundred forty-five (3545). Three research questions. A proportionate stratified procedure was used to select 405 respondents out of the total of 3545 population, 405 copies of questionnaires were administered out of which 374 were duly completed and returned. The instruments used for data collection were close ended questionnaires which was categorised into two (for users and staff). The study revealed that online information sources provisions such as online databases and electronic alert were not adequately provided and therefore are not commonly used. The study therefore recommends that medical libraries should provide facilities that will enhance the use of online information source.*

<http://www.ajol.info/index.php/tim/article/view/144898>

**3. Anil Kumar and Ritu Kalia. Use of Internet by the Faculty and Academic Staff Members: A Survey Study of Swift Group of Colleges Rajpura in the Disciplines of Medical Science**

International Research: Journal of Library and Information Science v. 6 no. 2, June 2016

*The present study has been undertaken to use the Internet by the Faculty and academic staff members: A survey study of Swift Group of Colleges Rajpura in the disciplines of Medical Science. A well structured*

questionnaire was distributed among the faculty and academic staff members of two selected departments of Swift Group of Colleges Rajpura. The responses were gathered from 35 users (23 Teachers and 15 academic staff members). The most significant finding was that 85.7% SGOC respondents i.e. teachers and academic staff members used the Internet daily, 8.57% weekly followed by 5.71% thrice in a week. Majority of them 60.0% respondents were mostly using the E-journals under the internet resources, while 32.0% were E-database and 8.0% E-Books use it with the requirement of Information need. It was suggested that the library should organize training programme for the information professionals so that they can know about different search interface, latest changes of the journals site and develop sophisticated searching and retrieval skills or techniques. It was also suggested that the speed of Internet should be increased so that the respondents can speedily access the information and utilize the information i.e. research work, education work, writing paper/presenting paper, administrative work, entertainment and also their download relevant materials.

<http://irjlis.com/use-of-internet-by-the-faculty-and-academic-staff-members-a-survey-study-of-swift-group-of-colleges-rajpura-in-the-disciplines-of-medical-science/>

**4. Umesh S.D and K. Divyananda. Status of Medical College and Research Hospital Library and Information Centers at Bangalore: A Study**

International Research: Journal of Library and Information Science v. 6 no. 2, June 2016

*Health Science libraries are prime reservoirs of health information, library plays a vital role to get necessary information for medical practitioners to update the medical knowledge. The purpose of the study is to investigate the status of 10 medical college and research hospital libraries at Bangalore. Study focus on the context of collection, physical infrastructure, usage of ICT tool, library services and problems. For this study survey method was used and distributed questionnaire to collect relevant data. The comparative analysis of 10 medical college libraries have been discussed and based on findings suitable suggestions given to improve medical college services.*

<http://irjlis.com/status-of-medical-college-and-research-hospital-library-and-information-centers-at-bangalore-a-study/>

**5. Enanu Tilahun and M Natarajan. Information Seeking Behavior of Undergraduate Students of Agriculture and Veterinary Medicine of Jimma University**

International Research: Journal of Library and Information Science v. 6 no. 2, June 2016

*This paper is an outcome of the research study conducted by the authors on information seeking behavior of undergraduate students of Agriculture and Veterinary Medicine of Jimma University, Jimma. Data has been collected through a structured questionnaire that was distributed to randomly select 300 students, wherein 289 of them have responded. The collected data has been analyzed with the latest version of MS-Excel for appropriate statistical procedures. The study revealed that the awareness of the services provided by the library, the purpose and type of information the students were seeking, the accessing of internet facility and use of catalogue card with the satisfaction of the services provided. They are not satisfied with the reading hall and reference service. They also suggested to have more e-resources and more photocopiers for the serving the student community. LIS professionals should take initiative to introduce e-discovery tools for better searching the e-resources together.*

<http://irjlis.com/information-seeking-behavior-of-undergraduate-students-of-agriculture-and-veterinary-medicine-of-jimma-university/>

**6. James King et al. Creating value at the National Institutes of Health**

Information Services & Use, vol. 36, no. 1-2, pages 73-80, 2016

*The National Institutes of Health (NIH) Library meets the needs of the diverse NIH research community through a range of innovative services, resources, and knowledge. Based upon an understanding of the information industry and the mission and goals of NIH, the NIH Library offers a number of services that exploit data of various types to support assessment and create value. Understanding our users' engagement*

with content (e.g., citations, behavioral data, research funding) allows us to provide personal and customized services including bibliometrics, collection assessment, and custom information solutions.

<http://content.iospress.com/articles/information-services-and-use/isu802>

**7. Sanghee Oh, Yan Zhang, and Min Sook Park. Cancer information seeking in social question and answer services: identifying health-related topics in cancer questions on Yahoo! Answers**

Information Research: An International Electronic Journal v. 21 no. 3, September 2016

*Introduction. More and more information users turn to social media to seek cancer-related information. Little is known, however, about their cancer information needs in social question and answer sites; that is, community-based online services where users can ask and answer one another about a variety of topics. Method. The current study investigates cancer-related topics that users seek and share by analysing questions on Yahoo! Answers. A total of 81,434 cancer questions were randomly collected using Yahoo! Answers application program interfaces. Analysis. We analysed these questions using text mining techniques. First, we extracted terms related to health topics on cancer from the questions. Second, we analysed the terms based on a layered model of contexts for health information searching. The analysis revealed patterns of user needs at the population level. Results. Of the terms extracted from the collected questions, a total of 420 terms were selected and classified to reveal demographic, cognitive, affective, social, situational, and technical information related to cancer information needs, demonstrating that askers provided rich information about their personal problems, emotions, social relationships, and life situations in questions. Conclusions. Consumers' cancer information needs expressed in social question and answer sites are multi-dimensional. Health care professionals and system developers should examine consumers' cancer information needs in light of their specific demographic, cognitive, emotional, social, situational, and technical contexts*

<http://www.informationr.net/ir/21-3/paper718.html>

**8. Tomaszewski, Robert et al. A Study of Citations to Wikipedia in Scholarly Publications**

Science & Technology Libraries Volume 35, 2016 Issue 3

*The debate on using Wikipedia as a credible academic information resource is dynamic and controversial. This study used the Web of Science (WoS) database and its "Cited Reference" and "Analyze Results" tools to identify and examine trends in the use of Wikipedia citations in scholarly, peer-reviewed publications for the years from 2002 to 2015. Results indicate that the use of Wikipedia citations in peer-reviewed journals has been increasing since 2002. Given that Wikipedia is considered a nonauthoritative source, it might be assumed that this resource is frequently being cited in open access (OA) journals, which are sometimes considered less rigorous when it comes to publication standards. Alternatively, it might be assumed that Wikipedia is being used by scholars from lesser-quality institutions or from developing countries, where access to authoritative information resources might be limited. This study examines these assumptions and describes the disciplines, research fields, and types of journals that are accepting Wikipedia as an authoritative reference source, thereby increasing its credibility. This research is intended to fuel informed debate on the issue, which will contribute to improvement in scholarly communication*

<http://dx.doi.org/10.1080/0194262X.2016.1206052>

**ABSTRACTS ONLY**

**1. Christine E. Shaw , Andrea L Szwajcer. Publication rate of presentation abstracts presented at the Canadian Health Libraries Association (CHLA/ABSC) annual meetings from 2004-2009**

Performance Measurement & Metrics v. 17 no. 3, 2016

*Purpose To determine the publication rate of Canadian health sciences librarians, post conference presentation. Discover barriers that prevent librarians from taking conference presentation to full publication. Assess the metrics available to librarians for scholarly output measurement by examining metrics, traditional and*



