

Review Article

The Role of Medical Libraries in Supporting Evidence-Based Practice among Health Professionals

Dr. John G. Ogonu¹, Dr. Waribo C. Ihua²

¹ Department of Library and Information Science, Rivers State University, Nkpolu-Oroworukwo Port Harcourt Rivers State Nigeria

² Department of Human Physiology, Faculty of Basic Medical Sciences, Federal University, Otuoke Bayelsa State, Nigeria

ABSTRACT:

Evidence-Based Practice (EBP) has become a foundational approach in modern healthcare delivery, emphasizing the use of current, valid, and clinically relevant evidence in decision-making. Health professionals including physicians, nurses, pharmacists, laboratory scientists, physiotherapists, and public health practitioners depend on timely access to credible medical information to ensure accurate diagnosis, safe treatment decisions, and improved patient outcomes. Medical libraries, whether situated in teaching hospitals, medical schools, research institutes, or specialized healthcare facilities, serve as critical infrastructures for promoting and sustaining evidence-based healthcare practice. They provide access to scholarly databases, peer-reviewed journals, clinical guidelines, and systematic reviews, while also offering professional support through literature searching, information literacy training, research assistance, and knowledge management services. This paper examines the role of medical libraries in supporting evidence-based practice among health professionals. It explores key concepts of EBP, highlights the functions of medical libraries in facilitating evidence access and utilization, and discusses challenges limiting library support for EBP such as inadequate funding, limited digital infrastructure, poor awareness, and shortage of trained medical librarians. The paper also provides recommendations for strengthening medical library services through capacity building, digital transformation, collaborative partnerships, and policy support. The study concludes that medical libraries are indispensable partners in healthcare delivery and play an essential role in improving clinical outcomes by empowering health professionals with evidence-based information resources and services.

Keywords: Medical libraries, Evidence-based practice, Health professionals, Knowledge management, Health information services.

1.0 INTRODUCTION:

Healthcare systems across the world are increasingly confronted with complex medical conditions, emerging diseases, technological advancement, and rising patient expectations. These realities demand that health professionals rely not only on experience and intuition but also on scientifically validated evidence when making clinical decisions. Evidence-Based Practice (EBP) has therefore emerged as a global standard for ensuring that healthcare delivery is effective, safe, and aligned with best practices. EBP refers to the conscientious integration of the best available

research evidence with clinical expertise and patient values to facilitate decision-making in healthcare (Sackett et al., 1996).

In the contemporary health environment, clinicians are overwhelmed by an ever-growing volume of medical literature. Thousands of journal articles, clinical trials, systematic reviews, and guidelines are published daily. The challenge for health professionals is not merely the availability of information but the ability to identify reliable sources, critically evaluate evidence, and apply it appropriately in clinical practice. This is where medical libraries become indispensable. Medical

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libraries are specialized information centers that provide health-related information resources and services tailored to the needs of clinicians, researchers, students, and other healthcare workers (Bandyopadhyay, 2020).

Medical libraries play a significant role in bridging the gap between research evidence and clinical application. They ensure that health professionals have access to high-quality medical literature such as PubMed/MEDLINE, Cochrane Library, CINAHL, HINARI, UpToDate, and clinical guidelines issued by global bodies like WHO and CDC. Beyond access provision, medical librarians act as knowledge facilitators who train health professionals in information searching skills, evidence appraisal, citation management, and scholarly communication (Marshall et al., 2013).

The relevance of medical libraries in supporting evidence-based healthcare practice has grown significantly due to the increasing complexity of clinical decisions and the emphasis on quality improvement in healthcare institutions. Hospitals and medical schools are now assessed not only on the competence of their personnel but also on their ability to demonstrate the use of research evidence in patient care. Therefore, medical libraries have become integral to clinical governance, professional development, and institutional research productivity.

In developing countries, including Nigeria, the importance of medical libraries is particularly critical due to challenges such as limited access to subscription databases, insufficient ICT infrastructure, and scarcity of evidence-based clinical resources. Many health professionals still depend on outdated textbooks, personal experience, or informal peer consultation rather than current research evidence. This situation can negatively affect patient outcomes, contribute to medical errors, and reduce the effectiveness of clinical interventions. Strengthening medical libraries is therefore a strategic requirement for improving healthcare quality and professional competence.

