Content analysis as a means of exploring research opportunities from a conference programme

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Abstract

Background: Health librarians should keep up-to-date in a dynamic environment and accept the importance of continuing personal development (CPD) and growth in their critical reflection and creative thinking skills. They also need to acknowledge the potential value of research activity and the challenges of ongoing improvement and development. Conference programmes may prove a useful source of stimulation, especially if supplemented by creativity techniques, action research and the ideal of 'finding flow'.

Objectives: The article analyses the themes and papers presented at the 10th International Conference on International Medical Librarianship (ICML) to identify opportunities for further research, literature reviews, assessment of practices and services, etc.

Methods: Content analysis approach to conference papers and suggestions for further action including supplementing with techniques of creativity and group input.

Results: A fairly extensive list of further actions (although not intended to be exhaustive) is suggested for the sixteen conference themes. Although subjective, the list might help to stimulate growth in research on health librarianship and demonstrate how one source of stimulation – conference programmes (regularly presented to medical library communities) – can be used.

Conclusions: Content analysis has proven a constructive means of generating research questions from a conference programme. Content analysis and other methods aimed at stimulating creative and progressive thinking, including brainstorming, force field analysis, De Bono's 6 hats, creative swiping and creative visualisation, may prove equally useful and require further investigation. To ensure an ongoing cycle, these can be linked to action research.

Keywords action: research, brainstorming, conference proceedings, content analysis, creativity techniques, research opportunities.

Key Messages

Implications for Practitioners

- Every opportunity should be explored by groups of practitioners to note themes for improvement and benefitting from conference attendance – conference themes and papers may be a valuable source of information.
- Content analysis of conference papers may be a useful way to support the reflective practitioner to consider the potential of conference papers for improvement and further research.
- Creativity techniques such as brainstorming, force field analysis and the De Bono six hats may help LIS professionals to identify research opportunities allowing for the richness and diversity of group input. This can follow a content analysis of conference themes and papers which can be done (but is not limited) to an individual.

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- Opportunities for research should be noted by groups of practitioners and work colleagues – even if on a small scale. Action research, promoting ongoing reflection on what is done and on the impact, may align well with efforts to stimulate creativity in libraries and information services.

Implications for Policy

- Organisations such as libraries and information services should make a formal and structured effort to benefit from conference attendance.
- Organisations such as libraries and information services should formally explore methods for idea generation for research and improvement allowing for individual as well as group input.

Background

Conference attendance can be a valuable means of experiencing new cultures, venues and environments and for networking with colleagues from all over the world. However, it also brings pressure to reflect on what can be learned, on an individual level as well as by library and information (LIS) services and associations.

Over time there have been a number of calls for research adding to an evidence base for libraries[1–4] and for health librarians (variously referred to as medical librarians, hospital librarians, clinical librarians, healthcare librarians, natural health librarians, health science librarians, medical information specialists, drug information specialists, healthcare information specialists, health information specialists and health LIS professionals) to create a research-focussed environment:

'An environment in which research is considered part of what we do needs to be fostered and incorporated into our everyday practice as librarians. Some of us have more time to devote to research than others, but every librarian has a part to play in building up an evidence base that is directly relevant to our decision-making needs... Librarians need to start filling the gaps and mending the seams of our professional body of knowledge in order for our profession to advance'.[3]

The urgency for health librarians to keep abreast in a dynamic environment is also widely acknowledged. Ritchie[5] comments on the importance of continuing professional development (CPD), while Rossall *et al.*[6] stress the importance of health librarians' developing research capacity. Petrinic and Urquhart[7] deal with the necessity of research

methods in training and education while others[8–11] focus on action research. Jerome[12] states: 'I would argue that continuing our exposure to research projects serves as an excellent professional outlet'. Discussions of the research challenges and opportunities for health librarians have also pointed out the value of multidisciplinary approaches and research networks.[6]

In addition, various professional LIS organisations and the subject literature are increasingly stressing the importance of reflection, which can take many forms, including formal feedback sessions to colleagues, a blog or contributing to a newsletter. Given the expense of conference attendance, Goodfellow and Graham[13] call for the use of blogs as alternatives, arguing that:

'The knowledge acquired by those attending the conference is not always effectively shared with other non-attending staff by conventional tools such as conference reports or post-event presentations'.

How conference papers are interpreted and which papers are considered of interest will be influenced by personality, experience and learning style. On a theoretical level, Ford[14] explores different information processing styles and the development of new knowledge from a more theoretical perspective – his ideas should be noted in any effort to enhance the ability of health librarians to improve their services and personal skills, as should the guidelines that have appeared on librarians becoming reflective practitioners. Grant,[15] for example, discusses various types of reflection, stressing:

'In seeking to refine a problem, an individual might contemplate a range of options before taking up an

idea, making a decision or reaching a conclusion. Through this process, it is possible for a greater level of personal and professional insight to be achieved, the way in which individuals work may change in response to this insight, and have the potential to result in a paradigm shift in both thought and process'.

Forrest[16] recommends:

'When we begin to reflect we need to move beyond the standard 'bag of tricks' of our professional education, by developing the confidence to challenge core beliefs and assumptions. In this way we can empower ourselves with a greater understanding and knowledge of the skills required'.

Many factors such as lack of time and lack of access to information resources or training in research or institutional support for research may, however, influence research productivity among health librarians.[4] Bearing this in mind, this article suggests the potential value of a conference programme as a source of information. How one follows up on what was noted and learned at a conference may depend on access to information resources and opportunities for innovation. The Internet offers valuable free access to further information through tools such as Browsys Advanced Finder and free databases such as Medline, ERIC and Library, Information Science and Technology Abstracts (LISTA). On a practical level, an article by Blanton[17] offers suggestions on benefiting before, during and after a conference using techniques such as searching tags, Twitter, photos, LiveBlogging, Networking (FriendFeed, LinkedIn) and for note taking (Evernote).