*altmetrics, of articles resulting from conference presentation. Design/methodology/approach A survey using FluidSurveys was distributed via e-mail to authors of poster and papers presentation presented at Canadian Health Libraries Association/ Association des bibliothèques de la santé du Canada (CHLA/ABSC) conferences from 2004 to 2009. A literature search for articles matching presentations in National Library of Medicine's PubMed, Cumulative Index of Nursing and Allied Health (CINAHL), and, Library, Information Science & Technology Abstracts (LISTA) was conducted to determine publication rate. Metrics of retrieved articles were gathered and analyzed to gage scholarly output of Canadian health sciences librarians. Findings A publication rate of 31.5% was determined by literature search. Time restriction was the most common reported reason for not publishing. The altmetric analysis included 71 articles, of which 52% had at least 1 value in various metrics, with Mendeley counts being the most common value represented. Research limitations/implications Not all survey respondents may be library science professionals, so that survey findings may not be generalizable to the Canadian health librarian profession. While every effort was made to find and confirm publications related to conference presentations, the reported publication rate may be either an over estimate or under estimate of the true rate. Current altmetric science is very dynamic and evolving. Originality/value This study provides a baseline publication rate, identifies barriers librarians face to publication and provides a glimpse into the state of metrics available to Canadian librarians for evaluation of their scholarly output.*

<http://www.emeraldinsight.com/doi/abs/10.1108/PMM-07-2016-0034>

**2. Mike Thelwall & Kayvan Kousha. Are citations from clinical trials evidence of higher impact research? An analysis of ClinicalTrials.gov**

Scientometrics November 2016, Volume 109, Issue 2, pages 1341-1351

*An important way in which medical research can translate into improved health outcomes is by motivating or influencing clinical trials that eventually lead to changes in clinical practice. Citations from clinical trials records to academic research may therefore serve as an early warning of the likely future influence of the cited articles. This paper partially assesses this hypothesis by testing whether prior articles referenced in ClinicalTrials.gov records are more highly cited than average for the publishing journal. The results from four high profile general medical journals support the hypothesis, although there may not be a cause-and effect relationship. Nevertheless, it is reasonable for researchers to use citations to their work from clinical trials records as evidence of the possible long-term impact of their research.*

<http://link.springer.com/article/10.1007/s11192-016-2112-1>

**3. Maximiliane Wilkesmann. Ignorance management in hospitals**

VINE Journal of Information and Knowledge Management Systems, (2016) Vol. 46 Iss: 4

*Purpose The purpose of this paper is to investigate how professionals, like doctors, deal with their ignorance? Which strategies do they apply? How can the organization support activities that encourage dealing with ignorance in a positive way? The paper shows how ignorance can be managed in professional organizations like hospitals. Design/methodology/approach In order to explore this touchy subject the research follows a sequential mixed method design. The advantage of combining research methods is the opportunity to explore an uninvestigated research field. In the first exploratory research sequence (empirical study 1) preliminary questions were defined by means of 43 qualitative semi-structured interviews with hospital physicians and literature analysis. The results of the qualitative content analysis also served as a starting point for the development of a Germany-wide online-questionnaire survey with more than 2,500 physicians (empirical study 2). Findings The results show, that breaks, a lack of negative organizational constraints, collective learning, positive role models, and intrinsic motivation have the highest impact on ignorance sharing of physicians in hospitals. In reverse, negative organizational constraints, distrust, a lack of intrinsic motivation, and omitting the implementation of evidence based insights in terms of collective learning have the highest impact on hiding ignorance. These findings help to manage ignorance in a positive way. Originality/value Physicians all over the world have to deal with incomplete information and ignorance in their daily work. Mostly, they have no time and/or no resources to gather all relevant information before they make a diagnosis*

or administer a therapy. It is quite evident that scientific discourses on knowledge management and professions mostly emphasize the power of expertise and knowledge, whereas research on ignorance is currently more or less neglected. This paper is one of the first attempts to overcome this research gap.  
<http://www.emeraldinsight.com/doi/abs/10.1108/VJIKMS-08-2016-0046>

**4. Vinyard, Marc, Whitt, Jeremy. Scopus**

The Charleston Advisor, Volume 18, no. 2, 1 October 2016, pages 52-57

*Scopus indexes journals, book series, and conference proceedings from nearly every academic discipline. A noteworthy feature of Scopus is citation analysis at article, journal, author, and institutional levels. Users can identify the most cited articles on topics and use Scopus' proprietary metrics to evaluate the prestige of journals. Scholars can use Scopus for literature reviews, identify journals for publication, and evaluate professors being reviewed for tenure. Scopus has more comprehensive coverage of journals than Web of Science. This review strongly emphasizes an analysis of Scopus' content selection and inclusion of journals from potentially predatory publishers.*  
<https://doi.org/10.5260/chara.18.2.52>

**5. H Frank Cervone. Perspectives on informatics in the health sciences for information professionals**

Digital Library Perspectives v. 32 no. 4, 2016

*Purpose Informatics is a relatively new interdisciplinary field which is not very well understood outside of specific disciplinary communities. With a review of the history of informatics and a discussion of the various branches of informatics related to health care practice, the paper provides an overview designed to enhance the understanding of an information professional interested in this field. Design/methodology/approach The paper is designed to provide a basic introduction to the topic of informatics for information professionals unfamiliar with the field. Using a combination of historical and current sources, the role of informatics in the health professions is explored through its history and development. Findings The emergence of informatics as a discipline is a relatively recent phenomenon. Informatics is neither IT (information technology) nor information science but shares many common interests, concerns, and techniques with these other two fields. The role of the informaticist is to transform data to knowledge and information. Consequently, while the outcomes may be different, there are many commonalities in informatics with the work information professionals perform. Originality/value Most introductions to informatics assume the reader is either an IT professional or a clinical practitioner in one of the health science fields. This paper takes a unique approach by positioning the discussion of the history and application of informatics in the health sciences from the perspective of the information professional.*

<http://www.emeraldinsight.com/doi/abs/10.1108/DLP-07-2016-0020>

**6. Christopher W. Belter. Citation analysis as a literature search method for systematic reviews**

Journal of the Association for Information Science and Technology Volume 67, Issue 11 Pages C1 - C1, 2573 - 2828, November 2016

*Systematic reviews are essential for evaluating biomedical treatment options, but the growing size and complexity of the available biomedical literature combined with the rigor of the systematic review method mean that systematic reviews are extremely difficult and labor-intensive to perform. In this article, I propose a method of searching the literature by systematically mining the various types of citation relationships between articles. I then test the method by comparing its precision and recall to that of 14 published systematic reviews. The method successfully retrieved 74% of the studies included in these reviews and 90% of the studies it could reasonably be expected to retrieve. The method also retrieved fewer than half of the total number of publications retrieved by these reviews and can be performed in substantially less time. This suggests that the proposed method offers a promising complement to traditional text-based methods of literature identification and retrieval for systematic reviews*

<http://onlinelibrary.wiley.com/doi/10.1002/asi.23605/abstract?campaign=woletoc>

**7. Mayank Yuvaraj. Ascertaining the factors that influence the acceptance and purposeful use of cloud computing in medical libraries in India**

