Health Information Technology: Building the Foundation for the Reconstruction of Health Care Delivery

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I. INTRODUCTION

The Patient Protection and Affordable Care Act (PPACA) aims at increasing access to health care, while simultaneously improving the quality of care delivered and decreasing the costs of acquiring needed care.¹ Notably, the most significant provision of PPACA is the individual mandate, which requires United States citizens and legal residents to have health care coverage.² Those who do not purchase qualifying health coverage are assessed a tax penalty of the greater of $695 per year up to a maximum of three times that amount or 2.5 percent of household income.³ The penalty will be phased-in until 2016, at which point the penalty will be annually adjusted to reflect the cost-of-living.⁴ The mandate represents an attempt to significantly expand access to health care services for most Americans, however without the technological infrastructure to sustain such a marked expansion, fundamental changes in access to health care will not be possible.⁵

Expanding access to health care necessarily involves the increase of health information technology.⁶ Health information technology (health IT) refers to the exchange of health

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3. Id.
4. Id.
5. Melinda Beeuwkes Buntin et al., Health Information Technology: Laying The Infrastructure For National Health Reform, 29 HEALTH AFFAIRS 6, 1214, 1214 (2010).
6. Id.
information in an electronic environment. As more health information is exchanged, proper and expedient processing and utilization of that information becomes essential. Recognizing the importance of health IT to an expanding health care delivery system, PPACA incentivizes the increase of health IT infrastructure and its usage in the delivery of quality health care. Specifically, PPACA provides funding from the American Recovery and Reinvestment Act of 2009 to accelerate the investment in and adoption of health IT, thereby simplifying administrative procedures and promoting efforts to develop and maintain quality of care measures. Although idealistically, implementation of widespread health IT will make health care delivery more effective, there are significant roadblocks to such adoption. These include costs, disagreement as to methodology, and concerns about the complexities of appropriate installation and maintenance. While these misgivings have merit, successful reconstruction of the existing health care delivery system necessitates a developed health IT infrastructure that does not exist today.

II. PROVISIONS UNDER PPACA RELATED TO THE USE OF HEALTH IT

The utilization of health IT, such as electronic health records, is an extensive theme contained in PPACA. While new initiatives focused exclusively on health IT are altogether absent from the legislation, PPACA itself contains more than forty references to the term “health information technology.”

The most significant provision under PPACA relating to health IT requires the

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8. Buntin et al., supra note 5, at 1216.
10. Buntin et al., supra note 5, at 1215.
14. GENERAL ACCOUNTING OFFICE REPORTS & TESTIMONY, supra note 12, at 1.
15. Blumenthal, supra note 13, at 5.
16. FOLEY & LARDNER LLP, LEGAL NEWS ALERT – PPACA EMPHASIZES USE OF HEALTH INFORMATION TECHNOLOGY, at 1 (May 2010) [hereinafter PPACA EMPHASIZES USE OF HEALTH INFORMATION TECHNOLOGY].
17. PPACA EMPHASIZES USE OF HEALTH INFORMATION TECHNOLOGY, supra note 16, at 1.
Secretary of the United States Department of Health and Human Services (HHS) to integrate the reporting mechanisms for the Physician Quality Reporting Initiative (PQRI) with the electronic health record “meaningful use” incentives established by the Health Information Technology for Economic and Clinical Health Act (HITECH Act), enacted as part of the American Recovery and Reinvestment Act of 2009. In other words, PPACA will tie electronic health record (EHR) adoption and quality reporting together with incentives for both. This provision is one of the most significant of PPACA with regard to health IT and electronic health records (EHRs). Specifically, the Secretary must create a plan that will integrate reporting on quality measures pertaining to the meaningful use of EHRs under both PQRI reporting requirements and HITECH Act provisions.

Furthermore, PPACA requires that the Secretary of HHS identify gaps where quality measures do not exist or are lacking and need improvement. A quality measure is defined

as a standard for measuring the performance and improvement of population health or

health plans, providers of services, and other clinicians in the delivery of health care services. In an effort to incentivize the adoption and incorporation of appropriate quality measures, the Secretary is permitted to award grants and contracts to public and private entities so that they might develop quality measures or work on improving existing ones.