Given the imperative for research as discussed above, this article will analyse the themes and papers presented at the 10th International Conference on Medical Librarianship (ICML), 31 August–4 September 2009 in Brisbane, Australia as an exemplar of how a conference programme may stimulate suggestions for research and changes in practice. Such a programme may for example stimulate health librarians to

- determine what is happening in a specific context (country, institution or regarding a target group)
- learn more about a new technology or approach
- undertake action research (on a small scale)
- conduct exploratory studies
- plan in-depth postgraduate studies
- carry out systematic reviews
- reflect on existing practices
- note opportunities for personal development
- identify a need for short courses and gaps in training

Methods

A content analysis approach to the papers appearing in the 10th International Conference on Medical Librarianship (ICML) conference programme was adopted examining, for illustrative purposes, a single paper presented in four of the sixteen conference themes for further action, for example research, systematic reviews and collaboration.

The paper themes and titles used in this article are based on the conference programme made available to conference attendees. The full-text of conference papers presented at the ICML 2010 conference is available at http://espace.library.uq.edu.au/collection/UQ:179364.

This article does not seek to apply content analysis techniques at the in-depth level of categorisation normally associated with content analysis[18,19] nor does it include an analysis of papers presented as part of the programme of the 6th International Conference of Animal Health Information Specialists (6ICAHIS) which was combined with the ICML conference.

Results

The sixteen themes covered by the conference were as follows: evidence-based medicine (EBM): translating the evidence; performance and quality measures; health informatics; medical humanities; publishing trends and challenges; professional development; partnerships and collaborations; spotlight on Indian health librarianship; rural and indigenous health; consumer and patient health information; emerging and new technologies; International Clinical Librarian Conference (ICLC); marketing and promotion; emerging diseases and disasters; health information; and history of medicine.

For illustrative purposes of the content analysis technique in action, four of the conference themes were purposively selected based on the amount of details provided. One paper was selected per theme and is discussed below to show how questions for further research and action can be generated. Although not always spelled out, all questions can be made applicable to various healthcare and country contexts, and sometimes also to various stakeholders in a healthcare setting, for example doctors, nurses, patients. The four themes selected were as follows: 'EBM: translating the evidence', 'performance and quality measures', 'medical humanities' and 'publishing trends and challenges'.

- *Evidence-based medicine: translating the evidence*. From a paper titled 'Consideration of research in specific fields and whether there is evidence', a number of questions can be derived, for instance: How do we develop the ability to analyse, interpret and come to a responsible conclusion regarding research evidence? Is there a need for librarians to teach such abilities (i.e. ability to analyse, interpret and come to a responsible conclusion regarding research evidence)? How can librarians collaborate with faculty to address the skills required in evidence-based medicine? How can librarians find evidence suitable to the needs of each patient (considering different backgrounds, ability to interpret research findings and the levels at which research findings are presented)? What do we know about the ability of patients in various contexts (e.g. disease, setting, age group) to deal with evidence?

- *Performance and quality measures*. From a paper titled 'Evidence for change: library needs assessment', a number of questions can be derived: How can we determine needs for library services (e.g. new methods of data collection)? How can we do needs assessment and service adaptation at a level that is manageable on an ongoing basis? What are the needs in a specific setting, and how do (or can) such needs link to literature reports?

- *Medical humanities*. From a paper titled 'Curious herbalist: the life and times of Elizabeth Blackwell', the following question can be derived: Are there country-specific healthcare

professionals that can be studied for their contribution to the development of healthcare (and with an information slant)?

- *Publishing trends and challenges*. The following are examples of questions that can be generated from a paper titled 'Interdisciplinary project to improve quality writing in peer reviewed scientific articles': How can librarians contribute to the quality of writing for peer reviewed publication? How can librarians address their own needs as regards writing for peer reviewed publications? How can librarians contribute to quality systematic and literature reviews?

A fuller list of all the themes and a selection of papers presented under these themes, together with suggested questions to stimulate further reflection, are presented in Appendix.

Discussion

Various reports have appeared on identifying research needs such as Lewis and Cotter's[20] report on changes in research questions facing librarians and reports on Delphi studies in the health library and wider LIS service sector.[21,22] Eldredge[23] offers an interesting inventory of research methods for librarianship and informatics including content analysis, Delphi method, focus groups, gap analysis and systematic reviews. Booth[1], Booth and Brice[24] and Koufogiannakis and Crumley[3] advise on the importance of formulating clear questions based on reflection to contribute to an evidence base in health librarianship. Such questions might cover information needs, information behaviour, information retrieval, reference/enquiries, education, collections, management, information access and retrieval, and marketing and promotion.

The suggestions offered in the article, including those presented in Appendix, are not an exhaustive list nor are they formulated as research problems. However, they serve to demonstrate that content analysis can provide a constructive means for an individual of generating research questions from a conference programme.

Further development of this approach might usefully consider converting these questions using a standardised format such as PICO [P (Patient or Population), I (proposed Intervention), C (Comparison group or Current standard) and O (Outcome

desired)[25]], a technique closely linked with evidence-based practice and medicine and therefore an important focus in health librarianship.

Acknowledging the experiences of using content analysis in this article, alternative methods exist within the LIS community, which merit further investigation in stimulating creative ideas on new areas of service improvement and research. In addition to the methods already cited (Delphi method,[21,22] blogs[13] and reflection[15,16]), Ford's[26] research on creativity and convergence in Information Science research can be noted when intending to stimulate research in the field of medical and health librarianship, whilst, on a more practical level, English[27] discussed the potential of force field analysis for information professionals. Drawing from other sectors, there are also a range of techniques that might be useful employed in stimulating research ideas within the LIS community such as De Bono's 6 hats, creative swiping, creative visualisation, breakthrough thinking and brainstorming (Table 1).

