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Health information for the developing world

Rajendra Kale

This is a report of the conference "Getting information from the developed to the developing world" held in July at BMA House, London.

Doctors and other health professionals in developing countries are missing out on relevant information about health. A lot of the information they need is available in the developed countries, and those who have it are happy to share it with them. But transporting information, like food or medicines, from one part of the world to another is not an easy task nor is it the complete answer to the information drought. It is one thing to ferry books and journals from Europe to Africa and another to make relevant information available to the right person at the right time at an affordable cost.

Gross inequalities exist in the availability of health information in the developing and the developed worlds. Paucity of relevant information is a chronic feature of health care in developing countries and in the formerly communist countries of eastern Europe. As a result many health professionals in these countries have gradually been lulled into believing that they can go about their job without new information.

The position in the developed world is quite the reverse. Most doctors are deluged every week with so much information that they are virtually paralysed by its plethora. Too much irrelevant information is also unhelpful. Transferring all available information from the developed countries to the developing ones is obviously not to going to meet the health information needs of the developing world.

"Getting information from the developed to the developing world" was the title of a conference held at BMA House, London, earlier this year. The meeting came about because the BMJ Publishing Group regularly receives requests for free subscriptions to its journals from doctors in the developing world. The group does provide journals free of charge, although it worries that this is probably a highly inefficient way of getting information to the developing world. The group is also willing to make its information available to doctors in the developing world at minimal cost, and the problem then is one of distribution. How can relevant and useful information be transferred to doctors and others in the developing world at minimal cost? How can we know which material is wanted?

The 67 participants at the conference represented international organisations, government and non-government bodies, and publishers and included journalists, doctors, and other interested individuals. The aims of the meeting were to bring together people who know what material is wanted in the developing world, publishers who might make health material

available as cheaply as possible, and people who know about distribution to the developing world; to look at how material is currently getting to the developing world (many donation and distribution schemes already exist); to see if more material might be made available as cheaply as possible; to see if distribution channels can be made better known and developed; and to make practical suggestions on getting material to the developing world. As with all conferences, much of the benefit of the meeting came simply from putting people in contact with each other. A network is being established of people interested in the distribution of health material to developing countries, and anybody who would like to join should contact Ms Carol Priestley, who is the director of the International Network for the Availability of Scientific Publications (see useful addresses at end).

By the end of the day it was apparent that the title of the conference was inappropriate. Some of the information needed by developing countries—for example, epidemiological data—needs to be generated by the countries themselves. Some of this information would also be of interest to health professionals in developed countries, and needs to flow in a "south-north" direction (south being regarded as the developing countries and north as the developed countries). Some data are already available in some developing countries but need to be shared among other developing countries—that is, a south-south flow of information. Undoubtedly, however, much of the information needed is available in developed countries and needs to flow in a north-south direction.

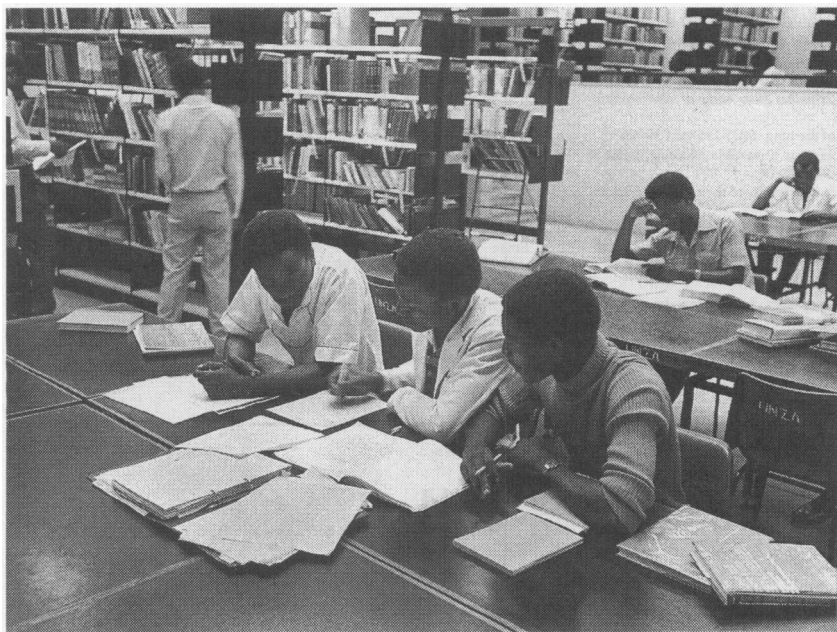
What is wanted?

Health workers in many countries, particularly in sub-Saharan Africa, have almost no access to up to date information. "The shelves in our libraries are full of outdated books, most of them 15 to 30 years old," lamented Ms Helga Patrikios, from the University of Zimbabwe Medical Library. Economic decline has affected her library as it has others in Africa, but her centre is better than many because it is based in a medical college that was once well funded. The library at Nigeria's Nsukka University subscribed to no journals nor got support from donors till 1993.

