



CHAPTER

13

Electronic Communication in Health Care

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Overview

Communication processes in health care have undergone dramatic changes through use of electronic means of communication. Patients have increased access to health information on Internet sites even though they may lack the ability to judge the quality of the information obtained. Health care providers have access to information through online reference materials and clinical practice guidelines. Clinicians can access patient records and lab test results as well as place orders electronically in health systems with integrated electronic medical records. Providers can communicate directly with patients and provide individualized patient care through e-mail consultations. Finally, providers can consult with other health professionals who are caring for a patient or can seek “specialty” consultations through use of electronic communication.

This chapter examines the use of the Internet and electronic communication, especially the use of e-mail, to facilitate communication within the medication use system. The focus will primarily be on e-mail exchanges, especially those between patients and health care practitioners and those among providers related to care of specific patients.

Introduction

While this chapter summarizes the current state of use of the Internet in communications in health care, the technology is evolving so rapidly that many of the examples cited in this chapter will undoubtedly soon be outdated. Nevertheless, issues raised here, including privacy and security considerations, will continue to be of concern regarding use of electronic communication in professional practice. In examining these issues, the chapter will:

1. Provide the background information to understand current use of the Internet, and most specifically e-mail, in health care,
2. Describe issues related to use of electronic communication in patient–provider relationships,
3. Describe interprofessional consultations and other uses of communication technology,
4. Discuss the security and privacy issues involved in use of e-mail in patient care,
5. Describe patient consent procedures needed in establishing pharmaceutical care services using e-mail communication,
6. Describe the challenge of composing e-mails that are clear, concise, complete, credible, and courteous, and
7. Describe techniques for managing e-mail exchanges.

CASE STUDY 13.1

AN E-MAIL HEALTH CARE STORY

Mr. Samuels flies across the country to start a new job. He has already chosen a medical practice in his new town because it has the same online health support service as his previous doctor, even though it is a different medical plan. He can set up appointments, get prescription refills and lab results, e-mail the doctor or nurses, and manage his personal health history. He develops fever and muscle aches a week after he arrives. Fearing that he may have anthrax or smallpox, he e-mails his new doctor a list of his symptoms, along with his itinerary over the previous 14 days. The doctor's automatic system immediately matches his itinerary against the public health database of anthrax and smallpox occurrences and runs his symptoms against his own personal health record, including his medications. It sends an urgent alert to the doctor, who sees no likely source of exposure for Mr. Samuels but spots a potential drug–drug interaction. She calls him and tells him that the new drug he just started could have caused an adverse reaction. She feels confident that he does not need to come in for tests or take unnecessary antibiotics. Instead, she changes his medication and asks him to e-mail her in 24 hours. The next day, his e-mail message confirms that his fever and aches are gone. Unnecessary lab tests, investigation by public health authorities, anxiety

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for Mr. Samuels and his family, and an unneeded antibiotic are all avoided. This “nonevent” is the happiest of all endings for Mr. Samuels, his doctor, and the health of the public.

Adapted from National Committee on Vital and Health Statistics, 2001.

Mr. Samuels lives in “The Interactive Communication Age.” The rise of consumerism and patient empowerment has created a set of expectations based on a rapid, relentless societal pace and increased need for information. The consumer (patient) expects the best price along with personal control, choice, and convenience. When people in today’s society ask for something, they want “understandable, appropriate responses and do-able actions” when, where, and how they choose (Ball and Lillis, 2001). One way they get immediate access to information is by using the Internet.

Use of the Internet

The Pew Internet and American Life Project has conducted a series of national surveys on the use of the Internet. A 2005 study (Fox, 2005) found that 137 million people or 68% of American adults use the Internet, which was up from 63% one year earlier. The 2005 survey found that 79% of Internet users have searched online for health information, with 40% of those specifically seeking information on prescription or over-the-counter (OTC) medications. This was a statistically significant increase over the 34% found to access medication information in 2002. In addition, 30% have searched for information on alternative treatments and 23% have looked for information on experimental treatments or medications. In spite of widespread use of the Internet to access information on medications, only 4% reported in 2005 that they had purchased prescription medications via the Internet and 62% saw such a practice to be less safe than getting medications from a pharmacy.

