New Media

The Internet, Medical Practice, and Medical Education - Some Medico-Legal Issues

(Medical Education Series - Part 9)

The Internet has traditionally provided a venue for limitless open communication. Unlike radio or television, this communications medium remains largely unregulated. A license to "broadcast" on the Internet has never been required, and the vastness of the Internet makes enforcement of any regulations particularly difficult. Despite this, the Internet has been a gold mine for individuals with an interest in medical and health matters. Since the launch of the World Wide Web in 1994 the number of Web sites devoted to some aspect of medicine or medical education has grown exponentially, as any online search will quickly attest to.

People using the Internet for medical education tend to fall into three categories: (1) patients and their families looking for easily understood, nontechnical health information, (2) healthcare providers looking for health information in varying degrees of technical detail, and (3) healthcare educators looking for high-quality resources that can be recommended to their students. In this note I address some of the medico-legal issues pertinent to these groups and to other users of the Internet.

The medical profession has traditionally published in medical journals with limited circulation. Making this same literature widely available over the Internet may not be without potential problems. For instance, a controversial but well-supported conclusion in a peer-reviewed journal article may confuse the lay public not trained in critical appraisal of the scientific literature. On the other hand, patients are now better informed than in the past, often researching various conditions and treatments before approaching their physicians concerning a clinical complaint. Giving them an opportunity to read the peer-reviewed literature can sometimes be very beneficial.

Patients and their families looking for health information have an enormous number of resources from

which to choose. For example, many hospitals and physicians maintain Web sites, both as means to attract patients and referrals and as an educational service independent of any commercial interests. As well, numerous medical societies such as the Canadian Cancer Society (www.cancer.ca) provide excellent patient-oriented resources. One particularly excellent consumer resource that is often overlooked is www.health.gov, a US government site coordinated by the Office of Disease Prevention and Health Promotion. The Canadian counterpart site is at <http://www.canadian-health-network.ca>

While the Internet is often an excellent source of reliable medical information to consumers, it is also "home" to promoters of a number of dubious diagnostic devices and treatments. For instance, one good example of such a dubious site involves The New Hope Clinic ("A Quantum Medicine Center" - <http://www.newhopeclinic.com>), located in Tijuana, Mexico, which "specializes in the use of BioElectric Cancer Therapy ... which ... has been shown to be 80% effective in the treatment of cancer." Clinic promoters use e-mail, Internet discussion groups, and their slick Web site to attract clients.

One regulatory body that is particularly interested in these matters is the American Federal Trade Commission, which is targeting false and unsubstantiated health claims on the Internet through Operation Cure All - a law enforcement and consumer education campaign. Their Web site (<http://www.ftc.gov/bcp/conline/edcams/cureall/>) offers both information for consumers on how to recognize health fraud and guidance for businesses on how to ethically market health products and services.

While regulatory authorities in Canada and in the USA do what they can to monitor sites making false and unsubstantiated health claims, their medico-legal authority and financial resources are sometimes too limited to deal effectively with this problem. Fortunately, a number of anti-quackery crusaders have taken to using the World Wide Web to expose purveyors of health frauds, myths, and fads. The premier

Web site of this type, QuackWatch (www.quack-watch.com), is operated by a retired psychiatrist, Stephen Barrett. The site is filled with hundreds of reports on dubious products, services and theories, all presented in a highly engaging manner. I particularly recommend the section "Cheers and Jeers from Quackwatch Visitors" where Dr. Barnett places his fan mail and his hate mail.

Another anti-quackery site, from the US National Council Against Health Fraud (<http://www.ncahf.org>) contains a number of position papers on subjects such as colonic irrigation, homeopathy, herbal remedies and the like. Both these sites offer numerous links to other anti-quackery sites, and both are members of the Anti-Quackery Web Ring (<http://g.webring.com/hub?ring=antiquackerysite&cid=8&chub>).

While it could be argued that there would be no need for such anti-quackery sites if there were sufficient medico-legal protection and regulatory oversight, the international nature of the Internet and freedom of speech/freedom of choice issues make this view naive. This is why anti-quackery sites are so valuable to consumers.

One special advantage of using the Web for personal health research is the ease of participating in forums for discussion concerning a wide range of clinical topics. This makes for useful exchanges of information and ideas, often including international perspectives, and explains the popularity of the UseNet discussion groups and similar on-line services such as Yahoo! Groups (<http://groups.yahoo.com>). Medically-related discussion groups can provide patients with a relatively easy way of seeking and receiving information about a specific medical condition from those familiar with the condition from a personal perspective. Such discussion groups offer the capacity for significant gains in distributing medical information, but at the same time have potential for serious drawbacks. Part of the problem is that the most information offered in medical discussion groups is anecdotal and distributed by lay people who, while they may be very knowledgeable about a particular condition, may also lack the knowledge and resources to provide completely accurate information. Individuals suffering from chronic or terminal diseases have had their hopes raised by the prospect of a "miracle" cure, only to find that such cures do not actually exist or are quack remedies. Unfortunately, there are few solutions to stop these problems other than education concerning the negative consequences of taking unproven treatments.

Another service that many health consumers find attractive involves using the Internet to obtain physician profile information, including malpractice claim data. A

number of US states now put malpractice data on the Internet. For instance, the State of Virginia makes practitioner information available at <http://www.vahealth-provider.com>, while the Federation of State Medical Boards of the United States offers a national fee-based service at <http://www.docinfo.org>. Finally, the Questionable Doctors site at <http://www.questionabledoctors.org> "contains data on disciplinary actions taken for medical incompetence, misprescribing drugs, sexual misconduct, criminal convictions, ethical lapses and other offenses."

