

## Global public health and the information superhighway

### Epidemiologists are using the internet

EDITOR,—Ronald LaPorte and colleagues presented an impressive, though not unrealistic vision of an electronic future for public health.<sup>1</sup> Many of us in public health have used Internet in some of the ways suggested.

In 1990 an electronic network for research and teaching in public health was established among epidemiologists in Hungary, Canada, Norway, Israel, and Australia.<sup>2</sup> In 1991, to facilitate a European Community funded TEMPUS (Trans European Mobility Programme for University Studies) project aimed at developing education for a new public health in Hungary, we set up a listserv at the University of Western Ontario, Canada, linking 16 partners in six countries.<sup>3</sup> This electronic mailing list has provided a mode of communication between partners, enabling rapid transfer of information and discussion of the project, as well as development of presentations and publications.

More recently, in Newcastle, a listserv has been set up as a part of the *Mailbase* system open to academics in public health.<sup>4</sup> This list facilitates the sharing of information (on workshops, seminars, conferences, research grants, new ideas, etc) and promotes links, collaborative working, joint problem solving, and mutual support. It was initially intended for those working in the United Kingdom, but the membership has grown rapidly over 18 months and has spread to the rest of Europe and North America. At the outset the list was easily accessible only to academics, but the opening up of the information superhighway<sup>1</sup> heralds the possibility of a much wider membership for the list, including those working in health services (such as public health physicians in Britain) and others in public sector and non-governmental organisations.

Electronic communication, especially computer conferencing, has also been used as a tool for distance education in epidemiology and biostatistics,<sup>5</sup> breaking the isolation that is often felt by students at remote sites.

As LaPorte and colleagues have indicated, the possibilities are many. The advantages are also great. For example, preparing a joint publication with international authorship takes considerably longer without electronic mail (e-mail); we prepared this letter by shuttling the draft back and forth across the Atlantic in a matter of seconds for each transfer. We could even have e-mailed it to the *BMJ* if the journal had its own e-mail address, enabling direct editing and typesetting. Could this be a future for rapid communication in medical journals?

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The *Mailbase* system operates from Newcastle University Computing Centre and provides a national

We prefer short letters that relate to a recently published article and we are unlikely to publish letters longer than 400 words and containing over five references. Letters may be shortened. Your letters should be typed with double spacing and include a word count. All authors need to sign the letter and provide one current appointment and address. We encourage you to declare any conflict of interest. Please enclose a stamped addressed envelope if you require an acknowledgment.

resource for the support of academic e-mail discussion lists. To join the public health list, send an e-mail message with the single line:

join public-health firstname lastname  
to mailbase@mailbase.ac.uk, substituting your first and last names as appropriate. There is no cost and you will receive full information on the list and on using *Mailbase* when you join.

- 1 LaPorte RE, Akazawa S, Hellmonds P, Boostrom E, Gamboa C, Gooch T, *et al.* Global public health and the information superhighway. *BMJ* 1994;308:1651-2. (25 June.)
- 2 Østbye T, Bojan F, Rennert G, Hurlen P, Garner B. Establishing an international computer network for research and teaching in public health and epidemiology. *European J Epidemiol* 1991;7:34-8.
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- 4 Parkin D, White M. New electronic mailing list for public health and epidemiology. *Public Health Physician* 1993;4(1):10.
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### Electronic mail forum proposed

EDITOR,—Given the dearth of clinically oriented information technology (as opposed to financial systems) in the new NHS, I was pleased to see the *BMJ* give such prominent space to Laporte and colleagues' article promoting the use of the information superhighway in medical communication.<sup>1</sup> When the internet is used for purposes as diverse as "virtual" rock concerts, updates of soap operas, and conferences about bestiality it is surely time for doctors to join the bandwagon and use this astonishing resource for their own purposes.

Although a bulletin board for general practitioners already exists and a "healthcare" forum has recently been added to CompuServe, I think that the *BMJ* has its own contribution to make. I agree wholeheartedly that letters in response to clinical research papers are at least as informative as the papers that prompt them<sup>2</sup> and suggest that the *BMJ* provide an electronic mail forum for correspondents to comment on research published in the journal. Not only would this provide inexpensive "real time" clinical dialogue, but the system would enable both easy international access and a digest of opinion to be published in "hard copy" in the journal as at present.

