Evaluation of health and biomedical information resources and services in South East Asian Region

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Abstract

The present paper intends to provide bird's eye view of conditions of medical libraries in South East Asian countries. Comparative study into the situation regarding resource development, information management and information dissemination through resource sharing are highlighted. Accessibility of national and international resources, difficulty in acquiring them, their adequacy and relevance to the need of users in medical decision making are explained. The article explains how WHO's initiative through HELLIS Network and HINARI programme have helped SEARO countries to solve the most crucial problem of getting full text articles of foreign medical journals. Comparative study of data collected regarding National Focal Points of HELLIS Network member countries, indicating their current status are presented.

A special reference to National Medical Library (India) on its collection, services and its role in resource sharing among HELLIS Network member countries are mentioned.

Introduction

With the arrival of 21st century, a new spell of information revolution has started, which has made profound impact on library collection and services. New technologies have not only changed the way information is stored and distributed in the library, but more importantly, they have changed the fundamental role of the librarian.

Today, medical librarians need specialized information management skills to deliver health care information for the benefit of local, national and international medical research community. They navigate through unlimited supply of knowledge accessible to them via internet and web technology. Present day librarian can be used as an important "tool box" to deliver information. Timely supply of required knowledge may bring revolution in every field. Knowledge is the enemy of disease. Knowledge can cure patient but only if it is put into action. Knowledge has to be mobilized and utilized by librarian to deliver high quality patient care.

1. Generation of knowledge and resource development

1.1 Procurement of foreign medical journal

The present article deals with the development of medical information resources and their optimum utilization through resource sharing at the national and regional levels in South East Asian countries.

Development of medical libraries have direct relation with the level of medical education and research of a country. With the advancement of medical education, the quest for new knowledge is generated. In order to

satisfy the information needs of medical research scholars, it is essential that libraries strengthen their own collection and develop strategies to utilize resources from others through cooperation. In most of the SEAR (South East Asian Region) countries where a large number of future physicians are being educated remain away from the reach of current scientific journals to support them in medical decision making. In fact, they learn to practice medicine from their field experience, without having support of adequate information sources.

Many less privileged countries find it very difficult to procure required amount of print foreign medical journals due to their high cost. Global price rise in newsprint and fluctuating exchange rates further aggravates the situation. Many medical libraries of developing countries have to reduce the number of subscribed medical journals year after year. In order to find answer to this dilemma many publishers started coming forward to make negotiable attracting pricing policy for package of print and online journals for a group of libraries having similar subject interest. Formation of journal consortium among group of libraries has become a common practice in the field of social science, science, technology and medicine. Compilation of "Union catalogue of Subscribed Foreign Journals" of a country can also be the possible solution to the problem, which ensures possibility of locating the journal required by a medical scholar in his country.

1.2 Procurement of databases of original medical literature

Due to high price of medical journals and data bases, it is not possible for individual medical college/institution to purchase them. National or international level resource sharing of these data bases may ensure easy and wider access to these materials. Effort to provide global access to health care information is duly recognized by WHO in its latest report "World Report on Knowledge for Better Health". Lack of access to reliable and relevant information remains a major barrier to the health care system in this region. Many international organizations such as Latin American and Caribbean Centre for Health Science Information and the Pan American Health Organization (PAHO/WHO) along with the Brazil Government (BIREME) joined hand to promote technical cooperation in production of scientific information resources for countries of this region. They produce Virtual Health Library (VHL), Scientific Electronic Library Online (SCIELO) and LILIACS System (Latin American and Caribbean Literature on Health Sciences) in pursuit of achieving equitable access to the relevant and up-to-date health information in this region.

EMRO (Eastern Mediterranean Regional Office, WHO) also produced EMRO Index Medicus which indexes 310 journals published in this region. SEAR countries also bring out IMSEAR (Index Medicus SEAR)

WHO's HELLIS (Health Literature, Library and Information Services) Network and HINARI (Health Inter Network Access to Research Initiative) programme have made successful breakthrough in this direction by providing gateway to international medical journal databases and full text. They explored all possibilities to support the promotion of effective use of information technology in SEAR countries to provide basic medical information resources for refining medical education standard of clinical care.

1.3 Development of indigenous databases of original medical literature

Indigenous medical journals and databases form an important tool for research scholar, through which he can monitor the achievement made by his country in that specialized field. Publication of medical bulletin and journal can be considered as an important parameter to measure the achievement of medical research output made by a country. Electronic healthcare information resources produced by the developed world may not necessarily be relevant to the needs of those living in less privileged countries. Librarian needs to provide required medical knowledge and locally relevant content to users. It is important that information supply match with the user's needs, rather than simply "imposing" information upon him.