This paper examines the role of medical libraries in supporting evidence-based practice among health professionals. It explores how medical libraries enhance access to medical evidence, support clinical

decision-making, improve information literacy, facilitate research and continuing education, and contribute to healthcare quality improvement.

2.0 CONCEPTUAL CLARIFICATION:

2.1 Medical Libraries

A medical library is a specialized library established to support healthcare education, research, and clinical practice by providing access to medical literature and related information resources. Medical libraries are typically found in teaching hospitals, medical colleges, nursing schools, pharmaceutical institutions, and research centers. They provide both print and electronic resources such as textbooks, medical journals, clinical manuals, research reports, guidelines, and digital databases.

Medical libraries differ from general academic libraries due to their specialized focus on biomedical sciences, clinical medicine, public health, nursing, pharmacy, allied health disciplines, and medical technology. They also emphasize speed, accuracy, and currency of information because healthcare decision-making often involves urgent situations where outdated information may result in serious consequences (Adebayo & Yusuf, 2018).

2.2 Evidence-Based Practice (EBP)

Evidence-Based Practice refers to the systematic approach of using the best available research evidence to guide professional decisions in healthcare. It integrates three major components:

1. **Best research evidence** (clinical trials, systematic reviews, guidelines).
2. **Clinical expertise** (professional judgement and experience).
3. **Patient values and preferences** (individual needs, beliefs, and expectations).

EBP originated from evidence-based medicine but has expanded into nursing, pharmacy, physiotherapy, radiography, laboratory science, and public health practice. Its primary goal is to improve healthcare outcomes through scientifically proven interventions rather than assumptions or traditions (Melnyk & Fineout-Overholt, 2019).

2.3 Health Professionals

Health professionals are trained individuals who provide health services through diagnosis, treatment, prevention, counseling, and rehabilitation. This includes doctors, nurses, pharmacists, dentists, laboratory scientists, radiographers, physiotherapists, dieticians, and community health workers. These professionals rely heavily on accurate medical information to deliver quality healthcare services.

3.0 EVIDENCE-BASED PRACTICE PROCESS AND INFORMATION NEEDS:

EBP follows a structured process commonly summarized as the “5 A’s”:

1. **Ask** – Formulate a clear clinical question.
2. **Acquire** – Search for the best evidence.
3. **Appraise** – Critically evaluate evidence quality and relevance.
4. **Apply** – Integrate evidence into clinical decision-making.
5. **Assess** – Evaluate outcomes and improve future practice.

This process reveals that evidence-based healthcare is strongly dependent on information retrieval and evaluation. Health professionals must have access to trustworthy databases, clinical decision tools, and peer-reviewed resources. Without access to these resources, the EBP process becomes incomplete or ineffective. Medical libraries provide the necessary infrastructure to ensure health professionals can successfully perform these steps (Guyatt et al., 2008).

4.0 ROLES OF MEDICAL LIBRARIES IN SUPPORTING EVIDENCE-BASED PRACTICE (EBP):

The roles of Medical Libraries in supporting EBP are outlined as follows:

4.1 Provision of Access to Current and Credible Medical Information Resources

One of the most important contributions of medical libraries is ensuring that health professionals have access to updated medical information resources. Evidence-based practice requires the use of current research findings, as medical knowledge evolves rapidly. Medical libraries provide access to:

- Peer-reviewed medical journals
- E-books and clinical textbooks
- Systematic reviews and meta-analyses
- Clinical guidelines and protocols
- Drug information databases
- Evidence-based clinical decision support tools

Access may be provided through subscriptions to electronic databases or through open-access initiatives. Medical libraries often serve as institutional gateways to scholarly medical information. Without this access, clinicians may rely on incomplete internet information, outdated books, or unverified sources, which could compromise patient care (Tenopir et al., 2017).