Although many physicians embrace this idea in theory, many are worried about the use of malpractice information as an indicator of competence or quality. Cynics argue that the medico-legal systems in Canada and the USA are so haphazard that good doctors are just as likely to be sued as those who may be practicing below the standard of care. Other opponents of this concept contend that the public may misinterpret malpractice history data and punish capable doctors who happen to treat a large number of high-risk patients.

It is sometimes claimed that sex and health matters are the two most popular subjects for Internet browsing. If it is true, then the use of the Internet as an aid to the marketing of sildenafil (Viagra®) must surely be an issue. Not only is there literally thousands of sites offering information on sildenafil (with many sites offering information of dubious value), but the drugs themselves can sometimes be bought on the Internet without prescription (see for instance, <http://www.viagra-world.com>). The medico-legal issues in this practice are obvious. For instance, in many cases the patient does not receive a traditional physical examination by a physician, but rather completes a detailed online questionnaire and communicates with a physician using secure online communication. In fact, specifically in response to these concerns, the American Medical Association has issued a warning about this practice, pointing out that drug information at these sites is often written in medical terminology that the lay person cannot understand, and noting that the patients are provided neither with a proper examination nor a follow-up visit to determine whether the drug worked or exhibited side-effects.

Another medico-legal issue concerns the use of e-mail in healthcare environments, where matters of privacy, security and confidentiality in relation to medical information exist. The American Medical Informatics Association (<http://www.amia.org>) has published guidelines for e-mail communication and for administrative and medico-legal aspects of the use of e-mail. These guidelines include: (1) not using e-mail for

urgent matters, (2) informing patients about who actually handles the received messages, (3) establishing the types of transactions permitted using e-mail, and (4) instructing patients to note the type of transaction in the subject line of the message to allow filtering. The association also provides guidelines on instructing patients on when to escalate to phone calls or to go to the hospital, on not forwarding patient-identifiable information to a third party without prior patient permission, on carefully checking all "To" fields prior to sending e-mail messages, and on matters of e-mail encryption and backup.

The use of the Internet as an aid to clinical care has introduced a number of special issues in the realm of medical licensing and jurisdiction, particularly with respect to telemedicine. In the USA, several states have recently adopted legislation that addresses licensing requirements for interstate practice. In some cases these statutes have required out-of-state physicians to obtain a license to provide medical services to patients that are being treated in another state using electronic communications and have placed restrictions on the nature of physician-to-physician consultations, such as second opinions on the interpretation of biopsies and tests or imaging interpretations for *x-ray* or ultrasound studies.

For instance, Michael J. Becich has made the point that the Texas practice of medicine act was modified in 1995 to include the following provision: "A person who is physically located in another jurisdiction but who, through the use of any medium, including an electronic medium, performs an act that is part of a patient care service initiated in this state, including the taking of an *x-ray* examination or the preparation of pathological material for examination, and that would affect the diagnosis or treatment of the patient, is engaged in the practice of medicine in this state for the purposes of this Act". This means that individuals who practice telemedicine on Texans must have a Texas medical license. Similar issues also exist in Europe and elsewhere.

Such issues raise many medico-legal issues. If state lines are crossed through telemedicine, which physician is liable in the event of substandard care: the consulting physician or the referring physician? And which state licensing board should bring the suit? Becich points out that in cases of malpractice the patient may have the ability to bring a malpractice suit against the physician using telemedicine in three states: the physician's state, the patient's state, or any state with which the physician has established sufficient telemedicine business links.

A related matter concerns difficulties raised by the possible need to obtain special consent from telemed-

icine patients. While some of the processes that take place during a telemedical visit consultation will be unique, it is likely that the legal principles that apply to the conventional, face-to-face, doctor-patient relationship are equally as valid in the context of the practice of telemedicine.

The complexities of using the Internet to give support to clinical care raises very many issues which will only be resolved as legislation is passed and common law rulings accumulate. If a patient is harmed or injured by a physician's (or even their own) misinterpretation of information posted on the Web, who is responsible? What about the case where the information posted is incorrect? If e-mail is "intercepted" containing confidential patient information, what are the liability issues? Legal liability issues also figure prominently in any discussion of inaccurate and potentially harmful medical information. Jurisdiction becomes relevant, given the international nature of the World Wide Web. Questions arise as to who is responsible if unverified and ultimately harmful information is distributed via a discussion group. Is the person volunteering that information liable, or is it always *caveat emptor*? What onus is there on individuals who use this content? What responsibility, if any, do Web site and UseNet administrators bear? In cases of international communication, in whose legal jurisdiction would liability proceedings take place? Should liability claims apply only to peer-reviewed or organization certified sites? These questions must ultimately be addressed so the medical community can best utilize the enormous potential the Internet offers. Until these issues are adequately addressed, many physicians and patients will avoid or restrict their use of the Internet for medical purposes.

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Erratum

In the letter to the Editor entitled: "Epidural analgesia and maternal fever", published in the August/September 2002 issue, Can J Anesth 2002; 49: 760, the letter should have been signed by

Yitzhak Cohen, Ron Flaishon, Avi A. Weinbroum, Tel Aviv, Israel.