Administrative simplification represents another effort under PPACA that incorporates the use of health IT. Under Sections 1104, 10109, and 3021 of PPACA, some key

21. Id.; Mather et al., supra note 19.
22. PPACA EMPHASIZES USE OF HEALTH INFORMATION TECHNOLOGY, supra note 16, at 1.
23. Id.
25. Id.
elements of Health Insurance Portability and Accountability Act (HIPAA) Administrative Simplification provisions are amended and expanded. PPACA first amends Section 1173 of the Social Security Act (SSA). Sections 1171 through 1179 of the SSA, HIPAA’s Administrative Simplification provisions, were created to encourage the growth of electronic record keeping and claims processing within the nation’s health care system. These provisions require the Secretary of HHS to adopt electronic format and data standards for nine specified administrative and financial transactions between health care providers and health plans, including patient eligibility inquiries and reimbursement claims. Section 1173 of the SSA, as amended by Section 1104 of PPACA, establishes a timeline for the development, adoption and implementation of a single set of operating rules for each of the nine specified transactions. The set of operating rules shall be adopted no later than July 1, 2011, in a manner that such rules become effective no later than January 1, 2013. Further, the standards and associated operating rules must meet the following requirements: 1) enable determination of an individual’s eligibility and financial responsibility for specific services prior to or at the point of care, 2) be comprehensive, and 3) provide for timely acknowledgment, response, and status reporting that support a transparent claims and denial management process. PPACA also amends SSA Section 1173 to require the Secretary to regularly solicit input from the National Committee on Vital and Health Statistics (NCVHS), the Health Information Technology Policy and Standards Committees, and other stakeholders regarding whether standards and operating rules should be developed for other administrative and financial transactions. Finally, PPACA adds a new Public Health Service Act (PHSA), Title XXX, Subtitle C, comprising Section 3021, which requires the Secretary to develop standards that facilitate enrollment of individuals in federal and state health and human

29. ERIN D. WILLIAMS & C. STEPHEN REDHEAD, CONG. RESEARCH SERV., PUBLIC HEALTH, WORKFORCE QUALITY AND RELATED PROVISIONS IN THE PATIENT PROTECTION AND AFFORDABLE CARE ACT (PPACA) 80-82 (June 7, 2010).
30. Id. at 81.
31. Id. at 80.
32. Id.
service programs. Specifically, the standards must allow for the following functions: 1) electronic matching against existing federal and state data that provide evidence of eligibility, 2) simplification and submission of electronic documentation, digitization of documents, and system verification of eligibility, 3) reuse of stored eligibility information, 4) capability of individuals to manage their eligibility information online, 5) ability to expand the enrollment system to integrate new programs, and 6) notification, including by e-mail and phone, of eligibility and recertification.

Under PPACA, the Secretary is also charged with developing reporting requirements for use by health plans to address the plan’s benefits and reimbursement structures. These reporting requirements must implement activities to improve patient safety and reduce medical errors through the use of best clinical practices, evidence-based medicine, and health IT. Plans are required to submit reports to the Secretary and plan members stating whether the benefits under the plan include the specified elements. Moreover, PPACA requires that the Secretary develop similar reporting guidelines for application to the establishment of health benefit exchanges.

Many of the other provisions under PPACA incentivize the use of health IT by requiring its usage in order to participate in a variety of new programs, many of which provide financial rewards for such participation and meaningful use of health IT. For example, PPACA permits the Secretary to disperse grants to programs that establish themselves as “Community Health Teams,” or community-based interdisciplinary, interprofessional teams designed to support primary care practices. In order to establish themselves as such, the programs must demonstrate a capacity to implement and maintain health IT that meets the requirements of certified EHR technology. Similarly, the Secretary is authorized to make grants to long-term care facilities in an effort to assist