From the techniques associated with creativity, brainstorming is one of the best known and most popular – also in the LIS context.[35] Although brainstorming is widely practised Robson[38] warns against bad practices. This warning is also important when considering any of the other techniques of creativity to enrich a content analysis of conference themes and papers and when drawing on group input. Each of these techniques needs to be carefully studied and their value assessed. It also needs to be realised that although group input and idea generation can offer many benefits, there are also many instances that can benefit from individual input and which can be completed much quicker and easier by an individual.[38]

In an increasingly fiscally aware age, organisations such as libraries and information services need to be confident of the benefits of conference attendance and look to take forward the knowledge gained. Content analysis has proved effective, on an individual basis, in generating research questions and the techniques listed provide an opportunity to formalise means for generating many more and varied questions to consider at an organisational and LIS community level, for example, in medical libraries and medical library interest groups and associations.

Table 1 Alternative methods for stimulating creative ideas

Alternative methods for stimulating creative ideas include

1 Force field analysis (a term invented by Kurt Lewin) provides a framework for looking at the factors that influence a situation. These are referred to as forces and include driving or motivating forces as well as forces that act as barriers. The original focus of force field analysis was social situations. It is also strongly associated with action research.[28–30]

2 De Bono's 6 hats are associated with creativity, lateral thinking and the six thinking hats (or modes). The latter are the white hat (calls for information known or needed), the red hat (signifying feelings, hunches and intuition), the black hat (representing judgment or playing devil's advocate), the yellow hat (symbolising brightness and optimism), the green hat (focusing on creativity with possibilities, alternatives and new ideas) and the blue hat (which is used to manage the thinking process).[31,32]

3 Creative swiping is based on considering the competition (briefly addressed in an article by Gist[33] in the health environment).

4 Creative visualisation is a technique that seeks to affect the outer world by changing one's thoughts. It is often associated with sports and athletes, as well as positive thinking.[28]

5 Breakthrough thinking is a deliberate, focused effort aimed at developing radically new approaches that overcome constraints, instead of making incremental changes in previous ways of working.[34]

6 Brainstorming is a group technique that seeks to generate a large number of solutions to a problem by breaking it down and restructuring knowledge of the topic. It has been associated with creativity, and different types of brainstorming have been noted such as individual and electronic brainstorming.[28,35,36] The aim of brainstorming is to generate as many ideas as is possible by means of group input: ideas are not evaluated at the time when generated or called out, with the intention that one idea may lead to another and that in the end ideas may be combined. Even wild and 'silly' ideas are allowed and encouraged.[36] 'Brainstorming starts a chain reaction of associations in everyone's minds, and this is a prime cause of the technique's effectiveness... a brainstorming session constitutes a social process at which individuals tend to think up more ideas than they would if left to do so on their own'... 'Creativity occurs when we organise our thoughts in a way that leads readily to a different understanding of a situation'.[37]

The power of the Internet and its related tools and services (blogging, social networking, databases and search engines) lies in the fact that all health librarians have the opportunity to access information and to create and share information in some way. A need for research has been identified, and all have the opportunity to be involved in research and improvement of services, even on a small scale.

To enhance the benefits from conference attendance and to allow for idea generation and creativity, it is suggested that the following should be tried and assessed:

- Content analysis based on individual input: quick, easy to do – but lacking the richness that can be gained if drawing on the analytical and creative abilities of a group and techniques of creativity.
- Experimentation with different methods associated with creativity and idea generation to supplement content analysis. Brainstorming is the most popular and also the easiest to apply – but others may prove more valuable.
- Exploring virtual methods of collaboration, group input and idea generation.
- Finding flow in idea generation and creativity as argued by Cskiszentmihalyi.[39] It should become part of the life of LIS professionals attending conferences and giving something back to their institutions and sponsoring organisations.

Action research refers to a reflective process of progressive problem solving led by individuals working with others in teams or as part of a 'community of practice'. After an intensive study of the concept of 'action research', Stringer[40] notes that action research underlies processes that are rigorously empirical and reflective or interpretative, it engages people that would traditionally be the 'subjects' in the research and results in some outcome related to the lives or work of the participants. It can be well aligned with the methods of creativity and idea generation mentioned here. It can also allow for a participatory or collaborative approach where library users can be involved in ideas generated from conference attendance, and it can be conducted across distances.[10,41,42] Action research can be applied in following up on ideas generated, but it also seems appropriate to assess the value of employing different techniques of creativity and idea generation.

Conclusion

Given the challenges of dynamic healthcare environments, health librarians should explore all means to identify opportunities for research, collaboration and improving their services and practices. This includes the need for systematic reviews where gaps in knowledge and understanding of issues relevant in the healthcare context have been noted. An individual's content analysis of a conference programme may be one such means. However, as indicated, there are other creativity techniques that might be explored, the most popular being brainstorming. There is also the power of group input. If aligned with action research, the use of these can turn into a circle of exploring the possibilities offered by individual and group input and benefitting as fully as possible from conference attendance. It can be linked to CPD and the call for reflective practitioners. Cskiszentmihalyi[39] alerts us to the wider benefit of going the extra mile and the value of creativity. Creativity is not only important for innovation and the improvement of services. It is also important for personal fulfilment: 'Creativity is a central source of meaning in our lives… we are living more fully than during the rest of life'. He further stresses the importance of finding flow and enjoyment in our everyday lives and our work.

