

# Health Communication in the New Media Landscape

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## Improving Physician–Patient Communication

**PETYA ECKLER, GREGORY WORSOWICZ,  
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Physician–patient communication is the backbone of medical care and has been shown to influence both patient satisfaction and health outcomes (Stewart, 1995). Research in the area began in the mid-1960s and has gained momentum in the past decades as this interaction continues to evolve in terms of participants, complexity, and diversity. “Clear, candid, accurate, culturally and linguistically competent provider–patient communication is essential for the prevention, diagnosis, treatment, and management of health concerns,” according to Healthy People 2010. Indeed, one of the objectives listed in the report is to improve the dialogue between physicians and patients (U.S. Department of Health and Human Services, 2000).

Communication between physician and patient involves two primary tasks: information exchange and relationship building, also referred to, respectively, as cure and care. Information exchange, or the cure dimension, supports the compiling of medical history, describing the problem to reach a diagnosis, and understanding treatment (Cegala, McGee, & McNeilis, 1996; van den Brink-Muinen, van Dulmen, Jung, & Bensing, 2007). It is influenced by the racial concordance between patient and doctor; the physician’s use of jargon; and the patient’s age, education, income, dialect, and attitudes toward illness (Gordon, Street, Sharf, & Soucek, 2006; Shuy, 1993; Siminoff, Graham, & Gordon, 2006).

The affective side of communication, or the care dimension, relates to physician friendliness, empathy, reassurance, and understanding of patient expectations and concerns; patients have found this aspect quite unsatisfactory (Myerscough & Ford, 1996; van den Brink-Muinen et al., 2007). Relationship building correlates positively with patient satisfaction and, to a lesser extent, with treatment compliance (Cegala et al., 1996). To address these distinct and sometimes conflicting aspects of communication, medical schools have developed programs for both communication and interpersonal skills (Duffy, Gordon, Whelan, Cole-Kelly, & Frankel, 2004).

Based on levels of control over the exchange, Stewart and Roter's (1989) theoretical model distinguishes several types of relationships. A paternalistic relationship has high physician control and low patient control, while a consumerist relationship has high patient and low physician control. In a mutual relationship, both parties exercise strong control. The authors state that patients may adopt a passive role by default, unaware of alternatives or unable to negotiate a more active stance. In particular, older, less educated patients are more likely to be in a paternalistic relationship, while younger, more educated, and more skeptical patients are more likely to exact a relationship with high patient control. This relationship is not a constant, however, and may change depending on the needs and circumstances of the participants, so neither model is forever appropriate or inappropriate (Stewart & Roter, 1989).

Traditionally, communication has been discussed in terms of the medical encounter and mainly the medical interview. The very structure of the interview, however, affects its content and consequences: it is unlike a regular conversation because of the imbalance in participation of the two parties. On average doctors talk for 60% of the time (range 51%–77%) and patients talk for 40% (range 23%–49%). The question-and-answer format itself has been found to correlate negatively with patient compliance and recall (Roter, 1989). Because patients rarely use this format in everyday life, it makes them uneasy and unable to share their experiences (Shuy, 1993). Information giving, on the other hand, relates strongly to satisfaction, compliance, and recall (Roter, 1989) but takes a very small share of the exchange. Even when physicians engage in information giving, they can only be effective when a positive relationship already exists and if they understand patients' attitudes to the illness (Myerscough & Ford, 1996).

While the medical interview is still considered the main communication avenue, the increasing prevalence of chronic disease and the

shift from inpatient to ambulatory treatment are changing the time continuum. The exchange now starts before and continues after the actual medical encounter. New media facilitate this pre-, during, and post-visit continuum and present an opportunity to improve communication by offering access, convenience, and consistency. But technological advancements also present new challenges such as the lack of standardized guidelines, problems of reimbursement, and legal and ethical questions. This chapter discusses these issues and their implications for the future of physician–patient communication.

