# Internet-Based Clinician-Patient Communications

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E-mail has revolutionized the way we communicate. E-mail has several inherent features that contribute to its widespread use:

- Convenience—no need for stamps, envelopes, trips to the post office,
- Almost instantaneous delivery,
- Ability to send to multiple recipients,
- A record of what was sent and received,
- Ability to attach files and insert hyperlinks to Web sites, and
- Asynchronous communication (each person can read and respond at his/her own convenience).

These features also make e-mail attractive for use in clinician-patient communication, especially as an alternative to an office visit, which costs the patient both time and money. A 2006 Harris healthcare poll of 2,600 Americans showed that 74% of patients would like to use e-mail to correspond directly with their physicians.[1] In addition, 62% of the respondents stated that the use of e-mail communication would influence their choice of physicians. Moreover, when responders of all ages are included, the majority of Internet users are females,[2] which has implications for practitioners who care predominantly for female patients. Sixty-six percent of women living in the United States used the Internet, according to a 2005 report.[3] Women are more likely than men to use e-mail and use Web sites to access health information and to get support for health and personal problems.[3] There are gender differences in the use of e-mail communications, with women generally being less aggressive and more supportive in their messages; women are also more likely to use this modality to nurture existing relationships and establish new ones.[4]

## Barriers to Physician Adoption of E-Mail Communication

Despite the prevalence of Internet use and patient demand for e-mail between patient and provider, a 2004 survey of nearly 1,700 physicians revealed that although 30% of the respondents used e-mail to frequently communicate with colleagues, less than 4% frequently used e-mail to communicate with patients.[5] However, in a later survey, 24% of physicians reported that e-mail was used in their practices to communicate with patients on clinical issues.[6] The number is steadily increasing, reaching 31% in 2007 and 36% in 2008,[7] but still lags behind patient demand.

So, what are the concerns that prevent physicians from adopting and incorporating physician-patient e-mail into their practices (Table 1)? Most concerns revolve around time commitment, privacy and security, cost and decreased reimbursement, and exposure to liability. While these concerns are understandable, studies have shown that most of them may not be valid, and that the remaining issues can be addressed by appropriate use of technology and by following guidelines. The following examples of concerns and how they may be addressed illustrate this point.

***"I don't have enough time in the day."***
*Dr. Sally Jones is a busy women's health*

**Table 1.** Perceived Barriers to Physician Adoption of E-mail Communication with Patients

- Concern about being overwhelmed and not having time to manage a flood of e-mails.
- Concern regarding abuse of e-mail by patients (frequent, long messages with attachments, possibly for frivolous or non-clinical purposes).
- Lack of security and privacy of patient data and non-compliance with HIPAA (Employers have access to and even ownership of e-mail messages of employees using e-mail at work via office computers).
- Inability to authenticate the person at the other "end," as patients may share their e-mail accounts with family members.
- The cost of the technology required for secure e-mail messaging and lack of reimbursement for time spent on e-mail communication with patients.
- Need for integration of e-mail communication with existing office workflow and electronic health records.
- Concern regarding increasing risk of malpractice and other forms of liability.

*practitioner. Barbara, a 50-year-old perimenopausal executive, comes to her to get established. At the end of the visit Barabara asks, "Dr. Jones, would you mind if I e-mailed you if I think of some question I forgot to ask today?" Dr. Jones is concerned about how much time it would take to respond to questions by e-mail and how would it affect the quality of the communication.*

E-mail communication has been shown to improve both patient and physician satisfaction, and to have the potential to improve the doctor-patient relationship.[8] In addition, e-mail communication can decrease the number of patient phone calls and, thus, shift work away from the busy office hours.[9] Moreover, concerns related to the potential for patient abuse of such communications may be unwarranted. For example, a 2007 University of Pittsburgh study[10] followed 121 families of pediatric patients who communicated by e-mail with their providers over a 2-year period after signing a written consent. The authors found that although 40% of the messages were sent after business hours, only about 0.002% required urgent action by the provider. The providers received an average of 1.2 messages per day and were able to respond 57% faster than by telephone. The concern over e-mail abuse by patients may be overblown; when it does occur it may need to be dealt with similarly to the way in which one would deal with a patient who has abused office staff by calling too frequently.

In order to better examine these concerns, let us look at some hypothetical scenarios in the practice of women's health provider Dr. Jones.

