HINARI Access to Research Initiative – Overview, Impact and Training Activities
Lenny Rhine, Ph. D
Medical Library Association//Librarians Without Borders®E-Library Training Initiative’
September 04, 2009

Background:

At the end of the 20th century, there was a paucity of relevant and up-to-date information at health institutions in low-income countries. The print materials (textbooks, journals), etc) that were available generally were significantly out of date:

“The shelves in our libraries are full of outdated books, most of them 15 to 30 years old.”

“Management of medical schools and hospitals are in ‘disarray’ where the local research cultures are extremely fragile, if they exist at all.”

Generally speaking, these institutions and their staff suffered from ‘information poverty.’ According to Britz,

“Information poverty is that situation in which individuals and communities … do not have requisite skills, abilities or material means to obtain efficient access to information, interpret it and apply it appropriately … (it’s) a lack of essential information and a poorly developed information infrastructure.”

In regard to the delivery of health care in low-income countries, the results of this paucity of health information impacts negatively on clinical practice/evidence-based medicine, medical education and information seeking skills and the research environment.

Equitable and universal access to health information is an important component of the 2015 Millennium Development Goals for Health. It is a a key factor in reducing global disparities in health and would benefit multiple groups of stakeholders - clinicians, researchers, students, policy makers, patients and consumers. The HINARI project is one of the principal programs aimed at meeting the 2015 goal of equitable and universal access to health information.

During the past fifteen years, Information Technology (IT) has been envisioned as a tool to bridge the ‘north/south’ health information gap. The Internet is viewed as a means of acquiring and sharing information and multilateral communication. IT has been shown to improve access to health information and the health of populations in developing countries.

In order to successfully harness the IT tools, projects need the following components: reliable supply of electricity, hardware and telecommunications infrastructure (256 bps bandwidth – minimal), free or legally accessible and relevant information ranging from clinical resources to research outputs and policy papers and training that includes how to identify,

1 Patrikios, H 1994 - see Kale R.
3 Britz JJ. To know or not to know: a moral reflection on information poverty. Journal of Information Sciences. 2004: 30(3):194
4 Odutola, A.B. Developing countries must invest in access to information for health improvements. JMIR 2003, 5(1), e5
filter and download relevant information. This IT package of components parallels the 'Green Revolution' of the late 20\textsuperscript{th} century that included seed, fertilizer, water, a market and an infrastructure to deliver the harvest..

**Overview: HINARI Access to Research Initiative**

Initiated in 2002, the ‘HINARI - Access to Research’ Initiative (www.who.int/hinari/) is coordinated by the World Health Organization (WHO). It is a collaboration between the WHO, publishers and other health care content owners. The goal of this project is to provide biomedical and health care research and guideline information to non-profit academic and research institutions, governmental and policy making departments in low-income countries. Via the program, more than 6200 e-journals (January 2009) plus other reference and research tools (British National Formulary, Cochrane Library, EndNote, Web of Knowledge, etc.) are available to the participating institutions.

AGORA (agricultural research) and OARE (environmental research) are similar programs. AGORA (Access to Global Online Research in Agriculture – www.aginternetwork.org/) contains access to more than 1300 journals while OARE (Online Access to Research in the Environment – www.oaresciences.org/) includes access to a similar number of journals.5 These projects are coordinated by the Food and Agriculture Organization (FAO) and the United Nations Environment Program (UNIP).

Institutions in countries with a Gross National Income (GNI) per capita below $1250 are eligible for free access (Band 1) while organizations in countries with GNI per capita between $1250-$3500 pay a fee of $1000 per year / institution (Band 2). For details, see www.who.int/hinari/eligibility/en/. As of May 2009, over 5000 institutions have registered for HINARI with the leading countries being Viet Nam, Nigeria, Peru, Bangladesh and the Ukraine.

The enclosed graphs for HINARI logins and page views in total and by continent demonstrate the steady usage growth of this project.