Perhaps an e-mail address for the BMA would be a useful first step?

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- 2 Bhopal RS, Tonks A. The role of letters in reviewing research. *BMJ* 1994;309:1582-3. (18 June.)

\*\*The *BMJ* does have e-mail addresses (CompuServe addresses: R Smith 100336, 3120; J Smith 73064, 2044; internet address jsmith@bmjedit.demon.co.uk). We don't broadcast these widely because we haven't yet integrated our external e-mail facilities with our internal systems. When we have done so we will advertise the relevant numbers in the *BMJ*. We also don't routinely publish authors' e-mail numbers in articles and letters for the same reason that we don't publish their phone or fax numbers: because we want to keep contact information to a minimum that is accessible to anyone. Everyone has a postal address; not everyone (yet) has a phone or fax or e-mail address. Likewise, Dr Smith's suggestion of an electronic forum is one we are keen to explore, but publishing comments on letters electronically (and not in print) presents problems for those readers who don't have electronic access.—ED, *BMJ*

### Doctors and students need computer training

EDITOR,—Ronald E LaPorte and colleagues point out the potential of exchanging information by means of the internet.<sup>1</sup> But how many of the journal's readers have the confidence or competence to use computers in this way? Furthermore, how many practitioners outside the academic community have easy access to the network?

We have investigated the computer literacy of 354 (64% of 553) first and third year medical students, 224 (55% of 407) teachers in the faculty of medicine, and 492 practitioners (96% of 513 attending an introductory computer course) in Glasgow and the west of Scotland by use of self completed questionnaires. Three quarters of the undergraduates (272 (77%)) and practitioners (384 (78%)) would need help even to use one computer package, even though 443 (90%) practitioners had access to a computer at work and 202 (57%) students had access to one at home. Computer literacy among undergraduates was no better than that found in a previous survey<sup>2</sup> and similar to that seen elsewhere.<sup>3</sup> Teachers were more literate (only 76 (34%) needing help to use one package), but 69 (31%) had no computer in their own workspace.

First year students were more likely than third year students (50 (21%) *v* 19 (16%)) to have used computers frequently at school, and there is other evidence that secondary schools are starting to address the problem.<sup>2</sup> The General Medical Council recommends that all students should acquire basic computing skills. Glasgow University, like some others, is starting a university-wide computer literacy course this autumn, which is aimed particularly at those students (at present 80%) who did not use computers frequently at school. The next problem is to provide appropriate hardware and software to satisfy the assumed increased demand from students and to allow all staff to have access to a computer.

Two obstacles to LaPorte and colleagues' vision must be tackled. Firstly, we need continuing education for existing practitioners and a substantial proportion of new graduates who are

"computer illiterate" for some years yet. Computer skills should be integrated into all postgraduate courses. For example, we would add "information management including computer skills" to the content of the master's degree in general practice suggested by Lindsay F P Smith.<sup>4</sup> Students taking the master of public health at Glasgow University are now required to attain basic computer literacy.

Secondly, the need for an appropriate bridge between JANET (the joint academic network, the British end of the internet) and NHS networks has been discussed in seminars as part of the "Cumberlege process."<sup>5</sup> Given the rate of growth of the internet, a well planned solution is needed urgently to prevent the growth of unofficial and uncontrolled connections.

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- 1 LaPorte RE, Akazawa S, Hellmonds P, Boostrom E, Gamboa C, Gooch T, et al. Global public health and the information superhighway. *BMJ* 1994;308:1652-3. (25 June.)
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- 4 Smith LFP. Higher professional training in general practice; provision of master's degree courses in the United Kingdom in 1993. *BMJ* 1994;308:1679-82. (25 June.)
- 5 *Managing the knowledge base of healthcare. Report of a seminar held on 22nd October 1993 at the King's Fund Centre, London.* London: British Library Research and Development Department, 1994. (Report 6133.)

### Computer linked fax system is efficient

EDITOR,—The chief medical officer recently stated that an information cascade system should be established to transmit messages to doctors.<sup>1</sup> Consequently, district health authorities, family health services authorities, NHS trusts, directly managed units, and other health care organisations have had to consider how to disseminate information within their organisation and to other organisations. In the event of a major incident or communicable disease outbreak—and for routine administration—an efficient communication system is called for.

