

Between Strangers: The Practice Of Medicine Online

A distinction between the provision of information and the practice of medicine is essential to oversight of online medical care.

by Tracy E. Miller and Arthur R. Derse

ABSTRACT: An emerging consensus supports online communication between patients and physicians in an existing relationship to improve the quality, timeliness, and efficiency of medical care. Patients are also seeking medical care online from physicians they have never met, ranging from one-time interactions for a second opinion to psychotherapy. These practices call for a new regulatory paradigm to ensure accountability, establish acceptable parameters for online medical practice, and distinguish online health care delivery from online health information. The new patient-physician encounters also challenge the medical profession and society to reexamine core assumptions that define medical practice and the patient-physician relationship.

THE EMERGENCE OF THE INTERNET portends a dramatic shift for health care and the relationships of patients and physicians. The most immediate impact of the Internet has been consumers' access to an extraordinary array of information online. Despite broad variation in the quality of information, the Internet offers far-reaching potential to engage patients more fully as partners in medical decision making and in their course of treatment.¹

The policy dilemmas posed by the range in the quality of online information, e-health sites' lack of transparency, and concerns about the privacy of patients' information elude simple public solutions but have been well aired in the policy arena.² Unfolding at the same time, but more slowly and with less public scrutiny, is the practice of medicine online. As highlighted in a recent report by the Institute of Medicine (IOM), online communication between patients and physicians can improve health care quality, making health care delivery more effective, patient-centered, and timely.³ Indeed, while office visits will remain fundamental

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to the practice of medicine, the medical visit will inevitably be supplemented with other means of delivering care. Patients and physicians together will find a balance among the available options: the in-person visit, e-mail, and telemedicine.

■ **Scope of online activity.** In general, consumers have used online health information to supplement rather than replace information from other sources, including interaction with their physicians during office visits.⁴ At the same time, market research shows that in 2001 approximately 7 percent of Internet users seeking health information online, or three million people, sought consultation online with a medical expert for a specific medical condition.⁵

In fact, e-health sites and private practitioners now offer, without face-to-face contact, treatments that have long been considered the practice of medicine: access to prescription drugs, a single consultation with a physician who remains anonymous, and ongoing treatment of an identified patient by an identified physician. Most notoriously, anonymous physicians on numerous sites prescribe medications such as Viagra and Xenical with little or no medical history taken to screen for medical risks.⁶ At other sites, physicians respond to consumers' questions with the caveat that they are not dispensing medical advice. One prominent site, AmericasDoctor.com, offered "round-the-clock real-time interactions" free of charge, with "AmDocs" identified by number.⁷ Psychotherapy is also available online, either in one-time encounters with anonymous therapists or for ongoing therapy with identified psychiatrists affiliated with well-known medical centers.⁸

On Web sites operated by entities ranging from health plans and hospitals to e-health businesses, patients can ask questions of identified physicians or nurses free of charge. Disease management and other e-health sites enable consumers to enter information about their blood pressure, blood sugar level, or other biological markers and then receive computer-generated feedback about their diagnosis and treatment needs.⁹ Patients with a cancer diagnosis can seek out second-opinion consultation online from pathologists or oncologists who review biopsies and medical records for fees ranging from \$300 to \$1,250.¹⁰ Finally, in the treatment model that most closely resembles existing consultation practice, physicians affiliated with two leading hospitals in Boston offer second opinions; after reviewing the patient's history and test results, they provide their medical opinion to the patient's physician.¹¹

■ **Compelling public policy questions.** These and other emerging online practices raise compelling questions for public policy. Moreover, as technology develops, making access to voice and video communication as well as home monitoring and other devices more widespread, the options and scope of online medicine will expand. In particular, it is likely that over the next decade text-only communication via the Internet will be replaced by audio and visual communication. Similarly, surgery via telecommunication and robotics is in the development phase but may be integrated into online medical practice, reshaping the benefit/risk calculation for long-distance medical practice.