### *"I'll lose money by emailing my patients instead of seeing them in the office."*

*Dr. Jones receives an e-mail from Barbara: "Dr. Jones, I forgot to mention at the office visit that my mother was diagnosed with osteoporosis when she was 75. Should I get a bone mineral density test?" Dr. Jones wonders whether she should have the patient schedule an office visit to discuss this so she gets paid for her time and advice.*

Traditionally, physicians have been answering patient questions over the phone without any reimbursement. Replacing a portion of telephonic communication with e-mail should not lead to any loss of revenue. Increasingly, patients are more likely to choose physicians who agree to use e-mail communications; thus, allowing e-mail communication with patients may improve patient retention and attract new patients.

The problem of lack of reimbursement is also being addressed. The American Medical Association created the Category III code 0074T for online communication between physician and patient with an established relationship.[11] This has since been changed to a Category I code 99444 (99444: Online evaluation and management service provided by a physician to an established patient, guardian or health-care provider not originating from a related evaluation and management (E/M) service provided within the previous seven days, using the Internet or similar electronic communications network). Several health plans are looking at reimbursing for care rendered under this service level. In 2008 both Aetna and Cigna started covering payments for eVisits conducted through RelayHealth, a secure online healthcare portal and messaging service.

### *"I don't know who's reading my message."*

*Dr. Jones gets an e-mail from Barbara: "Dr. Jones, I had a sputum SNP genotyping done through a commercial company (I got this as a gift from my sister). It shows that I may have a higher than average risk of breast cancer. Is this the same as the BRCA mutations that I hear so much about? What should I do?" Dr. Jones is concerned about the sensitivity of this information and whether e-mail can ensure the privacy and security of the communication.*

Regular e-mail should not be used for sensitive or confidential information. In addition to unscrupulous individuals who can hack into e-mail systems or intercept messages routed through the Internet, employers have the right to all content on employee

computers, as well as messages on enterprise e-mail systems. It is very important for physicians and patients to understand this and come to an agreement on appropriate use of e-mail communication. Patients should sign off on this agreement and be provided with a copy. In addition, physicians should exercise common sense and escalate the communication to a telephone call or an office visit when appropriate. There are several commercial systems for secure and confidential healthcare e-mail communications that should be used whenever possible (Table 2). These and other communication guidelines are outlined in Table 3.

**Table 2.** Products for Secure Clinician-Patient E-mail Communications

| Company | URL |
|---|---|
| CareConverge | http://www.careconverge.com/healthcare/patientportal.htm |
| HealthEmail | http://www.healthyemail.org/ |
| iHealth | http://www.medem.com/phy/phy.cfm |
| eMediary Healthcare edition | http://www.caveoinc.com/html/eMediary_Providers.htm |
| iMedicor | http://www.imedicor.com/ |
| .mdEmail | http://www.max.md/products/email.php |
| askMedica | https://www.askmedica.com/index.php |
| RelayHealth | http://www.relayhealth.com/default.aspx |
| MedFusion | http://www.medfusion.net |

### *"Do I need to call a lawyer before e-mailing my patients?"*

*Barbara is due for her Pap test and HPV screening visit. Dr. Jones's office sends Barbara an e-mail message reminding her about the need to schedule an appointment as well as patient education material for the tests (including benefits of screening, consequences of not screening and recommendations from national guidelines). Based on their communication agreement, Barbara acknowledges receipt of this e-mail. Dr. Jones wonders about her liability risk if Barbara does not set up an appointment and is subsequently diagnosed with cervical cancer.*

Liability risk is a complex issue. Electronic communication can decrease the risk of physicians being sued for malpractice, and medical malpractice insurance carriers are beginning to recognize this. A major insurance carrier in the Northwest is giving physicians discounts on their premiums if they enroll in iHealth, a portal for online communication with patients, patient education, patient reminders and so forth. The improvement in patient satisfaction and potential for improved doctor-patient relationships also decrease the risk of lawsuits. The fact that

**Table 3.** Points to Consider when Developing Provider-Patient E-Mail Communication Policy

**Communication Guidelines**

- Inform patients that messages should be sent only for non-urgent matters.
- Inform patients that they should expect a turn-around of up to 24 hours during the work week.
- Discuss with patients when to escalate to a phone call or face-to-face visit.
- Make patients aware that e-mail is shared with other office personnel and becomes part of the legal medical record.
- Give the patient a list of categories of messages (medication refill, lab test, new concern or symptom, follow-up to recent office visit, etc) to include in the subject line of any e-mail message.
- Inform patients that they need to include their name, medical record number and contact information in the body of e-mail.
- Ensure that both patients and clinicians acknowledge receipt of each e-mail message.
- Establish a policy whereby providers agree never to share e-mail addresses or messages with third parties, or to use such communications for marketing without the patient's consent.
- Get patient consent to receive unsolicited e-mail from the physician's office for reminders for appointments, laboratory tests etc.

