

Evidence-Based Library and Information Practice & Educational Needs of Health Librarians: National and International Trends

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ABSTRACT

The health care knowledge base, documented in the healthcare literature is vast and ever increasing and changing. Changes in medical information and technology are revolutionising health care. The clinicians today are trying to incorporate research into practice and are increasingly depend on technology to bring evidence to the bedside to improve quality and patient outcomes. Today, given the significance of evidence-based practice, health librarianship is given higher priority in many centers. Responses vary, but there seems to be a more towards 'clinical information scientists' - 'informationists' who might be educated in both clinical and information disciplines. But adaptation to change is not enough. Even as we have increased our roles in health environment as value-added educators and information providers, there is need to continue education and training in different facets: conferences, short courses, seminars etc should be conducted. Conferences are required to be organised at national level in order to improve health care services and recognition of health librarianship.

Keywords: Medical librarianship, health science librarians, clinical librarianship, evidence based medicine, India.

1. INTRODUCTION

Over the past few decades, the role of the medical librarian has become increasingly complex, due to the explosion of information, and the way information is now digitised, libraries are increasingly virtual. Now the additional problem is that clinicians need information but not any information. They need evidence from high quality research. The information is available, but they may have not time to search effectively. To meet their needs, the librarian must adopt the role of going out of the library to meet the clinicians, themselves. A clinical librarian must be able to interact effectively with other health professionals and have the ability to assess a need and respond quickly with relevant information support. Today, Evidence-based medicine (EBM) extends the librarian's role beyond identification of the literature to get involved in practicing and teaching quality filtering and critical appraisal of the literature. These activities require librarians to obtain expert knowledge of medical terminology, etc. This is the only way to meet all these rapid changes. The new role of the clinical librarian as an educator, using evidence as the basis of practice at the 'point of care'¹, reflects the change in approach which has taken place in medical practice. The increasing emphasis of EBM calls for the integration of clinical expertise with the best available external evidence. Librarians are therefore involved in part of the progress of getting research into practice, getting evidence to the bedside that involves resolution of clinical problems, with best, available, up to date external evidence from systematic

research, clinically relevant and applicable to the problem at hand. In addition, the librarian has been assumed an educator by teaching other health care professionals or students how to search for EBM themselves. How and why information is communicated among patients, health care providers, administrators, evaluators, and planners is also of importance to health librarians. Today, given the significance of evidence-based practice, health librarianship is given higher priority in many centers. Responses vary, but there seems to be more towards 'clinical information scientists'-'informationists' who might be educated in both clinical and information disciplines.

But adaptation to change is not enough. Even as we have increased our roles in health environment as value-added educators and information providers, we need to continue education and training in different facets: conferences, short courses, seminars, etc. Librarians have to migrate into the clinical setting and to avoid doing that is likely to deny our future in the information age.²

2. CHANGES IN HOSPITAL/HEALTH/CLINICAL/MEDICAL LIBRARIANSHIP: INTERNATIONAL SCIENCE.

The 1980s was a decade of change in medical librarianship. A review of literature shows that clinical medical librarianship had not been analysed from a historical perspective until the mid 1980s.

Gertrude Lamb identified a gap between what medicine as a discipline knew about good patient care and the knowledge that was actually applied to the care of

patients³. Seeing an opportunity for medical librarians to help make the connection, she pioneered the concept of librarians who participated on clinical rounds to identify and meet information needs related to current cases. Lamb established the first clinical medical librarian (CML) program at the University of Missouri–Kansas City (UMKC) School of Medicine in 1971 and continued her efforts at Hartford Hospital and the University of Connecticut Health Center in 1974.⁴⁻⁵ Cimpr summarised the reasons clinical library services were offered: ‘to provide information quickly to physicians and other members of the health care team; to influence the information-seeking behaviour of clinicians and improve their library skills; and to establish the medical librarian’s role as a valid member of the health care team’⁶. Davidoff and Florence, in a 2000 *Annals of Internal Medicine* editorial, saw the same literature-practice gap as that identified by Lamb in the early 1970s’, despite an emphasis on evidence-based medicine and developments in technology and information sources. They proposed a national program, modelled on the experience of clinical librarianship, to train, credential, and pay for a new profession of ‘*informationists*,’ educated in both clinical and information disciplines, with the potential to improve the quality of care as well as its cost-effectiveness⁷. The 2000 ‘*Annals of Internal Medicine*’ editorial proved a stimulus to librarians already exploring ways to better integrate information into the clinical context⁸.