One consequence of the dearth of information, explained Ms Patrikios, is that health workers get used to practising without keeping up to date. This also happens in the developed world, but, according to the editor of the *National Medical Journal of India*, only

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Many libraries in the developing world are not so well stocked

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may also be harmful because it might prevent the development of skills in the recipient countries.

What is happening now?

"Many inappropriate materials have been shipped, or potentially useful information has ended up in the wrong place," said Ms Priestley. She works for a cooperative network of organisations and libraries from both the developed countries and the developing ones and knows that information that flows south-south is often much more relevant than information that flows north-south. The network has created several computerised databases, one of which provides current information on existing programmes of support or activity in the provision of information. Another provides inventories and profiles of institutions and libraries in developing countries. The network also offers a clearing house and advisory service that helps in the publication, distribution, and exchange of scientific publications. It produces a useful directory of subject specific supporting organisations.

Ms Carolyn Sharples, manager of the international campus book link project run by Book Aid International, said that Book Aid International is also selective about the books it sends and will not accept medical books that are more than five years old as donations. The material is screened by two experts before it is sent out. Book Aid International annually sends about half a million books, periodicals, and other printed information to 65 countries worldwide. These publications include recently outdated editions of the popular *British National Formulary*. The organisation has been sending material since the 1950s, when it functioned under the name of Ranfurly Library Services. With the help of Rotary International, it transports the vast surplus of printed material in Britain to London, then ships it overseas at either no cost or discounted prices. Its medical books scheme for 1994 is financed by the multinational pharmaceutical company Glaxo.

Ms Patrikios and her team in Zimbabwe have identified and provided a core collection of 40 different books for every district and general hospital and a collection of 13 different health manuals for each of the health centres and clinics around the country (there are over a thousand). What the team needs is a steady supply of current, low cost books; journals; a security system to prevent theft of publications; and trained staff, who unfortunately leave to join the private sector.

Countries that are classed as developing vary widely in their capabilities and assets, and Abel Packer of Bireme, Sao Paulo, Brazil, described an elaborate electronic information network. Brazil is a member of the Pan American Health Organisation and uses the Latin American and Caribbean health sciences

15% of doctors in India regularly read a journal. A similar pattern is seen in many other countries—for example, Mexico—where good journals have been hard to come by. Ms Patrikios has succeeded in making more information available in Zimbabwe and has seen a slow increase in requests for information—but mostly from people preparing for exams rather than those wanting to use the information to treat patients.

"Those sending information risk being paternalistic, patronising, and wrong."

The fact that health workers have been starved of information is one of the factors that make it hard to determine what information they really need. Indeed, Gabor Kapocs, a neurologist from Hungary, thought that it was impossible to know people's needs, and he emphasised that different groups—for example, doctors, nurses, other health professionals, administrators, government bodies, and lay people—will need different information. Nobody in London or New York can know what is needed in rural Botswana or a small town in Romania. Those sending information risk being paternalistic, patronising, and wrong. Distribution systems have to allow people in developing countries to select the material themselves. Consistent follow up and evaluation, followed by remedial changes, are also important, and the box contains suggestions that might help to improve the appropriateness of the information sent.

Delegates at the conference also heard the phrase "evidence based medicine" many times—from people from both the developed and the developing world—and editors and publishers acknowledged that much of the material published in medical journals in developed countries is of low scientific quality. It makes no sense to transmit such information to the developing world, but at the same time those in the developed world have to be careful about telling people in the developing world what is good for them.

Sending indiscriminate information may actually do harm. It is certainly dangerous if people are unable to appraise critically material that is sent to them and use it to make major decisions. Sending information about advanced technology may inspire recipients to improve their facilities but could depress them to the point of despair. Sending ready made high quality information

Sending appropriate information

- Ask people what material they want, and let them know what material is available
- Use core library catalogues that have been identified by the WHO and others
- Encourage recipients to be constructively critical. They may be afraid to criticise the quality of material for fear of being thought rude or that donations may stop
- Establish personal contacts and use carefully phrased evaluation forms
- Include international reply coupons to pay for the return of evaluation forms
- Consider offering training in critical appraisal to donors and recipients

information system, with a network of centres capable of handling electronic databases on health.

Many other schemes for distributing information to and within the developing world were mentioned at the conference (box), and most are summarised in the directory of the International Network for the Availability of Scientific Publications. What became clear at the meeting, however, was that much might be gained by closer cooperation among those who run the programmes. Many programmes operate without staff knowing about other programmes. Moreover, if the groups were linked together in some way they might have more clout with publishers, governments, and funders. The International Network for the Availability of Scientific Publications and the BMJ Publishing Group are exploring the possibility of programmes linking up.

