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HEALTH SCIENCE INFORMATION SYSTEM IN INDIA : A LIBRARIANS PERSPECTIVE

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Abstract: *With the ever changing world of Biological and Health Sciences, the requirement of the day is to keep oneself well informed with the day to day happenings in the world of health. With the advent of information & communication technology, the storing, sharing and catering of the health information has become an easy task. The developing countries like India, still lack in utilizing the facilities of information technology. And the available few library and information science schools are ill equipped to do so. The present article will throw the light on resources which are currently providing the health science information throughout India and their contribution to health care providers.*

Keywords: *Health Science Information System, Information & Communication system, Consortium, E resources.*

INTRODUCTION:

The literature shows that use of the Internet and electronic resources is increasing rapidly and are useful components for delivery of quality health sciences information for patient care and evidence-based medicine. In developing countries, the Internet is available to most of the health professional as India has 560 million Internet users which is second largest in world but the health science R&D information availability is still not at par with developed countries.

INFORMATION AND COMMUNICATION SYSTEM IN INDIA:

In recent years various Government of India ministries and departments have initiated on e-governance, the development of which is visible on their websites. National Knowledge Commission of India (http://www.knowledgecommission.gov.in/) has proposed comprehensive programs ranging from education to e-governance with five focus areas - access, concepts, creation, application and services includes Health Information Network and Knowledge Networks as major recommendations. Health Science Information System is one of the major concerns in India, the second highest populated country in the world. The libraries of medical colleges and health institutes need an improvement to attain a certain benchmark level in terms of infrastructure, databases, resources and services. Steps towards resource sharing and networking of these libraries help in improving the accessibility of health information.

Indian Council of Medical Research (ICMR) and National Informatics Centre (NIC) have taken initiatives on improving the access to national health information. Biomedical Informatics Division of National Informatics Centre (http://indmed.nic.in/) provides access to medical databases to researchers as below.

MedIND: It is a one point resource (http://medind.nic.in/) of peer reviewed Indian biomedical literature covers full text of 40 Indian biomedical journals. It has been designed to provide quick and easy access through searching and browsing.

IndMED: Bibliographic database (http://indmed.nic.in/) covers around 95 prominent peer reviewed Indian biomedical journals. Database is designed to provide easy access to Indian biomedical and health science literature with search options.

OpenMED: OpenMED@NIC (http://openmed.nic.in/) is an open access archive for Medical and Allied Sciences. Authors can upload and self-archive their scientific and technical documents. User need to register once in order to obtain a user id in OpenMED@NIC system. However no registration is required for searching the archive or viewing the documents.

Union Catalogue of Biomedical Serials in India: National Informatics Centre (NIC) provides document support services to the users through the Union Catalogue of Biomedical Serials in India (http://uncat.nic.in/). The database serves as a tool for identifying Serials holdings of major medical libraries in the country and has been compiled for locating journals of interest in 188 libraries in India. The database is open and accessible to all.

MEDICAL LIBRARIES & LIBRARIANS:

A health or medical library is designed to assist physicians, health professionals, students, patients, consumers and medical researchers in finding health and scientific information to improve, update, assess or evaluate health care. Medical libraries are typically found in hospitals, medical schools, private industry and in medical or health associations. A typical health or

medical library has access to MEDLINE, a range of electronic resources, print and digital journal collections and print reference books. The influence of open access (OA) and free searching via Google and PubMed has a major impact on the way medical libraries operate.

Medical librarians are skilled professionals who assist with resources and research in the medical professions. The focus of the medical librarian is to emphasize the use of evidence based research and practice. This can be for both medical research and medical practice. As well the medical librarian is expected be a resource for assisting with publishing and presentation of research. Medical librarians use web based resources to conduct research and help generate evidence based approaches to healthcare.

IMPACT OF INFORMATION TECHNOLOGY ON MEDICAL LIBRARIES:

The advent of information and communication technologies has brought many opportunities and challenges in the provision of library and information services in the health sector worldwide and rapid delivery of knowledge based resources are making an impact on clinicians and researchers and health student's work and learn under the changing nature of medical libraries. For years, health science libraries have struggled with ways to bridge the gaps of distance and time when identifying and delivering information to the point of need.