Guise echoes the need for clinical librarians to develop ‘a high level of clinical knowledge that supports their ability to interact on rounds, to search effectively, and-crucially to interpret the medical literature’⁹. Thus, the new profile as compiled from various recent writings on clinical librarianship are:¹⁰:

- (a) Expert knowledge
- (b) Be involved in a professional team as a part of their work
- (c) Attend bedside rounds or clinical meetings where individual patients were discussed; maintain diaries
- (d) Contribute to continuing education
- (e) Make an impact on patient care
- (f) Provide quality filtered, case specific information to the physician in support of clinical decision making
- (g) May be critical in a time dependent nature
- (h) May be a resource to assist physicians to improve the quality of healthcare service (specially in the Emergency medicine, for e.g.)
- (i) Provide immediate responses to information requests at the ‘point of care’.
- (j) Define the clinical problem.

Clinical librarianship has perhaps been one of the most innovative concepts to be introduced into health sciences libraries. The ideas behind it continue to inspire

health sciences librarians and to guide priorities. It moves the hospital librarian beyond the support and service role toward a more direct role in patient care¹¹.

3. WORLDWIDE CHANGES IN NATURE OF MEDICAL LITERATURE

Health sciences librarians have been advocating the use of indexes and abstracts for as long as these products have been available. More than twenty years ago, the National Library of Medicine pioneered online access to the literature with the introduction of Medlars online (Medline)¹². The Cochrane collaboration is a network of health care professionals, consumers, and researchers whose major goals are to produce and distribute systematic reviews of the effects of health care interventions.

Today, the internet has dramatically increased the amount of electronically accessible medical information. The internet enables the medical profession and consumers to have more information to make decisions and this could lead to better medical decisions and outcomes. Doctors need clinical information to justify individual clinical decisions with explicit reference to evidence. However, without the assistance from professional clinical-medical librarians, retrieving and filtering new and relevant information from databases and Internet remains a challenge. The health care librarian can bring expertise in the selection, preparation, and dissemination of systematic reviews to the health care profession.

4. CHANGES IN HEALTH/MEDICAL LIBRARIANSHIP: NATIONAL SCENE

The history of medicine in India is also ages old. Long before the Royal College of Surgeons came into being, students from far off lands were making their way to India’s Nalanda and Taxila universities to study medicine. The country had witnessed so many developments in the field of health, education and research during past two decades. ICMR was founded in 1911. The Medical Council of India came as a glimmer of hope in 1934. All India Institute of Medical Sciences (AIIMS) came into existence in 1956. Thus medical libraries emerged in medical schools and colleges and are functioning as bridge between the medical information resources and the users of the medical community where they are working.

With the implementation of the recommendations of National knowledge commission, which emphasised the significant role of different types of libraries including biomedical in promoting knowledge sharing among the user groups, the need of health knowledge workers is realised. Further, the demand of medical librarians with knowledge and experience in library automation will be much in demand in view of the Ministry of Health & Family Welfare, Government of India to develop digital medical library infrastructure in all medical colleges.

In order to improve health care sector, the Pradhan Mantri Swasthya Suraksha Yojana (PMSSY) was announced

in 2003 to augment facilities for medical education, setting up of AIIMS like institutions and up gradation of Govt. medical college institutions.

However, a number of studies indicate that the health science library professionals should also upgrade their skills in information and communication technology (ICT) and communication skills¹³. Another study of the techniques and methods adopted in the medical college libraries located in the districts of southern Karnataka plateau reveals that whatever the ICT infrastructure available in most of the libraries is inadequate¹⁴. Soubakhsh & Farzin in 2006 described that medical library and information centers are witnessing major revolution in their activities and services and this has caused the librarians to feel that in addition to their traditional activities, they need to achieve modern knowledge and skills. A survey of medical college libraries of Andhra Pradesh also revealed that most of the medical college libraries are not automated and librarians (36.36%) do not have training in computer applications. Thus, more stress need to be given on human resource management as suggested by Srinivasulu & Reddy in 2010. Further, according to Bhutt in 2012 there is an urgent need to plan, implement and develop ICT infrastructure to be fit in facing the challenges ahead of them¹⁵.