There are many diseases which are prevalent in the SEAR countries such as polio, malaria, dengue, leprosy, tuberculosis, gastroentitis etc. Indexing and abstracting of journal literature related to these diseases published in native countries are very essential to conduct research on their diagnosis, treatment and cure.

Survey of 5 world's leading medical journals such as *Annals of Internal Medicine, BMJ, JAMA, New England Journal of Medicine and Lancet*, which claim to be the leading voice in coverage of global health problem failed to give due coverage on diseases of poverty. Obuaya, who conducted the survey found that the frequency of research articles relevant to these diseases was very poor:

1. Annals of Internal Medicine 0%
2. JAMA 2%
3. New England Journal of Medicine 4%
4. BMJ 6%
5. Lancet 16%

The study concludes that contents of these journals are bias against the disease of poverty and they failed to provide due importance to diseases affecting the poor.

Under the circumstances, the developing countries should try to develop their own platform through which they can reflect the real picture of world health conditions. India makes valuable contribution in the production of world medical literature by publishing over 450 medical journals and bulletins. There is urgent need to incorporate publications of developing countries in renowned world Indexes and abstracts. List of journals of this region indexed in Pub Med are:

1.	Bangladesh	3
2.	Bhutan	0
3.	DPR Korea	0
4.	India	28
5.	Indonesia	0
6.	Maldives	0
7.	Myanmar	0
8.	Nepal	1
9.	Sri Lanka	1
10.	Thailand	4

An organized effort should be made to pool references on these diseases. Some of the SEAR countries such as Indonesia, Thailand and India made reasonable progress in this direction by bringing out regular issues of Index Medicus (Indonesia), Thai Index Medicus, Thai Citation Index, HIV/AIDS database of Thai, med IND database (India), Ind MED database (India), index to Indian Medical Periodicals etc.

2. Organization and dissemination of knowledge through partnership

Today clinical librarians are developing and managing a virtual knowledge service for health professionals. They are making use of latest clinical electronic health information products available in the market. They are exploring and exploiting the benefit of internet and web technology. Nowadays, many medical libraries hosted their own interactive website having link with virtual library collection interface to access full text of journal articles. HELLIS Network and HINARI programme extended the same facility to their member countries. Comparative study conducted by this paper found that most of the libraries of this region are in a very preliminary stage of library automation. They are facing variety of problems in accessing resources through modern technology.

The ever changing technology has made great impact on the way libraries acquire, process, disseminate and share information. WHO provided support to improve existing infrastructure by providing matching information technology as per their local requirement.

Librarians of these countries should be provided with essential education and training to sharpen their professional skills.

3. Initiative of WHO

Dissemination of health and biomedical information is an important function of WHO. Article 2 Paragraphs (q) and (r) of WHO's constitution specifically entrust the organization with the task of providing information on health to all.

WHO headquarter and Regional Offices have taken various initiatives in this regard.

3.1 HELLIS Network

WHO started "Health Literature, Library and Information Services (HELLIS)" Network in 1979 in the South East Asian Region. Since then SEARO, WHO has been supporting various activities to member countries including Bangladesh, Bhutan, DPR Korea, India, Indonesia, Maldives, Mayanmar, Nepal, Srilanka and Thailand. Its main mission is to provide information support to policy makers, administrators and health care professionals by promoting identification, collection, processing, sharing and dissemination of national knowledge assets by health science libraries in WHO South-East Asian member States.

During last two decades HELLIS has organized many meetings, workshops and trainings and has undergone several stages of development. HELLIS has launched an information portal www.HELLIS.Org featuring the services offered by HELLIS network and to its member States.

The present paper will discuss about the field level situation of information services provided by the National Focal Points of each member countries of HELLIS Network.

3.2 HINARI

The Health Inter Network Access to Research Initiative (HINARI) is a new programme of WHO started in January, 2002, which provides either low cost or free access to the major journals in biomedical and related social sciences and it is available to public and non-profit institutions of developing countries. HINARI is a part of the Health Inter-Network which was introduced by the United Nation's Secretary General, Mr. Kofi Annan at the UN Millennium Summit in 2000. It started providing access to over 2500 journals from the world's leading biomedical publishers to 113 countries, benefiting many thousands of health workers and researchers. HINARI members get automatic electronic gateway link to access full text of over 2500 journals.

To qualify to become member of the first phase of HINARI, a country must have a Gross National Product (GNP) of less than $1000 per head According to World Bank figures. Institutions from countries in the second phase of HINARI qualify with a GNP per capita of $1000-$3000 and they make an annual payment to access journals. Unfortunately, many SEARO member countries including India, Sri Lanka, Thailand, and Indonesia do not qualify to access facilities provided by HINARI.