4.2 Supporting Clinical Decision-Making through Reference and Information Services

Medical libraries provide professional reference services that support clinical decision-making. These include responding to clinical queries from doctors, nurses, and pharmacists regarding diagnosis, treatment options, medication interactions, and patient management. In many hospitals, medical librarians participate in clinical rounds, where they provide evidence summaries to support healthcare teams.

This role is essential because clinicians often face time constraints and may not be able to conduct extensive literature searches. Librarians can quickly retrieve relevant evidence, helping clinicians make informed decisions. Studies indicate that librarian-mediated searches improve the quality of clinical decisions and reduce uncertainty in treatment planning (Marshall et al., 2013).

4.3 Facilitating Literature Search and Retrieval for Evidence-Based Research

Evidence-based practice begins with finding relevant evidence. Medical librarians are trained in advanced literature searching skills and database navigation. They help clinicians and researchers retrieve high-quality evidence by using specialized search strategies such as Boolean operators, MeSH terms, keyword mapping, and filters for randomized controlled trials or systematic reviews.

Medical librarians also assist in searching platforms such as:

- PubMed/MEDLINE
- Cochrane Library
- Embase
- CINAHL
- Scopus
- Web of Science
- HINARI

By improving search precision and retrieval accuracy, librarians ensure that health professionals do not waste time accessing irrelevant or low-quality information.

4.4 Training Health Professionals in Information Literacy and Evidence Searching Skills

Medical libraries contribute to EBP through information literacy programs. Information literacy refers to the ability to identify information needs, locate appropriate resources, evaluate information quality, and use information ethically.

Medical librarians conduct training on:

- Database searching and keyword development
- Critical appraisal of medical research
- Identifying predatory journals and fake research
- Evaluating clinical trials and systematic reviews
- Citation and referencing skills (APA, Vancouver styles)

- Use of reference management tools such as Zotero, Mendeley, and EndNote

Such training strengthens the ability of clinicians and students to independently locate and apply evidence. Information literacy is particularly vital in the digital era where misinformation and unverified health content are widespread (Koufogiannakis & Brettle, 2016).

4.5 Supporting Clinical Guidelines Development and Hospital Protocols

Medical libraries support hospital management and clinical departments in the development of clinical practice guidelines and institutional protocols. This role involves retrieving evidence-based resources and helping clinical committees identify best practices for diagnosis, treatment, infection control, drug administration, and patient safety.

When hospitals develop treatment protocols, they must rely on evidence from randomized clinical trials, systematic reviews, and international standards. Librarians provide the necessary evidence base for these policies. In many teaching hospitals, medical librarians also assist in updating outdated protocols by supplying recent research findings.

4.6 Enhancing Research Productivity and Scholarly Publishing

Medical libraries promote research culture among health professionals by supporting academic publishing. Librarians assist with:

- Research topic development and literature review
- Accessing journals for manuscript preparation
- Bibliometric and citation analysis
- Journal selection and avoiding predatory publishers
- Plagiarism checks and ethical writing guidance
- Data management and institutional repositories

Research evidence forms the backbone of EBP, and without research productivity, health professionals may lack locally relevant evidence for practice. Libraries strengthen institutional research output and ensure clinicians have access to both global and local evidence.

4.7 Supporting Continuing Professional Development (CPD) and Lifelong Learning

Healthcare practice is dynamic and requires continuous updating of knowledge. Medical libraries contribute to continuing professional development by providing learning materials and organizing training workshops, seminars, webinars, and journal clubs.

Medical libraries provide CPD resources such as:

- Current awareness services
- Selective dissemination of information (SDI)
- New journal issue alerts
- Medical newsletters and bulletins
- Online learning platforms and MOOCs

This role ensures that health professionals remain current with evolving medical knowledge and emerging diseases, thus improving clinical competence and quality of care (Davies, 2011).

4.8 Promoting Knowledge Management and Institutional Memory

Medical libraries serve as knowledge management centers within hospitals and academic institutions. They organize and preserve institutional research outputs such as dissertations, clinical case reports, conference papers, and hospital research publications.

Through institutional repositories, libraries ensure that local evidence is preserved and accessible for future reference. This is important for addressing context-specific health problems, such as malaria, Lassa fever, maternal mortality, and other public health challenges common in Nigeria and Africa.