The current regulatory framework, built on a system of state-by-state licensure and geographic boundaries for practice, evolved well before the Internet emerged as a potential new medium for medical practice. As a result, public policy exists by default, without the benefit of an explicit judgment about online medicine or a clearly defined framework for distinguishing the provision of information to consumers from the delivery of medical care to patients. In the absence of an articulated public policy, market incentives and consumer demand may continue to drive practice in ways that do not protect the critical social goods at stake: patients' well-being and the quality of care, the nature of the patient-physician relationship, and the integrity of the medical profession.

Online Medicine In An Existing Patient-Physician Relationship

An emerging consensus among professional groups and quality experts strongly supports the practice of medicine online in an existing patient-physician relationship.¹² In this context, communication and monitoring can improve the quality of care, patients' access to information, and satisfaction.¹³ Although physicians remain wary of communicating by e-mail with patients, they are likely to change, prompted by mounting consumer demand, increasing functionality of online communication, and consensus on professional policies and practices.¹⁴

■ **Reimbursement and privacy concerns.** Appropriate changes in reimbursement to cover online consultation are also needed to integrate e-mail into existing practice patterns and increase online access to physicians. Only capitation now allows physicians to realize the efficiencies and benefits of online communication, although high-tech companies and several health plans have begun to offer fee-for-service (FFS) reimbursement for e-mail consultation on a trial basis. In fact, employers' interest in the efficiencies of e-mail medical consultation may prove to be a major driver for online consultation.

Patients' and physicians' concerns about the privacy and security of online medical information have also been an important barrier to e-mail communication.¹⁵ Implementation of the Health Insurance Portability and Accountability Act (HIPAA) will address these concerns for encounters with physicians who also practice in traditional settings; new policies must be fashioned to reach physicians who only practice online through entities not covered by HIPAA.¹⁶

■ **Professional guidelines needed.** The American Medical Association (AMA) and other professional organizations have offered clear guidelines about the practical and legal dimensions of e-mail with patients, covering issues such as informed consent, patient education, and incorporation of e-mail into the medical record.¹⁷ Further professional guidance and research are needed to evaluate the effectiveness of online medicine, identify best practices, and determine how to maximize the advantages offered by online communication in both existing and new patient-physician relationships.¹⁸

Online Medicine In New Patient-Physician Relationships

■ **Enhanced access and communication.** Even in the absence of face-to-face contact between patient and provider, online medicine offers clear benefits to patients. Most important, patients can gain access to medical expertise that otherwise would not be available to them. This is especially valuable for patients who are homebound, in rural areas, in prison, or in other settings that limit their access to treatment.¹⁹ It is also likely to be a valued option for patients with rare medical disorders and patients seeking advice from leading national experts who are geographically far from them. In a 2000 survey of online health information seekers, 90 percent stated that they would be interested or strongly interested in gaining information from experts at nationally known medical centers.²⁰

As already practiced on some Web sites, online medicine offers twenty-four-hour access to medical consultation and the convenience of receiving care at home. Online medical visits also generate a written record of the communication and enable physicians to readily link patients to recommended information sites. Finally, some patients seek online contact with physicians they have not met because they value the anonymity of the clinical encounter for sensitive medical topics or conditions.

■ **Lack of accountability.** Online medicine in new patient-physician relationships also brings clear risks. Internet communication in an established patient-physician relationship is encompassed by existing mechanisms and standards for accountability: state licensing standards and oversight, liability laws, and professional standards for nonabandonment and the duty to care. No mechanism exists to extend this regulatory oversight effectively to the provision of medical care that crosses state boundaries. To the extent that online medicine occurs over long distances, the potential for liability as a vehicle for accountability is also diminished; even if the same legal standards relevant for a face-to-face visit apply, the practical obstacles for patients to assert their claims may be insurmountable. Moreover, professional standards for what constitutes the competent practice of medicine online in terms of the kinds of diagnoses, treatments, and decisions that can meet acceptable standards of practice have not been delineated for new or existing patient-physician relationships.

