

## OPEN AND FREE ACCESS TO FULL TEXT JOURNAL ARTICLES AND MEDICAL DATABASES IN DISASTER AFFECTED DEVELOPING COUNTRIES

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### INTRODUCTION

Tsunami of 26 December 2004 caused havoc in a number of countries including Indonesia, Sri Lanka and Maldives, killing as many as 280,000 people. South Asian Earthquake of 8 October 2005 caused massive destruction of life and property in areas of Pakistan, India and Afghanistan resulting in an estimated death toll of more than 80,000 and displacement of almost four million. The health consequences were enormous requiring assistance from local populations, national governments and international community.

The health consequences of such disasters and the need for rapid identification of health related questions and their solutions also require unrestricted access to rapidly evolving resources of scientific and medical literature. Lack of access to information remains a major barrier to knowledge-based health care in developing countries.<sup>1</sup> This article aims to highlight this need and report on recent efforts to secure unrestricted health information access for professionals working in Pakistan. The article also aims to serve as a guide on free and open access full text journals and online databases. It also identifies areas of patchy access in the developing world and highlights opportunities for further development.

*Securing Access:* In January 2006, the author

started approaching individuals and organizations to seek and identify relevant medical databases and other resources that could be accessed free of charge from Pakistan. In March 2006, Turning Evidence into Practice (TRIP) database [www.tripdatabase.com](http://www.tripdatabase.com) agreed to provide free online access to any computer-accessing TRIP from Pakistan. Use of TRIP was successfully piloted from different cities in Pakistan. In April 2006 arrangements were made for the wider circulation of relevant information contained in this article.

### USEFUL MEDICAL DATABASES

*PubMed:* Through PubMed anyone with online access can access over 15,000,000 MEDLINE biomedical journal citations. MEDLINE is the US National Library of Medicine's bibliographic database covering the fields of medicine, nursing, dentistry and health care systems etc. This database can be accessed through National Center for Biotechnology Information's Literature Databases page on [www.ncbi.nlm.nih.gov/literature/](http://www.ncbi.nlm.nih.gov/literature/).

*DARE:* Database of Abstracts of Reviews of Effects (DARE) contains summaries of systematic reviews that have met strict quality criteria. The database covers a broad range of health and social care topics and can be used for answering questions about the effects of interventions, as well as for developing guidelines and policy making.

The database can be accessed using the web link [www.york.ac.uk/inst/crd/darehp.htm](http://www.york.ac.uk/inst/crd/darehp.htm).

*The Cochrane Collaboration:* The Cochrane Collaboration is an international not-for-profit organization, striving to provide up to date information about the effects of health care. The full contents of Cochrane Library have a restricted access. However, abstracts and

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\* Received for Publication: August 8, 2006

\* Accepted: September 25, 2006

summaries of the Cochrane reviews can be accessed free by going on 'Cochrane reviews' link on the home page [www.cochrane.org](http://www.cochrane.org).

### MEDICAL GATEWAYS

*Inasp -Health Links*: International Network for the Availability of Scientific Publications (INASP) - Health Link [www.inasp.info/health/links/contents.shtml](http://www.inasp.info/health/links/contents.shtml) is an Internet gateway to selected websites for health professionals. It provides access to bibliographic databases, trial databases, medical statistics and subject specific links.

*INASP Programme for the Enhancement of Research Information (PERI)*: [www.inasp.info/peri](http://www.inasp.info/peri) is a programme to support capacity building. From PERI home page links to eligible countries can be followed to identify country coordinator and resources made available through that particular coordinating institute. Institutions in Pakistan wishing to use PERI services are advised to register with Higher Education Commission (HEC), Government of Pakistan at [www.hec.gov.pk](http://www.hec.gov.pk). From HEC home page follow link to 'digital library or e-learning'. Eligibility for access to the information resources is exclusively open to certain categories of higher education institutions, teaching hospitals and indigenous non-governmental organizations recognized by HEC.

*BIOME and OMNI*: BIOME [www.biome.ac.uk/about/](http://www.biome.ac.uk/about/) is a collection of gateways, which provide access to evaluated, quality Internet resources in the health and life sciences.

OMNI [www.omni.ac.uk](http://www.omni.ac.uk) covers preclinical and clinical medicine and dentistry, health management, public health, epidemiology, psychology, applied neuroscience and pharmacology etc. OMNI also provides links to several free Internet MEDLINE services such as PubMed, Infotrieve, Snooz and Scirus [www.omni.ac.uk/medline/](http://www.omni.ac.uk/medline/).

BIOME also provides access to Bioethics Web [www.bioethicsweb.ac.uk](http://www.bioethicsweb.ac.uk) and MedHist [www.medhist.ac.uk](http://www.medhist.ac.uk), which are guides to Internet resources for biomedical ethics and history of medicine respectively.