## CURRENT STATE OF PHYSICIAN–PATIENT COMMUNICATION

After decades of scientific inquiry into physician–patient communication, findings both encourage and alarm. Communication has definitely improved, according to Stoeckle’s (1982) historical perspective of patient load in Massachusetts General Hospital. In the 1900s to the 1920s, 30 patients were seen in two hours, while in the 1920s through the 1940s the number dropped to 15. Since the 1950s, between 6 and 9 patients have been seen in 3 hours, with an average visit time of 20 minutes. Nationwide, the average visit time in 2004 was 18.7 minutes, according to the National Ambulatory Medical Care Survey (Hing, Cherry, & Woodwell, 2006), up from 16.3 minutes in 1989 (Mechanic, McAlpine, & Rosenthal, 2001). However, some are skeptical of these data, which are based on physician self-report, because direct observation has shown significantly shorter visit duration (Gilchrist, Stange, Flocke, McCord, & Bourguet, 2004; Gottschalk & Flocke, 2005).

In addition, Stoeckle (1982) reported that the space in doctors’ offices has become smaller and more intimate, hence more inviting, and waiting times for appointments, tests, and test results have decreased. Studies have demonstrated high (80%–90%) patient satisfaction with medical visit duration and other aspects of doctors’ visits except for cost and waiting time (Gross, Zyzanski, Borawski, Cebul, & Stange, 1998; Stoeckle, 1982). However, Sitzia and Wood (1997) noted that although many patient satisfaction surveys report highly positive results because of their methodological and conceptual approaches, the scientific community has accepted that “substantial dissatisfaction exists with specific components of care, notably waiting times and communication in primary care.”

Despite these encouraging findings, causes for concern still exist. Myerscough and Ford (1996) noted that communication is the most common cause for complaint from patients and an apparent weak point among doctors. Research has shown that half of psychosocial and psychiatric problems are missed during medical consultations, that physicians interrupt an average of 18 seconds into patients' descriptions of their problems, that half of patient problems and concerns are neither elicited by the physician nor disclosed by the patient, that patients and physicians do not agree on the main presenting problem in half of the visits, and that patients are dissatisfied with the information provided by physicians (Stewart, 1995). Physicians sometimes share uninvited personal information, which distracts the patient and interrupts the flow of the conversation (McDaniel et al., 2007). When discussing side effects of therapeutic drugs, patients usually initiate the talk and doctors are more likely to deny than affirm the possibility, even for patients who are likely to develop side effects and even when the described symptoms of possible side effects have a strong literature support to be connected to the drug (Golomb, McGraw, Evans, & Dimsdale, 2007).

While scholars generally agree that communication needs to improve, it is worth discussing how it can benefit patients and physicians. For patients, better dialogue has led to higher satisfaction; lower stress, anxiety, and pain; increased compliance; better understanding of treatment risks; less frequent use of therapeutic drugs; better-controlled hemoglobin and blood pressure, fewer emergency visits; and shorter hospital stays. For physicians, improved communication has caused higher satisfaction and fewer medical errors and malpractice lawsuits (Bull et al., 2002; Golomb et al., 2007; Greenfield, Kaplan, Ware, Yano, & Frank, 1998; Shaw, Zaia, Pransky, Winters, & Patterson, 2005; Sutcliffe, Lewton, & Rosenthal, 2004; Travaline, Ruchinskas, & D'Alonzo, 2005).

## RECENT DEVELOPMENTS IN PHYSICIAN–PATIENT COMMUNICATION

In view of the recognized importance of communication for the quality of health care, a number of recent developments have aimed at improving it. These include better education and formal testing in medical schools and residency programs; the shift of the time continuum into pre-, during, and post-visit; the shift toward a patient-centered, consumerist model of communication; and the introduction of new media.