References

1 Booth, A. Clear and present questions: formulating questions for evidence based practice. *Library Hi Tech* 2006, **24**, 355–368.
2 Bayley, L. & McKibbon, A. Evidence-based librarianship: a personal perspective from the medical/nursing realm. *Library Hi Tech* 2006, **24**, 317–323.
3 Koufogiannakis, D. & Crumley, E. Research in librarianship: issues to consider. *Library Hi Tech* 2006, **24**, 324–340.
4 Fenske, R.E. & Ward, P. Factors influencing research productivity among health sciences librarians. *Bulletin of the Medical Library Association* 1992, **80**, 353–360.
5 Ritchie, A. Future visions for continuing professional development in health librarianship: an Australian perspective. *Health Information and Libraries Journal* 2008, **25**, 103–105.
6 Rossall, H., Boyes, C., Montacute, K. & Doherty, P. Developing research capacity in health librarians: a review of the evidence. *Health Information and Libraries Journal* 2008, **25**, 159–174.
7 Petrinic, T. & Urquhart, C. The education and training needs of health librarians – the generalist versus specialist dilemma. *Health Information and Libraries Journal* 2007, **24**, 167–176.

8 Seeley, H. & Urquhart, C. Action research in developing knowledge networks. *Health Informatics Journal* 2008, **14**, 279–296.

9 Vezzosi, M. Information literacy and action research: an overview and some reflections. *New Library World* 2006, **8**, 286–301.

10 Clark, D. Is professional writing relevant? A model for action research. *Technical Communication Quarterly* 2004, **13**, 307–323.

11 Hannigan, G.G. Action research: methods that make sense. *Medical Reference Services Quarterly* 1997, **16**, 53–58.

12 Jerome, R.N. Further developing the professional research mentality. *Journal of the Medical Library Association* 2008, **96**, 287–288.

13 Goodfellow, T. & Graham, S. The blog as a high-impact institutional communication tool. *The Electronic Library* 2007, **25**, 395–400.

14 Ford, N. The growth of understanding in Information Science: towards a developmental model. *Journal of the American Society for Information Science* 1999, **50**, 1141–1152.

15 Grant, M.J. The role of reflection in the library and information sector: a systematic review. *Health Information and Libraries Journal* 2007, **24**, 155–166.

16 Forrest, M.E.S. On becoming a critically reflective practitioner. *Health Information and Libraries Journal* 2008, **24**, 229–232.

17 Blanton, H. Conference information: managing before, during and after. *FUMSI* 2009. Available at http://web.fumsi.com/go/article/manage/4394 (accessed 20 December 2009).

18 Julien, H., McKechnie, L.E.F. & Hart, S. Affective issues in library and information science systems work: content analysis. *Library & Information Science Research* 2005, **27**, 453–466.

19 Koufogiannakis, D., Slater, L. & Crumley, E. A content analysis of librarianship research. *Journal of Information Science* 2004, **30**, 227–239.

20 Lewis, S. & Cotter, L. Have the most relevant and answerable research questions facing librarians changed between 2001 and 2006? *Evidence Based Library and Information Practice* 2007, **2**, 107–120.

21 Dwyer, M.A. Delphi survey of research priorities and identified areas for collaborative research in health sector library and information services UK. *Health Libraries Review* 1999, **16**, 174–191.

22 Baruchson-Arbib, S. & Bronstein, J. A view to the future of the library and information science profession: a Delphi study. *Journal of the American Society for Information Science and Technology* 2002, **53**, 397–408.

23 Eldredge, J.D. Inventory of research methods for librarianship and informatics. *Journal of the Medical Library Association* 2004, **92**, 83–90.

24 Booth, A. & Brice, A. Clear-cut?: facilitating health librarians to use information research in practice. *Health Information and Libraries Journal* 2003, **20**(Suppl.), 45–52.

25 Schardt, C., Adams, M.B., Owens, T., Keitz, S. & Fontelo, P. Utilization of the PICO framework to improve searching PubMed for clinical questions. *BMC Medical Informatics and Decision Making* 2007, **7**. Available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1904193/pdf/1472-6947-7-16.pdf (accessed 6 December 2010).

26 Ford, N. Creativity and convergence in information science research: the roles of objectivity and subjectivity, constraint, and control. *Journal of the American Society for Information Science and Technology* 2004, **55**, 1169–1182.

27 English, L. The 7 habits of highly effective information professionals. *DM Review* 2005, **15**, 48–49.

28 Wikipedia. Available at http://www.wikipedia.org (accessed 20 December 2009).

29 Baulcomb, J.S. Management of change through force field analysis. *Journal of Nursing Management* 2003, **11**, 275–280.

30 Cronshaw, S.F. & McCulloch, A.N.A. Reinstating the Lewinian vision: from force field analysis to organization field assessment. *Organization Development Journal* 2008, **26**, 89–103.

31 DeBono Thinking Systems. Available at http://www.debonothinkingsystems.com/tools/6hats.htm (accessed 20 December 2009).

32 MindTools. Available at http://www.mindtools.com/pages/article/newTED_07.htm (accessed 20 December 2009).

33 Gist, G.L. Five steps toward excellence. *Journal of Environmental Health* 1991, **61**. Available at http://0-find.galegroup.com.innopac.up.ac.za/gtx/start.do?prodId=AONE&userGroupName=up_itw. (accessed 20 December 2009).

34 Business directory. Available at http://www.businessdictionary.com/definition/breakthrough-thinking.html (accessed 20 December 2009).

35 Forrest, L.A. The eye of the brainstorm: transforming the library through creative idea-building. *Urban Library Journal* 2008, http://ojs.cunylibraries.org. (accessed on 19 March 2012).

