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The Adoption of Electronic Health Records: Benefits and Challenges

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Introduction by Karoline Kreuser[*]

I. INTRODUCTION

Dr. Kenneth W. Kizer, M.D., M.P.H., gave the keynote speech at Loyola University Chicago School of Law's Sixth Annual Health Law and Policy Colloquium, *Diagnosing the Data*. Dr. Kizer currently serves as the President, CEO, and Chairman of the Board of Medsphere Systems Corporation, the leading commercial provider of open source information technology solutions for the healthcare industry. Prior to this, Dr. Kizer held the position of Under Secretary for Health in the United States Department of Veterans Affairs (VA). In all, Dr. Kizer has accumulated over twenty-five years of professional experience in the healthcare field, which has included work in the private sector, academia, and federal and state governments.

In his keynote speech, Dr. Kizer contended that the widespread implementation of electronic health records (EHRs) is the most important means by which to improve the safety, quality, and efficiency of health care in America. However, he also pointed out that this digital transformation of health care opens up vast quantities of personal health information for non-direct uses as well, such as research, analysis, public reporting, provider certification and accreditation, and marketing and other commercial activities. Dr. Kizer cautioned that while many secondary uses of health data have the potential to greatly benefit the public good, there are other, less desirable uses which, if not properly addressed by developing a national framework, could halt the adoption of this technology.

The following introduction to Dr. Kizer's presentation briefly summarizes the pressures on the healthcare industry, which are making the move to EHRs inevitable. It then highlights the potential benefits and drawbacks to EHRs, with particular emphasis on the privacy threat to patient information.

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II. FORCES DRIVING THE ADOPTION OF EHRS

Although the development and use of EHRs dates back to the 1970s,[1] the *widespread* implementation of this technology has only recently been perceived as a reality.[2] The EHR is defined as "a longitudinal collection of electronic health information about individual patients and populations."[3] Primarily, EHRs function as a mechanism for incorporating healthcare data presently collected in both paper and electronic forms with the intent of improving the state of the healthcare system in the United States.[4]

However, as of 2007, adoption of EHRs and other related technology has been minimal in the United States, and it is largely not a routine practice of medical providers.[5] In fact, a recent study estimated that only one in four physicians use EHRs, while the use of health information technology is even lower among hospitals.[6] Still, in 2004, President Bush set a goal for the majority of Americans to have an EHR within ten years.[7] Although this vision undoubtedly will require an extraordinary effort,[8] many believe that a variety of forces at work in the healthcare industry make the widespread use of EHRs unavoidable.[9]

The pressures driving the implementation of EHRs include "the desire to improve health care through timely access to information and decision-support aids; the need for simultaneous access to records by doctors, nurses, and administrators in modern, integrated provider and referral systems;" the motivation to tailor healthcare systems to highly mobile patients; and the push toward enhanced cost efficiency.[10] Furthermore, the heightened level of computer literacy in the general population, combined with increased

1. Clement J. McDonald, *The Barriers to Electronic Medical Record Systems and How to Overcome Them*, 4 J. AM. MED. INFORMATICS ASS'N 213, 215 (1997).

2. Eta S. Berner & Jacqueline Moss, *Informatics Challenges for the Impending Patient Information Explosion*, 12 J. AM. MED. INFORMATICS ASS'N 614, 614 (2005).

3. Tracy D. Gunter & Nicolas P. Terry, *The Emergence of National Electronic Health Record Architectures in the United States and Australia: Models, Costs, and Questions*, 7 J. MED. INTERNET RES. (2005), *available at* http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pmcentrez&artid=1550638.

4. *Id.*

5. June M. Sullivan, *Recent Developments and Future Trends in Electronic Medical and Personal Health Records*, 19 No. 3 HEALTH L. 16, 18 (2007).

6. *Id.*

7. *See* Blackford Middleton et al., *Accelerating U.S. EHR Adoption: How to Get There From Here. Recommendations Based on the 2004 ACMI Retreat*, 12 J. AM. MED. INFORMATICS ASS'N 13, 18 (2005).

8. *Id.*

9. Thomas C. Rindfleisch, *Privacy, Information Technology, and Health Care*, 40 COMM. ACM 93, 93 (1997).

10. *Id.*

government investment in healthcare communications technology, suggest that the transition to EHRs may occur in the near future.[11]

III. BENEFITS OF EHRs

Undoubtedly, there are a multitude of potential benefits to be derived from the widespread adoption of EHR technology. Specifically, "integrated electronic health records are increasingly seen as the way to achieve quality and continuity in treatment," while also controlling costs.[12] In fact, electronic medical technology is perceived by some as the only feasible means to markedly improve the healthcare system in the United States in the near future.[13] Additionally, the use of EHRs can provide physicians and other healthcare providers with ready access to a patient's complete lifetime medical history.[14]

EHRs are superior to paper records in several ways. Unlike paper records, EHRs have the capability of "provid[ing] a technical infrastructure on which to build longitudinal medical records that can be integrated across sites of care," including research, public health efforts, and clinical care.[15] Furthermore, electronic records decrease the errors caused by handwriting—the problems which paper records pose.[16] At the same time, electronic record technology eases physical storage requirements.[17]

Additionally, EHRs create the potential for computer-based tools to greatly improve the quality of health care that is provided to patients.[18] The computer functions that may be utilized "include reminder systems that identify patients who are due for preventive care interventions, alerting systems that detect contraindications among prescribed medications, and coding systems that facilitate the selection of correct billing codes for patient encounters."[19]

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11. *See* Eta S. Berner et al., *Will the Wave Finally Break? A Brief View of the Adoption of Electronic Medical Records in the United States*, 12 J. AM. MED. INFORMATICS ASS'N 3, 3 (2005).