In 1978 the Society of General Internal Medicine addressed the importance of communication and started offering medical faculty an annual course on teaching effective communication skills. Communication is now in the foreground at medical schools and residency programs and the Accreditation Council for Graduate Medical Education and the Liaison Committee on Medical Education have identified these skills as core competencies. The Accreditation Council for Graduate Medical Education expects residents to create and sustain therapeutic and ethically sound relationships with patients by using effective listening, non-verbal, explanatory, questioning, and writing skills. Most (65%) medical schools in 1993 had a formal curriculum in communication skills, compared to 35% in 1978 (Kalet et al., 2004). The National Board of Medical Examiners has added a communication and interpersonal skills subcomponent to the U.S. Medical Licensing Examination, during which medical students are tested on their ability to ascertain patient expectations, feelings, and concerns; determine patient support systems and impact of illness; encourage additional questions or engage in further discussion; and make empathetic remarks about patient concerns (Guadagnino, 2006).

The time continuum of physician–patient communication has been changing due to the increasing prevalence of chronic disease, which requires continuous management, and the shift from inpatient to ambulatory treatment. Communication now starts before the medical encounter and continues afterward, and new media facilitate this pre-, during, and post-visit continuum. E-mail reminders for upcoming appointments are now commonplace, as are follow-ups with lab results. Portable media players in waiting rooms offer patients an introduction to the visit, and mobile devices in homes monitor chronic illnesses after the encounter.

In the past 30 years, the power balance has shifted from the physician to the patient, allowing the latter more control over the agenda. While the patient-centered, or consumerist, method is not necessarily recent, it is discussed here because of its continued development. We see this process in the fact that the concept of patient-centered care still lacks an agreed-upon definition, despite its widespread use. Mead and Bower (2000) consider the most comprehensive description that of Stewart and associates (1995), who identify six interrelated components of the model: exploring both the disease and the illness experience, understanding the whole person, finding common ground regarding management, incorporating prevention and health promotion, enhancing the doctor-patient relationship, and being realistic about personal

limitations and issues such as the availability of time and resources. This definition puts a clear focus on communication and holism—exploring, understanding, and negotiating both disease and illness are part of good dialogue and long-term relationship building. Mead and Bower (2000) identify five conceptual dimensions of the patient-centered approach: the biopsychosocial perspective, patient as person, sharing power and responsibility, therapeutic alliance, and doctor as person.

The last recent development is the introduction of new media. New media is a broad communication concept that can refer to any of the following:

- Emerging digital technologies and platforms—video games, virtual worlds, software, mobile devices (phones, wireless handheld devices, portable media players, electronic kiosks, interactive TV/telemedicine)
- Online communication—Internet, blogs, chat rooms, wikis, e-mail, online newsletters
- Electronic and multimedia publishing—multimedia CD-ROMs and hypertext (Hamer, 2005).

Several main characteristics differentiate new from traditional media. First is the use of multimedia applications, in which the same information can be conveyed through text, audio, video, graphics, and animation. Second is interactivity: new media are active and engaging for the user, while old media (print and broadcast) are passive. A third unique feature is customization: information is personalized to one's own needs and environment. A fourth and final characteristic is the use of hypertext: information is not presented in a linear fashion but linked with related content through hyperlinks, which allows for richer context (Pavlik, 2001).

## NEW MEDIA AND PHYSICIAN–PATIENT COMMUNICATION

Internet use among American adults hit an all-time high in 2006, with 73% (147 million) going online, an increase of 7% (10 million) from the previous year. Of these users, 84 million had broadband connections at home, an increase of 25 million from 2005 (Madden, 2006). The Internet's impact on American society was also measured by how much it improved various aspects of users' lives. Users reported better ability to



shop, pursue hobbies and interests, and do their jobs. Twenty percent said the Internet improved the way they got health information.

