Research on access to electronic health knowledge in Africa:

Policy brief [1]

30 October 2006

Background

1. Ready access to reliable and up to date research can help doctors make informed decisions about best practice, and improve patient care and outcomes.
2. Health care professionals in training in sub-Saharan Africa can potentially benefit from increasing Internet availability for access to reliable, up to date medical knowledge and literature.
3. A major constraint is the high commercial on-line subscription costs for many journals. The World Health Organization enables free access to full text articles in low income countries via the HINARI programme; alternative models include reduced journal costs negotiated with publishers and open access journals.
4. We conducted a survey to describe Internet access patterns and awareness of initiatives that enable free access in postgraduate doctors working in national medical institutions in four countries in Africa, and used semi-structured interviews to explore factors influencing use.

Main findings

5. We found high and regular use of the Internet among postgraduate doctors in four selected national medical institutions in Africa, and Internet cafés are the most important Internet access point for two of the four institutions studied.
6. Among these doctors, awareness of free access initiatives is variable; it is highest for PubMed and lowest for BioMedCentral.
7. HINARI helps access in some research led institutions, but there are problems with organising distribution of passwords in others, and some users report difficulties making HINARI work.
8. In discussions with policy makers, we drew out the following policy implications relevant to three different sorts of policy specialist or manager:

Senior staff in medical training institutions

9. HINARI is important and ensures free access to subscription journals in low income countries (see annex for further details).
10. HINARI is critically dependent on the political and managerial commitment of deans and senior managers in postgraduate institutions. They need to ensure access is organised, advertised, and managed.

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[1] This document was agreed by the researchers who designed, conducted, analysed and reported the research in a paper from the International Health Group, Liverpool School of Tropical Medicine, UK (Helen Smith, Paul Garner); Malaria Research Group, Makarere University, Uganda; (Hasifa Bukirwa); Ifakara Health Research & Development Centre, Tanzania (Oscar Mukasa, Selemani Mbuyita, Masanja Honorati); Medical Research Council Laboratories, Banjul, The Gambia (Paul Snell); , Holy Trinity Development Foundation, Holy Trinity Foundation Hospital, Cameroon (Sylvester Adeh-Nsoh); Department of Health Promotion and Education, College of Medicine, University of Ibadan, Nigeria (Bright Orji).

11. Small, carefully managed investments in connectivity will increase access to a large amount of up to date medical literature.
12. There is a demand from postgraduate doctors for specific training in accessing up to date online articles and formal orientation to available online resources. Deans and senior managers need to ensure effective training for post-graduate and undergraduate students is provided.
13. Senior managers need to review the role of librarians in this new environment, as medical staff and students shift to online resources as their main source of up to date information. Job descriptions need revising, staff may need to be retrained and re-skilled, and the role of information technology within institutions adjusted.

National policy makers

14. Increasing evidence informed decision making in the health sector requires access to up to date medical knowledge. Ministries of education and health could seek tax discounts on computer equipment for medical institutions and health professionals to enable access to online medical knowledge.
15. Evidence informed practice requires clinicians trained in understanding and using current best evidence. Ministries of health could seek to revise national curricula to include critical appraisal of current research and training in information resource use, and make accessing up to date online articles a strict requirement.
16. Institutional research capacity may be strengthened by securing better links to the international research community through effective access to online journals.
17. Internet cafés may be useful commercially run centres where medical staff can access essential health information.

International stakeholders

18. Many doctors in national medical institutions in Africa remain unaware of HINARI and are not regular users; this raises concern over the visibility and promotion of the programme.
19. Most doctors are aware of PubMed (Medline) but report problems accessing free full text articles and this may be because they are not logged into HINARI; WHO may consider advertising the ‘search through PubMed’ function more widely, particularly on the PubMed website.
20. Commonly reported technical problems accessing materials for free suggests HINARI may wish to review the ease of use of its interface. HINARI welcome feedback and are already making steps to improve access.
21. These findings should be interpreted in conjunction with results of the strategic review of HINARI, funded by DfID, being conducted in 2006.

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Annex 1. HINARI programme information sheet

HINARI

An initiative of the World Health Organization (WHO) in collaboration with:

HINARI PARTNERS

- ***World's leading biomedical publishers***[1]
- ***Yale University Library***
- ***International Association of Scientific, Technical and Medical Publishers (STM)***
- ***UNICEF/UNDP/World Bank/WHO Special Programme for Research and Training in Tropical Diseases (TDR)***
- ***US National Library of Medicine (NLM)***
- ***Food and Agriculture Organization (FAO)***
- ***Cornell University, Mann Library***

WHAT IS HINARI?

The Health InterNetwork Access to Research Initiative (HINARI) provides free or very low-cost online access to 3,300 major journals in biomedical and related social sciences to local, non-profit institutions in developing countries. HINARI was launched in 2002 and is one of the world's largest collections of biomedical and health literature. There are presently 2000 institutions in 106 countries registered for HINARI. During 2005, users at these institutions downloaded over 3,500,000 articles. There are 113 countries eligible for HINARI.

