

U.S. expects 21st Century medicine using 20th Century technology

Barry Chaiken

June 25, 2008



It is not surprising that only 17 percent of surveyed physicians are using ambulatory electronic health records (EHR) systems. After all, the United States is spending over \$2 trillion and more than 16 percent of GDP to rank 37th by the World Health Organization on a variety of quality and access-to-care measures. Such poor results using 20th century pen and paper would be surpassed through the use of 21st century information technology, such as "fully functional" EHRs, in the management of patient care.

Published online by the New England Journal of Medicine on June 18, 2008, a survey of over 2,700 physicians offered evidence supporting the conventional wisdom around adoption of ambulatory EHRs. Physician use continues to increase but at a pace much slower than most healthcare experts or the public would like.

Physicians surveyed believe their use of EHRs improves quality of clinical decisions (82 percent), communication with other providers (92 percent) and patients (72 percent), prescription refills (95 percent), timely access to medical records (97 percent), and avoidance of medical errors (86 percent). In addition, more than 80 percent report a positive effect on the delivery of long-term and preventive care that satisfies evidence-based guidelines.

Respondents with fully functional systems - those with advanced features such as clinical decision support - reported averting a known drug allergic reaction (80 percent) or a potentially dangerous drug interaction (71 percent), being alerted to a critical laboratory value (90 percent), ordering a critical laboratory test (68 percent), and providing preventive care (69 percent). Physicians also expressed great satisfaction with their systems.

Financial incentives key to adoption

Considering the positive impact EHRs have on patient care, it is disappointing to realize that barely 17 percent of physicians utilize EHRs in the ambulatory setting. Physician resistance to EHR adoption, commonly thought to be due to physician discomfort using computers, appears not to be as important as financial considerations. Survey respondents cited capital costs (66 percent) and return on investment (50 percent) as barriers to adoption. In addition, 46 percent of purchasers of systems and 55 percent of non-purchasers of systems cited financial incentives as a major factor in adoption.

Interestingly, about 40 percent of respondents with and without EHRs reported that protecting physicians from personal liability for record tampering by external parties might play a significant role in facilitating adoption. Lastly, large practice groups - greater than 50 physicians - were up to three times more likely to have implemented an EHR than groups of three or fewer.

Usability remains a factor in physician adoption, as 20 percent of respondents of "basic" systems reported concern about ease of use and reliability. Perhaps this is due to the migration by large HIT vendors of their systems designed for the hospital to the ambulatory market. In addition, the large numbers of small, independent ambulatory care EHR vendors does not allow for the user-base and capital resources needed to ensure highly performing and problem-free systems.

Unlikely to meet 2014 EHR goal

So, what does this all mean to HIT marketplace? First, President Bush's goal of providing all citizens

with EHRs by 2014 will not be met and the expected improvements in quality, patient safety, and efficiency associated with EHRs will be delayed. Unless healthcare payers - insurers and the government - increase their investment in HIT by raising reimbursement rates for physicians using EHRs, sluggish adoption will continue.

Medicare's recently announced EHR and quality pilot project pays primary care physicians who implement and use EHRs \$45 per Medicare patient. This applies only to enrolled physicians practicing in 12 targeted communities. As the demonstration project is to last five years, physicians in other areas can expect limited financial support from the federal government to purchase EHR systems. Excluding the extra payments for meeting quality initiatives, the \$45 per patient does not come close to covering the initial capital (an estimated \$12,000 to \$26,000) and maintenance costs for a fully functional EHR.

Externalities and adverse incentives

Using the words of economists, the failure to account for the externalities and adverse incentives inherent in our employer-based healthcare delivery system presents a marketplace that delivers poor outcomes, inefficiencies, and problems in access. For HIT, this means that the costs of implementing an EHR accrue to the physician while the large majority of the benefits from an EHR - better quality of care and cost savings - accrue to the patient and the payer.

Other countries such as the Netherlands, Australia, New Zealand, and Britain have much higher rates of EHR adoption among physicians. It is not a coincidence that they have universal healthcare programs supported by various public and private models of reimbursement and care delivery. In each country, payers recognize the financial benefits of HIT deployment and are incented or required to invest heavily in it.

By adjusting the market through regulations and/or investment, these governments attempt to control externalities to foster aligned incentives that drive good behavior - the adoption of EHRs by physicians. Until the U.S. adjusts the misaligned incentives and removes the moral hazards inherent in its freewheeling, employer-based healthcare reimbursement system, its citizens cannot reasonably expect to benefit from the widespread deployment of EHRs.

Links:

New England Journal of Medicine: Electronic Health Records in Ambulatory Care — A National Survey of Physicians

New York Times editorial: Our Pen-and-Paper Doctors

Press release: HHS Secretary Announces 12 Communities Selected to Advance Use of Electronic Health Records in First Ever National Demonstration

2008 Electronic Health Records Demonstration Summary from CMS

Related articles

- Barry Chaiken: The virtues and vices of electronic medical records
- Healthcare reform and cost: It's déjà vu all over again
- Marshfield Clinic completes rollout of tablet PCs
- Rural hospitals playing a game of IT catch up

- Tom Still: Medicaid data management a healthcare IT success

Barry Chaiken is the chief medical officer of DocsNetwork, Ltd., Conference Chair of the Digital Healthcare Conference and a member of the Editorial Advisory Board for *Patient Safety and Quality Healthcare*. With more than 20 years of experience in medical research, epidemiology, clinical information technology, and patient safety, Chaiken is board certified in general preventive medicine and public health and is a Fellow and Board Member of HIMSS. As founder of DocsNetwork, Ltd. (EIS Inc.), he has worked on quality improvement studies and clinical investigations for the National Institutes of Health, Framingham Heart Study, and Boston University Medical School. Chaiken also serves as an adjunct assistant professor in the Department of Public Health and Family Medicine at Tufts University School of Medicine. He may be contacted at bchaiken@docsnetwork.com.