12. Meredith Carter, *Integrated Electronic Health Records and Patient Privacy: Possible Benefits but Real Dangers*, 172 MED. J. AUSTL. 28, 28 (2000), *available at* https://www.mja.com.au/public/issues/172_01_030100/carter/carter.html.

13. Kenneth W. Kizer, President, CEO and Chairman, Medsphere Systems Corporation, Keynote Address at the Loyola University Chicago School of Law's Sixth Annual Health Law and Policy Colloquium (December 5, 2006).

14. Berner & Moss, *supra* note 2, at 614.

15. Kenneth D. Mandl et al., *Public Standards and Patients' Control: How to Keep Electronic Medical Records Accessible but Private*, 322 BMJ 283, 283 (2001).

16. Gunter & Terry, *supra* note 3.

17. *Id.*

18. Walter V. Sujansky, *The Benefits and Challenges of an Electronic Medical Record: Much More than a "Word-Processed" Patient Chart*, 169 W. J. MED. 176, 176 (1998).

19. *Id.*

IV. SECONDARY AND UNDESIRABLE USES OF EHRS

Although there are many benefits to be derived from the implementation of integrated EHR systems, there are concerns associated with the use of this technology as well.[20] Not only is there a critical need to ensure that public accountability for secondary use of personal information is promoted, but it is equally important for patients' privacy to be adequately protected as well.[21]

A. Secondary Uses

In addition to the electronic collection of medical information for purposes of patient treatment, there are also several secondary uses of this data.[22] Secondary uses refer to functions of medical records that are not directly involved in patient care.[23]

Potential indirect uses of electronic medical information include "public health management, social service and welfare system management, law enforcement, screening, and licensing" for some professions.[24] Furthermore, medical records may also be used for "quality reviews, administrative reviews, and utilization studies to manage the business aspects of health care."[25] Additionally, EHRs have the potential to greatly benefit medical research as well, making it easier and more economical to conduct studies and gather data.[26]

B. Threat to Privacy of Patient Information

However, given the multitude of *uses* and *users* of this technology, significant threats to privacy, confidentiality, and consent must be addressed.[27] In fact, the L.A. Times reported that approximately "150 people (from doctors and nurses to technicians and billing clerks) have access to at least part

20. Carter, *supra* note 12.
21. *Id.*
22. Rindfleisch, *supra* note 9, at 95.
23. *Id.*
24. *Id.*
25. *Id.*
26. John Powell & Iain Buchan, *Electronic Health Records Should Support Clinical Research,* 7 J. MED. INTERNET RES. (2005), *available at* http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pmcentrez&artid=1550635.
27. Rindfleisch, *supra* note 9, at 95-97.

of a patient's records during a hospitalization."[28] Moreover, over 600,000 payors, providers, and other entities in charge of healthcare providers' billing data have at least partial access to these records as well.[29] Few controls are currently in place to ensure that information obtained through EHRs is used only for authorized purposes.[30] Therefore, there is a great threat of misuse of this sensitive medical information.[31]

The implementation of EHR technology will place a vast amount of additional information about the health care of identifiable individuals in the hands of various agencies, which have not previously had access to such data.[32] An example of a potential misuse of EHRs is the sale of consumer information to pharmaceutical companies.[33]

In addition, there are confidentiality and privacy issues inherent in the nature of the patient-physician relationship, as patients often face a dilemma regarding the disclosure of personal medical information to their physicians.[34] Although disclosure is necessary in order to receive treatment, this disclosure often reveals sensitive information that individuals would rather keep private.[35] Consequently, if patients do not have an expectation of privacy of their confidential information, they may fail to divulge necessary medical data or even avoid seeking treatment.[36]

Furthermore, privacy controls of electronic medical data are necessary not only to ensure that patients can build trusting and open relationships with their healthcare providers,[37] but also to decrease the risk of personal information becoming public.[38] In order to ensure that the adoption of electronic medical data does not threaten the privacy of patient information, it is necessary to address the risk not only of disclosing confidential information to the public, but of significant misuse of medical data.[39]

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28. Judy Foreman, *At Risk of Exposure: In the Push for Electronic Medical Records, Concern is Growing About How Well Privacy can be Safeguarded*, L.A. TIMES, June 26, 2006, at F3.
29. *Id.*
30. Rindfleisch, *supra* note 9, at 97.
31. *See* Carter, *supra* note 12.
32. *Id.*
33. *Id.*
34. Rindfleisch, *supra* note 9, at 94.
35. *Id.*
36. Mandl et al., *supra* note 15.
37. *Id.*
38. Rindfleisch, *supra* note 9, at 95.
39. *Id.* at 94-97.

V. CONCLUSION

The current pressures on the healthcare industry make the transition to EHRs inevitable.[40] Indeed, there are many important benefits to be reaped from the widespread adoption of this technology, as well as secondary uses of this data, including research, analysis of health trends, provider certification, and licensure. However, in order to ensure that the implementation of electronic health data does not threaten the privacy of patient information, it is necessary to develop a national framework to address the issues of secondary uses and misuses of confidential medical information.[41]

In the transcript that follows, Dr. Kizer sets the stage for the move to EHRs by addressing the problems plaguing our healthcare system and providing the context which makes this transition so important. Given the state of health care in this country, Dr. Kizer proposes that the implementation of this technology has the most potential to significantly improve the safety, quality, and efficiency of American health care.

40. *Id.* at 93.
41. Kizer, *supra* note 13.