## E-mail

The increasing use of new media has raised people's expectations of health care providers. In a nationally representative survey, 57%–77% of adults wanted at least one type of electronic communication with their doctor, including appointment reminders, communication of test results and consultations by e-mail, online scheduling of visits, and home monitoring devices that transmit information to the clinic. For 62% of survey respondents, their choice of a doctor would be influenced by whether he or she communicates by e-mail (Harris Interactive, 2006). Other studies have confirmed this strong interest. Eighty percent of patients at Duke Family Medicine Center were interested in e-mail communication and 42% were willing to pay a small annual fee for this service (Virji et al., 2006). In pediatric practices, 74%–80% of parents wanted e-mail communication, and 65% would choose a pediatrician based on that, but most (63%) were unwilling to pay extra (Anand, Feldman, Geller, Bisbee, & Bauchner, 2005; Kleiner, Akers, Burke, & Werner, 2002). Contrary to consumers' strong desire for electronic communication, only 2%–4% reported availability and use of such services, and another 3%–4% had access to the services but did not use them (Harris Interactive, 2006). Other studies report 5%–10% of patients e-mailing their doctors (Moyer, Stern, Dobias, Cox, & Katz, 2002; Virji et al., 2006).

Data from physicians confirm the low use of e-mail for patient communication. In a survey of Florida physicians, 17% e-mailed patients from the office but most did it rarely, and only 17% did so frequently, accounting for just 3% of the overall sample. Physician e-mail users were younger, urban, non-Asian, practicing in family medicine or surgery, and working in larger practices (50 or more physicians) with high-speed Internet access (Brooks & Menachemi, 2006). A study of pediatricians in Norfolk, Virginia, revealed 79% were reluctant to e-mail patients, although 87% had access in the office, but many were open to having their staff do it (Kleiner et al., 2002). Of the Florida physicians who did not use e-mail, about half (53%) had no desire to start, and one-third (34%) were undecided. This resistance was hardly due to unease with the medium, because many e-mailed friends and family, colleagues, hospitals, and pharmaceutical companies (Brooks & Menachemi, 2006).

Physicians and patients who communicate by e-mail regularly find many advantages. Patients report e-mail is convenient for setting appointments, getting refills and referrals, and other administrative services. E-mail users are more likely to report better communication with the clinic, and many (85%) prefer it versus the telephone for non-urgent messages. E-mail also provides constant availability and 73% of messages are sent outside clinic hours (Lin, Wittevrongel, Moore, Beaty, & Ross, 2005). In another study, 58% of patient e-mails and 61% of physician e-mails were sent after hours and on weekends (Anand et al., 2005). E-mail is also more efficient for patients, as it saves them time and extra telephone calls or visits to the clinic (Leong, Gingrich, Lewis, Mauger, & George, 2005; Lin et al., 2005). E-mail communication also urges more FYI and psychosocial messages from patients, and more direct and elaborate advice from doctors (Lin et al., 2005).

Physicians experience benefits as well. Daily users report it to be a time-saving alternative to phones, as it allows patients direct access and can be maintained even when patients travel (Patt, Houston, Jenckes, Sands, & Ford, 2003). In fact, an e-mail address can provide a more reliable connection to some users than a home address or a telephone number (Virji et al., 2006). Similar to patients, most physicians (60%) see e-mail as a good way to handle administrative tasks (Moyer et al., 2002). It also allows for gathering pre-visit information, such as medical history and information regarding allergies and current medications, which saves time during the visit and facilitates follow-up when patients ask questions or request clarification (Patt et al., 2003).

Barriers and concerns have also been identified. Moyer and associates (2002) reported that most common among patients were preferences to speak with a real person or use the telephone and fear that the message would get lost or that the person being called would take too long to reply. Surprisingly, privacy concerns were least common. Concerns were more pronounced among non-users than users. A patient survey by Katz, Moyer, Cox, and Stern (2003) suggested a potential conflict regarding the role of staff in e-mail exchanges. More than 75% of doctors were comfortable with staff answering patient messages, and nearly half felt patient e-mails should go to staff first. In contrast, only 32% of patients felt comfortable with staff answering e-mails to their providers, and 52% felt e-mails sent to the provider should only be read by him or her. Patient preferences regarding e-mail communication depend on the topic. E-mail is the best option for routine topics such as cholesterol results, normal PAP/PSA test results, prescription renewals, sore throat,

and back pain, whereas in-person communication is preferred for sensitive issues such as breast/testicular pain, abnormal PAP/PSA test results, mental health issues, and sexually transmitted infection test results (Katz et al., 2003).