37. WILLIAMS & REDHEAD, supra note 29, at 82.
40. Id.
41. PPACA EMPHASIZES USE OF HEALTH INFORMATION TECHNOLOGY, supra note 16, at 1.
42. Id.
43. Id.
44. Id.
45. Id.
them in offsetting the costs related to acquiring certified EHR technology.46

Although most of the health IT-related provisions under PPACA do not exclusively concern health IT or EHRs, a large percentage of the new programs under PPACA make the appropriate use of health IT a qualifying factor for participation.47 Inevitably, health care providers will undoubtedly be looking for ways to cut costs as they are required to provide health care services to many more Americans.48 If providers can experience financial rewards as a result of investment in the establishment of a health IT infrastructure or the implementation of EHR programs, participation in programs, such as the establishment of community health teams, will become all the more attractive.49 Furthermore, the expansion of health IT usage will make cost accounting more effective.50 More rapid assessments of quality and value of health care will be available, decreasing the money wasted on fragmentation of care and the use of unnecessary services.51 Moreover, simplification of the assemblage and exchange of health information will become essential as the number of potential consumers of health care increases substantially.

III. HEALTH IT ESSENTIAL TO THE EXPANSION OF ACCESS TO HEALTH CARE COVERAGE

Evidence indicates that health information liquidity can facilitate significant improvements in health care access, efficiency, and convenience.52 Health IT is particularly important in ensuring that patient-centered care is provided.53 Technology facilitates the portability of health information so that it follows patients across settings and providers.54 Liquidity of health information additionally saves time – allowing prescriptions to be filled remotely and quickly, lab results to be viewed by the provider and patient immediately after they are processed, and patients to be reached for targeted

46. Id.
47. Id.
48. Buntin et al., supra note 5, at 1218.
49. Blumenthal, supra note 13, at 3.
50. Buntin et al., supra note 5, at 1216.
51. Id. at 1216-17.
53. Id.
54. Id. at 5.
prevention outreach. Health IT also promotes equity and consistency in health care delivery, as clinical needs become the focus, rather than individual characteristics, such as socioeconomic status. Finally, health IT will lessen the burden placed on patients, since health information will be readily available at the point of care and patients will have direct access to their own personal health records.

Better methods of storing, analyzing and sharing health information will make possible the expansion of health care access to more Americans. Using health IT to implement payment reform and simplify administrative processes is essential to achieving expectations of health insurance enrollment. It is projected that approximately thirty-two million Americans will become newly insured as a result of the new health reform law. Accommodating these new enrollees requires the use of health IT to not only streamline managerial processes, but also to effectively manage risk. Data collected through EHRs could especially help insurers manage the care of new enrollees with pre-existing conditions. The standardization and integration of clinical and administrative data through the development of health IT will also enable health care providers to achieve greater efficiencies in health care delivery. This change in the way health care transactions take place will reduce both costs and hassle for patients, providers, and payers.

Besides increasing efficiency and enabling equitable delivery of care, the growth of health IT will assist in laying the groundwork for further change to the existing health care system. As many have argued, the transformation depends on better partnering between doctors and patients. Health IT can play a vital role in making this partnership simpler and stronger. As patient data becomes more accessible, physicians are better

55. Id.
56. Id. at 6.
57. Id.
58. Buntin, supra note 5, at 1214.
59. Id. at 1218.
60. Id.
61. Id.
62. Id.
63. Id.
64. Id.
65. Id. at 1214.
67. Penfield et al., supra note 52, at 5.
equipped to tailor care to the needs, preferences, and medical challenges of each individual.\textsuperscript{68} Moreover, patients can be provided care in methods that are easier to access.\textsuperscript{69} Just as health IT can afford health care providers opportunities to simplify the delivery of health care, so can these developments promote patient accountability with regard to health.\textsuperscript{70} Patients can begin to understand their health history and plan future care accordingly.\textsuperscript{71} In some instances, patients might even be able to control the input of data into a potential health IT system.\textsuperscript{72} Although changing the relationship between patient and provider is an important step in restructuring the delivery of health care and ensuring that more Americans have access to health care services, health IT has become increasingly important in ensuring that policymakers have correct information on which to base their policy initiatives.\textsuperscript{73} Just as health IT is crucial to changing clinicians’ and hospital administrators’ behaviors, health IT is absolutely necessary if policymakers are to effectively redirect policy priorities.\textsuperscript{74}