These risks are compounded by patients' limited capacity to evaluate the quality of care and professional affiliations of online providers. Whereas patients' knowledge of financial incentives and practice arrangements in traditional practice is often incomplete, financial relationships online are even less transparent.²¹ Likewise, although patients do not have valid, reliable measures of quality as they select physicians in person, practice context and reputation provide some minimal guideposts. Patients seeking treatment online must navigate to medical care without even the rudimentary physical markers of the physician's degree on the wall, the office space, or eye contact. Finally, the anonymity of physicians on many sites defies even an attempt at accountability and continuity of care.

■ **Absence of personal communication.** The absence of the personal commu-

nication and connection that occurs in a face-to-face meeting is also a major, unquantifiable loss. Communication online relinquishes both the verbal and nonverbal dimensions of communication in favor of asynchronous written exchange. This disembodied relationship has few analogues or precedents in medical practice to inform evaluation of the implications for communication, trust, and outcomes. In current practice, physicians on call provide medical advice over the telephone. However, this advice is given in the context of ongoing accountability and responsibility for the patient's care by the primary care physician. Telemedicine is often a one-time interaction, but it includes both voice and visual contact and usually entails an ongoing relationship with a provider who arranges or participates in the consultation.

As suggested by studies of patient-physician communication, nonverbal communication—gestures, facial expressions, and body language—plays a central role in communicating empathy, concern, and expressiveness.²² Physicians' skills in using and interpreting nonverbal communication also have been closely linked to patients' satisfaction.²³ Patients' trust and the quality of patient-physician communication in turn have been correlated with patients' compliance with treatment and with better outcomes.²⁴

Policy Challenges

■ **The existing policy framework.** Federal law sets standards for the privacy of medical information and bars fraud, deceptive advertising, anticompetitive behavior, refusal to provide emergency treatment, and financial remuneration for referrals. However, it does not provide standards or oversight for poor quality of care or other violations of professional practice. Historically, state governments have licensed and overseen the practice of medicine, creating a patchwork of legal standards and oversight tied to state boundaries; physicians and other health care professionals must be licensed in each state where they practice. As a result, health care professionals who provide advice, prescriptions, or other treatments across state boundaries essentially engage in the unauthorized practice of medicine.²⁵

Enforcement of such unauthorized practice, however, is ad hoc, dependent on interstate cooperation and focused to date primarily on Internet prescribing practices.²⁶ The National Association of State Attorneys General formed a task force to target prescribing practices and has proposed federal legislation granting state attorneys general federal subpoena and enforcement authority for Internet prescribing.²⁷ The U.S. Food and Drug Administration has also made Internet drug sales an enforcement priority.²⁸

■ **Needed: A new paradigm.** Professional standards and public policies for online medicine in new patient-physician relationships will depend on judgments about whether a medical visit or physical exam remains necessary for specific diagnoses and treatments. Equally important is the role of face-to-face contact for patient-physician communication, trust, and satisfaction. Finally, physicians, like

other professionals, have long been held to a fiduciary standard requiring that they place patients' interests above their own. What happens to the expectation and adherence to this ethical obligation between patients and physicians who have never met?

Strikingly, the evidence base to inform analysis of these issues is thin. Ultimately, policies for online medicine outside an existing patient-physician relationship must be based on some complex mix of limited empirical evidence, common sense, and pragmatic judgments about the risks and benefits. The only bright line for public policy and professional practice would be the prohibition of online medicine in new patient-physician relationships. This policy would be difficult to sustain, however, in the face of consumer demand and evolving technology that increases the quality and benefits of medicine practiced across geographic boundaries. To date, the AMA has embraced e-mail communication in an existing patient-physician relationship but has concluded that face-to-face contact is essential for new relationships.²⁹ Rather than categorically rejecting online visits in the absence of face-to-face contact, organized medicine should delineate the parameters and practice arrangements that would meet acceptable standards of medical treatment.