*Health InterNetwork Access to Research Initiative (HINARI)*: The HINARI programme

[www.who.int/hinari/en/](http://www.who.int/hinari/en/) was set up by World Health Organization (WHO) together with more than 30 leading publishers<sup>2</sup> with the aim of enabling developing countries to gain access to one of the world's largest collections of biomedical and health literature. The eligibility of a country is based on Gross National Product (GNP) per capita of the country, based on World Bank figures from 2001. Institutions in low-income countries are eligible for free access. Institutions in countries with GNP per capita between \$1000-\$3000 pay a yearly fee of \$1000 per institution.

Countries such as India and Pakistan that are classified as 'low income' according to most recent World Bank figures<sup>3</sup> are not included in the 'eligible countries' list.

The HINARI website also provides links to free databases and publications.

*Regional Databases and Virtual Health Libraries*: HELLIS network for South East Asian Index Medicus and other resources can be accessed through [www.library.searo.who.int](http://www.library.searo.who.int). WHO-Eastern Mediterranean Region Virtual Health Sciences Library [www.emro.who.int/HIS/VHSL/Index.htm](http://www.emro.who.int/HIS/VHSL/Index.htm) provides access to databases such as Arabic Medical Library and Index Medicus for WHO Eastern Mediterranean.

Bioline International [www.bioline.org.br/](http://www.bioline.org.br/) is a not-for-profit electronic publishing service, providing access to peer reviewed research journals published in developing world. It is providing access to journals from countries such as India, Cuba, Indonesia and South Africa etc. PakMediNet [www.pakmedinet.com](http://www.pakmedinet.com) is a Pakistani medical Journals and drug database, providing facilities for searching articles published in Pakistani journals.

*Open Access Publishing*: Open access means unrestricted access to and use of scientific information.<sup>4</sup> Bethesda Statement<sup>5</sup> states that the author and copy right holder grant to all users a free, irrevocable, worldwide, perpetual right of access and use. Open access journals use a funding model that does not charge readers or their institutions for access. The access is usually provided through Internet.

BioMed Central [www.biomedcentral.com](http://www.biomedcentral.com) is a publisher of more than 150 peer-reviewed

open access journals. It also maintains a catalog of databases on biomedical topics that are available online [www.databases.biomedcentral.com](http://www.databases.biomedcentral.com).

PubMed Central [www.pubmedcentral.nih.gov](http://www.pubmedcentral.nih.gov) is the U.S. National Institutes of Health (NIH) free digital archive of biomedical and life sciences journal literature. All articles in PubMed Central are free, sometimes on delayed basis.

The Public Library of Science [www.plos.org](http://www.plos.org) is a non-profit organization of scientists and physicians working to making the world's scientific and medical literature a public resource. PloS journals such as, PloS Biology, PloS Medicine and PloS Genetics can be accessed through above website.

The Directory of Open Access Journals [www.doaj.org](http://www.doaj.org) aims to 'increase the visibility and ease of use of open access scientific and scholarly journals thereby promoting their increased usage and impact.

*Free Access Medical Journals:* Many journals now provide part or full free online access to their archives and new material.<sup>6</sup> A collection of Useful links is provided on [www.freemedicaljournals.com](http://www.freemedicaljournals.com).

High Wire Press ([www.highwire.stanford.edu](http://www.highwire.stanford.edu)) is a division of Stanford University Libraries. It provides access to a large number of journals, published online with the assistance of HighWire Press. There may be some variation in access in different parts of the developing world based on the policies of individual publishers.

The journal list includes British Medical Journal and The British Journal of Psychiatry of BMJ Journals and The Royal College of Psychiatrists (RCPsych) respectively. BMJ Journals provide free access to 113 countries, areas and territories.<sup>7</sup> The RCPsych provides free online access to the College journals to 75 countries.<sup>8</sup> The eligible countries lists from both organizations do not include countries such as India, Pakistan, China or Sri Lanka.

*Other Resources:* Though the main focus of this report is access to medical databases and journals, interested readers can also access [www.medicalstudent.com/](http://www.medicalstudent.com/), [\[4doctors.com\]\(http://4doctors.com\) and \[www.medlineplus.gov\]\(http://www.medlineplus.gov\) for links and access to medical textbooks, encyclopaedias, medical dictionary and other relevant resources.](http://www.freebooks</a></p>
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All web sources identified in this article were accessed between March 15, 2006 to April 9, 2006. The author will advise the future users to use Internet search engines such as 'Yahoo' or 'Google' in case they encounter any difficulty in accessing relevant websites using the links provided above.

## CONCLUSION

Countries affected by disasters can directly benefit from open access to medical and scientific knowledge. Healthcare systems in disaster-affected areas of Pakistan are in constant need of updating and restructuring. Service planning and individual patient care can be improved through systematic use of identified resources. There is a need for resolving barriers to accessing scientific and medical information and knowledge in the developing world. Failure of HINARI to reach all parts of low-income developing world requires immediate attention.

## ACKNOWLEDGEMENT

The author wishes to acknowledge advice and support from Jon Brassey, Sibel Uludag, and Drs Babur Yusufi, Sohail Ali, Syed Ahmer, Syed Wasif and Santosh Madholkar.

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