Knowledge management in medical libraries supports EBP by ensuring that organizational

knowledge is captured, shared, and reused effectively (Nonaka & Takeuchi, 1995).

4.9 Supporting Patient Education and Consumer Health Information

EBP is not only about clinical evidence; it also involves patient preferences and values. Medical libraries provide patient education resources, which empower patients with reliable health information.

Medical librarians provide consumer health information services such as:

- Brochures on common diseases
- Nutrition and lifestyle guidance materials
- Maternal and child health resources
- Information on chronic illnesses (diabetes, hypertension, cancer)
- Health awareness campaigns

By educating patients, medical libraries contribute indirectly to better adherence to treatment and improved health outcomes.

4.10 Collaboration with Healthcare Teams and Clinical Librarianship

A major modern trend is the integration of librarians into clinical teams. Clinical librarianship involves librarians working directly with healthcare providers during ward rounds, case conferences, and clinical consultations.

Clinical librarians:

- Provide evidence summaries for patient cases
- Assist with rapid literature searching during emergencies
- Help interpret research findings
- Provide evidence-based answers to clinical questions

This collaboration strengthens the EBP culture in hospitals and improves clinical efficiency. Research suggests that clinical librarian involvement leads to

better decision-making and enhanced patient care quality (Weightman & Williamson, 2005).

5.0 CHALLENGES LIMITING THE ROLE OF MEDICAL LIBRARIES IN SUPPORTING EBP:

The roles of medical libraries in supporting EBP are limited by the following factors:

5.1 Inadequate Funding and Subscription Costs

Most medical databases and journals require expensive subscriptions. Many medical libraries in developing countries cannot afford resources like Scopus, Web of Science, UpToDate, or ClinicalKey. Lack of funding restricts access to essential evidence sources.

5.2 Poor ICT Infrastructure and Limited Internet Access

EBP heavily depends on digital access. Poor internet connectivity, inadequate computers, unstable electricity supply, and lack of institutional Wi-Fi limit the ability of medical libraries to deliver electronic resources effectively.

5.3 Low Awareness and Underutilization of Medical Library Services

Some health professionals are unaware of the full range of services offered by medical libraries. Many clinicians assume that Google is sufficient for evidence searching, which exposes them to unreliable information and non-peer-reviewed sources.

5.4 Shortage of Skilled Medical Librarians

Medical librarians require specialized skills in database searching, clinical terminology, evidence appraisal, and digital health information management. However, many libraries lack trained personnel, affecting the quality of services delivered.

5.5 Resistance to Change and Poor EBP Culture

Some health professionals prefer traditional practices based on experience rather than evidence. Resistance to EBP culture reduces demand for

medical library services and limits the impact of evidence-based interventions.

6.0 STRATEGIES FOR STRENGTHENING MEDICAL LIBRARIES FOR EFFECTIVE EBP SUPPORT:

There are strategies for strengthening Medical Libraries for Effective EBP support such as:

6.1 Digital Transformation and Expansion of E-Resources

Medical libraries should invest in electronic databases, digital repositories, online catalogues, and remote access platforms. Subscription partnerships and consortia purchasing can reduce costs.

6.2 Strengthening Librarian Capacity through Professional Training

Continuous training in evidence searching, systematic review methods, clinical informatics, and research support services is essential.

6.3 Establishing Clinical Librarianship Units in Teaching Hospitals

Medical libraries should embed librarians in clinical departments to provide real-time evidence support for healthcare teams.

6.4 Promoting Information Literacy Programs and Mandatory EBP Training

Hospitals and universities should integrate information literacy and EBP modules into health professional education curricula.

6.5 Collaboration with International Initiatives (HINARI, WHO, Research4Life)

Medical libraries should maximize free or low-cost resources offered by international organizations, particularly in low-income countries.

SUGGESTIONS:

To improve the Role of Medical Libraries in Supporting Evidence-Based Practice among Health Professionals, the following suggestions are proposed:

1. Medical libraries should prioritize expanding access to high-quality databases, journals, and clinical guidelines. Hospitals and institutions could:

- Invest in subscriptions to platforms like PubMed, Cochrane Library, UpToDate, Embase, and ClinicalKey.
- Encourage use of open-access initiatives such as HINARI, Research4Life, and institutional repositories.
- Provide remote access to electronic resources for healthcare workers outside the library.