Crossing The Rubicon: Recommendations For Policy

■ **Setting parameters.** Despite the risks associated with online medical practice in the absence of an existing patient-physician relationship, online medicine should be permitted in circumstances when online treatment and diagnosis can meet acceptable standards of medical practice and the relationship dimension of the physician-patient encounter is not important to the outcome of the visit. In particular, medical treatment that is provided solely over the Internet may prove to be a much-valued option for one-time interactions, such as a second opinion.

Such one-time interactions are likely to be the most frequently sought use of medicine online in new patient-physician relationships. Patients have relied upon online information to supplement existing relationships with their physicians and are likely to do the same with online medicine. In general, new patient-physician relationships online are best suited to one-time visits. The relational elements of patient-physician interaction are less critical than in an ongoing relationship: Patient trust is not as established, patients do not need or intend to rely on the physician for ongoing care, and patients generally have another physician with whom to discuss their care and bring closure to their treatment decisions.

Ongoing treatment in new patient-physician relationships online poses more significant risks that must be evaluated in relation to communication, quality, and outcomes. Given the role that nonverbal communication appears to play in conveying empathy, some treatments such as psychotherapy seem ill suited to online medical practice. Policymakers and health plans should also explore arrangements that tie the online medical visit to an ongoing patient-physician relationship to assist patients in selecting physicians online, to promote continuity of

care, and to support communication between consulting experts and referring physicians. Although patients have responded negatively to referral requirements in managed care, a referral requirement for online medicine may be more readily accepted. In addition, even in the absence of referral requirements, health plans could provide an effective structure for credentialing, disclosure, and continuity for online medical visits.

■ **Establishing a public framework for accountability.** Like all online practices, online medicine presents unprecedented challenges for monitoring of activity by entities that may be hard to locate, are sometimes operated offshore, and are in rapid flux. Beyond these practical difficulties, telemedicine and online medicine undermine the future credibility and effectiveness of a state-based system of oversight for medical practice. Emerging policy for telemedicine has involved a complicated mix of state strategies: expedited licenses for out-of-state practitioners, state-by-state reciprocity agreements, and registration policies.³⁰ As telemedicine and other treatments provided by long-distance technologies are integrated into medical practice, these solutions will prove too incomplete and ad hoc.

Ultimately, the benefits of medical treatments provided by new information technologies cannot be realized without fundamental changes in the oversight of medical practice to protect the interests of patients, offer legal assurance to professionals who meet acceptable standards, and establish a national system for accountability. Oversight should be achieved by a hybrid federal-state approach. Standards for online medicine should be national and cover issues such as mandated disclosure of financial interests and institutional affiliation, informed consent, privacy and confidentiality, certification to practice online, and a mechanism for reporting complaints to a registry of online practitioners. The federal government should establish a system for state reports of medical misconduct and sanctions for medical practice on- and offline that serve as grounds for federal action to limit or deny certification to practice online.

State governments should retain oversight of individual licenses and professional misconduct for in-person medical practice; the federal government is too removed from both practitioners and patients to assume this role on a national scale. Continued state oversight will, however, leave in place a patchwork of differing local standards for medical practice that must be addressed and harmonized over time. A federal role in oversight of online medical practice, although inevitable and essential, must overcome the significant political barrier posed by states' vested interest in retaining sole jurisdiction over medical practice.

The global nature of the Internet also requires international cooperation to promote enforcement, mandated disclosure to identify legitimate providers, and intensive efforts to educate and warn the public. The World Health Organization and national governments are already pursuing strategies that build on international cooperation.³¹ Given the challenges, consumer education and choice will remain important for consumer protection online. Mandatory disclosure as well as

educational initiatives by government and private-sector organizations will be essential to promote informed consumer choice.