The sustainable development of health IT will significantly impact access to health care in the United States.\textsuperscript{75} The meaningful use of health IT and EHRs will promote patient-centered care, save time and resources, prevent waste of unnecessary medical services, strengthen the patient-physician relationship, and fuel policymakers with updated, relevant information.\textsuperscript{76} Most importantly, health IT provides an important vehicle for change to the existing health care delivery system.\textsuperscript{77}

IV. THE COMPLEXITIES OF IMPLEMENTING HEALTH IT

Recommendation of establishment of comprehensive health IT programs seems an obvious solution to a general lack of meaningful quality measures and readily accessible patient health information, however appropriate implementation of a health IT infrastructure is

\begin{itemize}
\item \textsuperscript{68} Jerry Langley & Carol Beasley, DEP’T OF HEALTH & HUMAN SERVICES, HEALTH INFORMATION TECHNOLOGY FOR IMPROVING QUALITY OF CARE IN PRIMARY CARE SETTINGS, AGENCY FOR HEALTHCARE RESEARCH AND QUALITY 5 (July 2007).
\item \textsuperscript{69} \textit{Id.}
\item \textsuperscript{70} \textit{Id.} at 11.
\item \textsuperscript{71} \textit{Id.} at 10-11.
\item \textsuperscript{72} \textit{Id.} at 11.
\item \textsuperscript{73} Kate Ackerman, Blumenthal Looks Back at 2010, Offers Peek Into Plans for 2011, iHealthBeat, at 2-3 (Jan. 3, 2011), http://www.ihealthbeat.org.
\item \textsuperscript{74} \textit{Id.} at 2.
\item \textsuperscript{75} Buntin et al., supra note 5, at 1218.
\item \textsuperscript{76} Penfield et al., supra note 52, at 5-6.; Kate Ackerman, Blumenthal Looks Back at 2010, Offers Peek Into Plans for 2011, iHealthBeat, at 2-3 (Jan. 3, 2011), http://www.ihealthbeat.org.
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maybe the most complicated endeavor in restructuring the current health care delivery system.\textsuperscript{78} In fact, the federal government has been working to promote the nationwide use of health IT for years.\textsuperscript{79} In the past three decades, the U.S. Department of Defense (DoD) and the Department of Veterans Affairs (VA) have made significant contributions to advances in technology by adopting robust, comprehensive EHR systems.\textsuperscript{80} More recently, in 2001, the National Committee on Vital and Health Statistics proposed a national health information infrastructure.\textsuperscript{81} Later, in 2004, the Office of National Coordinator for Health IT (ONC) was created by executive order, envisioning a nationwide interoperable health information technology infrastructure that would improve healthcare quality and safety, reduce costs, promote a more effective marketplace, and improve the coordination of care.\textsuperscript{82} Unfortunately, accomplishing widespread adoption and implementation of health IT has proven difficult and there still exists much debate as far as the most effective method for achieving this transition.\textsuperscript{83} Based on its past work on federal health IT activities, the General Accounting Office (GAO) provided testimony concerning the principal issues posed by a transition to nationwide health IT capability.\textsuperscript{84}

Primarily, a productive transition will require the establishment of a foundation of clearly defined health IT standards that are agreed upon by all involved stakeholders.\textsuperscript{85} Developing and implementing universal standards is crucial if health IT systems are to work together and provide the right people the access to the information they require.\textsuperscript{86} Moreover, standards are needed to ensure data quality and consistency, so that exchange of health IT is interoperable.\textsuperscript{87} A seamless transition to health IT capability will also require defining comprehensive plans that include milestones and measures.\textsuperscript{88} Activities