Further, in 2014, Khan and Siddiqui¹⁶ also surveyed the use of Information Technology¹⁷ and services by medical students of Sanjay Gandhi Post graduate Institute of Medical Sciences (SGPGIMS), Lucknow, UP, India, where library has managed to adopt latest technologies. After exhaustive research, it was found that the library of SGPGIMS is providing IT-enabled services and resources, but it needs to improve its collection and services. Students have reacted positively toward the IT implementation in their library and want to have more improved services. Students should be provided with enough number of systems and round-the-clock access to the e-resources.

Hence, in order to cope up with the information challenges of the 21st century and to meet the increasing and changing needs and requirements of the users more effectively and efficiently and to keep pace with the ever-increasing technological changes, the Medical Library and Information Science (MLIS) professionals should acquire knowledge and skills in Information technology¹⁷.

However, the evidence-based library practice and health librarianship in India is still to be considered and improvement in the infrastructure of Medical libraries is need of the day. It is a privilege for the medical librarians that India is going to host the 12th International Congress on Medical Librarianship (ICML) schedule to be held in New Delhi during 2017.

5. EVIDENCE-BASED LIBRARIANSHIP AND ROLE OF HEALTH LIBRARIANS

The development of the concept of Evidence Based Librarianship (EBL) was described for the first time in 1997, by Eldredge in 1997. As with the evidence-based

practice movement, EBL began in the medical arena under the auspices of Medical Library Association in the USA and Canada, and under the Health Libraries Group in the UK¹⁸. The evidence based movement originated as evidence based medicine (EBM) and eclipsed by a much broader movement, referred to as evidence based health care. EBL adapts its core characteristics from the EBM and EBHC movements. Librarians operate their libraries in the real world context of providing services and collections through managing budgets and resources. Thus EBL constitutes an applied rather than theoretical science. EBM shares with librarianship the goal of applying the best scientific research toward the immediate, practical need to provide efficient, compassionate medical services to patients¹⁹. The pervasive use of EBM resources in answering clinical questions is making it imperative for information specialists to develop an expertise on their appropriate use. By exploring their use in answering complex clinical questions and general care management questions, this paper underlines the strengths and weakness of EBM resources and provides information specialists with some basic knowledge about how these resources can be combined with the primary literature to strengthen their effectiveness²⁰.

Indeed, librarians have played a central and critical role in the evidence-based movement. The informationist role has been well described in the Health sciences library literature. Informationist now typically refers to an individual with a thorough understanding of both a health care domain and information seeking and appraisal, who employs that combination of expertise as part of a health care or research team²¹.

‘Some of the most robust evidence-based library and information practice (EBLIP) work originated in countries such as Australia, Canada, Sweden UK and the US’²². The global interest has been reinforced by the *International Conference on Evidence-based Library and Information Practice* that has been held every two years since 2001. The Seventh International Conference on EBLIP held in 2013 in Canada had an International advisory group representing 14 different countries. In 2006, an open source journal “Evidence-based Library and Information Practice was started at University of Alberta in Canada in 2006 as a major development in this area (<http://ejournals.library.ualberta.ca/index.php/EBLIP/>). It provides a forum for librarians and other information professionals to discover research that may contribute to decision making in professional practice.

6. STUDIES DEMONSTRATING VALUE OF MEDICAL LIBRARIANS IN EBC

Many studies have demonstrated the value of supplementing the information in doctor’s heads with information from the published literature delivered to the point of care. Earlier Janet Doe, in 1943 conducted a survey of the ailing Army Medical Library which resulted in the new National Library of Medicine, USA