Use of E-mail in Society

The Internet and e-mail are often considered as one and the same even though both can be used separately. Nevertheless, e-mail has grown into the single most common use of the Internet. While the majority of e-mail is asynchronous, instant messaging (IM) and short messaging service (SMS) allow for real-time exchanges. However, IM and SMS lack interoperability between competing systems and are currently less secure than some forms of e-mail exchange.

The personal computer (PC) is still the major originator and receiver of e-mails in the United States, but there are now many wireless, non-PC options such as personal digital assistants (PDAs), pagers, and telephones. Creation of e-mails is still primarily a keyboard function but voice to text is evolving. Handheld mobile devices, with small screens and keyboards, have interesting implications for the use of e-mail. The device mobility allows for “always access” unless you exceed the geographic coverage area of the e-mail provider system. No more

waiting to get back to that desktop PC or hardwire connection. In addition, the sender can presume constant awareness from the receiver. On the other hand, messages sent to these devices must consider how the small display screens, awkward keyboards, and inability to open attachments impose practical limits on message size, composition, and response length.

E-mail and Internet use by patients is expected to continue to escalate as members of Generation Y (those born between 1977 and 1995) begin to use the health care system in earnest. Cascardo (2002) points out that this group represents the largest demographic block (70 million) since the baby boomers. Some of their health care expectations and behaviors are summarized by Cascardo. These patients:

- Are very involved in their health and well-being
- Assume their physicians are using the latest diagnostic and treatment tools
- Expect attention and will not tolerate being rushed through a visit
- Bring detailed notes with them
- Research their symptoms and have questions
- Know or demand to know their options
- Expect expanded hours to accommodate their schedules
- Expect continual online availability

Patient–Provider Use of Electronic Communication

The provision of clinical consultation services by e-mail has been controversial. Nevertheless, charging the consumer directly for a health care consultation by web/e-mail has been part of e-health almost from the beginning (e.g., WebMD.com). Governmental organizations, regulators, and organized health care became alarmed at the misuse of the system by unknown practitioners diagnosing and prescribing treatments for unknown patients (Rice, 2001). There were many examples of abuse of the system and of the system getting out in front of regulators and legislators. Since those early days in the 1990s, health care oversight agencies have begun to respond (Chin, 2002). At the same time, consumer demand has attracted the attention of even the most conservative medical organizations. Medem (www.medem.com) is one example of organized medicine constructing an Internet consultation platform. It promotes itself as the “premier physician–patient communications network, designed to facilitate online access to information and care for more than 90,000 physicians, their practices, and their patients, while saving patients time and money and helping physicians generate revenue.”

E-mail has the potential to profoundly affect the communication between providers and patients, but as yet, use of e-mail in clinical care has been sporadic. A multitude of general online consultation services exist, such as those identified in *A Guide to Medical Information and Support on the Internet* at www.geocities.com/HotSprings/1505/onlineDoctors.html. However, patients also want access to e-mail consultations with their personal providers. Ninety per cent of adults who use the Internet want to exchange e-mails with their physicians (Health Care News, 2001). The four activities most desired by patients are: (1) asking questions when a visit is not necessary, (2) making appointments, (3) renewing prescriptions,

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and (4) receiving medical test results. In addition, e-mail health-related reminders and a follow-up summary of office visits are considered highly desirable by patients. Over 50% of patients in one study indicated that the availability of online communication with a physician or health plan would influence their provider or plan selection process (Health Care News, 2002). However, only 9% of people surveyed have reported exchanging e-mails with their providers (Fox and Rainie, 2000). The percentage of physicians using e-mail to communicate directly with patients in one survey averaged 26% with another 13% planning to in the next 18 months (Health Care News, 2001). Physicians who do use e-mail with patients have reported using it for the following reasons: discuss symptoms and treatment (39%), determine whether a visit is needed (32%), address billing inquiries (31%), provide test results (21%), schedule appointments (17%), and authorize routine prescription refills (13%) (iHealthBeat, 2002). A recent study conducted a content analysis of the e-mail exchanges between parents and pediatricians (Anand et al, 2005). The most common result of an exchange was a prescription or OTC recommendation (42%). Only 11% resulted in an appointment for an office visit, and 5% resulted in a subspecialty referral.