Role of international organisations

Dissemination of health information is a major function of the World Health Organisation, said Mr David Thompson, who heads the organisation's office of publications. But he warned that the WHO was also affected by steadily falling resources. Its publication programme produces books and information that are prepared specifically for the developing countries. Every year it publishes 60 to 70 books in English, 35 in French, and 30 in Spanish, and it has programmes in several other languages including Arabic, Chinese, and Russian. The programme operates a two tier system of pricing, with substantial subsidies for developing countries. Most of its publications are distributed free, and the WHO also supports other programmes. The Commonwealth Secretariat and the Overseas Development Administration have well established health and education programmes, which include dissemination of health information in their activities.

Although delegates attending the conference and the workshop on the role of international organisations were pleased to hear of the initiatives of these organisations, many thought that they were small scale in proportion to the problem. In addition, the international organisations do not seem to have clear strategies, and many of their activities are not adequately coordinated. With commitment, leadership, and resources the international organisations could undoubtedly be better at encouraging the dissemination of useful information.

Barriers faced by publishers in developing countries

- Language is a major barrier in countries outside the new Commonwealth
- The cost of subscribing to journals from the developed countries is too expensive for almost all health professionals from developing countries. Funds generated from advertising are inadequate to support publishing in developing countries
- Distribution systems in developing countries are inefficient compared with those in the developed world
- Information about the market for books and journals is inadequate because of poor market research
- In some countries doctors are unwilling to pay for information and expect it to be supplied free, whereas in others information sent free is not valued highly
- Publishers' costs need to be recovered even if profit is not a consideration

What can librarians do?

Ms Deborah Avriel, from the WHO's library in Geneva, commented that her organisation strongly believes that an urgent need exists for new alliances to be formed among publishers, librarians, and distributors. Relevant packages of knowledge need to be created in developing countries or adapted for use there. Librarians can help to filter the huge flow of information and to select topics of interest to the local users and present them in an appropriate form. Several such packages exist, including Info-Med from Ghana and Chiz from Zimbabwe. Librarians could also help to increase the use of local publishers and make them more visible.

What problems do commercial publishers face?

Commercial publishers, said Peter Saugman from Blackwell Science, can play only a limited role in disseminating information to developing countries because they have to consider their shareholders or owners and find it difficult to make money in poor countries. Blackwell Science publishes a range of science books, the Four Dragons series, aimed at students in the Far East, which they sell there at about half the normal price. In the past four years 40 books have been published in that series. Geoffrey Burn, executive director of the BMJ Publishing Group, described the barriers encountered by publishers when trying to enter markets in developing countries (box).

Despite these barriers the BMJ Publishing Group has operated a scheme to distribute local, monthly editions of the BMJ in some developing countries, and at an affordable price to doctors. In India, for example, 25 000 copies of the local edition are sold at about 50p a copy.

How can the distribution of information be improved?

In one of the conference's four workshops, delegates explained that developing personal contacts, preferably in the postal or government services, and understanding the local distribution system, including import duties, are essential for developing successful distribution systems. Centralised distribution may be the cheapest and most reliable system in one country, whereas decentralised distribution, with direct mailing to individuals, may be more appropriate in another. The cost of postage for returning simple acknowledgment forms should be included. Fast channels of communication, such as electronic mail, may exist in the

Donation and distribution schemes

Info-med project is run by the Health Foundation of New York and is based in Ghana and Zambia. It prepares and distributes to doctors a quarterly digest based on information contained in bibliographic and full text databases that are accessed on CD-ROM

African Index Medicus was created by the Association for Health Information in Libraries in Africa with technical support from the WHO. It believes that giving visibility to locally published material prevents redundant research and duplication of materials for training

African Books Collective has 42 African publishers as members and a stock of 1200 different journals and books.

Swedish Agency for Research and Co-operation has active library support programmes in Eritrea, Ethiopia, Tanzania, Mozambique, and Zimbabwe

American Association for the Advancement of Science supplies up to 191 different publications to 250 institutions in 38 countries

East and central Europe journal donation project offers 600 different journals to its regional network of 200 libraries

Intra-African book support scheme, launched in 1991, ensures that books from the African Books Collective reach 12 main academic libraries in Africa

African Publishers Network, established in 1992 and comprising publishers throughout Africa, supports and promotes indigenous publishers

International campus book link, run by Book Aid International, is entirely led by recipients. This means that it will not send out a journal unless it is asked for by a recipient

recipient country, and donors must be aware of these. Airlines may sometimes carry donated goods free or at a reduced price.

What is the role of electronic publishing and distribution?