building in 1956.²³⁻²⁴

Recent researches have shown the value of information in patient care and highlight the role of the library and Librarian in supporting this information revolution²⁵. At some centers librarians are also becoming more embedded into patient safety and quality improvement initiatives and into research and clinical teams. This research also demonstrated that when clinical librarians are involved in providing information in patient care settings, answers to clinical questions can be obtained more quickly and efficiently²⁶. Key roles in teaching evidence based practice (EBP) are of interest to many hospital and academic librarians²⁷. In a large-scale critical incident survey of physicians and residents at 56 library sites serving 118 hospitals in the USA and Canada, out of 4,520 respondents, 75% said that they definitely or probably handled patient care differently using information obtained through the library. The outcomes were examined in relation to four information access methods: (i) Asking librarian for assistance; (ii) Performing search in a physical library; (iii) Searching library's web site; or (iv) Searching library resources on an institutional intranet. All library access methods had consistently positive relationships with the clinical outcomes, providing evidence that library services have a positive impact on patient care quality²⁸. Further, studies also describe that the medical librarians, skilled in identifying appropriate resources and working with multiple complex interfaces, can support clinician's efforts to practice EBM by providing time and expertise in articulating the clinical question and identifying the best evidence²⁹.

Thus, the advent of EBL and Information Practice and the leadership role that health science librarians were playing in its development seemed to be the perfect way to illustrate the practical value of linking research to practice³⁰.

Besides, librarians also play a role in managing the electronic information resources of a health care institution. Librarians and their health care technology support staff choose what publications are to be published.

7. CHALLENGES BEFORE HEALTH LIBRARIANS

The overarching rationale for the informationist profession is the growing amount of biomedical information that challenges health care practitioners to stay current. Davidoff & Florence pointed out that this information resides in scattered formats with inconsistent indexing and accessibility and requires time, domain knowledge, retrieval, and critical appraisal skills to convey the best of it to the point of care³¹. Lindberg & Humphreys's futuristic vision of Medical libraries proposed a marked increase in electronic information but also more in-context work by librarians 'to improve quality, to reduce the risks associated with inefficient or incomplete retrieval of the available evidence, and to do community outreach'³².

Several studies have identified the gaps in skills and

knowledge between those acquired at library schools and the requirements of librarians working in health librarians. Librarians need to develop skills in understanding how clinical research is done, reported and indexed. Plutchak noted that there is much work to be done by libraries in making the products of research accessible and usable to our library users and to ourselves. Despite the increasing abundance of research and scholarship linking research to practice continues to be a challenge³³.

8. TRAINING AND EDUCATION FOR LIBRARIANS WORKING IN HEALTH SECTOR

Internationally, a number of studies indicate the efforts made towards the educational and professional development opportunities for prospective or early career health information professionals³⁴. The extent to which health science librarians are engaged in research was also assessed³⁵. Another study by Akers, *et al.*, describer ORCID(open researcher and contributor ID) registry as a primer for librarians, by assigning unique 16 digit author identifiers that enable automatic linkages between researchers and their scholarly activities³⁶. Further, a study by Pearce- Smith also demonstrated that a Journal club is an effective tool for librarians, which aimed to develop appraisal skills and assist in the application of research to practice³⁷.

In view of the above studies, the present study suggests some initiatives to be taken for health library professionals in India:

1. The Library Associations should collaborate with Medical Council of India (MCI) to work together and organise training programmes for health librarians.
2. An apprenticeship program can be included as a part of curriculum to visit medical libraries, hospitals as well as health care providers in order to acquaint themselves with their requirements, related to research, patient care and terminology.
3. International conferences on EBL and information practice for health librarianship should be organised from time to time in academic and Medical libraries, e.g., AIIMS and National Medical Library (NML), New Delhi.
4. The curriculum should be designed to develop some subject knowledge relevant for the health sector especially for non-science background students e.g. knowledge of anatomy and physiology, origin and meanings of medical terms, project management skills, literature searching skills, knowledge of evidence based practice, research methods and epidemiology.

9. CONCLUSIONS

'Information will increasingly become the currency of healthcare in the future, and our ability to access, understand and interpret it at individual and population level will be a key determinant in the future success of our healthcare system.'

Thus it is evident that the importance of Library and Information Services in health care sector is very well recognised throughout the world. Library & Knowledge Services staff are vital to healthcare and underpin clinical and management decision making. The services you provide enable staff, patients and their caretakers to access the right knowledge and evidence to achieve high quality healthcare and health improvement. Health Library and Information professionals need to stay a step ahead, and right now the need has never been greater-(CILIP Health Libraries Group Conference 2016).³⁸

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