While studies examining consumer desire for e-mail consultations with pharmacists are lacking, some research suggests that e-mail consultations may be attractive to pharmacy patrons. A recent study of pharmacy patient preferences indicated that waiting to talk to the pharmacist face to face was undesirable for a number of reasons, including that the patient felt too ill or tired after their physician visit, and the lack of privacy in the pharmacy discouraged communication with the pharmacist (Amsler et al, 2001).

Individual pharmacy e-mail use in daily practice is not well documented. A survey by WebMD of community and chain pharmacists reported that 22% of retail pharmacists communicate with other professionals by e-mail and 10% with their patients/customers (Nicholson and Felkey, 2000). Kaiser Permanente reported that 88% of members who used their e-mail to ask a pharmacist a question were satisfied with the service. These members further reported their response upon receiving the pharmacist e-mail as: initiated self-treatment (11%), prepared for office visit (16%), took no action but were better informed (58%), decided to get medical attention (9%), and saved office visit (19%) (The Permanente Journal, 2001).

While the potential currently exists for a variety of health care professionals to communicate with patients and monitor their response to therapy electronically, this is rarely seen in practice. The factors commonly cited that limit e-mail use with patients are (1) providers prefer face-to-face communication, (2) there is a lack of reimbursement for e-mail communication, (3) privacy/security concerns, and (4) the potential increase in workload associated with using e-mail (Health Care News, 2001). Limits are also presented by what has come to be known as the "digital divide," meaning that not all patients have access to computers and e-mail capabilities.

REIMBURSEMENT BARRIERS

An important barrier to use of the Internet by providers in patient care has been the lack of a reimbursement structure. The magic key to reimbursement is to have approval for Medicare payment. The American College of Physicians

has urged reimbursement by Medicare for online patient care (American College of Physicians, 2003). The telemedicine Medicare regulations currently exclude e-mail from payment for consultative services. A few private payers are testing the concept as a method to reduce office visits. The selected patient population and scope of service are tightly defined in these pilot tests (RelayHealth, 2003).

Direct payment (out of pocket) by the consumer is also an approach that is being explored. A Harris survey (Health Care News, 2002) queried consumers about how much they would pay for the privilege of e-mail correspondence in lieu of an office visit or using the telephone. Thirty-seven per cent would pay an average of \$10.60 per month for e-mail correspondence with their physician. Given the option of a charge per e-mail message plan, patients would pay \$5.00–6.00 each. In another study, although 80% of parents surveyed thought pediatricians should use e-mail to communicate with parents, only 37% were willing to pay anything for an e-mail exchange (Anand et al, 2005).

Research from pilot programs using web messaging in clinical care has found that both physicians and patients preferred it to the telephone if there were no time-sensitive issues involved (Liederman and Morefield, 2003). Telephone volume was found to be lower in primary care practices utilizing web messaging (Liederman et al, 2005). Other research has found that physicians used a secure web-based portal for administrative functions such as refill requests and appointment scheduling, but were resistant to receiving or sending messages about the clinical care of patients (Kittler et al, 2004). This was true in spite of the fact that 38% of physicians surveyed communicated with their own personal physicians using e-mail and an additional 19% would like to be able to do so. The primary barrier to use of e-mail in clinical care cited by physicians was, once again, lack of a reimbursement system that would compensate for loss of office visit revenue.

"DIGITAL DIVIDE" BARRIERS

Another important barrier to the use of electronic communication in patient care is the fact that Internet use and e-mail adoption are not uniform across the entire population; this has been dubbed the "digital divide." The digital divide is often characterized in age, racial, ethnic, socio-economic, and disability terms. The highest Internet usage rates are found among those who are younger, richer, and have more years of formal education. Only 22% of those 70 and over go online as compared to 84% of those 18–29 (Fox, 2005). The digital divide not only separates those who have never used the Internet from those who have, but also those who have access to broadband connections and those who do not (Fox, 2005). Fifty-three percent of Internet users in 2005 reported having high-speed connection, up from 22% in 2002. Not surprisingly, those with lower socio-economic status were less likely to have access to high-speed connections. Education level was also related. Only 29% of those who had not graduated from high school had access to broadband as compared to 61% of high school graduates and 89% of college graduates (Fox, 2005).

In addition, those with a disability are less likely to have Internet access. This is important because 28% of individuals over the age of 60 have one or more

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disabilities in the area of vision, hearing, typing, and motor control that could potentially interfere with the use of e-mail. Yet the disabled are reported to highly value their ability to use the Internet and spend more time online than those who are not disabled. Twice as many disabled reported that the Internet significantly increased the quality of their lives compared to nondisabled individuals (Taylor, 2000).