\textsuperscript{77} Buntin et al., \textit{supra} note 5, at 1219.
\textsuperscript{78} \textit{GENERAL ACCOUNTING OFFICE REPORTS & TESTIMONY, supra} note 12, at 1; Langley & Beasley, \textit{supra} note 68, at 1.
\textsuperscript{79} \textit{GENERAL ACCOUNTING OFFICE REPORTS & TESTIMONY, supra} note 12, at 1.
\textsuperscript{80} Penfield et al., \textit{supra} note 52, at 7.
\textsuperscript{81} \textit{Id.}
\textsuperscript{82} \textit{Id.}
\textsuperscript{83} \textit{GENERAL ACCOUNTING OFFICE REPORTS & TESTIMONY, supra} note 12, at 1.
\textsuperscript{84} \textit{GENERAL ACCOUNTING OFFICE REPORTS & TESTIMONY, supra} note 12, at 1.
\textsuperscript{85} \textit{Id.}
\textsuperscript{86} \textit{Id.}
\textsuperscript{87} \textit{Id.}
\textsuperscript{88} \textit{Id.}
must be coordinated, results monitored, and outcomes effectively integrated. Thirdly, the GAO advises that successful implementation of nationwide health IT requires that personal privacy is protected such that public acceptance of health IT is achieved. Public confidence in adoption of health IT is essential if standards are to be made universal.

Not only is widespread adoption of health IT complex, it is also extremely costly. Moreover, the greatest driver of healthcare cost inflation is new medical technology. Considering the costs of implementing technological advances, convincing health care providers to adopt health IT is quite difficult. Providers are concerned about both the costs of installing and maintaining the systems themselves, as well as the possibility that they might not realize any future financial gains from implementation of health IT and EHRs. Many health IT experts contend that the EHRs currently available on the market are too expensive, too complicated, and will not guarantee better quality care. These experts also argue that spending large amounts of money subsidizing currently available technology would encourage providers to adopt records that will soon be outdated. Therefore, the adoption of new medical technology must be limited to technologies whose effectiveness and safety are based on sound scientific evidence. Additionally, as health care coverage is expanded in 2014, the medical technology industry will see a significant increase in demand for its products. Furthermore, health care coverage expansions will be partially financed by limits on the growth of Medicare payments. Because medical technology pays providers for medical services delivered to beneficiaries, cuts to providers will essentially be passed on to medical technology manufacturers in the form of pricing pressure and deferred purchases of more expensive

89. Id.
90. Id.
91. Id.
95. Blumenthal, supra note 13, at 2.
96. Id. at 3.
97. Id. at 4
98. Ullyot, supra note 93, at 83.
100. Id. at 1327.
Most importantly, recent medical literature has not indicated that health IT improves human performance in the practice of medicine. Very little research has been done on the topic, but of the studies performed, the results have shown little difference in quality between those medical practices that use electronic medical records (EMRs) and those with paper records. Moreover, other countries have tried health IT, the United Kingdom in particular, and have been devastated, both economically and otherwise, by its adoption.

Even considering the difficulties inherent to execution of health IT infrastructure, it seems unlikely that the existing health care system will stay current without taking advantage of the power of electronic technologies. Not until widespread efforts are made to establish workable health IT programs will it be clear the advantages of implementing such efforts.

V. CONCLUSION

While the future of health IT usage in practice remains uncertain, it is clear that Congress foresees a restructured health care system facilitated by an improved network of health information and EHRs. HHS has already taken substantial steps towards investment in health IT. On February 9, 2011, HHS announced that it will make $750 million in federal funds available for disease prevention efforts, which specifically include data collection initiatives and IT infrastructure projects at local health departments. This money will come from the Prevention and Public Health Fund created by PPACA. HHS has also launched a Web portal, where health IT developers are able to access health data. HHS hopes this portal will fuel development of innovative IT applications.
As efforts to repeal PPACA threaten the derailing of new health IT, administrative agencies, like HHS, continue to move forward.\(^{112}\) Although the consequences of investing in health IT could be devastating, change necessitates risk. New health IT has the potential to simplify the delivery of health care, curb costs, improve the patient-physician relationship, and stimulate patients to become active consumers.\(^{113}\) Arguably, these investments in the future of health care are worth the plausible risks.


\(^{113}\) Penfield et al., *supra* note 52, at 5-6.