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Telemedicine's Potential Ethical Pitfalls

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Technology impacts almost all aspects of our everyday lives. We communicate with each other using mobile and electronic modalities and are increasingly comfortable using them to receive and share information about our personal and professional lives. Recent data show that Internet use is growing among all age groups: 87 percent of adults use the Internet, and 58 percent own a smartphone [1]. Moreover, 72 percent of Internet users seek information about health online [1].

Coinciding with the evolution of electronic communication are systemic changes in health care delivery. An increasing amount of medical knowledge is required to deliver even the most basic care for a population that is living longer with chronic diseases that require close management and coordination [2]. For many primary care doctors, there are not enough hours in the day to take care of a large group of patients [3]. Given these capacity constraints, the need to find more efficient strategies for providing medical care is an urgent one. Additionally, there has been a shift from reimbursement for service to a payment model that focuses on efficiency of care and outcomes, a change that may facilitate a more rapid adoption of new care delivery models. Our health care system and society are poised, then, to take advantage of new communication technology through telemedicine.

Telemedicine—the use of medical information and technology to advance clinical care at a distance [4]—has the potential to transform patient-centered care. New technology platforms allow us to communicate with patients through a variety of means, including text, e-mail, and mobile-device applications. Telemedicine can integrate remote monitoring and sensing mechanisms with automated interactions and reminders to better engage patients when they are not in a doctor's office [5]. The technology can also facilitate communications between members of the care team, improving coordination of care. Despite these advantages, there are serious concerns about how the adoption of telemedicine may impact care. Ensuring that telemedicine is ethically acceptable will require anticipating and addressing four possible pitfalls: erosion of the patient-doctor relationship, threats to patient privacy, forcing one-size-fits-all implementations, and the temptation to assume that new technology must be effective.

The Patient-Physician Relationship

One of the longstanding premises of the doctor-patient relationship is the therapeutic value of the face-to-face clinic encounter. This is reflected in physicians' emphasis on a detailed history and physical as well as in the prevailing reimbursement models.

We are taught as physicians about the importance of the patient-doctor relationship as a basis for fostering mutual trust and empathy. This norm is also reflected by guidelines. For example, the American Medical Association (AMA) position statement emphasizes that telemedicine should still be used as a supplement to live visits and only for those patients with whom the practitioner has a pre-existing relationship [6]. Despite this presumptive value of a live visit for an initial patient-physician encounter, a major opportunity for telemedicine is to improve access to care and physicians in geographic areas where both are limited, where telemedicine care must replace face-to-face encounters entirely. Moreover, as society becomes more comfortable with electronic communication, our medical practices can evolve as well. It is important to address and answer concerns about the loss of the patient-doctor relationship so that they do not stand in the way of modalities that can improve access to or the quality of care.

Threats to Patient Privacy

The concern over privacy is legitimate. Patients may not know exactly who will be responding to and sharing their personal medical information. That information is available on different devices and computers, increasing the potential for security breaches, which may undermine patients' acceptance of telemedicine. With asynchronous communication, a lack of clarity about who exactly will respond may raise further privacy concerns. These apprehensions are important, especially given the uncertainties about this new delivery model of care mentioned above. But security issues are more operational than ethical, inasmuch as new encryption and security tools to protect information continue to proliferate. To gain patient confidence, it is essential that a robust privacy and security plan accompany any new telemedicine program and be communicated to patients.

One Size May Not Fit All

Another important consideration for telemedicine is making sure we don't force the same "solutions" on patients with different clinical situations, needs, and preferences. Patients differ dramatically in their adoption of new devices and software. Text messaging may work well for one patient but not another. A patient-reported outcome questionnaire may be reasonable for taking a medication and family history, but less appropriate for end-of-life discussions. Some patients may prefer a patient portal to a live visit, while others may not even have a computer to log onto. These differences in access to technology may exacerbate existing health care access and equity issues related to demographics and socioeconomic status. Patient-oriented technology is not one-size-fits all. Effective telemedicine scenarios must be user- and case-sensitive.

New May Not Be Better

The fourth consideration is how telemedicine might impact the quality of care and whether its use will have unintended consequences. As with any new drug or device, telemedicine should be evaluated to see how effectively it works and whether it produces any adverse events, but the evaluation does not necessarily need to be a large randomized controlled trial. It is important for the medical profession to apply

its evidence-based ethos to telemedicine rather than blindly believing that new technology is better—to balance enthusiasm about telemedicine’s potential with acknowledgement of the need for clear-eyed evaluation. For example, evidence about the use of telemedicine to improve patient outcomes and efficiency is mixed [7]. Having some demonstration of—even early—improved outcomes could dramatically accelerate adoption of effective technology or spur further development of technologies with limited effectiveness. The new generation of physicians who are more familiar with these technologies could take the lead in asking important questions to evaluate telemedicine’s effectiveness.

Conclusion

Ultimately, we should think about the same ethical issues with telemedicine that we have always considered in caring for our patients. If we focus on maintaining a strong patient-doctor relationship, protecting patient privacy, promoting equity in access and treatment, and seeking the best possible outcomes, telemedicine can enhance medical practice and patient care in ways that we can all feel comfortable with.

References

1. Pew Research Internet Project. Health fact sheet. <http://www.pewinternet.org/fact-sheets/health-fact-sheet/>. Accessed on September 4, 2014.
2. Smith R. What clinical information do doctors need? *BMJ*. 1996;313(7064):1062-1068.
3. Yarnall KS, Pollak KI, Østbye T, Krause KM, Michener JL. Primary care: is there enough time for prevention? *Am J Public Health*. 2003;93(4):635-641.
4. American Telemedicine Association. What is telemedicine? <http://www.americantelemed.org/about-telemedicine/what-is-telemedicine>. Accessed September 4, 2014.
5. Asch DA, Muller RW, Volpp KG. Automated hovering in health care—watching over the 5000 hours. *N Engl J Med*. 2012;367(1):1-3.
6. AMA adopts telemedicine policy to improve access to care for patients [news release]. Chicago, IL: American Medical Association; June 11, 2014. <http://www.ama-assn.org/ama/pub/news/news/2014/2014-06-11-policy-coverage-reimbursement-for-telemedicine.page>. Accessed September 5, 2014.
7. Ekeland AG, Bowes A, Flottorp S. Effectiveness of telemedicine: a systematic review of reviews. *Int J Medical Informatics*. 2010;79(11):736-771.

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