In light of the huge discrepancy between patients' desires to communicate electronically and doctors' readiness to do so (Anand et al., 2005; Brooks & Menachemi, 2006; Harris Interactive, 2006; Kleiner et al., 2002; Virji et al., 2006), physicians' concerns need to be recognized. In a survey of physicians who frequently e-mail patients, most were satisfied, but 25% said they would not recommend it to a colleague. Their most common concerns were medico-legal issues, time demands, some patients' lack of access to e-mail, patient difficulty in usage, and staff being unhappy. Most dissatisfied doctors (80%) used e-mail upon patients' request (Houston, Sands, Nash, & Ford, 2003). In another survey, 44% of physicians said e-mail would add to their workload, and half feared becoming overwhelmed. Regular e-mail users (not just with patients) had more positive attitudes than infrequent users, suggesting that concerns may result from inexperience with the medium (Moyer et al., 2002).

The topic of anxiety about time or work demands is prevalent in the literature, but no consensus exists on the actual time or effort spent on e-mail. One study reported physicians receiving one to five messages per day and spending 2 minutes responding to each, while in another, physicians estimated devoting 30 minutes daily to e-mail communication (Anand et al., 2005; Houston et al., 2003). Lin and colleagues (2005) found that e-mail diversified the format but did not increase the volume of patient messages. A study of a triage-based e-mail system, however, found that e-mail was an add-on to, not a substitute for, phone or in-person communication and did not improve overall efficiency. However, e-mail users were younger, more educated, less sick, and less likely to call or visit and until then may not have been served by other communication methods (Katz et al., 2003).

Another common concern is patients' ability to use e-mail appropriately and to distinguish between non-urgent and urgent conditions (Houston et al., 2003). Yet content analyses of e-mail messages do not substantiate these fears. White, Moyer, Stern, and Katz (2004) found no e-mails containing urgent messages, and only 5% with overly sensitive content. Most messages were formal, concise, and courteous, and directly related to medical issues, and only 43% required physician follow-up. Common topics were information updates, referral requests,

appointments, prescription renewal, tests, and health questions. Anand and associates (2005) also found relatively high levels of etiquette in e-mail communications, with no mention of urgent or acute problems and a focus on medical questions or updates, subspecialty evaluation, and administrative issues. Finally, reimbursement is also a common concern among doctors. The adage “Time is money” is particularly appropriate in this case, as doctors fear that more patient e-mails will take up more time, and hence this service should somehow be paid for (Patt et al., 2003).

## Telemedicine

Although telemedicine has existed for 20 years, new media are changing it by allowing information to be transmitted online or by various digital devices, thus increasing affordability (Slack, 2001). Telemedicine offers the benefits of connecting patients and physicians over long distances and allowing underserved locations and populations access to care. It also decreases time and travel (and hence cost) of specialty consultations.

So how does telemedicine influence physician–patient communication? In a study of an Internet-based telemedicine system for emergency ophthalmologic consultation, Bar-Sela (2007) demonstrated that the approach was reliable and preferred by patients. Diagnoses by telemedicine and by the ophthalmologist were in full agreement, and 98% of patients preferred the telemedicine exam. However patient preferences seem to vary by condition. During periods of low uncertainty about their health (health maintenance) or high uncertainty (crisis situations when any physician access is appreciated), patients felt telemedicine was effective. During periods of moderate uncertainty (when medications need to be changed), they preferred face-to-face consultation (Turner et al., 2004).