New Library World v. 117 no. 9/10, 2016

*Purpose* The paper aims to identify the factors that influence the acceptance and purposeful use of cloud computing technologies in Indian medical libraries. *Design/methodology/approach* In order to meet the stated objectives, a three round Delphi study was carried out; a panel of 32 participants, with expertise and experience of cloud computing in the context of Indian medical libraries, was constituted. *Findings* During the study, the participants identified about 60 different factors, and a consensus was reached on 42 of these, which were considered to have a direct impact on the levels of acceptance and purposeful use of cloud computing technologies in Indian medical libraries. The study points up significant factors which should be addressed to accelerate the acceptance and purposeful use of cloud computing technologies in Indian medical libraries. *Originality/value* The study is the first attempt to study the factors responsible for the adoption of cloud computing in Indian medical libraries through the Delphi Technique  
<http://www.emeraldinsight.com/doi/abs/10.1108/NLW-04-2016-0025>

**8. Md. Habibur Rahman et al. Modernization of Central library and establishment of an e-resource center at Chittagong Veterinary and Animal Sciences University (CVASU): A case studies**

Library Hi Tech News v. 33 no. 8, 2016

*Purpose* The purpose of this paper is to explain how the author carried out the Modernization project of Central library and establishment of an e-resource center at Chittagong Veterinary and Animal Sciences University (CVASU), stated the implementation of ILS in a library and encouraged library professionals by sharing practical experience to implement modernization project in their libraries. *Design/methodology/approach* The paper describes the authors' practical experiences regarding implementation of Modernization project of Central library and establishment of an e-resource center at Chittagong Veterinary and Animal Sciences University (CVASU) using open-source Integrated Library System (ILS) and Library Management System (LMS). *Findings* The study reveals practical and systematic approach toward implementation of modernization project starting from the project proposals, fund release, vendor selection, mode of procurement, manpower selection, selection of ILS and LMS solution to the library day to day activities and a series of communication with the funding organization. *Practical implications* This paper will help librarians to implement modernization project in a practical way to their libraries. This article stands a unique case study for the new applicant as well as those who have got UGC fund for library modernization. *Originality/value* The paper provides a practical experience in implementation of library modernization project complying all the procedures of funding agencies. The content of the paper was not published before in any form other than the internal workshop and presentation  
<http://www.emeraldinsight.com/doi/abs/10.1108/LHTN-06-2016-0029>

**9. Timothy J. Cain et al. Health Sciences Libraries Forecasting Information Service Trends for Researchers: Models Applicable to All Academic Libraries**

Library Hi Tech News v. 33 no. 8, 2016

To better understand the value of current information services and to forecast the evolving information and data management needs of researchers, a study was conducted at two research-intensive universities. The methodology and planning framework applied by health science librarians at Emory University and The Ohio State University focused on identifying the need for new or retooled information services supporting health and biomedical researchers and their increasing use of digital resources. The lessons learned and outcomes described herein are informing the development and implementation of new information service models and can help forecast changing user needs across the broader library community.  
<http://crl.acrl.org/content/77/5/595.abstract>

**10.** Arian Abdulla, Mangala Krishnamurthy **Comparing retrieval of systematic review searches in health sciences areas using two major databases**

Reference Reviews, Vol. 30 Iss: 8, pages 1-5

*Purpose* Effective literature searches are critical to researchers and health care professionals. To conduct literature searches, clinicians, researchers and nurses rely primarily on a few major databases (PubMed, Cochrane, CINAHL, etc.) to retrieve information. However, there is a lack of literature on the comparative efficiencies of major databases for systematic review results on a clinically related topic. This paper aims to fill that gap in the literature. *Design/methodology/approach* Cochrane Handbook (2011) defines systematic review as a review of a clearly formulated question that uses systematic and explicit methods to identify, select and critically appraise relevant research and to collect and analyze data from the studies that are included in the review. In this paper, search results of systematic reviews on a clinical topic between two major databases – PubMed and Cochrane Library – are compared. *Findings* Searching within PubMed for key terms in the titles and abstracts of articles is important to include in any systematic review, in addition to searching Medical Subject Heading terms. After applying filters, PubMed retrieved 130 systematic reviews that matched the criteria. In Cochrane Library, the searches were performed on the chosen topic using Boolean and phrase searching; text field searches resulted in 251 reviews. The search was further narrowed by subject, which yielded 20 reviews. It is strongly recommended to use multiple health-care specialty databases, check for duplicate reviews in the results and not limit results to English-only publications. *Practical implications* This paper can be used to introduce new researchers and/or students to methods for conducting systematic reviews using two or more databases on a chosen topic. *Originality/value* This paper fills a gap in the literature regarding comparative efficiencies of major databases for systematic review results on clinically related topics. <http://dx.doi.org/10.1108/RR-03-2016-0082>

**11.** Petros Kostagiolas **Linking physicians' medical practice information needs, resources and barriers to job satisfaction: A moderated mediation mode**

Journal of Documentation, Volume: 72 Issue: 6, 2016

*Purpose* Medical doctors seek information in order to satisfy their demanding everyday work practices and professional development endeavours. Information seeking is a continuous goal-related process that has impact on how they perceive and experience their job. The purpose of this paper is to explore the association of doctors' awareness of medical practice information needs (MPIN), their frequency of using online information resources and the barriers they encountered during information seeking with their overall job satisfaction. More specifically, the research examined the mediating role of these information seeking related variables (information needs, online scholarly resources and information barriers) on doctors' overall job satisfaction. *Design/methodology/approach* The study employed a questionnaire survey of 138 medical doctors working within the context of a University Hospital in Greece. The survey took place between February and March 2014. To test the hypotheses the authors conducted regression analysis, hierarchical moderated analysis and bootstrapping using SPSS macro developed by Preacher and colleagues. *Findings* The statistical analysis found that higher awareness of MPIN had an indirect effect on doctors' overall job satisfaction when they used online information scholar resources. In addition, this indirect effect was contingent on information-related barriers. *Originality/value* This study provides evidence for supporting the pivotal role of doctors' information seeking preferences in fostering job satisfaction. This is an understudied research area that deserves a unique focus particularly with the constantly expanding medical information space that has impact on doctors' medical practices and professional activities. <http://dx.doi.org/10.1108/JD-10-2015-0133>

**12.** Mary Grace Flaherty. **Good value: health information and the MSLS librarian**

The Bottom Line, 2016, Vol. 29 Iss: 3

*Purpose* The purpose of this paper is to examine the value of the MSLS degree in health sciences library settings. *Design/methodology/approach* This is a discourse and preliminary analysis supported with research

from the literature. *Findings* The value of the MSLS degree in the health sciences library setting is well recognized. Health sciences librarians' efforts to evaluate and quantify positive impact of services can provide a useful model for the LIS field. *Research limitations/implications* As this is a preliminary discussion, an exhaustive literature analysis was not undertaken. *Originality/value* A model for empirical-based research, borne out of the health sciences library specialty, can contribute to more effective methods for evaluating general library service and the overall value of the MSLS degree  
<http://www.emeraldinsight.com/doi/pdfplus/10.1108/BL-05-2016-0018>

**12. Loet Leydesdorff et al. Aggregated journal–journal citation relations in scopus and web of science matched and compared in terms of networks, maps, and interactive overlays**

Journal of the Association for Information Science and Technology Volume 67, Issue 9, pages 2194-2211, September 2016

*We compare the network of aggregated journal-journal citation relations provided by the Journal Citation Reports (JCR) 2012 of the Science Citation Index (SCI) and Social Sciences Citation Index (SSCI) with similar data based on Scopus 2012. First, global and overlay maps were developed for the 2 sets separately. Using fuzzy-string matching and ISSN numbers, we were able to match 10,524 journal names between the 2 sets: 96.4% of the 10,936 journals contained in JCR, or 51.2% of the 20,554 journals covered by Scopus. Network analysis was pursued on the set of journals shared between the 2 databases and the 2 sets of unique journals. Citations among the shared journals are more comprehensively covered in JCR than in Scopus, so the network in JCR is denser and more connected than in Scopus. The ranking of shared journals in terms of indegree (i.e., numbers of citing journals) or total citations is similar in both databases overall (Spearman rank correlation  $\rho > 0.97$ ), but some individual journals rank very differently. Journals that are unique to Scopus seem to be less important—they are citing shared journals rather than being cited by them—but the humanities are covered better in Scopus than in JCR*