We wish to highlight the potential use of a computer linked facsimile (fax) system as an efficient means of transmitting the same message to several destinations. This facility, available with many computer software packages, requires each recipient to have access to a fax machine. The sender can import a word file with the message into the fax linked software. This merges the file with the fax numbers of intended destinations selected from a file containing the fax numbers of key agencies. Computer activation of the sender's fax results in the automatic transmission of the message to target fax machines. This obviates the need to address each message separately and to load individual sheets manually into the sender's fax machine.

This means of communication is suitable for use during working hours. Out of hours a recipient may be alerted to receipt of a fax by a tonemaster bleep activated through a computer modem linked to the recipient's fax machine. Acknowledgement of receipt of the message could be faxed back to the sender.

The time saved by use of this facility is of benefit in both urgent and routine situations. The wide availability of fax machines makes this method of communication between agencies (both within and outside the NHS) broadly applicable and independent of more complex interagency information systems, such as EPINET (the Public

Health Laboratory Service Communicable Disease Surveillance Centre communication system) and electronic mail.

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### Global health network university proposed

EDITOR,—Recently we pointed out the potential of the information superhighway to become a critical factor in improving global health in the next century.<sup>1</sup> One important aspect of the telecommunications revolution is to enable distance education. We believe that it is time to establish a global training programme in public health through the capabilities that the internet provides and are enlisting faculty and students to join this effort.

Developing countries are facing the twin burdens of chronic disease and infectious disease. As the result of increased longevity, chronic diseases have emerged, yet infectious diseases have not been eliminated. Recently a World Bank report argued that cost effective public health measures represent a primary means for disease prevention and a reduction of the enormous cost of disease.<sup>2</sup>

The establishment of public health measures requires trained public health staff. Many developing countries have no choice but to send students abroad for training. This is enormously expensive—tuition, fees, and stipends at an American school of public health for a two year MPH degree cost over \$80 000, but unfortunately the costs are higher as more than 50% of students do not return home after completing their degree. Thus, increasing the number of foreign trained MPH staff in a country requires an investment of over \$160 000. In addition, we are in a global community of health, yet our students in developing and developed countries alike have little international experience.

Until now, a student could acquire the public health tools of access to information, the network of students, the availability of leading scientists, and international experience by few means other than through foreign training. Now, however, potentially equivalent international expertise and public health care education can be provided through the internet, which can reach broad audiences and avoid relocation and other unnecessary expenses.

We are in the process of establishing a telecommunications based public health training program. This program will grant degrees in public health, as well as provide internationally recognised certificates for those students receiving their public health degrees from their home institutions. Students can also take courses to gain international experience. We are seeking expert members of faculty of public health in schools, ministries of health, and other areas who could serve as mentors and instructors for a new "metaschool" of public health that could train students through the internet on the basis of how we learn through networks.<sup>3</sup>

The first step of this is to identify potential faculty in epidemiology and other disciplines from schools of public health who are facile on the internet who would like to teach in this metaschool. The second step is to network, across country boundaries, young people starting their training in public health so as to start a global training dialogue among students themselves and the faculty. The third step is to begin the degree granting programme.

Students and faculty interested in forming a global health network university (GHNet-U), please contact one of us below.

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## Necrotising fasciitis

### Use of skin flaps needs experience

EDITOR,—H Cox and colleagues seem to misunderstand the circulation of the skin.<sup>1</sup> The primary problem in necrotising fasciitis relates not just to the underlying fascia but also to the subcutaneous tissues. Any plastic surgeon will have seen cases in which the underlying subcutaneous tissues become necrotic. When this dead tissue is excised the skin above becomes necrotic because the feeding blood supply based on the fasciocutaneous perforated system has been removed. If excision of the necrotic tissue is adequate it will include both the fascia and the subcutaneous tissue, which leaves the skin to survive only on its dermal vascular network. The length and breadth of the pedicle are therefore severely compromised, particularly in areas where fasciitis is most common (the groin, perineum, abdomen, and leg).

It is therefore dangerous to suggest the use of skin flaps by those who are not experienced or trained in the technique. It is essential that patients