"Electronic publishing and distribution could solve these problems, and we should forget about shifting tonnes of paper around the world," said Dr Ken Warren provocatively in one of the workshops. He is

"No library in the world can afford to buy all the journals it needs."

the director of Global Library Systems and has a plan for a core library of almost 300 journals, Medline, and searching and facsimile software to be put on to three CD-ROMs and sold for about a fifth of the cost of subscribing to the journals. CD-ROMs are robust and cheap and easy to store. SatelliLife, a not for profit organisation based in the United States, is, said chief executive Dr Charlie Clements, beaming up to date information by a small satellite to ground stations in Africa and South America. The information is then disseminated further through ground telephone systems.

But electronic dissemination has its limitations. More telephones exist in Marseilles than in the whole of Africa, said Dr Clements, and in Ghana 60 researchers share one telephone—and it takes five years to get another one. Telephones in Tanzania do not work in the rainy season, and in Alexandria you may need to dial a number 65 times to get connected. The biggest problem is, however, cultural: the problem with introducing any electronic system is 10% equipment and 90% culture. Ms Patrikios said that many health workers in Zimbabwe are simply not ready to acquire material electronically. For a long time they will want books and journals and hope for the chance to learn by "wandering around the stacks."

Ms Patrikios did, however, argue in favour of CD-ROM indexes, stating that "no library in the world can afford to buy all the journals it needs, and even if they have the funds to do that they do not have the space to store them." Her library has developed a digest of Medline abstracts, which is circulated to health professionals in Zimbabwe and its neighbouring countries.

MEDLINE AND EXTRAMED

Medline is dominated by journals from developed countries, and editors in developing countries have mixed feelings about it. Most would like their journals to be indexed on Medline, but the process of getting listed is seen as arbitrary and political. Many people in developing countries think that the exclusivity of Medline is a way for the developed world to keep control of information. Others say that many journals are not indexed on Medline because they are of poor quality; getting indexed is an incentive for such journals to improve their quality, and the appearance of ExtraMED might remove that incentive.

ExtraMED is a system of delivering electronic documents that covers journals from developing countries that are not usually listed in Medline. Mr Christopher Zielinski, from the WHO, demonstrated ExtraMED's impressive capability at the conference. The chance of finding an article published in, for example, the *Al-Azhar Dental Journal* or the *Fujian Journal of Traditional Chinese Medicine* was slight until ExtraMED was started. As a new project in CD-ROM biomedical journals established by Informania,

ExtraMED contains the full text of over 200 journals. All that is needed to run ExtraMED is a personal computer with eight megabytes of RAM, 10 megabytes of hard disk space, Windows 3.1, and a CD-ROM player. ExtraMED costs £2000 and subscribers receive a monthly disk and a newsletter.

How can publishers in developing countries be helped?

One workshop identified three ways of helping publishers in developing countries. Firstly, international journals could publish region or country specific versions of their journal. Secondly, local publishers of journals could be given technical support in, for example, editorial and financial management; programmes for training staff from developing countries in developed countries and visits by multi-disciplinary teams could be developed. Thirdly, journals facing extinction could be helped to secure funds and skills to continue publishing.

Conclusions

Because of the gross inequalities in access to information worldwide the developed world must find ways of making useful, reliable, and appropriate information available to the developing world. It must also encourage health workers—in both the developed and the developing world—to base their decisions on scientifically sound knowledge. People in the developing world should be given the chance to say what they want rather than simply be sent information.

The flow of information should be not only north-south but also south-south and south-north. Many different projects already exist to encourage the flow of health information, but the organisations running the projects would probably benefit from sharing information and being better coordinated. International organisations such as the WHO help with information flow, but they should try to develop plans that are more strategic and less tactical.

Publishers should be more imaginative in finding methods to make their information available cheaply, and scientific, technical, and medical publishers should consider what they can do to help. Electronic dissemination should allow big improvements in the flow of information but is not a panacea. Finally, all projects should be regularly evaluated.

I thank Anna Donald, Paul Garner, Maurice Long, and Natalie-Jane Macdonald for reporting the proceedings of the workshops held at the conference.

Useful Addresses

Appropriate Health Resources and Technologies Action Group, Three Castles House, 1 London Bridge Road, London SE1 9SG

Association for Health Information and Libraries in Africa, WHO Regional Office for Africa, Library, BP6 Brazzaville, Congo

Bireme, Centre for Health Information, Rua Bolocatu 862, Vila Clementino, CEP 04023-901, São Paulo—SP, Brazil

Book Aid International, 39-41 Coldharbour Lane, London SE5 9NR

ExtraMED, Informania Limited, PO Box 1359, London W5 3ZP

International Network for the Availability of Scientific Publications, PO Box 2564, London W5 1ZD

East and central Europe journal donation project, New School for Social Research, 65 Fifth Avenue, New York, NY 10003, USA

World Health Organisation, Office of Publications and Library, CH 1211 Geneva 27, Switzerland