<http://onlinelibrary.wiley.com/wol1/doi/10.1002/asi.23372/abstract>

### Publications and new products



**Letizia Sampaolo**

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*Dear friends and colleagues,  
let's start the winter season with unexpected Beauty. Enjoy the read!*

**Science can bring beauty.** This believed the National Library of Medicine (NLM) Director, Patricia Flatley Brennan, PhD, who solicited NLM staff to give a go to their creativity and provide art that captured that “Beauty”. So, the 23 submissions that were provided included 3D imaging of T-cells, a scarf woven with a double helix, scientific photographs, blown glass, a hand-carved wooden stamp of the Library’s front facade, and more. The artists included scientists, division chiefs, librarians, editors, web designers, and other staff.



*Photo by Donald Bliss, US  
National Library of Medicine*

The “Beauty of Science” contest kicked off the 2016 Combined Federal Campaign (CFC), which raises funds from federal employees for charities, and all NLM submissions for the contest were reviewed and voted on by Library employees.

“Dendritic Petals” by Donald Bliss of the Lister Hill Center’s Audiovisual Program Development Branch was selected. It is a really exquisite photograph of a 3D dendritic cell model suggested from HIV research that resembles a pale pink flower. Bliss said “The data show HIV-laden dendritic cells extending wide sheets of membrane to encase T-cells”.

(<https://infocus.nlm.nih.gov/2016/10/21/beauty-of-science-at-nlm/>)

### JOURNAL ISSUES

*Health Information and Libraries Journal: Contents of December issue 2016*

#### **Editorial**

#### **Learning to write through reading**

Maria J. Grant

#### **Review Articles**

#### **A comparative review of gerontological nursing citation data**

Marilia Y. Antunez and Marcia Henry

#### **Original articles**

#### **Stem cell research: the role of information seeking and scanning**

Nelissen S, Van den Bulck J, Lemal M, Beullens K

### **An investigation of the questions posted on medical consultation websites**

Phoebe Chiu MH

### **Interactions and user-perceived helpfulness in diet information social questions & answers**

Zhang Y, Wang P

### **HIV information needs of parents of young men who have sex with men**

Rose ID, Friedman DB

### **Regular features**

#### **Dissertations into practice**

#### **Exploring trust in online health information: a study of user experiences of patients.co.uk**

Cunningham A, Johnson F

### **International perspectives and initiatives**

#### **International Trends in Health Science Librarianship Part 20: The Balkan States (Serbia and Slovenia).**

Ivkovic A, Roži A, Turk N

### **Teaching and Learning in Action**

#### **Information Literacy Advocates: developing student skills through a peer support approach**

Curtis R

### **FROM THE WEB**

#### **• Let's not forget that PubMed celebrates its 20th Anniversary this year!**

PubMed's first release was two decades ago in January 1996. It was an experimental database under the National Center for Biotechnology Information (NCBI) retrieval system. Then, the word "experimental" was dropped from the website in April 1997, and on June 26, 1997, a Capitol Hill press conference officially announced free MEDLINE access via PubMed. Since then PubMed kept evolving and in 2007, the NCBI retrieval engine was completely redesigned. It is interesting to go back over the steps that followed:

- In 2008, a number of discovery tools such as, an "also try" feature, query terms in article titles display, and a drug sensor were included and collections were added to the My NCBI user tools. Automatic term mapping was enhanced and an advanced search feature was added.
- Highlights for 2009 included a recent activity feature -- up to six months of a user's NCBI database searches and viewed records -- an autosuggest feature, and a hugely revamped, user-friendly interface.
- From 2010 to 2011, the PubMed advanced search page was reformatted, a new limits page was released, search terms were modified to automatically display in bold, a CSV selection was added as a "send to file" option, and structured abstracts and images were added to the abstract display.
- PubMed Mobile was launched for users with limited screen size or on handheld devices. Enhancements were made to the My NCBI My Bibliography feature to assist NIH-funded investigators with tracking and reporting their peer-reviewed publications. The MeSH database and the Clinical Queries pages were redesigned to provide the same streamlined interface previously released in PubMed.
- In 2012, the My NCBI My Bibliography collection was enhanced with links to similar articles and cited in. A facet sidebar replaced the limits page and the abstract display "author link" was updated to display results using a computer ranking algorithm to facilitate author name disambiguation. The "send to" menu was augmented with an export to citation manager option. A "save items" widget was added to the abstract display to provide an expedient way to add citations to a My NCBI collection.

## PUBLICATIONS AND NEW PRODUCTS

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- In 2013 to 2014, author keywords and social media icons were added to the abstract display and PubMed started accepting and displaying non-English abstracts. A new “relevance sort” option was released, and a way to download your entire history was added to the advanced search page. PubMed began indexing multiple author affiliations. PubMed Commons was released as a way for authors to share opinions and information about scientific publications in PubMed. Additionally, PubMed increased the addition of new citations from five to seven days a week.
- During 2015 to the present, the trending articles and “frequently viewed together” discovery tools were released. Additional knowledge panels and sensors were released; PubMed hit the milestone of 26 million citations; over one million citations are added every year.

What next in the near future? A new PubMed data management system will streamline data submission for publishers and provide an interface for immediate correction of citation errors.

(By Kathi Canese, NLM National Center for Biotechnology Information. This article originally appeared in the NLM Technical Bulletin June 21, 2016).

- **Anywhere Systematic Review – Any format, any device, any time**

Wiley is proud of the latest new enhanced HTML Systematic Review format that in four simple ways focuses on improving the reading experience of reviews on the Cochrane Library:

- **Readability:** superfluous information and clutter have been removed so that readers can focus on the article.
- **Navigation:** the new layout and sidebar tray allow readers easy access to information such as references at any point in the reading experience without losing their place on the page.
- **Functionality:** as well as viewing items such as figures, table's and references in context, readers can use new tools to browse through all these items in one place, and quickly navigate to their context in the article.
- **Mobility:** the responsive HTML systematic review will adapt to any device - desktop, tablet, or mobile - to give the optimal reading experience.

In addition, it is possible to submit a comment or find social media sharing options. But, how is Anywhere Systematic Review different from standard HTML?

- It is specifically designed to be used anywhere, on any device.
- It has a completely new look and feel to enable distraction-free reading.
- It has a host of navigation tools, meaning that the reader can move about the systematic review without losing their place.
- It provides information in context, via overlays or via navigational aids.
- Language switching is possible where non-English language content exists
- Related content, such as Cochrane Clinical Answers, can be easily seen.
- Publication data and other information, such as version history, can easily be accessed

Take a look at <http://www.cochranelibrary.com/help/anywhere-systematic-review.html>

### BOOK REVIEW

**The Medical Library Association Guide to Data Management for Librarians (Medical Library Association Books Series).**

ISBN-10: 1442264276 (ISBN-13: 978-1442264274). \$48.63 (Kindle). \$125.00 (Hardcover). \$43.37 - \$65.00 (Paperback). Rowman & Littlefield Publishers; first edition (September 29, 2016). 242 pp.