36 Rawlinson, J.G. *Creative Thinking and Brainstorming*. Aldershot, Gower, 1993.

37 Proctor, T. *The Essence of Management Creativity*. Prentice Hall, London, 1995.

38 Robson, M. *Problem-Solving in Groups*, 3rd edn. Aldershot, Gower, 2002.

39 Cskiszentmihalyi, M. *Creativity: Flow and the Psychology of Discovery and Invention*. Harper, New York, 1996.

40 Stinger, E.T. *Action Research*, 2nd edn. SAGE, London, 1999.

41 Brown-Sica, M., Sobel, K. & Rogers, E. Participatory action research in learning commons design planning. *New Library World* 2010, **8**, 302–319.

42 Desmarais, L., Parent, R., Leclerc, L., Raymond, L., MacKinnon, S. & Vézina, N. Knowledge transfer between two geographically distant action research teams. *Journal of Workplace Learning* 2009, **21**, 219–239.

Appendix: Detailed list of suggestions for research and improvement in practice according to conference theme

Following the brief overview of question generation for one paper from each of the selected conference themes, the appendix offers suggestions for research and improvement for all conference themes. It is, however, not intended as an exhaustive list nor is it formulated as research problems. For a few papers, no suggestions for further exploration came to mind, implying that better subject expertise or a deeper examination might be required. The paper themes and titles are based on the conference programme made available to conference attendees. The full-text of conference papers was made available after the conference: http://espace.library.uq.edu.au/collection/UQ:179364.

Evidence based medicine (EBM): translating the evidence

Papers	Questions intended to stimulate further action
Consideration of research in specific fields and whether there is evidence	How do we develop the ability to analyse, interpret and come to a responsible conclusion regarding research evidence?
	Is there a need for librarians to teach such abilities?
	How can librarians collaborate with faculty to address such skills?
	How can we find evidence suitable to the needs of each patient (considering different backgrounds, abilities to interpret research findings and the levels at which research findings are presented)?
	What do we know about the ability of patients in various contexts (e.g. disease, setting, age group) to deal with evidence?
Getting research findings into practice	How do we build a bridge between theory and practice?
	How can librarians contribute to research and how can librarians set an example in doing research?
	How can we assess the contribution of papers/articles/research reports to support the incorporation of theory into practice?
Information management by medical information professionals	How can librarians collaborate to practice what they preach?
	How are health librarians managing their own information?
Clinical practice guidelines quality improvement	Can literature searching contribute to the quality of clinical practice guidelines?
	What is the information behaviour of the authors of clinical practice guidelines?
Positioning the nursing librarian on the wards – nursing rounds with a difference	How can nursing rounds be used to observe information needs and information behaviour?
	How can nursing rounds be used to disseminate information or to raise awareness of information resources?
''I pull the curtains'' – ward rounds	How can librarians use nursing rounds as opportunities to promote their services?
	What is happening in a specific context (e.g. a country) regarding nursing rounds and possibilities for librarians to get involved?
Putting knowledge to work: development of an evidence dissemination service	What evidence is required in a specific context?
	Which resources are available in a specific context?
	Which means for the dissemination of information have been reported in general as well as in a specific context?
	Which means will work best in a specific context?
Encouraging the uptake of evidence in Queensland Health	What are the perceptions of and attitude to EBM in a specific context?
	Which means and methods have been reported to encourage the uptake of EBM?
	What will be required to encourage the uptake of EBM in a specific context?
Using an EBM website	Which websites on EBM are available for a specific context and focus?
	How can websites on EBM be used and promoted?
Getting evidence into practice	How is the incorporation of evidence into practice promoted in a specific context?
	What can and needs to be done to promote the incorporation of evidence into practice in a specific context?

Performance and quality measures

Papers	Questions intended to stimulate further action
An evaluation tool and protocol for improving literature searches in a hospital setting	Can we use an evaluation tool and protocol to improve the training of students and staff members (in view of a move towards workplace literacy)?
	Can we use such an evaluation tool and protocol as part of in-service training and performance assessment?
Distinguishing the evidence in evidence based practices	How do we learn to understand research reports (from both healthcare and librarianship contexts)?
	How can we use citation analysis to note and understand evidence in librarianship?
	How do librarians teach the skills of citation analysis?
Research performance indicators in a hospital setting	What are the research performance indicators we should consider in health fields and in librarianship?
	How do we include the ability to link to practice?
	How do we analyse the explicit and implicit linking of papers to implementation in practice?
Evidence for change: library needs assessment	How can we determine needs for library services (e.g. new methods of data collection)?
	How can we do needs assessment and service adaptation at a level that is manageable on an ongoing basis?
	What are the needs in a specific setting, and how do (or can) such needs link to literature reports?
Medical students responding to an information use survey: what works for them?	How can we learn from surveys with medical students?
	What are the information needs of medical students in specific settings?
	How can libraries and information services meet the needs of medical students in a manageable way?
Metrics, measures and meaning: evaluating the CareSearch website	How can we evaluate health related websites?
Networking an evaluation of clinical literature searches	How can we improve the quality of literature searches and systematic reviews?
	What is happening in country or institutional settings?

Health informatics

Papers	Questions intended to stimulate further action
Using clinical audit to teach health informatics	How can clinical audit be applied in other teaching settings?
Development of China Disease Knowledge Total Database	How can the experiences of developing a disease knowledge total database in one country be useful for other countries?
Evaluating electronic databases – experiences from the OTseeker evidence database	What can we learn from how the OTseeker evidence database is used, and how can this be transferred to the evaluation and assessment of how other similar databases are used?
Transforming the computers and medical information elective	How can experiences in transforming an elective in computers and medical information be applied in other settings?
Developing a nursing informatics curriculum	What is happening in the country context with regard to nursing, medical and healthcare informatics?
	Who is responsible for the training?
	What is the scope of the curriculum and how is it supported from a library perspective?

