



Q & A: What Advocates Should Know About Health Information Technology and Electronic Health Records

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Along with health reform implementation, the adoption of health information technology and electronic health records provide additional ways to improve healthcare quality and efficiency, cut costs, and update health systems. But what is health information technology and what can (or should) it do to improve the health needs of low-income populations and other communities experiencing health disparities? What do advocates need to know about this technology that could help to improve health status? Read on to learn more.

Q1 – What is health information technology (health IT)?

A. Health IT is the use of computer hardware and software to privately and securely store, retrieve, and share patient health and medical information.¹ Several technologies exist, but three are critical for the routine delivery of health care services:

- **Electronic health records (EHRs)** – EHR systems can electronically collect and store data about patients, transmit information to providers, allow providers to enter computerized patient care orders, and provide health professionals with advice from a network of health information to make clinical decisions.²
- **Personal health records (PHRs)** – PHRs are electronic records of individuals' health information that gives them the ability to manage, track, and participate in their health care.³ PHRs provide patients access to provider maintained-EHR systems. These "portals" or "gateways" allow patients to see, e-mail, and sometimes input information into EHRs for their providers to review. Other PHR functions may include scheduling appointments, requesting referrals, and getting prescription refills.⁴ They may also contain information that providers do not have, such as exercise routines and changes in dietary habits.⁵
- **Clinical Data Exchanges (CDEs)** – CDEs connect the health IT systems of providers and insurers in a geographical area, usually through a regional health information organization (RHIO). A RHIO may include hospitals, insurance companies, pharmacies, consumer organizations, government entities, and employers. CDEs allow sharing of information about identified patients between and among providers, regardless of their location.⁶

More details about health IT terminology are available at the HHS Office of the National Coordinator for Health Information Technology's website, *Health IT Terms*.⁷

Q2 – How can health IT improve health quality, particularly for underserved communities?

A. Health IT has the potential to provide a coordinated strategy to improve health quality and enhance patient safety. Hospitals view comprehensive EHRs as a way to coordinate services in inpatient and ambulatory care settings.⁸ For example, EHRs could track clinical information for patients with chronic and complicated health conditions who receive ambulatory and inpatient services in a variety of clinical settings throughout several hospital systems in a particular geographical region.⁹ EHRs could address gaps in care coordination, prevent adverse drug interactions, and provide uniform care interventions to improve patient quality.¹⁰

EHRs could also give providers electronic versions of standardized quality measures of clinical care.¹¹ For example, the EHR could provide orders and checklists that align with best practices and appropriate standards of health care.¹²

Further, health IT can improve communication between providers within the same clinical setting and between ambulatory and inpatient settings by allowing them to view allergies, see alerts to drug recalls and adverse drug interactions, determine current and past health conditions, review the results of medical tests, and identify patients who may require specific health screenings or prevention strategies.¹³ The ability to view this information promotes coordinated care to patients and holds the potential to reduce clinical redundancies, omissions, and adverse reactions to medications due to allergies.¹⁴ Patients needing follow-up care or health information could review on-line resources, schedule appointments, or link to community-based resources. Patients could securely communicate with their providers through an EHR system designed for such exchanges.¹⁵ For example, improving opportunities for patient-initiated (“activated”) communication with health providers enhanced patients’ quality of care, particularly among Latino populations and other communities experiencing health disparities.¹⁶ By offering an additional method of communication, EHRs could help improve health care quality and operational efficiencies.¹⁷

Innovative community health center (CHC) programs have demonstrated how health IT can improve care to low-income communities. One federally qualified health center in the rural Columbia Basin area of Washington provided specialized health IT services for its predominately low-income, Spanish speaking migrant worker or seasonal farmer population. The program provided an EHR interface with several features, including the state’s immunization registry, integrated mobile tools and educational videos in Spanish and English shown in examination and waiting rooms, and quality checklists of care for clinical priorities during patient visits.¹⁸ The EHR system permitted providers to target specific clinical priorities, generate patient panels, and reach prevention goals and clinical care indicators. Specifically, the percentage of diabetic patients receiving yearly foot examinations increased from approximately 30% in 2008 to 80% in June 2011.¹⁹

Q3 – What makes health IT work well?