Lisa M. Federer is Research Data Informationist at the National Institutes of Health (NIH) Library, where she provides training and support in the management, organization, and re-use of biomedical research data for researchers in the NIH's Intramural Research Program. She received her Masters of Library and Information Studies from the University of California, Los Angeles in 2011 and also holds an MA in English. In addition, she has also completed graduate certifications in data visualization from New York University and data science from Georgetown University.



Technological advances and the rise of collaborative, interdisciplinary approaches have changed the practice of research. Libraries have begun developing services and programs to help researchers meet the demands of the data-driven research enterprise, giving librarians exciting new opportunities to use their expertise and skills. The Medical Library Association Guide to Data Management for Librarians highlights the many ways that librarians are addressing researchers' changing needs at a variety of institutions, including academic, hospital, and government libraries. Each chapter ends with "pearls of wisdom," a bulleted list of 5-10 takeaway messages from the chapter that will help readers quickly put the ideas from the chapter into practice.

From theoretical foundations to practical applications, this book provides a background for librarians who are new to data management as well as new ideas and approaches for experienced data librarians (<https://rowman.com/ISBN/9781442264267/The-Medical-Library-Association-Guide-to-Data-Management-for-Librarians>).

### NEWS

#### **Predicting Scientific Success**

According to a study published in *Science* today, irrespective of whether a scientist reaches the peak of her career early or late in life, the overall impact of her papers remains relatively steady. This consistent impact level—or Q value—can be determined with as few as 10 papers, and used to predict a scientist's future achievements, according to the authors.

Stasa Milojevic, an informatician at Indiana University in Bloomington who was not involved in the work, said "It has been suggested that you're more creative when you're young, so you can expect to have your highest impact [paper] when you're younger, but actually what the [researchers] show is that people can produce their highest impact work at any stage of their individual careers, as long as they are productive." On the other hand, she added, the finding that a researcher's impact is stable means that if an early-career scientist's Q value is low, they are unlikely to have a truly big impact over the long term.

"But there is a flaw," said Roberta Sinatra of the Central European University in Budapest, who led the new study. "If I hire a scientist because of her h-index, I am implicitly making an assumption that somehow this is a promise of future performance," she said. But in fact little is known about how a scientist's impact changes over her career.

Sinatra and colleagues therefore wanted to understand how an individual's success or career impact evolves. "In particular, we were interested in big discoveries," she said. "Can we predict when a scientist will make the best discovery of her life? And how big will that be?" Find out what the study adds (R. Sinatra et al., "Quantifying the evolution of individual scientific impact," *Science*, doi:10.1126/science.aaf5239, November 3, 2016).

### FORTHCOMING EVENTS

#### **February 16-17, 2017, Dublin, Ireland**

**Academic & Special Libraries - Section of Library Association of Ireland: #ASL2017 -**

**The Sociable Librarian: Connecting & Creating Communities**

For further information: <http://www.aslibraries.com/asl2017>

#### **2017, Philadelphia, USA**

**9th International Evidence Based Library and Information Practice (EPLIB9) Conference**

## INSTRUCTIONS FOR AUTHORS JEAHIL

*JEAHIL* is the official *Journal of the European Association for Health Information and Libraries* (EAHIL). It publishes original articles, reviews, theme issues and brief communications in the field of health information and libraries. It also publishes news from EAHIL and from other medical library associations, meeting reports, product reviews, opinion and discussion papers and news items. No article submission/processing charges apply to authors. The aim of the European Association for Health Information and Libraries is to unite and motivate librarians and information officers working in medical and health science libraries in Europe. EAHIL encourages professional development, improves cooperation and enables exchanges of experience amongst its members.

### Manuscript submission

Manuscripts should be submitted by the corresponding author electronically to the Chief Editor, Federica Napolitani, federica.napolitani@iss.it, accompanied by a presentation letter. Articles presented for publication on *JEAHIL* must be original and will be submitted to qualified referees before publication. At present, articles are reviewed mainly by the members of the editorial board. Papers in monographic issues are reviewed by the guest editors. The peer review process is single blind. Authors of submitted papers must accept editing and reuse of published material by EAHIL including electronic publishing on the EAHIL website. Reproduction of articles or part of them should be previously authorized.

### Manuscript preparation

- Manuscripts should be written in good English and as concisely as possible to allow a clear understanding of the text. They should be typed double-spaced and with wide margins - font size 12 points, Times New Roman.
- The title should be followed by the complete name of the Authors, by their affiliation in English (town and country included) and by the "Address for correspondence" (author, address, email of the corresponding author).
- The recommended length for original articles is about 1000-2000 words (4-8 A4 pages) with no more than 20-25 references.
- Original articles should be accompanied by an abstract of up to 120 words and should also include key words, up to a maximum number of five MeSH terms ([www.nlm.nih.gov/mesh/MBrowser.html](http://www.nlm.nih.gov/mesh/MBrowser.html)).
- Avoid numbering in titles and subtitles; write titles in bold, subtitles in italics. Latin or foreign words should be in italics.
- Abbreviations should be spelled out in full the first time they occur in the text, followed by the shortened term in parentheses.
- All references in the text must be numbered in brackets and listed at the end of the article. They should be written in Vancouver style according to Uniform Requirements for Manuscript Submitted to Biomedical Journals ([www.icmje.org/](http://www.icmje.org/)).
- For sample references refer to: [www.nlm.nih.gov/bsd/uniform\\_requirements.html](http://www.nlm.nih.gov/bsd/uniform_requirements.html)
- For abbreviations of periodicals refer to PubMed Journals Database ([www.pubmed.gov](http://www.pubmed.gov)).
- Extended quotations and illustrations previously published should be authorized for reproduction in *JEAHIL* by the Authors and previous Publisher.

### Tables and figures

Tables and figures should always be accompanied by a legend, and be understandable without reference to the text. Numbered in Arabic numerals they should be cited in the text in round brackets and be of appropriate size for reproduction.

### Submission in electronic format

All manuscripts should be submitted together with an accompanying letter in electronic format. The text should be written in Word or RTF format. Figures and photos (in separate files) should be saved in JPEG, GIF or TIFF and have a resolution of at least 300 dpi.

