More than 70 million Americans have used the Internet to access health-related information. However, use of Internet-based communication between patients and providers is limited. Although sending electronic mail (e-mail) is the most common use of the Internet, and though some systems, including that at Harvard University,2 have used electronic communication with patients for more than 10 years, diffusion of this mode of communication to the broader healthcare delivery system is limited. The recent Institute of Medicine report, Crossing the Quality Chasm, alludes to the potential value of electronic patient-provider communication and recommends increasing nonvisit care, including care provided "over the Internet."3 Unfortunately, research on patient-provider e-mail communication is limited. This editorial reviews patient interest in using advanced technology to communicate with providers, physicians' concerns, early evidence for usefulness of physician-patient electronic communication, and factors that may limit its use.

Patient Perspectives

In one of the earliest surveys on physician-patient e-mail, Mold et al4 found that more than 80% of primary care patients with Internet access would like to use e-mail to interact with their providers. However, in 2 recent surveys— including a national survey—only 6% of patients had used e-mail with their providers.5 In another clinic-based survey of 476 consecutive outpatients, conducted at the University of Michigan, only 10.5% of patients who used e-mail had e-mailed their providers.6 Patients were somewhat concerned about the logistics and potential efficiency of physician-patient e-mail, but most (70%) were willing to use e-mail with their doctors and only few were concerned about privacy issues.7 Patients who have used electronic communication with providers overwhelmingly (79%) report a preference for electronic communication over “telephone tag” for nonurgent issues.8 Some patients may feel less intimidated to ask questions over e-mail, thus promoting greater patient participation in care. Patient participation in care has been shown to improve adherence and healthcare outcomes.9 Patient demand, combined with policy recommendations derived from the recent Institute of Medicine reports, may increase use of electronic communication between physicians and patients.

Provider Perspectives

In a survey of 9466 members of the American College of Physicians-American Society of Internal Medicine, although the majority (82%) used computers, only 7% reported weekly use of e-mail with their patients.10 Physicians' perspectives on electronic communication with their patients are mixed. The University of Michigan survey reported that physicians and medical staff were optimistic about the potential for using e-mail with patients.7 Specific benefits, based on a qualitative study of physicians who were early adopters of patient e-mail, included increased flexibility in responding to patients and increased continuity with patients who have chronic diseases.12

Consistent with their patients' perspectives, providers from Michigan reported few concerns about security of e-mails.7 However, other anecdotal reports in the lay press have indicated that some providers are concerned about privacy and security of e-mail.13 A review of the legal implications of electronic mail between patients and their providers, published in JAMA, suggests that providers document informed consent from patients before using e-mail, and also use precautions such as encryption.14 Unfortunately, the more complex a system becomes, the less likely it is to rapidly diffuse into practice.15 If patients and providers are required to use a special encryption system, this might limit the ease of diffusion. Some of these issues may be solved by newer, secure, web-based communication systems.16

Certainly, time demands are a frequently reported barrier to electronic communication with patients. Because of the ease of communication, providers could potentially be inundated with e-mails. In a survey of physicians in the Partners HealthCare system, more than 60% reported that patient-provider electronic communication would increase their workloads.16 Integrating e-mail into the existing triage...
systems in primary care could potentially enhance diffusion of the technology. Dr Stephen Katz at the University of Michigan has evaluated a triage-based e-mail system. In this secure system entitled, “Electronic Messaging and Information Link,” messages are first read and triaged by nurses.

Parallel to this concern is the lack of reimbursement for electronic communications with patients. Sixty-nine percent of physicians in the Partners Healthcare survey reported that they would increase use of electronic communication with patients if they were reimbursed. Blue Cross and other insurers in California have experimented with such reimbursement, providing $25 per web-based communication to providers (see www.relayhealth.com/rh/specific/healthPlans/studyResults.aspx). Widespread adoption of this policy by insurers would likely have a significant impact on use of this technology.

In conclusion, several potential benefits exist to using a secure, Health Insurance Portability and Accountability Act (HIPAA)-compliant electronic communication system with patients in the future. Overall, patient satisfaction with primary care clinical services, especially related to physician-patient communication, has declined in recent years. Electronic communication has the potential to expand the doctor-patient relationship and increase patients’ participation in their care. However, barriers to diffusion remain. For patients, literacy, health literacy, and computer literacy, as well as lack of access to computers limit the ability of some patients to use the technology. For providers, enhancing security, integrating the technology into the workflow to limit time demands, and increasing reimbursement might extend the use of this technology. Further research is needed to understand the exact costs and benefits of electronic communication between patients and providers.

If you are currently using, or are interested in using e-mail or more secure forms of electronic messaging with your patients, consider reading the guidelines adopted by the American Medical Association (AMA) at www.ama-assn.org/ama/pub/category/2386.html. This AMA website can provide suggestions on how to manage medicolegal and administrative issues related to e-mailing patients, including: "Develop a patient-clinician agreement for the informed consent for the use of e-mail. This should be discussed with and signed by the patient and documented in the medical record." You can also learn more by exploring Dr Daniel Z. Sand’s website dedicated to electronic patient-centered communication (www.epcc.org).

References