3.2.1 Technical Requirements for HINARI members:

Users must have at least a 50 kbps internet connection. It is designed to work best with internet Explorer version 4.0 or higher Netscape version 4.5 or higher. Users will also need Adobe Reader to view PDF journal article.

HINARI organize training workshops to train library professionals from member countries to equip themselves with modern online access to journal full text system. HINARI offers over 2500 journal titles from number of major publishers such as Elsevier Science, John Wiley & Songs, Springer Verlag, Kluwer Academic Publishrs, Blackwell Publishers, Lippincott, Williams and Wilkins.

Table I showing the current status of HELLIS Network libraries:

Review of current status of the HELLIS Network members of the Region

Country	Automation	Services	Collection	Resource development (Indigenous)
Bangladesh National Health Library & Documentation Centre (NHLDC), Dhaka National Focal Point Estab. 1974 All medical libraries of Bangladesh are HELLIS member.	Stage 2	1. Collect, organize, preserve all health publications issued in the country and acts as national repository 2. Maintains national standard for health library in the country 3. MEDLINE services started in 1990 4. Document delivery Services 5. Photocopy services 6. Full text service through HINARI	Books – 15,000 Jr. (B) – 16,000 Jr. (Sub) -141 (including 85 Bangladeshi)	
Bhutan Royal Institute of Health Science, Thimphee, National Focal Point	Stage 2	1. Provide reference services 2. Literature search services through WHO website 3. Provide photocopy services for document delivery 4. HINARI full text service through HINARI portal		

		5. MEDLINE available through WHO website		
DPR Korea WHO Regional Office started in Pyongyang in 2001. Institute of Information for Medical Sciences, Korean Academy of Medical Sciences National Focal Point	Stage 2	1. Library automation 2. No internet available 3. Document Delivery System, manual 4. HINARI member		1. Index Medicus for 15 Korean journals
India National Medical Library National Focal Point (over 100 medical colleges are HELLIS Network members)	Stage 3	1. MEDLINE database. 2. Catalogue through OPAC 3. Inter library loan 4. Xerox facility 5. Delivery of full text of articles (i) State medical colleges (ii) SEAR COUNTRIES 6. Professional and apprenticeship training 7. Scanner available 8. Internet and computer workstation available	Books -130,000 Jr.(B)– 500,000 Jr. (Sub) 1600 (including 94 Indian journals) CD-ROM – 300 MEDLINE – CD All Government Reports and Publications. WHO Publication repository	1.Union Catalogue of Journals (10 DGHS Lib.) 2. Index to Indian Medical Periodicals 3. Indian Press Index on Health 4. Med IND database (compiled by National Informatics Centre) (NIC)

				5. Ind MED database (compiled by NIC)
Indonesia National Institute of Health Research and Development (NIHRD) National Focal Point	Stage 2-3	1. Online Document Delivery System 2. E-journal – full text service 3. Cooperation among members of HELLIS Network in Indonesia 4. Created virtual library for all other members of HELLIS network in the country. 5. Vertual library works through interactive website of the Focal Point 6. MEDLINE Search source available		1. Union catalogue in Indonesia 2.Index Medicus, Indonesia 3. Health Research Report in Indonesia
Maldives Indira Gandhi Hospital, Male National Focal Point Does not have any medical college. Students study medicine		1. No internet available 2. HINARI Member 3. HELLIS Network Member		

from Tribhuvan University, Institute of Medicine, Nepal				
Myanmar (Burma) Central Biomedical Library, Yangon. National Focal Point	Stage 2	1. Information and reference services 2. Document delivery services 3. Literature search service through HINARI and Jr. search through WHO website 4. Make use of Pub Med and MEDLINE through WHO website	Books –15,000 Jr. (B) –16,000 Jr. (Sub) – 11 Dissertation – 3,000 CDs –300	1.Contribute to IMSEAR by providing article index 2.Compile Union list of periodical and thesis of Myanmar
Nepal National Health Education, Information and communication Centre, (NHEICC) National Focal Point	Stage 2	1. It provides IEC (Information, Education and communication in health sector) 2. Support various programmes of MOH (Ministry of Health) 3. Create awareness among people to implement IEC activities 4. Full text service through HINARI portal 5. MEDLINE service		