### Please note

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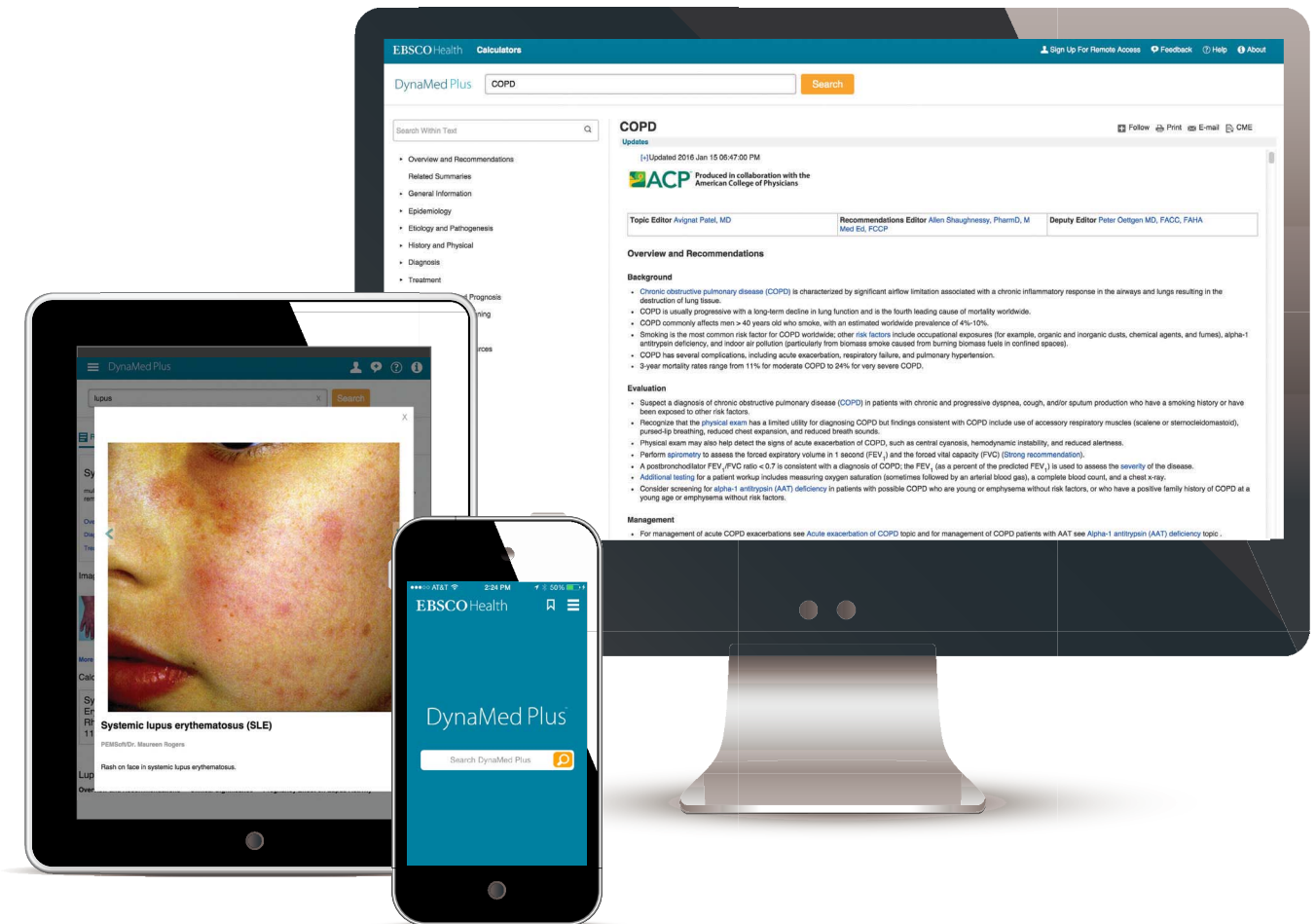
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# Supplementary Material to A short history of EAHIL's Continuing Education Courses

Suzanne Bakker

JEAHIL 2016;4 (December)

## Appendix I

### List of tentative requirements in medical librarianship

In: Bakker S, Blijdenstein L, Van Dieën R, Geertshuis G, Mertens M, Sennekool J and Schouten-Blijdenstein W. [transl.]. Training Qualifications for Medical Librarians: report and recommendations of the Study Group Training Qualifications of the NVB/BMI, 1992. Presented in Montpellier, 3rd Eur Conf Med Libr, 9 pages [chapters 1, 3 and 5 of the original report published in Dutch]

### Health care and medicine

#### A 1 Health care structure and organisation.

- 1.1 Knowledge of state health care institutions and their functions;
- 1.2 Knowledge of the structure of the intra and extramural health care and their mutual relations;
- 1.3 Knowledge of health care financing and planning in the Netherlands;
- 1.4 Knowledge of the field of health care professions;
- 1.5 Knowledge of law and ethics in health care (i.e. privacy, responsibility, ethical problems);
- 1.6 Knowledge of international health care organisations (WHO, European organisations);
- 1.7 Knowledge of the internal organisation of a hospital;
- 1.8 Knowledge of library-, documentation- and information organizations in Dutch health care: (semi) state (WVC, GVO, NCGV, IDC, a.o.), syndicates (KNMG, KNMP, NZF, a.o.), and other organisations.

#### A 2 Basic medical knowledge

Basic medical knowledge comparable in level to the LOI-course "Primary medical knowledge".  
For a (para)medical HBO-graduate this requirement is superfluous.

### Library techniques

#### B 1 Searching in online and offline files

- 1.1 Knowledge of the necessary hardware and software:
  - communication software;
  - modems;
  - CD-ROM hardware (and software);
  - conversion software.
- 1.2 Familiarity with the most important host organisations and command languages:
  - DIMDI and GRIPS commands;
  - Datastar and STAIRS commands;
  - RCC and STAIRS commands;
  - PICA and ORS/OPC commands.

#### B 2 Knowledge of bibliographies and files

- 2.1 MEDLINE/Index medicus;
-

- 2.2 Embase/Excerpta medica;
- 2.3 Current contents editions and files (CC, CCOD, MSW, Reference update);
- 2.4 Science citation index;
- 2.5 Specialized files like Toxlit, Cancerlit, Heclinnet, CINAHL;
- 2.6 Dutch files: WVC documentation, NCGV literature board;
- 2.7 Knowledge of existing medical and related CD-ROM products and their respective differences;
- 2.8 Skills in instructing the users of CD-ROM terminals and other off-line systems.

N.B. Purpose, terminology, characteristics, coverage, and indexing of the sources (printed, online, on CD-ROM or disc) should be known.

### *B 3 Knowledge of medical indexing systems*

- 3.1 MeSH;
- 3.2 Emtree and Malirnet;
- 3.3 NLM classification;
- 3.4 Dutch Basic-classification;
- 3.5 ICD and ICPC;
- 3.6 SIG;
- 3.7 DSM-III-R (IV).

N.B. Knowledge of these systems characteristics and the advantages and disadvantages as indexing and shelving systems is important.

### *B 4 Document supply*

- 4.1 PICA, NCC/BL: organisation, file contents;
- 4.2 IBL policy and procedures in the Netherlands (NCC, KNA W);
- 4.3 Training in the use of the NCC/IBL system (P and M);
- 4.4 IBL policy and procedures concerning other countries (ADONIS, European co-operation projects).

### *B 5 Personal documentation*

- 5.1 Knowledge of the existence of several programs for personal documentation;
- 5.2 A sound knowledge of the system supported by one's own library.

### *B 6 Administration of periodicals*

- 6.1 Knowledge of at least one automated system of periodical administration;
- 6.2 Knowledge of at least one automated system of periodical circulation;
- 6.3 Knowledge of the acquisition and administration process of periodicals (a.o. agents, budgets).

### *B 7 Construction and administration of a catalogue/database*

- 7.1 Global knowledge of some automated catalogue systems, for a better choice and evaluation;
- 7.2 Detailed knowledge of at least one automated catalogue system (p.e. Tinlib, InMagic, STRIX, Cardbox, CDS/ISIS, Micro-OPC);
- 7.3 Knowledge of the possibilities and conditions of cataloguing with PICA (GGC).

## **General knowledge and skills**

### *C 1 Languages*

- 1.1 Fluency in English;
- 1.2 Passive knowledge of German and, if possible, of French.

### *C 2 Knowledge of automation*

- 2.1 Knowledge of how micro-computers ( esp. MS-DOS compatibles, and if possible, AppleMacintosh) work and practical experience in handling a PC (the use and keep of the hardware);
  - 2.2 Basic knowledge of MS/DOS and/or Windows and, if possible, utilities (p.e. Norton, PCTools);
  - 2.3 Basic knowledge of the construction and administration of PC-networks;
  - 2.4 Knowledge of and practical experience with input and output devices: CD-ROM player, (laser)printer, modem, perhaps reading-pen and scanner;
-

## Appendix

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2.5 Know-how of software for databases, word-processing and datacommunication, and practical experience with one of each kind;

2.6 Practical experience with one word-processing program.

### C 3 Management

3.1 Basic skills in financial and administrative policies;

3.2 Basic skills in staff management.

### C 4 Didactics

Basic skills in instructing users.