**Security/Privacy/Confidentiality Guidelines**

- Use "https" for all web e-mail, encrypted connections for Wireless e-mail communication.
- Discuss and agree with patients regarding encryption of e-mail.
- Double-check the "To" and "CC" lines before sending and ensure that there is no inadvertent "Reply to All" used.
- Keep physician (professional) e-mail separate from personal e-mail accounts.
- Ensure that any computer used for e-mail communication has appropriate security, allowing only authorized users to log on and ensuring that the screen can be locked when stepping away from the computer.

**Medicolegal Guidelines**

- Discuss signing an informed consent during a face-to-face visit prior to initiating e-mail communications.
- Include the e-mail policy in the signature of all provider-to-patient e-mails.
- Include a waiver of responsibility for technical failures, delay in response: "e-mail is a privilege, not a right."

e-mail communication is self-documenting works in the favor of doctors.

As discussed above, e-mail communication raises privacy issues, as the message can fall into the wrong hands. While a patient cannot sue a practice for a Health Information Portability and Accountability Act (HIPAA) violation, a complaint can prompt an audit by Federal agencies. There have been cases in which practices have been sued by patients for breach of privacy under common law.[12,13] It is important to have a signed agreement with the patient regarding the appropriate use of e-mail communications.

## Guidelines for Clinician-Patient E-mail Communication

Several professional organizations[14,15] have developed guidelines on this topic. Some institutions have developed their own policies and technology solutions for secure e-mail based on these policies.[16,17] Table 3 summarizes the key points covered by these guidelines and policies, and Table 4 lists some practical suggestions for e-mail communications between providers and patients.

**Table 4.** Summary of Recommendations for Clinician-Patient E-Mail Communication

| |
|---|
| **Have a policy for e-mail communication** |
| • Find out if there is an existing policy in your workplace.<br>• If not, consider using one of the commercial products listed in Table 2 (templates are available).<br>• Otherwise, develop your own guidelines using the suggestions in Table 3 (along with appropriate legal input). |
| **Ensure patient awareness and compliance with this policy** |
| • Have patients sign informed consent documents.<br>• Give patients a copy and place one in your records.<br>• Include salient points from the policy in e-mail signatures and on the backs of business cards.<br>• Reinforce compliance with policy during follow-up visits. |
| **Integrate e-mail communication with office workflow** |
| • If you use electronic health records (EHRs),<br>  – Check if the product has an integrated patient portal feature,<br>  – If not, make sure the e-mail (including its Internet header) and your response are copied into the EHR as an encounter.<br>• If you do not use EHRs<br>  – Print the e-mail with its Internet header and your response into the paper chart.<br>• Forward e-mail to the person who normally receives patient phone calls, and then replicate your existing workflow as far as possible.<br>• Have patients use categories for their e-mail messages (eg, medication refill) and decide on workflows for each (may be similar to workflows for phone messages). |
| **Leverage e-mail for practice management** |
| • If patients are agreeable, use e-mail to replace regular mail for<br>  – office visit reminders,<br>  – health-maintenance reminders,<br>  – Follow-up communication with patients after an office visit with summary of recommendations, and on sensitive lab test results. |

## Secure E-Mail Communication and the Patient Portal

Increasingly, institutions and payors provide their patients access to an online patient portal; typically, it is a full-featured, personalized health record or an administrative and communication Web site that contains many features required to maintain security and ensure privacy while also providing additional features that patients may find useful. Clinicians should investigate whether they have access to such a tool for use with their patients within their practice community. Within most of these patient portals, patients will be notified in a HIPAA-compliant manner that a message from their clinician is available, but they must log on to a secure Web site to read the message. Moreover, any reply from the patient back to the clinician would also be submitted through the portal (rather than via her usual e-mail), ensuring secure communication. While these measures reduce security and privacy concerns, the technology will not obviate the need for both the clinician and patient to follow guidelines to ensure the most efficient and safe e-mail experience.

## Summary and Conclusions

Although slow to adopt this modality, physicians are increasingly using e-mail for communications with their patients on clinical issues. A number of institutions have developed policies and established solutions for secure e-mail communication. Products are available in the marketplace (Table 2) or are integrated as part of patient portals bundled with electronic health records systems. When used appropriately, e-mail has the potential to improve patient satisfaction and physician-patient relationships. ■

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## Treatment of Type 2 Diabetes: An Update

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*Dr. Mehta and Dr. Jain report no potential conflicts related to the content of this article.*

*Received: January 15, 2009; Accepted January 20, 2009.*

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