Medical humanities

Papers	Questions intended to stimulate further action
Medical history of British India: online project	What is known about the medical history in a specific country and where/how is such information made accessible?
Obstetrics in colonial Philippines	What is the country specific information infrastructure for any specific field of medicine and how can this be explored?
One library of books	Which one-stop access information resources are available for any specific field of information applying to a specific country?
Curious herbalist: the life and times of Elizabeth Blackwell	Are there country specific healthcare professionals that can be studied for their contribution to the development of healthcare (and with an information slant)?
Art of medicine: visualizing medicine from Vesalius to MRI	Further consideration required for suggestions
Why medical biography?	Which country specific medical biographies are available and how can such biographies be brought to the attention of medical and other healthcare students and faculty?
Medical best sellers	Which medical best sellers may be of interest in a specific country setting?
	How can medical fiction be used in bibliotherapy and in supporting information behaviour?
Using postcards to document the history of veterinary medicine	Does this have implications for documenting the history of any specific field of medicine in a specific country?

Publishing trends and challenges

Papers	Questions intended to stimulate further action
Describing versions of scholarly articles	What is happing in a country or institutional context regarding the description of different versions of scholarly articles?
A study of the change of medical librarians' roles and library services with the emergence of electronic information	What can we take from views on the change in health librarians' roles and library services with the emergence of electronic information to reconsider our own roles and services offered?
	How can we ensure that training and support is in place to prepare us to take on new roles and services offered?
Trends and challenges for electronic resource management	How should we deal with electronic resource management in a specific institutional or country setting?
Interdisciplinary project to improve quality writing in peer reviewed scientific articles	How can librarians contribute to the quality of writing for peer reviewed publication?
	How can librarians address their own needs when writing for peer reviewed publications?
	How can librarians contribute to quality systematic and literature reviews?
Deep indexing of illustrations to reveal hidden data in the scholarly literature: CSA Illustrata	What does deep indexing entail, and what can be learned for the improvement of country or institutional contexts?
	How can deep indexing be linked to the theory of information representation e.g. the theory of poly-representation?
Is electronic always the right choice?	What are the preferences in a specific setting for the use of electronic versus printed information resources?
	How are these resources actually used?
Next wave of scholarly communication	What trends can we expect in scholarly communication, and how can we prepare for them?
	Which resources do we need to monitor and what should environmental scanning entail if we are to prepare libraries and information services to deal with changes in scholarly communication?

Professional development

Papers	Questions intended to stimulate further action
Information literacy: is it worth the effort?	What can we learn from the evidence on teaching information literacy, and how can the value and impact of information literacy programmes be monitored?
Library futures: from cybrarian to clinical librarian	Is there a need for clinical librarians in a specific institution/country setting, and if so, how is this need addressed?
	How can librarians in specific country settings be prepared to take on the roles of both cybrarian and clinical librarian?
Training capsule for health science library professionals	Who could train health science librarians in a specific country?
	How should it be done?
Journey of a knowledge management fellow	What role is there for knowledge management in health care and how can this be addressed at an individual level?
Does it make you a hospital librarian if you work in a hospital library?	What is the status quo in hospital libraries in a specific country, and how do hospital staff tackle their information needs?
	How can the needs of hospital staff be met in a specific country context?
	What is the status quo in teaching hospital librarians in a specific country setting?
	How does the training of hospital librarians in different contexts compare?
Introducing evidence based LIS practice in Sweden	How can evidence based LIS practice be promoted in a specific country or institutional setting?
	What are the attitudes to and perceptions and knowledge of evidence based LIS practice in a specific country or institutional setting?
The need for a global curriculum in training health science librarians of the future	What can be learned from suggestions about such a curriculum?
Part of the job is changing the job: career development and changing roles of health librarians	How can individuals take care of their own career development and life long learning in healthcare contexts?
Moving outside the comfort zone and empowering your own professional development	Which new skills need to be learned, and how can these be incorporated in institutional programmes for continuing professional development (CPD)?
Spreading our professional wings	Which fields, disciplines and theories can contribute to LIS science related research in healthcare contexts?
An iCollege perspective positioning information professionals for the future	Which new skills, knowledge and attitudes should be considered and how can this be done through CPD?
Clinical librarians in the era of evidence based healthcare (sharing experiences)	How can we record the experiences of clinical libraries to benefit from tacit knowledge and contribute to communities of practice?

Partnerships and collaborations

Papers	Questions intended to stimulate further action
Breaching the library walls in BrazilClinical Librarianship Hospital	How can health librarians move their service and support beyond the institutional boundaries?
The role of library partnerships in capacity building for better health	With whom can health librarians collaborate and what can be learned from different disciplines?
Competence in the information professions: a comparative analysis and environmental scan	What are the competencies in a specific institutional or country setting and how should inadequacies be addressed?
Maintaining the NLM Arctic Health website	What does the maintenance of health related websites entail?
Medical LIS services in Papua New Guinea	Which medical and health related information services are available in a specific country for healthcare professionals as well as patients?
	Do such services meet their needs, and how can such services be improved?