## Appendix II

### Table of subjects of course modules to be included in a post-certificate education for clinical librarianship in the Netherlands [translated]

In: Gerrebrands M, Van Zoen L, Bakker S.: Gecertificeerde Voortgezette Opleiding tot Klinisch Bibliothecaris, Biomediaties 2003;(60):6-12.

#### Module 1: Academic skills

- Science dynamics;
- Validity issues;
- Reasoning skills.

#### Module 2: Knowledge of health care 1

- The professions in health care;
- The internal organisation and clinical context of a hospital;
- Information flow- and accessibility analysis of information transfer;
- Library, documentation and information organisations/companies in healthcare (in the Netherlands)

#### Module 3: Knowledge of health care 2

- (Aims and goals of) government agencies in health care;
- The structure of the intra- and extramural health care and their mutual relations;
- Funding and planning of healthcare (in the Netherlands);
- Law and legal aspects

#### Module 4: Basic medical knowledge

- Clinical epidemiology;
- Clinical and health care statistics ;
- Medical research methodologies;
- Medical terminology.

#### Module 5: Capita selecta

- International healthcare organizations (WHO and European organizations);
- Political and social developments (European decision-making, political and economic globalisation).

#### Module 6: Search & retrieval

- Search and retrieval in online and offline files;
- Medical bibliographies and data files;
- Medical retrieval systems;
- Evidence-based document delivery;
- Personal documents, journal management, catalog and database construction and management.

#### Module 7: Management skills

- Basic skills in information transfer (interdisciplinary communication);
  - Teaching (instructional staff development and teaching materials).
-

## Appendix III Listing of CEC titles and course leaders at EAHIL events (1988-2016)

### 1988 Bologna

MeSH and NLM classification systems	Medical Library Association, Chicago
Management strategies for health science libraries	Medical Library Association, Chicago
Managing the cost-effective library: the library as a cost centre; major areas of expenditure, cost justification	ASLIB, London
Microcomputers in libraries	ASLIB, London
Microinformatique (in French)	ADBS, Paris
Reference service in the medical library: methods and spatial behavior (in Italian)	AIB, Sez. Regionale Piemonte e Lombardia

### 1994 Oslo

If many Scandinavian delegates sign on for courses A, B and C, it may be possible to hold these courses in Swedish or Norwegian in addition to English

Internet for beginners	Live Rasmussen
Navigating and searching resources on the Internet	Anders Ardo and Traugott Koch
MeSH indexing	Gun Brit Knutssøn and Marie Monik,
Quality management and performance measurement: theory and practice	Carl Gustav Johannesen and Helle Bjamoe
User education	Jean Yeoh
Sharing outcomes information with consumers	Bob Gann
Initiation a la programmation pour bibliothecaires documentalistes	Vincent Maes
Legal aspects of medical librarianship - Copyright and the new electronic media; accessibility and liability of information products; the legal responsibilities of librarians and information specialists.	Jon Bing
Creating your own CD-ROM disc, networking and the use of CD-ROM's	Irja Laamanen and Merja Jauhianinen
Databases in medicine and nursing research/healthcare	Christine Wickman
Pricing and costing of library services	Tony McSean and Derek Law,
Improving the librarian's image	Kaya Irgens
L'information biomédicale au futur	Jean-Philippe Accart
Le concept d'information stratégiques appliqué a l'industrie pharmaceutiques et à la santé publique.	Rabia Bazi

### 1998 Utrecht

Managing successful projects and project teams.	Keith Bonson & Beryl Morris,
Quality management and performance measurement.	Carl Gustav Johannsen
User education: developing your teaching skills.	Jean Yeoh
ISI Web of Science and Current Contents Connect:	Mark Wheeler
EMBASE workshop: When every piece of information is essential?	Justus Krabshuis
Using BIOSIS Previews to access medical and veterinary information.	Nigel Robinson
EBSCO for information retrieval	Nick Vos and Annemieke Meijer
Cochrane Library and Evidence-based medicine	Carol Lefebvre
Text retrieval and bibliography formatting software	Eric Sieverts and Hans van der Laan
Wir mache ich mich und meine Bibliothek fit fur's Jahr 2000	Oliver Obst



## Appendix

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Datenbanken der Cochrane & Quellen zur Evidenz-Basierten Medizin	Reinhard Wentz and Carol Lefebvre
Documents and/or programs: Hybrid Internet sources and information transfer	Paul Nieuwenhuysen
Scientometrie: connaissance et phenomenes genomiques	Marie Angele de Looze
Accessing, evaluating and organizing medical information on the WWW	Lisa Blankenship and Lynn Fox
Encouraging innovation at work	Beryl Morris and Keith Bonson
NLM Medical Subject Headings (MeSH)	Marie Monik and Gun Brit KnutssOn
Visit Maastricht Medical Library and Study Landscape for PBL	Fons van den Eeckhout and Sieb Bohlken
Visit Tilburg University Library	Miebet Wilhelm-de Gouw and Gemma Geertshuis
International Public Health Information on the Internet	Anke Scheiber
Des serveurs Web pour les professionnels de l'information biomedical	Corinne Verry
Genome and molecular biology information for librarians	Frank Norman
Information specialist/librarian: link between author and publisher	Micheline van Migro
Copyright and the electronic library	Charles Oppenheim
Databases in medicine and health care	Christine Wickman
Symposium on evidence-based medicine: Perspectives and roles of the health library	Jenni Tsafirir and Barbara Aronson

### 1999 Tartu

MeSH & NLM Classification	Marie Monik
Benchmarking	Joanne Marshall
Editing Newsletters	Shane Godbolt
How to set up a facilitated group mentoring programme	Ann Ritchie
Evidence Based Medicine	Anne Marie Haraldstad
Resources on the Internet	Christine Wickman

### 2000 London ICML [EAHIL meetings incorporated, no courses]

### 2001 Alghero (workshop) no courses

### 2002 Cologne

DIMDI course on DIMDI's free accessible databases on the web (Medline etc.)	DIMDI staff
Finding biomedical and healthcare information on the web	Alain Besson
Library services, problem-based learning and the study landscape	[day trip/visit]
Why and how to use the Dublin Core metadata for health internet resources	Benoit Thirion & Ioana Robu
Evidence-based medicine beyond PubMed and Cochrane	Jane Rowlands
Reference Manager: bibliographic management made easy	Mariel Volckaert
Evidence-based medicine: searching PubMed and the Cochrane library	Lena Nordheim & Sigrid Gimse
Newsletter editing: scientific and scholarly communication among library professionals	Shane Godbolt & Susan Fairlamb
New management for information professionals: training techniques -train the trainer	Aileen Wood & Cheryl Twomey
Round table discussion on evaluating pharmaceutical databases: academic freedom versus company constraints	Linda Lisgarten and Giovanna Miranda
Round table discussion on clinical librarianship	Suzanne Bakker

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DIMDI course on pharmaceutical and toxicological databases at DIMDI	DIMDI staff
Effective Medline search strategies for clinical queries	Edith Motschall
Copyright and the electronic library	Charles Oppenheim
Co-operation and competition between libraries: service level agreements	Shane Godbolt & Susan Fairlamb
What is and how to use the OMNI service	Lisa Gray

### 2003 Oslo

Searching the evidence: training the trainer	Lena Nordheim & Irene N. Wiik
Successful project management: medical importance of communication skills and teamwork	Jarmila Potomkova
PubMed and other relevant NLM resources - hands-on course	Astrid Muller
Collaboration versus competition	Shane Godbolt
Managing E-journals: a do-it-yourself approach	Anne-Gry Skonnord