Telemedicine consultations shift the locus of power between practitioners. In face-to-face encounters, the physician sets the pace, while in telemedicine the nurse does so by moving the monitor to the next person. During face-to-face interaction, the doctor can hurry the visit through nonverbal cues, but in telemedicine the nurse determines when all the questions have been resolved (Turner et al., 2004). Telemedicine changes the dynamic of the clinical encounter for the patient as well. Patients thought they approached telemedicine differently than face-to-face encounters, but a content analysis of their conversations found no significant differences. Health care providers said they treated

the situations the same, but the physician was interrupted and called away during face-to-face visits, but not during telemedicine sessions (Turner et al., 2004). Liu and associates (2007) found significant differences between telemedicine and face-to-face consultations: duration was shorter, patient-centered behavior patterns (facilitation utterance, empathy utterance, and praise-utterance) were fewer, and less data were taken for the medical records via telemedicine. Still, patient attitudes toward the encounters were similar. Doctors, however, were dissatisfied with telemedicine because they thought too much time was spent on small talk, and they had difficulty asking questions and connecting with patients.

### Online Health Information

Eight in 10 American Internet users (113 million) go online for health information. On a typical day in August 2006, 8 million Americans searched for health information, which makes this activity as popular as paying bills, reading blogs, and looking up a phone number or an address (Fox, 2006). Online health information benefits consumers by increasing their knowledge and involvement with their own health (Hart, Henwood, & Wyatt, 2004). Most people (51%–74%) feel reassured in their decisions, confident to raise new questions with their doctor, relieved by what they found, and eager to share their knowledge with others (Fox, 2006). However, barriers exist for a small but substantial group (10%–25%), who feel overwhelmed to make an informed decision, frustrated by lack of information or inability to find it, confused, and frightened (Fox, 2006; Hart et al., 2004). Another aspect of gathering health information online is that most consumers (75%) do not check the source or date of what they find (Fox, 2006). These findings raise doubts about consumers' confidence in their evaluation skills.

Internet use influences the physician–patient relationship when patients discuss the information they find with their physicians. When that happened, physicians said quality made all the difference: accurate, relevant information benefited, while inaccurate or irrelevant information harmed health care, health outcomes, and their relationship. However, the best predictor of a perceived deterioration in the relationship was the physicians' perception that he or she was being challenged (OR = 14.9) (Murray et al., 2003). Physicians reported patient benefits were more common than harms, but there were more problems than benefits for doctors. The main challenges were the need

for longer clinical visits, patients' difficulties evaluating the information, patients' desire for new and unavailable treatments, and patients trusting the Internet more than their doctors (Potts & Wyatt, 2002).

Patient perceptions of physician authority may also be at risk. Lowrey and Anderson (2006) found that increased use of online health information was positively correlated with patients' belief that doctors are not the experts on medical knowledge. Other significant variables were income and perceptions of alternative medicine. However, this explained only 12% of the variance in perception. Other threats to physician authority, according to the authors, were the profession's specialization, popularity of alternative medicine, and the perception that doctors value power and money over patients.

The above findings suggest that online health information is mostly disadvantageous, especially for physicians, but the implementation of Web-based information prescriptions could change that. An information prescription is the prescription of "focused, evidence-based information to a patient at the right time to manage a health problem" (D'Alessandro, Kreiter, Kinzer, & Peterson, 2004, p. 857). Such prescriptions satisfy patients' need for more knowledge in the same way as general health Web sites but also meet physicians' standards of quality, consistency, and relevance. Most patients (65%) who got them visited the Web site within a week, and after a reminder, compliance increased by 45% (Ritterband et al., 2005). Other studies confirm the high demand among patients for health information guidance (Rice & Katz, 2006; Salo et al., 2004).