Partnerships and collaborations (Continued)

Papers	Questions intended to stimulate further action
Developing an Australian-based portal/gateway for EBM resources	Which portals and gateways of EBM resources are available to meet the needs in a specific setting? How can EBM portals and gateways be developed to meet the needs in specific settings?
Role of librarians in EBM practice at a large Norwegian University Hospital	What role are librarians playing with regard to EBM practice in a specific setting or country?
The hunter librarian	Further consideration required for suggestions
Partnerships maximize skills sets and minimize time commitment (involving the librarian, clinician, organization specialist, drug information specialist). Delivering the informatics rotation.	Which partners should be considered to improve services in a specific context, and how can such partnerships be initiated?
Egyptian pilot study for a Global Database of Cancer Control in Developing Countries	Which databases are available to address health related information needs in a specific country or institutional context? Which databases need to be developed to address health related information needs in a specific country or institutional context?
REBLs with a cause: a catalyst for evidence based collection development	Which guidelines and criteria apply to the development of an EBM based collection? How can the use of such a collection be monitored?
Creating research capacity in developing countries: the role of international collaborative networks of information professionals: a case study of ophthalmic resource centres in Asia and Africa	How can research capacity in a specific country or institutional setting be improved e.g. by means of action research, joint systematic reviews, small scale exploratory projects? How can research confidence be built? How can we improve writing skills?
Western Pacific Region Index Medicus (WPRIM): a tool for global accessibility of health research in the Western Pacific Region	Which information resources are available to the health sector in the institutional and country setting and are these sufficient?
Bridging the partnership divide: HINARI over 8 years	What can be learned from a project such as HINARI, and are such lessons transferable?
Providing a budget CPD at a distance	How can the need for CPD be met in an institutional and country specific context?
Evidence based health services for management nurse leaders	Which evidence based services are available to specific target groups, and how can such services be improved?
Collaborate, innovate and change in the design and delivery of an information literacy programme to undergraduate nursing students	Are information literacy programmes on offer meeting the requirements of the target group and improving learning, and can programmes be benchmarked?
Strategies for improving health information in the developing world	How effectively are developing countries using information available for free?
Exploring the impact of the information specialists on evidence based practice	What can be learned from the potential impact of librarians and information specialists, and how can we ensure that issues are dealt with in involving and training librarians and information specialists?
Partnerships and collaborations necessary for the successful operation of a resource sharing network	How are information resources shared in a specific institutional or country context and are such methods adequate to meet the information needs?
Study on the status of medical library user instruction in Korea and programme development	What is happening in the institution/country with regard to user instruction and information literacy and especially with regard to assessment skills?
The Bibliosan system in the outline of Italian biomedical research	What can be learned from a specific system such as Bibliosan and its value for biomedical research in other settings and contexts?

Partnerships and collaborations (Continued)

Papers	Questions intended to stimulate further action
Medicine@Macquarie: developing a library service model for a new postgraduate medical school	Is the library service model in a specific context still appropriate to the needs of clients/users? Which methods can be used to adapt the library service model to clients'/users' needs?
Information needs of school nurses: assessment and resources implementation	How can the information needs of specific groups be assessed? What can be learned from the needs reported for specific groups and how can this be incorporated into practices in specific settings?
Making a difference at the bedside: delivering evidence based resources to healthcare practitioners	Which new methods can be used to deliver EBM resources, or to raise awareness of such resources? How can the impact of using such methods be assessed?
Positioning medical students' information fluency through the curriculum and beyond	How does information fluency differ from information literacy, and what can be learned that can be incorporated into institutional practices?
Medical Journal Editors' Association in Western Pacific Region	What are the views of medical journal editors in a specific country on the dissemination of information and methods for staying abreast of new developments? How do they identify new trends to be covered? What are their information needs and information seeking behaviour?
Undergraduate medical education: redefining the role of the librarian	What can be learned to change institutional specific practices (e.g. scope, methods and assessment) in medical education?

Spotlight on Indian health librarianship

Papers	Questions intended to stimulate further action
An overview of health science information systems in India from a librarian's point of view	Which health related information systems are available in a specific country?
QMed Knowledge Foundation: empowering the medical information user	What can be learned from QMed Knowledge Foundation that can benefit local contexts and practices?
Virtual Private Network for knowledge management in homeopathic research organizations in India	How can knowledge management in homeopathic research be applied in specific contexts?
Management of preserving resources in digital libraries in India (challenges and perspectives)	How are information resources managed and preserved in the specific institutional/country contexts (e.g. archival resources and digital resources)?

Rural and indigenous health

Papers	Questions intended to stimulate further action
Managing the knowledge assets of indigenous systems of medicine	What is being done in a specific country with regard to indigenous systems of medicine or indigenous medical practices?
Literature landscapes: investigating the contribution of journals and bibliographic databases to palliative care	Which databases and journals are available for specific healthcare fields? Which means of current awareness services can be used for specific healthcare fields?
Online and social media training curricula to facilitate bench to bedside information transfer	How are online and social media used in local curricula and training? How can online and social media be used in local CPD?
Research prospects for user instruction	What can be learned about the need for research and improvement in user instruction? Consumer and patient health information

Consumer and patient health information

Papers	Questions intended to stimulate further action
Pilot project to build e-health literacy among university students in Hong Kong	What is being done in the institutional/country context with regard to e-health literacy, how can it be improved and how do we assess whether it is working?
The literature of loss: finding what might be useful	What is the information infrastructure for specific fields in healthcare?
	Which literature can be recommended to patients with regard to specific fields of healthcare or diseases?
Interpreting the information behaviour of patients and families in palliative cancer care (practical approach)	How can findings on information behaviour in various healthcare contexts be translated into practice?

