

Modernizing medical education

Neil CM Bacon

Continuing medical education, continuing professional development and the increasing importance of clinical governance all add to the challenge of delivering life-long learning to the profession. Use of the Internet to deliver this education provides a number of solutions and potential cost savings.

The Internet, use of email and 'the web' have led to a dramatic improvement in the efficiency of business communication across the world. Every day one hears of this 'revolution' and reads of huge numbers of web users, vast amounts of information available for download and new ways of delivering education and training. However, for the UK medical profession the reality is somewhat different.

While almost all large businesses will have a website, the number of academic departments, trusts or health authorities 'wired' is still vanishingly small. Likewise, while it is the norm for an employee of even the smallest company to offer an email address when asked how they can be contacted, if a junior doctor were to reply likewise to his/her consultant he/she would most likely meet with a quizzical stare.

Businesses all over the country are utilizing the Internet to reduce costs, improve efficiency and simplify training, yet the NHS and academic medicine — with a greater need than many for these benefits — trails a long way behind. Ironically medical students and junior doctors use the Internet for personal use. In a postal survey over 95% of final year medical students state they use email 'regularly or all the time', with 70% stating the Internet to be their primary means of finding medical information (unpublished survey of 800

students from ten medical schools, NCM Bacon, January 1998 85% response rate).

MODERNIZING MEDICAL COMMUNICATION

The failure of the profession to harness the potential Internet use by junior doctors comes at a time when the need for better communication among the profession is acknowledged as a priority.

Initiatives such as the National Institute for Clinical Excellence (NICE), the National Electronic Library for Health (NeLH) and the promotion of clinical governance are all in part responses to concerns from the public and government about professional standards. Like many previous initiatives, the success of such programmes will be critically dependent on an efficient system of information dissemination, a fact recognized in *Information for Health*, the recent Department of Health strategy document (<http://www.imt-inhs.exec.nhs.uk/strategy/index.htm>).

But it is not only the Department of Health and the NHS who have to find a solution for these problems. Every Royal college, postgraduate medical school and professional association faces an increasing challenge to communicate with their members and/or those for whom they have educational responsibility. While the Internet clearly offers solutions to a number of these problems, the problem remains of how to harness the potential yet at the same time be assured of security, professionalism and cost control.

DOCTORS NEED ACCESS TO THE BEST MEDICAL KNOWLEDGE

The amount of high-quality medical information available on the Internet grows daily. Cochrane (<http://www.update-software.com/ccweb/cochrane/revabstr/abidx.htm>), Bandolier (<http://www.jr2.ox.ac.uk/bandolier/index.html>) and the Oxford University Department of Evidence Based Healthcare (<http://cebm.jr2.ox.ac.uk>) are just three of thousands of sites providing health-care information free to all those with Internet access. Patients increasingly bring information from the Internet to consultations, and expect those caring for them to be at least as aware of current knowledge.

Coupled with this demand on individual doctors is the need for continuing medical education, continual professional development and the probable introduction of re-certification for many members of the profession in the near future. The impossibility of keeping up-to-date with traditional medical journals is well recognized (Sackett et al, 1997), even without the increasing demands described above. Members of other professions, facing analogous pressures, have adopted Internet technologies to cope with such demands. How can the individual doctor use the Internet to modernize their access to information?

DOCTORS.NET.UK: A PEER LED INTERNET RESOURCE

In response to the demands and needs of both the profession and individual doctors, a group of NHS clinicians has created a centralized Internet resource

Dr Neil CM Bacon is Nephrology Specialist Registrar and Clinical Fellow in Knowledge Architecture at the John Radcliffe Hospital, Oxford OX2 9DU

to be used by, and benefit, the whole profession. Doctors.net.uk has been created to modernize medical communication while keeping education and quality of information as central themes. There are a number of key components of the service available to the profession.

Universal medical email address

Doctors.net.uk provides all doctors with a lifelong email address at no charge. This email account can be accessed from any computer connected to the Internet. This enables all doctors to use, and be contacted through, email wherever they are working. Many doctors without their own computer are using the system through computers in libraries, their doctors' mess or the hospital in which they work.

It is proving especially useful for those doctors working abroad — whether in clinical practice, research or attending conferences. In designing the Doctors.net.uk email system, full compatibility with NHSnet has been assured. Doctors may use their Doctors.net.uk email facility to send email to, and receive email from, any NHSnet account (in addition to gaining access through any Internet-connected computer, NHSnet users may access the resources of Doctors.net.uk through their NHSnet account).

For those professional and academic bodies who need to contact doctors, whether they be medical schools, associations, postgraduate deans or medical colleges, the lifelong email address provides a rapid, cost-effective means of communication.

Internet forums

The Doctors.net.uk forums allow medical associations, committees or special interest groups to have their own Internet-based discussion and debate. By providing a professional and highly secure environment the forums make it easy for any individual or group to benefit from local, national or international discussion groups. To ensure confidentiality the forum may, if needed, be 'closed' — access being limited to invited users only.

One of the earliest forums on the system has been created to meet the needs of medical directors and other professionals to discuss the issues surrounding the introduction of clinical governance. Discussions are also being held with a number of colleges exploring the ways in which such forums may support education across the UK.

Library resources

In order to improve access to medical information, Doctors.net.uk brings together a number of key information resources. Medline, Cochrane abstracts (soon to be expanded to the full Cochrane database) and other sources may be searched from one easy to use interface. As part of its role in the development of the NeLH, Doctors.net.uk is also developing information resources for a number of sub-specialities.

Reducing costs of communication for the NHS

One way in which Doctors.net.uk is already reducing NHS costs is through its medical vacancy service. The NHS spends over £25 million a year advertising medical jobs — with the cost increasing every year. Doctors.net.uk provides all NHS trusts, academic departments, health authorities and GP practices with unlimited free advertising of medical posts. In the first month of operation over 20% of NHS trusts are using this facility.

The service, created after extensive consultation with NHS personnel officers, uses the full power of the Internet, ensuring it is quick, efficient and, most importantly, extremely cost-effective. Trusts use the Internet to place advertisements on the site whenever they wish (those without Internet access fax the vacancy for display). The doctor seeking a vacancy may search the website or simply register to be emailed when a specific job is added.

THE FUTURE: A PEER-LED SERVICE

The Internet clearly provides opportunities for the medical profession to tackle long-standing challenges in education and communication. To fully realize this potential it is important that practising clinicians are intimately involved in the development of what will become standard tools for all health-care professionals. By maintaining quality and education as the central themes of the project, Doctors.net.uk seeks to enable the profession to realize these opportunities in a unique peer-led environment. In the first 3 months of the project over 1400 junior doctors have joined — with 200 more joining each week. **HM**

For more information, and to join Doctors.net.uk, go to <http://www.Doctors.net.uk>.

Sackett DL, Richardson WS, Rosenberg RB (1997) *Evidence-Based Medicine: How to Practice and Teach EBM*. Churchill Livingstone, London

KEY POINTS

- Businesses across the world have modernized their communication and education using Internet technologies.
- Medical students and junior doctors consider the Internet to be an essential communication tool.
- Doctors.net.uk is a peer-led, professional resource launched to allow the UK medical profession to benefit from the potential of the Internet to modernize education.
- Professional associations and societies, medical schools and colleges may utilize Internet-based discussion forums for no charge.
- Doctors.net.uk brings together high-quality knowledge resources, such as Medline and the Cochrane database, for all doctors in a simple-to-use location.
- The Internet offers great potential to reduce costs to the NHS. For example the Doctors.net.uk vacancy service is available free of charge to all NHS trusts.