Finally, just because someone has access to the Internet does not mean they can read and comprehend the written information. Most websites continue to provide information at levels that would exclude significant numbers of the general population from understanding the information because of low health literacy (Berland et al, 2001).

Interprofessional Use of Electronic Communication

Electronic means of communication among providers are resulting in startling changes in the delivery of health care. Many providers are using e-mail to better coordinate care of individual patients. Research has shown that pharmacists and physicians who are within the same health care system can facilitate communication by using electronic mail (Henault et al, 2002). Unfortunately, use of e-mail among providers related to the care of a patient has the same privacy and system security concerns and risks of HIPAA (Health Insurance Portability and Accountability Act of 1996) violations as does use of e-mail between providers and patients. If you send or receive patient information to anyone via your computer, either with computer-generated fax or e-mail, you are required to be HIPAA compliant.

Uses of electronic communication go beyond communication among different providers caring for a patient within a given health care system. Radiologists in India may read x-rays, MRIs, or mammograms transmitted from imaging sites in the United States (Leonhardt, 2006). Electronic transfer of images using new wireless fidelity systems has evolved to the point that it now takes less than 4 seconds, while it previously took nearly one hour to transmit a mammogram. Services are available for online “second opinions” from specialty experts using physicians from institutions such as Harvard Medical School (Partners Online Specialty Consultations, 2006). In some states, telemedicine networks are being established to provide consultations in nearly all specialties, including radiology, pathology, oncology, pharmacy, surgery, psychiatry, and behavioral health (Blanchet, 2005). Integrated computer systems provide health care professionals access to patient-specific data from a variety of sources and sites of care. Pharmacy services to remote rural areas or underserved areas of inner cities include automated dispensing at remote sites with no pharmacist present but with a distant, off-site pharmacist “checking” and authorizing the filling of the prescription. Patients with questions can have audiovisual contact and consultation with the pharmacist at the distant site (Clifton et al, 2003).

Technology has advanced to the point that electronic monitoring of medication use and home monitoring of physiological parameters such as blood pressure, blood glucose, and International Normalized Ratio (INR) can be used, with

results transmitted to providers electronically (Balas 1999; Networking Health, 2000). Microchips can store records of how patients use a variety of medications, such as special vial caps that record date and time a vial was opened, electronic blister packs, MDI inhalation monitors, and electronic monitoring of eye drop administration (Packaging Digest, 2005; Boden et al, 2006). The electronic transfer of monitoring data can allow providers to consult with patients and other providers in such a way that problems are identified quickly and timely adjustments of therapy are possible.

Computerized Physician Order Entry (CPOE) along with Clinical Decision Support Systems (CDSSs) are available in many health networks. A CPOE system is designed to reduce medication errors by providing prescribers with a menu of drugs and default dosages from which to pick. Such a system can reduce certain types of medication errors such as those caused by the illegibility of handwritten orders, similarity of drug names, and misspecification of dose. They can also improve patient safety by providing readily accessible information on patient allergies, concurrent medications, and lab results at the time an order is written. A test of CPOE at Brigham and Women's Hospital in Boston found that it did reduce serious medication errors in that hospital (Bates et al, 1998). On the other hand, new types of errors such as accidentally selecting the wrong drug or wrong dose from a menu can become problematic with CPOE systems (Koppel et al, 2005).

A *Lancet* article reported that approximately 50% of U.S. physicians use PDAs (Baumgart, 2005). Blackberries and other hand-held computers are used routinely to access drug references and write prescriptions. The devices provide immediate access to patient clinical data and clinical decision support software. They facilitate interprofessional consultation and make possible the simultaneous viewing of patient data from remote locations during the consultation. CT scans, echocardiograms, and even laparoscopic surgical procedures can be transmitted in real time to hand-held computers.

Patient Privacy and System Security Issues

Information privacy and security are contentious issues throughout the whole of society. The Internet has brought into focus the fact that information (data) about individuals is a very valuable commodity and vulnerable to theft. In marketing terms, the ability to target individuals with tailored messages at the correct moment by the right method is worth billions of dollars. In addition, consumers want the personalization, but only on their own terms and under their control, which increases the cost of obtaining and manipulating the information on individuals.