---

5 April 2009 data
The impact of this project is significant as is noted by Margaret Ngwira, a librarian in Malawi:

"Information isolation is a thing of the past. The past months have brought great
changes to our College with the combined opportunity of HINARI access, and the other vital ingredient—fast Internet through satellite access. The two are revolutionizing access to information.”

Overview of Training Activities in 2008 and 2009

As previously noted, training is one of the essential components for the successful use of HINARI’s resources. Training activities are combined efforts of various WHO regional offices (WPRO, SEARO, AFRO & PAHO), the Information Training and Outreach Center for Africa (ITOCA) - see www.itoca.org - and the Librarians Without Borders®/Medical Library Association (USA) – see http://www.mlanet.org/resources/global/. Significant behind the scenes production work is done by staff at WHO/Geneva, FAO, UNEP and Cornell and Yale Universities (USA). Principal trainers include:

Gracian Chimwaza, Vimbai Hungwe, Dele T. Fawole, Pamela A. Marin da, (ITOCA), Lenny Rhine (Librarians Without Borders®), Gaby Caro (WHO) Julius Dizon (WPRO), Pascal Mouhouelo (WHO/AFRO), Justin Chisenga (FAO) Mohamed Atani (OARE) and Steve Glover, Christie Hospital/UK.

Training workshops from January 2008 through May 2009 include:

January: Bangladesh - SEARO, Madagascar - ITOCA
March: Gambia - ITOCA/MLA, Sierra Leone - ITOCA, Pretoria - ITOCA, Syria - EMRO
April: Cameroon - ITOCA, Sudan - UNEP/ITOCA
May: Togo - PRSAO/ITOCA
June: Burundi - ITOCA/MLA, Paraguay - PAHO
August: Dr. Congo - ITOCA, Fiji - WPRO/MLA
September: Burkina Faso - ITOCA, Brazil - WHO/BIREME, Zambia - MLA
October: Mozambique - ITOCA/MLA
November: Nigeria - ITOCA, Gambia - MLA
January: Kenya - ITOCA
February: Bhutan - SEARO, East Timor - SEARO
March: Solomon Islands -WPRO/MLA
May: Hawaii – Medical Library Association Meeting/MLA,

Other activities conducted were several Distance Learning Courses:

March - June 2008: Email Course
Sept. - Dec. 2008: POLHN/Moodle Course version 1.1
April - June 2009: POLHN version 1.2

During this period, new training modules have been developed and updated. Most of the modules are a combination of PowerPoint presentations and Word document hands-on ‘exercises’. Material that has been updated include the following modules: Internet Basics, Searching, Health Resources on the Internet, HINARI Overview, Partner Publishers’ websites and HINARI/PubMed - in depth.

---

6 Margaret Ngwira, Kamuzu Nursing College, University of Malawi, May 2007
New training material include a module on EndNoteWeb and a package of modules titled 'Advocacy skills for HINARI' that contain material on Marketing, Repackaging and Workshop Organization. Another set of new material highlight 'Authorship Skills' – a Web-Bibliography, How to Write a Scientific Paper and a Frequently Asked Questions' discussion. Finally, several training tools have been created including a 3-4 hour Short Course, a PowerPoint presentation titled Do's and Don'ts, brief Word documents titled HINARI – The Basics and HINARI Payment – The Basics, and short PowerPoint presentations on Access Problems and Solutions, and Printing, Copying, Saving and Emailing Problems and Solutions. Almost all of this material has been translated into Spanish, Portuguese and French although the ongoing changes of the modules makes this process complex.

Also of note are the distance learning courses that have been developed with the assistance of the Pacific Open Health Learning Net (POLHN) - [http://polhn.org/](http://polhn.org/) These courses are geared toward individuals who cannot attend national or regional workshops and those who need to update their skills.

Using Moodle, a free and open source e-learning software platform (also known as a Course Management System - CMS) , a six week 'HINARI – In Depth' distance learning course has been developed. While the participants initially have been from the Oceania region, we are planning to conduct workshops throughout the HINARI eligible regions. A 'self paced' course also has been added to the POLHN server. This course is geared toward individuals with finite time for training and highlight the necessary skills to utilize HINARI and its resources.