		through WHO website 6. Depositary Library of WHO publications		
Sri Lanka The Library of Medical Faculty, University of Colombo. National Focal Point 20 Libraries are member of HELLIS Network Founded in 1870. Same year library had inaugurated 15 branch/Department libraries attached to the Central Library. It is the 2nd oldest medical library in the whole of Asia	Stage 3	1. Lending and reference services 2. Inter-library loan 3. Current awareness services 4. Selection, dissemination of information 5. Database search and information retrieval 6. Access to internet 7. Provides training and information skill for efficient information retrieval 8. Provides MEDLINE services through LAN 9. OPAC facility available 10. EBSCO, John Wiley, Black-Well Synergy and other free access database services	Books – 26,208 Jr. (B)– 19,119 Jr. – 47 International 12 National Thesis – 138	1. Prepares indexes and Union list of periodicals. 2. Sri Lankan Index Medicus 3.Health Directory of Sri Lanka
Thailand Library & Information Centre, Mahindol University, Salaya campus.	Stage 3-4	1. OPAC services available with online catalogue 2. CD-Net server in use – MEDLINE with limited full text service	1. Books 2. Journals 3. CD & Video	1.Compilation of Thailand Union catalogue of Health & Biomedical

National Focal Point It was known as Royal Medical School when it was founded in 1897		3. Electronic document delivery system 4. Delivery of full text of documents 5. E-journal locator service 6. Database service of Ovid Medline, Pub Med FIREST Consult, MD Consult, Science Direct, OCLC Firest Search, Blackwell Springer Link, Wilely Inter Science etc.		serials 2.Thai Index Medicus created by Chulalong Korn. Medical Library, Member HELLIS Network 3.Thai Citation Index 4.Thai Nurses Research Database 5.HIV/AIDS Database of Thailand 6.Health Library Directory

3.3 National Medical Library

National Medical Library (NML) of India is one of the largest and most user friendly medical library of India. It occupies important position in country's health care and information delivery system and offers services which are truly national in scope.

NML contains over 130,000 books and over 500,000 bound journals. The library procures over 1600 medical journals per year by spending over 1,873,857 of US$. Library operations starting from book acquisition to reference services have already been computerized. Computerized catalogue can be accessed through OPAC. It has an interactive website to provide web based information dissemination services. It provides a variety of user friendly affordable information services.

It has been offering access to MEDLINE search service since 1990. Besides, it has about 134 CDs including SERLNE, EMBASE, CANCER-CD etc. It has a workstation for user to make use of internet, e-mail and OPAC services. The library is visited by over 230 research scholars per day. The library has the largest collection of current as well as back volumes of journals in biomedical sciences. It provides document delivery services (mostly full text of journal articles) throughout India through delivery of photocopy, FAX, e-mail etc. A large number of requests for articles are received from outside Delhi and SEAR countries through WHO. It provides over 800-900 articles/month to medical scholars. It also supports a project entitled "Inter-linking of Government Medical College libraries with NML". Under this project, it provides financial assistance to Government Medical College libraries of India to develop their information technology infrastructure. It also provides initial manpower assistance to start automation of library. So far, NML has paid Rs. 500,000 each to 64 medical college libraries all over India.

It has the responsibility and obligation to work in partnership to develop sustainable relationship with other medical college libraries of India. NML is the National Focal Point of HELLIS Network services of India. It plays a leading role in providing document delivery to other medical college libraries in India and to SEAR countries through WHO. NML conducts workshops and training courses on behalf of SEARO, New Delhi. It also provides training to students of library and information sciences graduating from different Indian Universities and library associations. NML also imparts professional training to qualified librarians under the Apprenticeship Training Act of Government of India.

4. Some of the significant barriers faced by SEAR countries:

1. Shortage of financial support from local authorities.
2. Lack of strategic planning to achieve time bound target.
3. Lack of information resources and communication technology.

4. Even if internet is available, there is problem of connectivity of internet due to unreliable electricity, high cost of internet services and broad band facility.
5. Lack of communication and cooperation among members of HELLIS Network countries.
6. Lack of qualified and trained staff.
7. Lack of regular comprehensive training programme on:

(i) Basic training in information search skills.

(ii) Basic trouble shooting skills of hardware and software.

8. Most of the libraries of the region lack technical knowledge to exploit web-based communication to reach the world community.

5. Conclusion

Comparative study conducted in this report reveals that the application of electronic health care information techniques are still in their infancy and they are yet to make impact on health care decision making. Data presented in the study warrant a call for greater global partnership. The issue of disparities in health among different regions of the world remains the major challenge of the millennium. There is genuine need to understand ground level problems existing in health sector of these less privileged countries.

Medical librarians of SEAR region need to reengineer their setup and make information services relevant to new millenium. They are required to be committed to translate their dynamic vision in to action.

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