This dynamic tension between the individual's control of his or her own information and the cost of doing business is nowhere more evident than in health care. This tension is behind the genesis and implementation of HIPAA. The privacy regulations included in HIPAA regarding how health care is going to use and protect personal health information (PHI) have gotten a great deal of attention in all aspects of health care. The basic principles of the HIPAA privacy section reflect ethical principles that involve asking permission about use of personal

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information, limiting data access to only those with a legitimate need to know, and providing patients with access to their own health care records for review and comment. The patient's e-mail address is considered part of their PHI and is subject to the same protections as his or her name, mailing address, and phone number. The reader is referred to the following sites for more information about HIPAA and privacy concerns: www.hhs.gov/ocr/hipaa/, and www.healthprivacy.org/.

Computer system security involves not only the threat of a terrorist attack. How frequently security violations occur or will occur in the future is unknown. Advocates of e-mail communication tend to downplay interception of individual communication between patients and practitioners or between different providers as being a low-probability event. However, well-publicized examples of security violations include a county health department epidemiologist mistakenly sending a list of HIV patient names to 800 department employees, the theft of nearly 60,000 patient records from a managed care company, and thefts of computers containing PHI (Health Privacy Project, 2005). Public perception of the security risks involved, fueled by examples such as those identified above, makes security an important issue that needs to be carefully addressed.

Encryption isn't just a question of risk management. HIPAA requires encryption when any care provider or researcher sends e-mail containing PHI across the Internet. One major risk with e-mail is that senders cannot control what happens on the recipient's side. If a physician sends sensitive test results to a patient at home, how can the physician be assured that the patient's children won't see them? If a pharmacist communicates with a patient about a specific medication or answers a patient question about a medication, that e-mail exchange contains a great deal of PHI, including information about medical conditions as well as medication therapies. Providers sharing information on e-mail related to a specific patient are also providing personal health information on that patient that could be problematic if system security safeguards are not in place. If e-mail is sent to a patient at work, another employee could look over the patient's shoulder or peek at the e-mail while the patient is at lunch. In addition, many patients are unaware that e-mail they send or receive at their place of employment legally "belongs" to the employer. To address the issue of e-mail privacy in health-care applications, a number of "secure" communication systems have been developed that use a separate server for storage of information and e-mail access. The Medem Network (medem.com) is one example of a web messaging system. The combination of passwords and encryption tools allow patients and providers to exchange e-mails and to access the patient's integrated medical record.

Authentication or determining the true identity of the person one is communicating with is not a problem unique to e-mail. E-mail, like snail mail, removes the possibility of visual and voice identification. Authentication methods for use of e-mail in patient care include strategies such as digital certificates, passwords, keys, or tokens that can accomplish authentication. Some providers require that authentication be accomplished by in-person registration for the e-mail service whereby informed consent can be obtained. The informed consent process would include explanation of the e-mail service features, restrictions on use of e-mail,

and risks involved. A consent form would then be signed before a password was provided for use of the e-mail service.

Liability and the Therapeutic Relationship

The establishment of a “therapeutic” relationship between health care provider and patient is key to a whole chain of responsibilities that the provider can be held liable for. Health care newspaper columnists answer questions from individuals, but they do not have a “therapeutic relationship” and therefore are not held legally to the appropriate use of their answers. The development of a therapeutic relationship by e-mail will most likely follow the same standards as the telephone. A phone call to a physician’s office from a stranger to the practice can be refused without legal recourse. Just how much interaction, in what form, how often, and how much information exchange must take place before health care practitioners have established “therapeutic relationships” with patients and are thus responsible for the results of their advice are important, unanswered questions in health care.

Another strategy providers use is to simply not answer e-mails from “strangers” to a practice. The non-answer could take the form of no response and deletion, acknowledgment of receipt with a standardized policy statement on e-mails from strangers, or a full response with the appropriate disclaimer. The strategy chosen is a business, ethical, legal, and clinical decision. Ethical guidelines for dealing with patient inquiries and medical advice in the absence of a pre-existing relationship have been described (Eysenbach, 2000).