The impact of training has been difficult to assess. As previously noted, there continues to be a growth in HINARI logins and page views and some of this could be the result of training workshops. While each specific workshop is evaluated, no long-term/follow-up studies have been undertaken. This will be part of a in-depth survey that will be completed in 2010. With the publishers committed to 2015, this will be an interim study to assess how the program can assist in reaching the health information Millennium Development Goals.

Despite the lack of the assessment of the long-term impact, the ITOCA trainers have estimated the 'downstream' impact. Between January 2004 and July 2008, this group has trained 987 participants at 31 workshops in 20 countries. These workshops were 'in depth' as they were conducted over 3 or 4 days. Via Open Seminars/Short Courses, another 600 professionals were trained. The group estimated that over 8,200 individuals were trained downstream.

As one of the trainers, I would like to add the contents of two email messages I received after conducting workshops in The Gambia and Solomon Islands:

‘Greetings from the smiling coast of Africa.... Attending your HINARI and authorship course was a great experience and the effect it have on my academic life is immense. I used to struggle digging out relevant and recent articles but not any more and you know what I just cannot stopping searching. You empowered me and my colleagues and in doing so you gave me a new hobby and thank you very much. Please tell HINARI the only way this very important tool can be use to maximum is training people, before this training I found it very difficult to find my way. Thank your once again for
empowering me and my colleagues."\(^7\)

'Yes, Nicholas is planning to do a session on the HINARI for the staff of SICHE. There was so much excitement about HINARI soon after the workshop and it made others want to learn about HINARI too.'\(^8\)

**Observations/Conclusions:**

In the background section, there has been a discussion of all the components necessary for successful use of HINARI and Internet resources. While some institutions have a reliable power supply and sufficient hardware and bandwidth to access the Internet and HINARI, this is not a consistent situation across the board. In the various 'workshop reports', there are comments about electricity interruptions and slow or inconsistent access to the Internet. At times the workshop program will be re-arranged to deal with these issues and this is the environment that many users cope with on a daily basis. If these issues are resolved over time, the usage of the HINARI resources would increase significantly.

Other usage issues fall into the categories of 'language of education' and 'culture of learning.' Since a vast majority of the biomedical information is in English, countries where this is the language of education are more easily able to utilize the resources and also absorb the training. To overcome some of the language issues, the HINARI platform and training material have been translated into several languages. While this is useful, the core of the material is in a foreign language that is not easily comprehensible by many of the researchers, clinicians and students.

The 'culture of learning' also is a complex issue. In many of the HINARI eligible countries, current information has not been available for 20+ years. Often, the lecturers rely on out of date information and do not incorporate 'information seeking skills' into the various curriculum. Researchers will not have reviewed the current literature when constructing a project or writing a grant. Now that current information is available, the use of such resources as HINARI has to be incorporated into the education and research processes. Often, the researchers and lecturers need 'in-service courses' to obtain the baseline skills. These types of issues are discussed in the 'Advocacy Skills for HINARI' training material.

A final area of concern is that of 'user name and password distribution' within an institution. This issue ranges from two extremes. The first is when an institution does not distribute the information to eligible users. There have been cases where the Library staff was not giving the user name and password to teaching faculty and residents. The second extreme is when an institution's user name and password is posted to the public or distributed to ineligible users electronically. Due to these activities, new user names and passwords must be sent to registered institution. These issues are discussed in the 'Do's and Don'ts' presentation during workshops.

Regarding the steady growth of the use of the resources, the HINARI staff and trainers are quite interested in assessing the impact of the training. As previously mentioned, this will be undertaken during a 2010 study. Not only will we have a better idea of the impact of the

\(^7\) Ahmed Manjang, Medical Research Council/The Gambia, Nov. 2008
\(^8\) Clare Devi, Solomon Islands College of Higher Education, March 2009
training but also will obtain useful information for the development of new training materials and delivery formats.