2. Government and hospital administrations should invest in modern digital infrastructure within medical libraries:

- High-speed internet connectivity, Wi-Fi, and reliable power supply.
- Computers, tablets, or mobile-access points for on-demand information retrieval.
- Cloud-based storage and digital repositories for research outputs.

3. Medical librarians should receive continuous professional development in areas such as:

- Advanced database searching and systematic review methods.
- Clinical terminology, medical indexing, and evidence appraisal.
- Knowledge management, research support, and bibliometrics.

4. Hospitals and teaching institutions should embed librarians into clinical teams to provide real-time evidence support:

- Librarians participate in ward rounds, case conferences, and departmental meetings.
- Provide instant evidence summaries to guide diagnosis, treatment, and patient management.

5. Health professionals should be trained in evidence searching, appraisal, and critical evaluation through structured programs:

- Workshops, seminars, and webinars on database searching and critical appraisal.
- Integration of EBP modules into undergraduate and postgraduate health education curricula.
- Use of library-led journal clubs and case-based learning sessions.

6. Healthcare institutions should formulate policies to encourage the routine use of evidence in clinical practice:

- Mandate reference to evidence-based guidelines in clinical protocols.
- Encourage library-mediated literature search for complex cases.
- Monitor and evaluate the use of evidence in clinical decision-making through audits.

7. Medical libraries should actively support healthcare workers in research activities:

- Assist in literature review, manuscript preparation, citation management, and journal selection.
- Maintain institutional repositories for theses, dissertations, case reports, and research publications.

8. Medical libraries should provide resources and programs that support lifelong learning for healthcare professionals:

- Offer selective dissemination of information (SDI) and current awareness services.
- Organize regular training sessions, webinars, and access to e-learning platforms.

9. Health institutions should increase awareness among staff about the availability and scope of medical library services:

- Orientation programs for new staff and students.
- Promotional campaigns highlighting librarian services and evidence resources.

10. Medical libraries should collaborate with national and international organizations to enhance service delivery:

- Partner with WHO, Research4Life, and other initiatives for free or low-cost access to global medical literature.
- Collaborate with professional associations to organize joint training and workshops.

7.0 CONCLUSION:

Medical libraries play an essential and strategic role in supporting evidence-based practice among health professionals. As healthcare systems increasingly demand high-quality, safe, and efficient patient care, the need for accurate and timely evidence becomes unavoidable. Evidence-based practice requires health professionals to access credible research, critically evaluate medical evidence, and apply findings in clinical decision-making while considering patient values. Medical libraries provide the necessary foundation for this process by ensuring access to scholarly databases, peer-reviewed journals, clinical guidelines, and evidence synthesis resources.

Beyond providing information resources, medical libraries contribute significantly through specialized services such as librarian-mediated literature searches, clinical reference support, information

literacy training, research assistance, scholarly publishing support, and knowledge management. The involvement of librarians in clinical rounds and guideline development further strengthens the integration of evidence into healthcare decision-making. Medical libraries also contribute indirectly to improved healthcare outcomes by supporting continuing professional development and patient education.

However, medical libraries face major challenges, particularly in developing countries. These include inadequate funding, poor digital infrastructure, limited access to subscription-based medical resources, low awareness of library services, and shortage of skilled medical librarians. These challenges reduce the effectiveness of medical libraries in supporting evidence-based healthcare.

To enhance the contribution of medical libraries to evidence-based practice, there is a need for sustained investment in digital library infrastructure, training and recruitment of specialized medical librarians, integration of librarians into clinical teams, and the promotion of strong EBP culture in healthcare institutions. Government agencies, hospital administrators, professional bodies, and academic institutions must recognize medical libraries as essential partners in healthcare delivery. Strengthening medical libraries will ultimately lead to improved clinical decision-making, enhanced professional competence, reduced medical errors, and better patient outcomes.

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