Pharmacy has a long history of answering unsolicited inquiries using various forms of communication. The e-mail “Ask Your Pharmacist” (AYP) programs are just an extension of that tradition. The development of a therapeutic relationship and the inherent professional obligations for pharmacists seem to reside entirely with the pharmacist’s association with the prescription. A review of this topic indicates this is an unregulated area (Brushwood, 2001). A disclaimer is often included in AYP responses indicating that the information provided is not for treatment or diagnosis purposes and must not be acted upon without the advice of a personal health care provider. These disclaimers are ubiquitous in health care websites and health care information e-mails. Just how protective from malpractice these disclaimers are has yet to be established. Using disclaimers would seem appropriate in a setting where a therapeutic relationship is *not* established nor intended and to serve as a reminder to the patient about the “worth” of the advice.

On the other hand, AYP services are obviously worried about being held liable for providing faulty advice or delaying care. These services recognize that questions from “perfect strangers” raise a lot of concerns about the accuracy of the information provided by strangers and the use strangers will make of any information given to them by a pharmacist. The strategy of AYP services and other providers of health information to limit liability is use of a disclaimer. Even those sites that collect extra information in a health record make sure to limit their responsibility for the use of the information. A typical disclaimer is “The information you provide in this Confidential Health History is for record keeping

purposes only. Please refer to “Check Drug Interactions” or “Ask a Pharmacist” for additional information” (Brushwood, 2001).

Establishing Pharmaceutical Care Services Using Electronic Communication

Embarking on services involving e-mail communication with patients or with other providers requires a thorough understanding of the appropriate use of e-mail in health care. While providers who are separately responsible for providing care to a specific patient can consult and share personal health information of the patient, doing so electronically makes secure and appropriate use of e-mail more important. Precautions to consider in establishing pharmaceutical care services that use e-mail for communication include:

1. E-mail cannot be used in the case of urgent or time-sensitive communication. Patients who e-mail a pharmacist for advice must know that the pharmacist may not read the message soon enough to give timely advice when immediate attention is needed. Patients must be instructed beforehand on when they should escalate to phone calls to the pharmacist, phone calls to their physicians, visits to their physicians, or calling 911.
2. E-mail messages containing PHI of patients require password protection for computers, encryption, and authentication in transmission of patient information. Typical e-mail services are not adequate for protection of PHI.
3. E-mail consults with patients should occur in the context of therapeutic relationships that have been established with in-person contact.
4. E-mail communication with patients or providers becomes part of a patient's permanent medical record and, in pharmacy practice, patient medication profile.
5. Patients should provide written informed consent to use of e-mail in pharmacist-patient communication. Issues of system security and appropriate versus inappropriate uses of e-mail can then be conveyed and patient understanding verified.
6. Never forward patient-identifiable information or e-mail addresses to a third party, even a family member, without a patient's written permission.

The American Medical Association (AMA) has developed guidelines for patient consent forms to be used by physicians establishing e-mail services in patient care. These can be located at www.ama-assn.org/ama/pub/category/2386.html. Pharmacists who wish to begin using e-mail as part of their patient care services should examine these guidelines carefully (Kane and Sands, 1998). Information in the consent form should include:

1. A consent statement that expresses the patient's desire to use e-mail communication. An example statement might be “I wish to use e-mail or other Internet-based communications (online interaction) to facilitate my receipt of health care from (Name of Pharmacy).”
2. The circumstances under which e-mail should *not* be used (e.g., emergency or other time-critical situations). Statements such as “I understand that

responses to e-mail requests will be made within (timeframe such as 24 hours). I understand and agree that I am not to use e-mail in emergency or other time-critical situations.” Examples of emergency situations specific to the patient’s condition should ideally be included. For a patient with angina, for example, consent forms may include instructions to call 911 if there is

- Severe or ongoing pain unresponsive to angina medications
- Pain lasting 20 minutes or more
- New pain at rest or with minimal activity
- Severe shortness of breath
- Loss of consciousness
- Just feeling the need for immediate help

Other examples of time critical situations include bleeding with anticoagulants, having a heart rate of less than 60 beats per minute with low blood pressure, or fainting for someone on a beta-blocker.

3. The types of e-mail requests or questions that are acceptable (e.g., refill requests, requests for information on prescription or OTC medications being used, or requests for a review of medications being taken from various sources).
4. Who in your pharmacy (support staff) will have access to e-mail and who may handle specific types of e-mail inquiries or requests. For example, who will be authorized to respond to drug information questions, price quotes, product availability, or refill requests? Which inquiries will be handled only by the pharmacist, and which may be handled by either a pharmacist or a technician?
5. Fees that will be charged for specific online services.