### 2004 Santander

English for librarians	Margo de Wolf
Human genome information for librarians	Fernando Martin-Sanchez and Ana Yarte del Toro
Copyright and the electronic library	Charles Oppenheim
Health economics information: the quest for efficiency in health care	Moira Napper
Conceptual fingerprinting as both a literature discovery tool and a means of semantic interlinkage of bibliographic, sequence and image databases	Les Grivell
How to make better decisions in library practice	Anne Brice and Andrew Booth
Finding the evidence to support EB health care	Andrew Booth
Structuring the information on the Internet: the Dublin Core metadata, RDF and the semantic web	Benoit Thirion and Ioana Robu
Negotiating for e-journal access: getting the best deal through a systematic and value-driven approach.	Albert Prior and/or Paul Harwood

### 2005 Palermo

E -Learning: new opportunities for librarians	Valentina Comba
Librarian support for systematic reviews and other major: research projects	Julie Glanville, Carol Lefebvre, Vanna Pistotti

### 2006 Cluj-Napoca

Hidden treasures on the internet	Friedhelm Rump
Measuring impact: cost justification for information services	Liz Blankson-Hemans
Free resources on the internet	Hilde Strømme
The design of web tutorials and guides	Patricia Flor
PubMed and other relevant NLM resources	Astrid Muller
negotiating best prices and service for electronic journal access	Paul Harwood and Carolyn Alderson
From Medline to Cochrane: essentials of evidence-based medicine for medical librarians	Jarmila Potomkova,
The changing role of the medical information specialist	Ronald van Dieën and Hans Ket
How to eat an elephant- or- how to keep your audience awake	Eve Hollis and Ronald van Dieën

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## Appendix

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### 2007 Krakow

Using evidence in day to day practice: an EBLIP update	Andrew Booth
Using the mesh translation maintenance system	Stuart J. Nelson & Jacque-Lynne Schulman
Statistics for the statistically challenged: a primer for understanding the numbers and statistics in healthcare research reports	Ann McKibbon
Weblogs and Mashups services	Oliver Obst and Guus van den Brekel
"I didn't know that exists" - internet search tools for the biomedical librarian	Friedhelm Rump
Making library instruction count: user education methods and techniques	Michelle L. Zafron
Knowledge translation and knowledge syntheses: what every health librarian should know	Ann McKibbon
Make your own library toolbar	Guus van den Brekel and Dorien Kieft-Wondergem
Measuring impact: cost justification for information services	Liz Blankson-Hemans

### 2008 Helsinki

Progressive inquiry learning	Minna Lakkala
The latest tools and tricks for better internet searching	Friedhelm Rump
Effective marketing (or change management & changing roles	Liz Blankson-Hemans
A user-friendly approach to becoming an evidence-based practitioner	Anne Brice & Jo Hunter
Supporting the evidence - clinical trials, health technology assessment reports, practice guidelines. where to find and how to search them	Chiara Bassi & Vanna Pistotti
Strategic planning for information services	Liz Blankson-Hemans
Bridging the gap between PubMed and the Entrez life science databases	David Herron
PubMed	Astrid Muller
Don't forget the food! - how to practice critical appraisal in a journal club, and implement evidence-based practice in a local library and information setting	Jo Hunter & Anne Brice
Finding evidence based clinical information in the Cochrane library and PubMed	Hilde Strømme
Health 2.0 & library 2.0 - power to the user (and the librarians)	Guus van den Brekel & Dorine Kieft-Wondergem

### 2009 Dublin

Identifying and evaluating search filters	Julie Glanville & Carol Lefebvre
Web 2.0	Chris Mavergames
Tips for the trainer of library courses	Thomas Allen
Marketing and communicating your service value brand	Ian Pearce
Clinical trials, health technology assessment reports, practice guidelines-where and how to search, a practical course	Chiara Bassi & Vanna Pistotti
Writing for academic publication a workshop for health sciences librarians	Helen Fallon
Diagnostic test accuracy studies challenges in identification	Julie Glanville & Anne Eisinga

### 2010 Lisbon

Access to fulltext articles / Acesso aos textos integra is dos artigos	Teresa Costa, Helena Donato, Manuel Montenegro
Scholarly Publishing and Open Access	Eloy Rodrigues

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BioMedical WEB-Nuggets  
Emerging technologies and tools  
Emerging technologies and tools  
Writing for scientific/academic publications  
The use of group reflection to evaluate projects: using the knowledge we have to create seas of change  
Bibliometrics: an introduction  
How to design and start a library liaison programme  
Strategic planning for health information libraries: a Quantum2 workshop  
PICO workshop  
Hinari - Training the trainers: promoting Hinari among international visitors from eligible countries  
Navigating the evidence base: planning and delivering effective library services  
effective survey design: ask the right questions, get the right answers  
How to develop a search strategy for a systematic review

### 2011 Istanbul

Tips for the trainer of library courses  
Hinari /internet resources for health information professionals: training the trainers  
Research and publication ethics (in Turkish )  
Retrieving medical information from free and reliable sources  
Opening the information toolbox  
Searching skills for finding the evidence  
Designing and setting up a 23things programme for your library  
Bibliometrics: the basic of using citations  
best practices in health science libraries - achieving operational excellence: a quantum2 workshop

### 2012 Brussels

Text analysis tools for information retrieval  
The cream of the crop- free resources in biomedical internet searching  
Présentation de CISMéF (Catalogue et Index des Sites Médicaux de langue Française) [in French]  
Drupal for librarians  
Visibility and impact -library's new role: How the library can support the researcher to get visibility and generate impact to researcher's work  
Design and create a sustainable 23 Things for EAHIL  
Selling CAT's : action needed for the information specialist!  
  
A manageable, cyclic approach to studies of user needs and information behaviour  
checklist quality in-depth searching for systematic reviews

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Pedro Principe  
Guus van den Brekel  
Antonio Vaz-Carneiro

Barbara Sen  
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Blair Anton

Gabrielle Derriks  
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Mala Mann

Tomas Allen & Jennifer Lopez

Lenny Rhine & Gaby Caro  
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Ingeborg van Dusseldorp, Hans Ket & Marion Heijmans

Ina Fourie & Suzanne Bakker  
Tomas Allen

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## Appendix

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### 2013 Stockholm (courses incorporated in the interactive workshop format)

#### 2014 Rome

LIBREVE: Library research support services Worldwide.  
Save costs by learning from the world's good practices whilst  
planning your research support service offer

Vanessa Proudman

Keeping up to date the new way: apps, content curation &  
aggregation tools

Guus van den Brekel

Gathering information for a systematic review of online  
health awareness event information throughout Europe

Bonnie Heim

OA capacity-building for Europe's libraries: Horizon 2020,  
open access policy and training

Vanessa Proudman

Patient information, health consumer/patient libraries

Gaetana Cognetti, Ivana Truccolo

What is Altmetrics? The impact of Altmetrics on researchers  
and on librarian's professional life

Valeria Scotti

### 2015 Edinburgh (courses incorporated in the interactive workshop format)

#### 2016 Seville

Searching Clinical Trials.gov, the WHO portal and other trials  
registers and regulatory sources to improve the reliability  
of systematic reviews

Carol Lefebvre

Improving efficiency and confidence in systematic searching

Wichor Bramer, Gerdien de Jonge

From Bibliometrics to Altmetrics: a new concept of impact

Valeria Scotti

More appeal to systematic searching: a middle way to satisfy  
library directors, library clients and the search theory

Maurizio Grilli

Community Managers tools for health science libraries

Elena Pastor

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