■ **The dividing line: Practicing medicine and providing information.** While commencement of the patient-physician relationship in traditional practice is almost always straightforward, online medical care often lacks clear markers other than a physician's order such as a prescription. Unlike publication of static information, online information is increasingly interactive, customized, and personal. In the arena of e-health information, many sites now tailor information based on personal health characteristics, create a structure for consumers to provide personal information such as blood pressure levels, analyze the patient's data, and feed back recommendations generated by computer software. A feature with growing market appeal is "ask the expert," which allows consumers to ask questions of physicians who are coached to walk the fine line between information and advice.

These practices have blurred the distinction between the provision of information and the practice of medicine, a distinction essential to oversight of medical practice. On one side of that line, practices are part of a profession with a long history of public regulation. On the other side, activities are largely protected from government oversight by the First Amendment. As physicians interact with persons seeking advice and information online, they must understand the scope of their duties and the requirements of licensure. Equally important, the public must differentiate between interacting with physicians as consumers and as patients.

Securities regulation cases involving licensure requirements related to computer-generated information and publication of investment advice offer insightful guideposts for defining professional practice online. In 1985, in *Lowe v. Securities and Exchange Commission*, the U.S. Supreme Court struck down a ruling enjoining publication of an investment newsletter that recommended the purchase and sale of specific securities, holding that the publication was not tantamount to the practice of a profession and was protected by the First Amendment.³² Discussing the elements of professional practice that would require registration as a securities dealer, the Court noted that the advice provided was not personalized, that it was not based on the individual financial circumstances of investors, and that there was no person-to-person counseling or contact between the publishers and the readers. Subsequent federal court rulings also have applied these criteria in the securities arena, making judgments about the extent and nature of contact between the consumer and the professional that would trigger licensure requirements and concomitant professional oversight.³³

Consistent with these judicial rulings, core characteristics of medical practice suggest criteria for distinguishing medical information from clinical practice: (1) direct or personal communication between patient and physician; (2) provision of professional judgment tailored to the patient's particular medical circumstances and information provided by the patient; and (3) closure to the encounter or sufficient information for the patient to act without seeking further medical advice.

All three criteria share key attributes of current medical practice and increase the likelihood that the patient will act in reliance on the information provided.

■ **The policy dilemma of interactive information.** Designed to build customer loyalty and to influence patients' self-care and treatment decisions, interactive health care communication calls into question the legal framework devised for more passive information traditionally provided by publishers. In general, publishers rarely face liability for the content that they publish; the courts have concluded that no duty exists to individual readers and that liability would have a chilling impact on First Amendment rights.³⁴ However, as information online becomes more interactive and customized, the expectations surrounding accountability may shift.

An important development in the oversight of health information online has been the emergence of five major codes of conduct to promote self-regulation of the e-health care Internet.³⁵ Focused primarily on the provision of content, not medical care, the codes offer important guidance about the quality, transparency, and security of information on e-health sites as well as protections for consumer privacy. The effectiveness of these codes as a vehicle for accountability is limited by the fact that there is no mechanism to harmonize the codes into a single standard accepted by the industry or to enforce the guidelines apart from accreditation. Moreover, self-regulatory codes have generally been effective in other industries either because the industry is limited and well identified, such as the nuclear energy industry, or because the standards are ultimately backed by the possibility of government enforcement.

The fluid, open-ended nature of the Internet weakens the potential effectiveness of any self-regulatory scheme; a cohesive, well-identified community of interest motivated either by protecting the integrity of the industry or by acting to forestall government intervention cannot emerge in the diversity, multiplicity, and instability of the entities present on the Internet. These same characteristics, however, pose serious challenges to traditional oversight by state and federal authorities. For this reason, the emergence of standards from within the industry is critical as one driver for accountability. In addition, consolidation of the differing industry standards could provide the framework for government regulation.³⁶ Over time it is also likely that the courts will confront a growing number of cases asserting harm from online health information. These cases should build the framework for a new standard for liability to cover interactive, targeted health care communication.