Composing and Managing E-mail Messages

Composing effective e-mail and managing the e-mail process is important to successful communication with patients, co-workers, physicians, and other colleagues. Some tips for e-mail communication include:

1. Do not use patient name or other identifying information in the e-mail if there is no encryption used.
2. Double check all “To” fields prior to sending messages.
3. Set up an automatic reply to tell patients or providers that the message was received.
4. Ask patients and providers to acknowledge receipt of messages sent to them.
5. Use an automatic signature with name and full contact information as well as a reminder about the form of communication to use in emergencies.
6. A permanent record of online communications pertinent to treating and monitoring the patient should be maintained as part of the patient record. Perform at least weekly backups of e-mail onto long-term storage.
7. Have written policies in place to inform staff, colleagues, and patients.
8. Consult with malpractice carriers on plans for e-mail use in patient care.
9. Have a plan in place for evaluating the costs and outcomes of e-mail services (e.g., cost effectiveness or patient satisfaction).

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10. Request that others use a subject line summarizing the content of the message. For example, ask a patient to put “Refill request for Fosamax” into the subject line. This rule should be followed by the pharmacist as well in communication with patients and colleagues as long as encryption and a secure service are used so that PHI is not accessible.
11. Make action requests and timeframes for response clear to recipients of e-mail.
12. Separate unrelated topics into separate messages, especially if some items deal with more urgent issues than others.
13. Make e-mail messages one page or less if possible.
14. Check e-mail at defined times 2 to 3 times a day. Tell people what the schedule is and let them know that if they need to reach you on short notice, they must use the telephone.

**E-mail Etiquette**

Rules for polite conversation using e-mail include:

- Do not use all uppercase letters in words. This is the equivalent of shouting. Use of uppercase and bold in a word is seen as particularly aggressive.
- Do not say anything or refer to a third person in an e-mail that you would not say to the person face-to-face. E-mail messages can be easily forwarded to individuals or groups, so treat these messages as if you were publishing them in a newsletter at work.
- People being sent a cc should be clear about why they are being copied and what is expected of them in response.
- Reread your messages before hitting “send.” E-mails do not have the nonverbal cues that can help in person-to-person or telephone communication, so be sure that your messages will not be misinterpreted.

Summary

In order for pharmacists to have a meaningful role in patient care in the future, they must be prepared to utilize and even capitalize on the use of emerging technologies and electronic communication capabilities. These technologies will become an accepted part of patient care and of professional–patient and professional–professional communication.

Patients want access to e-mail consultations with their personal providers. E-mail consultations may be attractive to pharmacy patrons because of the privacy involved and their ability to communicate when they are feeling better; often they can’t do this when filling a prescription. One important barrier to use of the Internet and e-mail in patient care has been the lack of a reimbursement

structure for professional consultations. When e-mail consultation services have been implemented in the pharmacy, patients have reported satisfaction with the service. However, establishment of e-mail services with patients requires careful planning. Information privacy and security are crucial. E-mail that contains PHI of patients requires password protection for computers, encryption, and authentication in transmission of patient information. Typical e-mail services are not adequate for protection of PHI. Pharmacists who wish to begin using e-mail as part of their patient care services should carefully examine guidelines established for physicians using e-mail communication in medical practice. A consent form that expresses the patient's desire to use e-mail communication must be signed. The circumstances under which e-mail should *not* be used, such as emergency situations, as well as the types of e-mail requests or questions that are acceptable must be described. Patients should be told who in your pharmacy will have access to e-mail and who may handle specific types of e-mail inquiries or requests. While use of e-mail has become ubiquitous in society, its use in health care presents special challenges and unique dangers that must be addressed.

REVIEW QUESTIONS

1. What expectations are younger patients likely to have regarding communication with providers when they begin to use health care more extensively?
2. What system requirements exist if e-mail with patients or other providers will be used to convey personal health information?
3. What barriers exist to more widespread use of e-mail in health care communication?
4. What is the “digital divide” and how does it affect use of e-mail in health care?
5. What must patients understand and consent to regarding use of e-mail with providers?
6. What “rules” should be used in composing e-mail messages and managing e-mail exchanges?

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