Timely access to accurate and relevant medical information is crucial to the development and administration of healthcare services. With web accessible databases, and resources, user can easily search and identify online full text journals, books and other sources with a click of mouse the information is immediately available on the point of need. Currently a lot of relevant publications are available online and they can be accessed conveniently over the internet by those libraries that have internet protocol under the consortium.

HEALTH SCIENCE PUBLISHING INDUSTRY IN INDIA:

The developments in content creation, online submission, image management, review and refereeing tools in publishing industry has made the industry operations much easier and faster than before. 'In press', 'in process' and 'forthcoming papers' are available online. Professionals in Indian scenario are yet to experience and use these effective tools as there are very few publishers existing and publishing the journals in health science discipline. Like:

Medknow Publications: Medknow Publications is a publisher (http://www.medknow.com) for academic, scientific, medical, peer-reviewed, print and online open access journals. The publishing house is committed to improve the visibility and accessibility of science from developing world. Medknow, with over 80 print and online journals, is the largest open access publisher of print journals with 'fee- less-free' model of open access publishing which provides immediate free access to the electronic editions of the journals without charging the author or authors' institution for submission, processing or publication of the articles. Each journal published by Medknow has its independent website. The websites use the OpenURL standard, making it easy for libraries to link users as directly as possible from citation to the full text of the article.

IndianJournals.com: IndianJournals.com is an e-publisher (http://www.indianjournals.com) publishing vast collection of interdisciplinary Indian Journals and Research Publications in 17 disciplines with 124 journal titles. The publisher provides global exposure to Indian journals and caters to societies, institutes and individuals connected with Indian Journal. The publisher has covered 15 journals in Biology and 13 journals in Medicine disciplines under subscribed and free full text models.

National Medical Library (NML): The NML library was initially conceived as a departmental library having a small collection of books for the use of officers of the erstwhile Directorate General of Indian Medical Services (DGIMS).

The DGIMS was later merged with the Office of the Public Health Commissioner in India in 1947 to form the Directorate General of Health Services (DGHS) and the library became DGHS Library. Realizing the need for a Central Library to support academic, research and clinical work of Biomedical Professionals in the country, the DGHS library was gradually developed and declared as Central Medical Library in 1961 and as the National Medical Library on 1st April 1966. The National Medical Library of India aims to provide wide and efficient library and information services to the health science (HS) professionals in India.

HEALTH SCIENCE CONSORTIUM:

The term consortia may be defined as "A cooperative arrangement of purchasing electronic recourses among a group of institutions, which will provide collective purchasing power and enable them to avail best possible bargaining facility to ensure highest discount price for electronic journals".

Aim & Benefits of e-journal Consortium:

- Round-the clock instant online access to multiple users through IP address and customer ID.
- Access to users beyond the physical space and time of the library. Users can access library's e-journal resources from their Departments.
- Consortia models offered by publishers may help in:

- Benefit of cross sharing
- Resource increase by depth (back volume) and breadth (non subscribed title) to consortium members.
- Negotiable price for subscribed titles.
- Ultimate aim of any e-journal consortium is to make online journal literature available to unreachable medical scholars working in the country through electronic media.
- Facilitates better management of information resources in electronic environment.
- Hassles of archiving print resources and their management is reduced.
- Dissemination of e-journal literature is more fast, more economical and efficient.

Electronic Resources in Medicine (ERMED) Consortium: National Medical Library's Electronic Resources in Medicine Consortium (http://www.nml.nic.in/Brochure.htm) is an initiative taken by Directorate General of Health Services (DGHS), Ministry of Health & Family Welfare (MOH & FW), Government of India to develop nation wide electronic information resources in the field of medicine for delivering effective health care. 39 centrally funded Government Institutions including 10 DGHS libraries, 28 ICMR Libraries and All India Institute of Medical Sciences (AIIMS) library are selected in its initial stage as core members. The MOHFW aims to provide fund required for the purchase of electronic journals under the NML-ERMED consortium project. The consortium is coordinated through it's headquarter set up at the National Medical Library.