Online consultations allow consumers to contact previously unknown physicians with health questions. Users most often discussed specific symptoms and requested a diagnosis or a second opinion, information on a disease, or information on a treatment or drug (Umefjord, 2006). Reasons that patients cited for choosing this option were the convenience (52%) and anonymity (36%) it offered, their own doctor was too busy (21%), they lacked time or had difficulty getting an appointment, they felt uncomfortable at a clinic, they appreciated the affordability of this option, they felt discontent with previous doctors, they felt their concerns were embarrassing, and they had a preference for written communication.

## Other Digital Technologies

New media will continue to influence physician-patient communication as they penetrate the health care field. Portable media players, wireless

handheld devices, blogs, and wikis have gone mainstream and are gradually being adopted by the medical field.

Portable media players assist medical education in the University of Michigan School of Dentistry and other universities across the country (Boulos, Maramba, & Wheeler, 2006; Trelease, 2006). The University of Michigan has gone one step further and introduced this technology into physician–patient communication by giving patients iPods with video messages that provide an orientation to the visit while they wait (Johnson, 2007). The Cleveland Clinic offers its patients online podcasts and videocasts on various health topics.

Cell phones have also influenced communication. In some clinics in Kansas City, Missouri, patients receive a phone message whenever their appointment is delayed, which can decrease time spent in waiting rooms. Chin (2005) concluded that the cell phone has “promising benefits” for the physician–patient relationship after examining patients’ postoperative calls to their surgeon. Only 17% of all calls were to the surgeon’s cellular phone, and 80% of them were during business hours, and most were urgent. But while the surgeon’s cell phone was used sparingly and mostly for emergencies, giving the number created the impression among patients that the doctor was truly concerned with their care and outcomes.

## **PRACTICAL AND OPERATIONAL CHALLENGES OF NEW MEDIA**

While new media could potentially improve physician–patient communication, they also pose some practical and operational challenges for physicians. These include the establishment of and adherence to guidelines for communication, reimbursement regulations, possible legal ramifications, and continued adherence to prior ethical standards.

### **Guidelines**

The American Medical Association (2002) guidelines for electronic communication state that new technologies should never replace the crucial interpersonal contact that is the basis of the physician–patient relationship but rather enhance it. The guidelines cover communication, medical/legal, administrative, and ethical standards. Communication guidelines include establishing turn-around time for messages, informing patients

about privacy issues, establishing the types of transactions to be covered, informed consent, and ways to terminate an e-mail relationship. Guidelines have also been created by the eRisk Working Group, a consortium of 30 medical malpractice carriers, the AMA, and multiple national, state, and local medical societies. But while guidelines exist, they are seldom followed. Brooks and Menachemi (2006) reported that the most commonly practiced rule (48%) was printing the e-mail and placing it in the patient's chart, followed by informing patients about privacy issues (36%). Adherence to additional rules occurred in less than 25% of cases, but frequent users of e-mail were more likely to follow five or more guidelines.

## Reimbursement

The Center of Medicare and Medicaid Services has developed reimbursement guidelines for telehealth and e-consults, but physicians should be aware of what can and cannot be submitted as compliant services. For example, telehealth is reimbursed by Medicaid, but the rules are different for each state. Third-party payers often mirror government payers for allowable services but may also have their own reimbursable services. In terms of medical codes for identifying, tracking, and reimbursing for telemedicine, some states use modifiers to the existing Physicians' Current Procedural Terminology codes such as "TM" and "TV." Physicians need to know each payer's rules and regulations, which adds an administrative burden and additional expenses to their practice and has the potential to increase the cost to the patient. Still, the "quiet revolution" has already begun, according to Stone (2007), and Aetna, Cigna, and others now reimburse physicians for Web consultations in Florida, California, Massachusetts, and New York.