Emerging and new technologies

Papers	Questions intended to stimulate further action
Development of a multi-site-high-volume rapid document delivery system across Mayo Clinic and Mayo Health System	How is document delivery dealt with in the specific institutional/country setting, and what can be learned from the Mayo Clinic and Mayo Health System project?
Changing trends in medical school curricula, the effect of technology and the role of libraries	What is happening in the medical curricula in the country and how would this affect the role of the library?
Innovative online tools to support medical libraries	Which online tools are available and can be used to support medical libraries?
Positioning medical libraries in the World of Web 2.0 technologies	What is happening with regard to the use of Web 2.0 tools, and how can the use of these be improved?
Public health 2.0 collaborative partnerships for integrating social technologies into practice community	How can the use of Web 2.0 tools be incorporated into public settings?
Open Medical Library: cooperation and scientific communication network through RSS	How effective are Web 2.0 tools in specific settings (e.g. users'/clients' readiness to accept the use of the tools)?
Open source systems bring Web 2.0 to special libraries	How are open source systems used in the institution/country?
Text mining and primary data management (what to expect in the future)	To what extent and how are text mining and primary data applied?
Innovative roles and skills required of medical librarians in virtual worlds	How do we prepare librarians to be innovative in virtual worlds?
	How can data be collected on preparing health librarians for new roles?
Closing the gap: using Cisco Unified MeetingPlace technology to change communication and collaboration in organizations	Which technologies are available for virtual meetings and how effective are these?

International Clinical Librarian Conference (ICLC)

Papers	Questions intended to stimulate further action
Role of the clinical librarian in consumer health: report on a 18 month project in Melbourne	What is the role of clinical librarians in a specific context or country setting? How can the role of clinical librarians be explored? How can we use alerting services to explore the changes in the role of clinical librarians?
Approaches to evaluating clinical librarian services: a systematic review	What systematic reviews are required to deepen our understanding of the role of clinical librarians and the requirements for clinical librarian services? What is known about the approaches to clinical librarian services in a specific country? How can clinical librarian services in a specific country be promoted?
Extreme outreach: having a librarian in the operating room areas	What is the value of outreach services going beyond the library walls and what can be learned from such efforts?
A comparison between clinical librarianship in the UK and USA	What can be learned from comparative studies? How can such studies be repeated in different contexts?
Seamless hybrid authentication in Research4Life	What can be learned from this project? How can it be replicated in other contexts/settings?

Marketing and promotion

Papers	Questions intended to stimulate further action
Personal Librarian Programme at Yale Medical Library: reaching out to medical students	What can be learned about outreach programmes from the Personal Librarian Programme at Yale Medical Library?
Relationship marketing can stimulate library development	What does relationship marketing entail and how can it be incorporated in local contexts?
Really Simple Syndication: a study on health sciences faculty and medical residents' adoption of a new technology following an instruction session on RSS	How effective are specific Web 2.0 tools and how are these adopted in local contexts?

Emerging diseases and disasters

Papers	Questions intended to stimulate further action
Sichuan 512 catastrophe: rebuilding libraries after the earthquake	How are libraries in a specific country preparing for a variety of disasters and what can be learned from the reports?
Library and disaster emergency planning	What are libraries in a specific country doing about disaster emergency planning? What can be learned from reported library and disaster emergency planning (i.e. a systematic review)?
Managing emerging diseases and disasters in India	How can health librarians prepare for managing information and addressing information needs regarding health disasters in specific country contexts? How can health librarians aptly meet information needs arising from new and unknown diseases?
Positioning health information professionals to manage disaster situations	What is known about the healthcare information infrastructure in a specific country and how health librarians can contribute in providing information services in disaster situations?

Health information

Papers	Questions intended to stimulate further action
HINARI (Health InterNetwork Access to Research Initiative): overview, trends, developments	What can be learned from the work and experiences of HINARI and to what extent is this transferable to other contexts?
Studies of Chinese Digital Medical Information metadata	What is the status quo in the use of metadata with regard to country/institution specific information resources, and how can this be improved considering the theory of information representation (e.g. poly-representation)?
Seeking health on the Web: health search engines and new developments	Which health related search engines and other WWW search tools can be used to meet the information needs in a specific setting?
	How can the use of such search tools be promoted?
	How do such search tools compare with traditional medical and health related databases?
Lessons from a journal deselection project	What can be learned from a journal deselection project and how can this be applied to a specific setting?
	What can be learned by considering other reports on similar projects?
Google books: coverage of core clinical textbooks	How well are specific health related topics covered by Google books, and how can the appropriate use of Google books be promoted?
Dissemination of health information through ERMED Electronic Journal Consortium in India	How is country specific health related information disseminated?
	How accessible is such information to the public at large?
Assessing the impact of electronic journals in the Faculty of Veterinary Science at the University of Zimbabwe	What is the impact of country specific medical and health journals?
Clinical trials registers and clinical trials results registers: their contribution as health information sources to evidence based healthcare decision making	Which clinical trials registers and clinical trials results registers are available in a specific country, and how do these (if available) contribute to EBM?
Positioning library services for 21st century medicine	How can future forecasting be used in positioning library services for the 21st century?
	How can environmental scanning be used in positioning library services for the 21st century?
	What methods can library services use to position themselves for the 21st century?
Exploring information needs and information behaviour in oncology contexts: the importance of tasks, roles and organisational settings	What methods can be used to identify fields to enlighten research on task-based impacts on information needs and information seeking behaviour?
Specialised languages used in patient records: implications for information organisation and retrieval	How can patients' understanding of terminology and access to language tools be improved to help them when seeking information?
From magic options to the informed female breast cancer patient	How well are patients informed about their disease (any disease specific context)?
	What methods can be used to deepen our understanding in linking patients' understanding of their disease and the information they have received to information needs?
Indian scenario of library profession, growing versus graying in the era of electronic information and consortia	What is the staff profile in the medical/health librarian sector of a specific country?

History of medicine

Paper	Questions intended to stimulate further action
Debate over a library: soma versus psyche	Further consideration required for suggestions
Medical museums as libraries	What medical museums are there in the country and can they serve the role of libraries or contribute to the availability of information on a particular facet of medicine in the country?
Kipling and his medical references	Further consideration required for suggestions