Health Science Library and Information Network (HELINET) Consortium: HELINET is operated by the Rajiv Gandhi University of Health Sciences, Karnataka. The consortium was started with a vision to improve the quality of education and research in the Health Science colleges/institutions in Karnataka state through enhanced access to high quality medical information. The major benefit of this consortium is providing access to more than 600 core international Health Science e-journalsto Medical, Dental, Nursing, Physiotherapy, Pharmacy Colleges, etc..Publishers/Aggregator Resources are Science Direct, Blackwel, Nature Publishing, Springer, Taylor and Francis, Springer Books, Skolar – MD Books, OVID, Annual Reviews, Benthem Science, CABI Publishing, JCCC. Funding for sources are Students/College Managements. HELINET plans to extend the services to the country.

TRAINING COURSES IN HEALTH SCIENCE LIBRARIANSHIP AND ASSOCIATIONS IN INDIA:

Health science librarianship and Health Library Associations in India needs to show their endurance to update standard guidelines for its application, operation and services in consonance with the development in the fields of health sciences and advanced technology. There are very few organizations in India which are imparting training in the specialized domain.

Rajiv Gandhi University of Health Sciences is the only institute in India offers twelve months training program - Post Graduate Diploma Course in Health Science Librarianship (PGDHL). The course was introduced in the year 2002 with an in take of 10 students per academic year and first batch of students came out in 2003.

OPEN ACCESS AND FREE MEDICAL E-RESOURCES:

Information about Medicine and Health Sciences specific online resources that are open access so available to all researchers and medicine and health science specific online resources that are freely available to researchers

- National Cancer Institute http://www.cancer.gov/
- Medscape http://www.medscape.com/
- Pubmedhttp://www.ncbi.nlm.nih.gov/pubmed/
- Medline http://www.proquest.com/en-US/catalogs/databases/detail/medline_ft.shtml
- Medicalbooksfree.com http://medicalbooksfree.com/
- Free medical journals http://www.freemedicaljournals.com
- Clinical Care Options (CCO) http://www.clinicaloptions.com/
- AMA Medical Journal Archives http://www.ama-assn.org/ama/pub/medical-journals.page?
- Clinical Skills online www.youtube.com/sgulcso
- International Virtual Medical School (IVIMEDS) http://www.ivimeds.org
- CEBM (Centre for Evidence based Medicine) http://www.cebm.net/
- EBM (Evidence-Based Medicine) http://ebm.bmj.com/
- GFMER (The Geneva Foundation for Medical Education and Research) http://www.gfmer.ch/000_Homepage_En.htm

- Cochrane Reviews http://www2.cochrane.org/reviews/
- ACP Journal Club http://acpjc.acponline.org
- E-medicine http://emedicine.medscape.com
- MedEdPortal, Association of American Medical Colleges (AAMC) https://www.mededportal.org/?from=mep2
- End of Life/Palliative Education Resource Center (EPERC) http://www.eperc.mcw.edu
- The Health Education Assets Library (HEAL) http://www.healcentral.org
- Multimedia Educational Resource for Learning and Online Teaching (MERLOT) http://www.merlot.org
- www.similima.com
- www.medicalebooks-aslam.blogspot.com
- www.innerbody.com
- www.blog.cardiacforum.org
- www.mediconet.blogspot.com

RECOMMENDATIONS:

To ease the access to health science information in India, following suggestions are made

- A special financial grant to be released by the Government of India to all important health science libraries to strengthen the infrastructure in terms of hardware, software and Internet facilities in libraries
- In association with WHO access to HINARI to be extended to empower health and biological institutions in India.
- A policy on establishing Institutional repositories to be designed making it mandatory to all health science institutes in India to share and archive scholarly health information generated from their respective institutes.
- Major health science journals and databases to be subscribed with countrywide license.
- Consortia model subscriptions should be eased and extended as per the needs of individual institute requirements.
- Advanced training in Health Librarianship to be introduced in all the Universities in LIS curriculum as an optional course to cater and strengthen the specialized discipline.

CONCLUSION:

In a populated country like India, raising health issues are of great concern to health community. The sharing of knowledge pertaining to health issue with the click of mouse through information technology is blessing to health care providers. However, the creation & facilitation of the health information is limited to the financially sound institutions and the centrally funded organizations. The time has come for the government to take appropriate steps to cater the health care information at the root level by involving Villages, Talukas, Districts and States. The advances in the information and communication technology can be utilized effectively to create multimedia files in different regional languages for the benefits of health care providers as well as the receivers.

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