## Ethical and Legal Issues

Each new communication medium raises its own liability concerns. When telemedicine is used, visual evidence of the visit is captured for future review. If such an encounter is later seen by non-authorized individuals, the question of informed consent becomes pertinent (Flemming, 2007). Privacy and security concerns have been expressed in regards to e-mail as well (Katz et al., 2003; Moyer et al., 2002). Unsecured, delayed, or lost e-mail can be opened by outsiders. Insufficient protections can subject patients to possible embarrassment,



social stigma, and discrimination (Hodge, Gostin, & Jacobson, 1999). The security breaches of databanks and the private data collection industry that collects, analyzes, and sells consumer data are additional factors for concern (Anderson, 2007). Hodge and colleagues make the following recommendations for legal reform in regards to health information privacy: (1) recognize that identifiable health information as highly sensitive, (2) provide privacy safeguards based on fair information practices, (3) empower patients with information and rights to consent to disclosure, (4) limit disclosures of health data absent consent, (5) incorporate industry-wide security protections, (6) establish a national data protection authority, and (7) provide a national minimal level of privacy protections.

## IMPLICATIONS FOR THE FUTURE

In evaluating new media's impact on physician–patient communication, we are reminded of Harris (1995), who wrote, “Just as more isn't necessarily better health care, more technology is not necessarily the answer to the health care dilemma” (p. 3). We see new media not as more technology but as an opportunity to improve physician–patient communication, provided they are used with an understanding of their strengths and limitations.

The above review of the empirical literature shows that some of new media's strengths are also their weaknesses. E-mail may be a time-saver for patients but is potentially time consuming for physicians. It enables psychosocial and FYI messages from patients but gets blamed for depersonalization. Patients prefer telemedicine for some health conditions, but not for others. While these findings seem confusing at best, the key to understanding them lies in one of the unique features of new media: customization. Offering different features to different people is new media's strongest selling point. But while customization benefits the individual, it contradicts standardization and optimization in the health care industry, and this conflict may impede widespread utilization.

New media offer challenges, but the established and potential benefits may outweigh them. The expansion of communication into a pre-, during, and post-visit continuum will improve information flow and consistency of care, especially for chronic illnesses that require long-term attention. Text messages could improve compliance by reinforcing

physician authority and the value of treatment after the visit when the doctor's influence begins to wane and the influences of the social environment remain strong (Pendleton, 1983). Another controversial consequence of new media, online health information, can be turned into a tool for health education. The literature has demonstrated that patients are eager for information guidance and physicians need to respond to these needs. Research has shown that contrary to physician concerns, patients do not use e-mail for urgent messages or abuse the privilege of having their doctors' cell phone number. The evidence presented earlier suggests that a major barrier lies within physicians and the industry as a whole.

The adoption of new media ultimately depends on both the industry and the individual physician. Such an adoption will create an expanding market for new services. Pre-visit services such as payment registration, scheduling, medical information/questionnaires, and real-time notification of clinic delays and post-visit services such as customized Web sites, automated disease management systems, secure messaging, and notification of results, are technologically feasible, but technology is not the major roadblock to their adoption. Instead, the creation of appropriate guidelines, regulations, and safeguards is probably the biggest determinant of whether new media successfully enter the health care industry. But while we look at the industry for direction, we should not forget about individual responsibility. One example is in the already existing comprehensive guidelines for electronic communication, which get little attention among physicians. We need to stress the inevitability of the adoption of this technology. Consumers have been using new media with the banking, hospitality, airline, information technology, and news industries, and it is natural that they would expect the same from the health care industry. Issues of privacy, confidentiality, and security are pertinent to those businesses as well and have somehow been surmounted.

Communication through new media is rapidly becoming the norm rather than the exception, and physicians and the health care industry need to adapt to these changes. We say this while acknowledging that technology is not a one-size-fits-all tool (Flemming, 2007) and patients will benefit unequally. We also agree with Slack (2001) that the idea of new media is not to replace the doctor. Instead, we see new media as a tool that will help the physician communicate better with patients in an environment of increasing time demands, workloads, and numbers of patients needing long-term care.

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