BACKGROUND

HINARI was developed in the framework of the Health InterNetwork, introduced by the United Nations' Secretary General Kofi Annan at the UN Millennium Summit in 2000. Led by WHO, the Health InterNetwork aims to strengthen public health services by providing public health workers, researchers and policymakers access to high-quality, relevant and timely health information, via the Internet. HINARI works collaboratively with a sister online information delivery program in agriculture, called AGORA[2](Access to Global Online Research in Agriculture), which is led by the FAO. This collaboration between the agriculture and health sectors is resulting in cost savings for systems development and efficiencies in training and outreach.

HINARI CONTENT

Over 3300 journals in: basic science, biochemistry, biotechnology, cardiology, clinical medicine, dentistry, education, environmental sciences, ethics, general medicine, geriatrics, immunology, infectious diseases, mircobiology, nursing/allied health, nutrition, OB/GYN, oncology, parasitology, pediatrics, social sciences, surgery, toxicology, tropical medicine, and zoology.

THE HINARI SYSTEM

HINARI offers a simple and effective user interface over the web, serving as a gateway to full-text journal articles at Publisher Partners' websites. HINARI users can search and access full-text articles available through HINARI directly from the Pubmed (Medline) database. WHO is responsible for management and maintenance of all functions of the HINARI website, with the support of Yale University Library. HINARI and AGORA share fundamental design and systems elements, which enhances ease of use and promotes cross-sectoral browsing and searching.

1 *Founding Partners:* Blackwell, Elsevier Science, the Harcourt Worldwide STM Group, Wolters Kluwer international Health & Science, Springer Verlag and John Wiley. As of May 2005, close to 70 publishers are contributing content to HINARI.

2 For more information visit the AGORA website at www.aginternetwork.org or email agora@fao.org

HINARI

Health InterNetwork Access to Research Initiative

ELIGIBILITY FOR HINARI

Potential users are required to register with WHO. This can be done online at the HINARI website. The HINARI Publisher Partners have opened access to eligible organizations in Phase 1 countries for free. The 69 countries in Phase 1 generally have an annual GNP per capita of US$1000 or less. Forty-four Phase 2 countries may access the entire collection of 2900 journals for an annual subscription (January-December) of US$1,000 per institution. These countries have an annual GNP per capita of US$1000-$3000. Individual Publisher Partners reserve the right to add to or delete from this list.

Eligible categories of institutions are: national universities, research institutes, professional schools (medicine, nursing, pharmacy, public health, dentistry), teaching hospitals, government offices and national medical libraries. All staff members and students are entitled to have access to the journals.

ELIGIBLE COUNTRIES, AREAS and TERRITORIES

Phase 1 (free access)

Afghanistan
Albania
Angola
Armenia
Azerbaijan
Bangladesh
Benin
Bhutan
Burkina Faso
Burundi
Cambodia
Cameroon
Central African Republic
Chad
Comoros
Congo
Côte d'Ivoire
Dem Rep of Congo
Djibouti
Eritrea
Ethiopia
Gambia
Georgia
Ghana
Guinea
Guinea-Bissau
Guyana
Haiti
Honduras
Kenya
Kiribati
Kyrgyzstan
Lao People's Dem Rep
Lesotho
Liberia
Madagascar
Malawi
Mali
Mauritania
Mongolia
Mozambique
Myanmar
Nepal
Nicaragua
Niger
Nigeria
Papua New Guinea
Rep of Moldova
Rwanda
Sao Tome and Principe
Senegal
Sierra Leone
Solomon Islands
Somalia
Sudan
Tadjikistan
Timor-Leste
Togo
Tokelau
Turkmenistan
Tuvalu
Uganda
Ukraine
United Rep of Tanzania
Uzbekistan
Viet Nam
Yemen
Zambia
Zimbabwe

Phase 2 (low-cost access)

Algeria
Belarus
Belize
Bolivia
Boznia-Herzegovina
Bulgaria
Cape Verde
Colombia
Costa Rica
Cuba
Dominican Republic
Ecuador
El Salvador
Equatorial Guinea
Federated States of Micronesia
Fiji
Guatemala
Iraq
Jamaica
Jordan
Kazakhstan
Kosovo
Latvia
Lithuanie
Maldives
Marshall Islands
Morocco
Namibia
Panama
Paraguay
Peru
Romania
Saint Vincent and the Grenadines
Samoa (Western)
Serbia - and - Montenegro
Suriname
Swaziland
Syrian Arab Republic
The Former Yugoslav Rep of Macedonia
Tonga
Tunisia
Vanuatu
Wallis and Futuna
West Bank and Gaza

OUTREACH AND TRAINING

Capacity building and outreach are critical components of the HINARI initiative, which ensure that individuals in participating organizations can access and use HINARI effectively. The partners supporting the development of both AGORA and HINARI are collaborating to develop a joint international training and reference/ technical support system, and are conducting "train-the-trainers" workshops at national and sub-national levels, with a special focus on Africa. The UNICEF/UNDP/ World Bank/WHO Special Programme on Research and Training in Tropical Diseases (TDR) has organized multi-regional HINARI training workshops for librarians and researchers, produced a CD-ROM of multi-lingual training materials, and provides infrastructure grants for targeted institutions to help them use HINARI effectively.

TECHINCAL REQUIREMENTS

Users must have at least a 56 kbps Internet connection. HINARI is designed to work best with Internet Explorer version 4.0 or higher, or Netscape version 4.5 or higher. Users will also need Adobe® Reader® to view PDF journal articles.

For more information visit http://www.who.int/hinari, or email the HINARI Team at hinari@who.int