The e-health codes have a less important role in relation to online medical practice. Guidelines here must come from the profession. Unlike the provision of medical information, medical practice is highly regulated, requiring rigorous enforcement authority to remove or curtail the right to practice. Delivery of care in a new medium does not justify a shift to self-regulation for oversight of medical practice.

■ **Building the evidence base.** Virtually no evidence base exists to determine what patients will relinquish or what is at risk in the patient-physician relationship

as the e-health transformation unfolds. Benchmarks to measure what is gained in terms of patient satisfaction and communication are also essential.

Health services research should be targeted to develop the evidence base to inform critical judgments for professional standards and public policy as medical practice is reshaped through information technology. Specifically, research should evaluate the importance of verbal and nonverbal communication, physical presence, and the physical exam to the quality of care for specific diagnoses and treatments, to patient-physician communication, to patient trust, and to satisfaction with care. Patients' compliance with recommended treatment as it relates to the medium of communication must also be explored, recognizing that the monitoring and ease of interaction online may offer strong advantages that outweigh the loss of more personal contact. In this assessment neither an idealized vision of the patient-physician relationship nor emphasis on the shortcomings of communication in current practice should serve as the standard to assess online medicine. Instead, patient satisfaction and evidence-based standards related to the outcomes of care should provide the yardstick for comparing Internet communication with face-to-face medical practice within and outside existing relationships.

IN MANY ARENAS the Internet is appropriately regarded as simply another medium for practices or information already delivered in-person or through other means. Existing professional standards and regulatory structures are therefore adequate, although enforcement demands innovation and new resources. The delivery of medical care online, particularly in new patient-physician relationships, falls outside this paradigm. For new patient-physician encounters, society must examine its core expectations for medical practice and the patient-physician relationship to determine how medicine between strangers should proceed.

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This paper was supported by a generous grant from the Strengthening the Patient-Provider Relationship in a Changing Health Care Environment initiative of the Robert Wood Johnson Foundation. The authors acknowledge the contribution of the following persons who served on an advisory panel for the project: John Arras, University of Virginia; Mark Boulding, Medscape; Thaddeus Grimes-Gruczka, e-health consultant; Joanne Husted, Institute for Health Care Research and Policy; Arthur Levin, Center for Medical Consumers; Peter Millock, Nixon, Peabody LLP; and Anthony Suchman, Relationship Centered Health Care. Their insight, expertise, and thoughtful dialogue informed the ideas put forward in the paper, although the views presented are solely those of the authors.

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34. See, for example, *Roman v. New York*, 442 N.Y.S.2d 945 (Sup.Ct. 1981); and *Winter v. G.P. Putnam's Sons*, 938 F.2d 1033 (9th Cir. 1991), holding that the publisher of *The Encyclopedia of Mushrooms* was not liable when the plaintiffs ate poisonous mushrooms in reliance on the book and required liver transplants due to their injuries. For a discussion of publisher liability and its relationship to health information online, see N.P. Terry, "Cyber-Malpractice: Legal Exposure for Medicine Online," *American Journal of Law and Medicine* 25, nos. 2-3 (1999): 327-366.
35. See URAC Health Web Site Accreditation, webapps.urac.org/websiteaccreditation/portal/consumer/Standards.asp (2 January 2002); Health On the Net Foundation Code of Ethics, www.hon.ch/HONcode/conduct (2 January 2002); Health Internet Ethics (Hi-Ethics), www.hiethics.org/Principles/index.asp (2 January 2002); E-Health Initiative, www.ehealthinitiative.org/policy (2 January 2002); and "Principles Governing AMA Web Sites," www.ama-assn.org/ama/pub/category/1905.html (2 January 2002). For an analysis of these codes and guidelines, see C. Baur and M.J. Deering, "Proposed Frameworks to Improve the Quality of Health Web Sites: Review," *Medscape General Medicine*, 26 September 2000, www.medscape.com (2 January 2002).
36. Boulding, "Self-Regulation: Who Needs It?"