

Virtual Mentor

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FROM THE EDITOR

Some “Face Time” for Health Information Technology

According to a report released by the Office of Science and Technology Policy of the Executive Office of the President and the President’s Council of Advisors on Science and Technology, “information technology has the potential to transform health care as it has transformed many parts of our economy and society in recent decades” [1]. Further, the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009 seeks funding of up to \$20 billion from the American Recovery and Reinvestment Act of 2009 (ARRA) to promote adoption of health information technology use in the U.S. While questions about the implementation of HITECH and ARRA remain, the importance of adopting and utilizing available technology and, in fact, seeking to perfect unavailable technology has been widely accepted. In the end, the primary goal for implementing health information technology is improved quality of health care for individual patients.

As with widespread use of any technology, be it medical records or CT scanners, ethical concerns are sure to arise, and in this issue of *Virtual Mentor* we attempt to pinpoint, define, and explore those aspects of HIT that create the potential for ethical dilemmas.

The issue begins with a series of case studies drawn from doctors’ real experiences. Deborah D. Nelson, MD, comments on the far-too-common problem of physicians’ “selective editing” in electronic medical records (EMRs) and the harm this practice can cause, especially if a physician is caring for more than one patient with the same diagnosis. In a desire to become more productive, a resident is “forced” to copy and paste notes and recommendations from one chart to the other. A cut-and-paste error results in a pediatric patient being given an incorrect and potentially nephrotoxic medication. The resident is to blame, but Dr. Nelson remarks upon the ethics of using an HIT system that makes cutting and pasting possible. This month’s clinical pearl arises from that medication error. Jennifer P. Rudine, PharmD, a clinical pharmacist in Memphis, Tennessee, and I review vancomycin and its potential danger to pediatric kidneys.

In the second case, Stephen T. Miller, MD, and Rexann G. Pickering, PhD, CIP, RN, look at how the ability to mine data rapidly for research purposes in the age of health information exchanges invites lapses in informed consent. They cite the infamous Tuskegee and the Nazi experiments as examples of “scientific curiosity” pursued in the absence of consent to underscore the necessity of securing it, even when merely mining preexisting data.

In the third and final case, Nabeel Farooqui, MD, provides insight into a physician's use of health information technology to enhance his income by retrieving database information on prospective patients and selecting only those who are compliant and insured or timely payers. As health care professionals, we must support ourselves financially, but Dr. Farooqui questions whether this is an ethically acceptable way of going about it.

As we move forward, it is informative to glance back occasionally to understand why changes were needed to our recordkeeping systems in the first place. Jim Atherton, MD, a resident physician in pediatrics at the University of Tennessee, looks at the historical development of the medical record.

Health information technology not only means better exchanges of information and data between care providers, but also describes an area of medicine that is fairly new—clinical decision-support systems and bioinformatics. Clinical decision-support systems (CDSS) provide physicians with computer-based medication, testing, and laboratory recommendations. Standardizing evidence-based recommendations contributes to quality health care and minimizes treatment discrepancies across populations. James B. Lewis, MD, and Kathryn Ryder, MD, MS, both residency program educators, describe the educational value of CDSS and bioinformatics and look at the threat of cookbook medicine, wherein residents might order certain labs and meds without knowing the significance of those tests and treatments for their patient.

The term “meaningful use” has garnered much attention lately, due to the availability of federal funding and increased payments from government payors for clinicians who develop and implement HIT in a meaningful way, that is, in a way that improves quality of care. In the policy forum section, former Robert Wood Johnson clinical scholar Stephen T. Miller, MD, and Alastair MacGregor, MB ChB, MRCP, explain what counts as meaningful use of HIT under the American Recovery and Reinvestment Act. Health law expert Howard Burde provides an overview of the HITECH Act's provisions.

A critical aspect of quality care is patient safety, and this, too, is an area where HIT has a role to play. Angeline Wang, second-year medical student at the University of Michigan, reviews a recent article in the *New England Journal of Medicine* on reduction of medication errors effected by use of bar-code technology. In a second journal article related to safety and reporting of adverse events, Timothy Hotze, senior research assistant at the American Medical Association, reviews an article that appeared in the *Journal of Health Information Management Association* on how to assess the harm done to patient confidentiality by a breach in data security.

Our medicine and society piece this month is written by James E. Bailey, MD, an HIT expert with particular interest in how health information exchanges can improve management of chronic disease. Here he looks at the perennial concern over the

dehumanization of medicine and concludes that today's technological innovations may, in fact, further humanize health care.

Finally, we have two op-ed pieces this month that deal with the potential advantages and possible pitfalls of implementing HIT. Alon B. Neidich, a second-year medical student at Tufts University in Boston argues that HIT implementation is a necessary step in providing twenty-first-century care. Kenneth Robertson, MD, MBA, draws on his personal experiences to state that, while information technology is needed and a great tool for health care, ethical slippery slopes exist.

We attempted in this issue of *Virtual Mentor* to give the ethics of technology and its impact on society more “face time” (paradoxically) than it has heretofore had.

References

1. President's Council of Advisors on Science and Technology, Executive Office of the President. *Realizing the Full Potential of Health Information Technology to Improve Healthcare for Americans: The Path Forward*; December 8, 2010.
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