A. If appropriately designed and implemented, health IT can communicate with each other across institutional, geographic, and software boundaries (known as “interoperability” or “connectivity”).²⁰ However, some health providers have expressed concerns about the lack of interoperability of different EHR systems that could prevent effective and widespread use of EHRs.²¹

To ensure that health IT works well, the Institute of Medicine recommended that basic EHR systems should contain a set of eight core features (“functionalities”) to promote patient safety.²²

- patient health information and data regarding medical and nursing diagnoses, demographics, clinical notes, test results, allergies, and medication lists;
- results management of previous and current electronic laboratory and radiology tests;
- computerized entry management of a range of clinical orders (e.g., nursing and physician orders, ancillary services, referrals, and medication);
- decision support through computerized reminders and prompts to prevent, diagnose, and manage illnesses (e.g., preventive health reminders for screenings and vaccinations, and clinical guidelines for treatment);
- electronic connectivity between the patient and members of the health care team;
- patient support through computer-based patient education and home monitoring of patients with chronic illnesses;
- administrative processes of electronic scheduling systems (e.g., hospital admissions and inpatient and ambulatory procedures and visits); and
- reporting and population health management of clinical data needed for submission to federal, state, local, and public health authorities (including key health quality indicators for organizational reporting purposes).

Q4 – What could more sophisticated health IT systems be designed to do?

A. Additional functionalities could further enhance patient safety, help achieve clinical guidelines, complement patient preferences, improve care transitions and follow-up care, and promote communication among providers. Features could include electronic clinical documentation of advanced directives, imaging results of radiological tests, diagnostic test images, consultant requests and reports, guidance for drug dosage, and alerts for laboratory test results (e.g., for low levels of potassium).²³ These and other functionalities provide a more coordinated approach to diagnosis and treatment.

Also, health IT could potentially connect with tele-health and distance medicine for specialty services. For patients residing in rural or geographically isolated areas who experience shortages of health care specialists, access to specialty health care services

may be critical to receiving evidenced-based specialty care for their particular conditions.

Q5 – What are some of the barriers to widespread adoption of health IT and EHRs?

A. The cost of obtaining and maintaining current systems represents a significant obstacle to health IT adoption.²⁴ Estimates for purchasing and installing an EHR system range from \$15,000 to \$70,000 per provider.²⁵ Other analyses indicate that these costs increase, depending on the size of the medical practice and other factors. One analysis determined that installing an EHR in a primary care practice would cost an estimated \$32,400 per physician to implement, \$17,100 for maintenance (for the first year), and costs associated with 122.2 hours of staff time per physician to prepare and implement the system and 134 hours per physician to prepare for use in a clinical setting.²⁶

To increase usage of health IT, providers may need more immediate evidence of how it improves their workflow such as automated clinical monitoring, nursing documentation, and bar-code medication administration systems.²⁷ Some providers remain unconvinced that health IT and EHRs can improve patient quality because they also capture repeated or unnecessary test results.²⁸ Other providers expressed dissatisfaction with certain EHR systems relating to their ability to increase productivity and reduce their workloads.²⁹ Even providers practicing in technologically equipped hospitals have not completely adopted health IT. One health system's study revealed that providers electronically prescribed only about half (51%) of medication orders in these facilities.³⁰

Further, CHCs may face particular obstacles to widespread health IT adoption, such as the lack of EHR vendors that can design software to address the CHCs' clinical requirements, and limited on-site IT support staff.³¹ These difficulties were reflected in an initial survey of EHR use in federally-funded CHCs. The survey indicated that an estimated 26% had some EHR capability and 13% could perform minimum levels of EHR functions.³² However, the community health centers that primarily served uninsured individuals and those with the *lowest* incomes were less likely to have a functioning EHR system.³³

Q6 – Is funding available to implement health information technology?

A. Yes. The Health Information Technology Economic and Clinical Health (HITECH) Act, enacted as part of the American Recovery and Reinvestment Act of 2009, provides funding to create and implement interoperable computer systems with the capacity of handling EHRs.³⁴

Q7– How does HITECH apply to Medicaid?

A. HITECH provided \$300 million for eligible Medicaid providers to create, operate, or upgrade certified EHR systems.³⁵

In addition to funding Medicaid providers, states can receive 100% federal reimbursement for funds used to ensure that the Medicaid EHR incentive program meets legal requirements and reduces opportunities for fraud, waste and abuse.³⁶ States can also obtain 90% federal reimbursement for expenses to ensure that appropriate providers are lawfully receiving Medicaid EHR incentive payments.³⁷

Q8 – Does HITECH apply to Medicare providers?

A. Yes, HITECH also assists eligible Medicare providers in establishing qualified EHR systems. HITECH offers payments to certain Medicare providers for up to five years to create and operate EHRs if eligible providers satisfy specific criteria.³⁸ Eligible Medicare providers can receive an additional payment if they practice in designated Health Professional Shortage Areas (HPSAs).³⁹ However, Medicare providers who are not meaningful users of EHRs will have their Medicare reimbursements reduced by 1% per year beginning January 1, 2015, unless they can satisfy requirements for a hardship exemption.⁴⁰

Q9 – What is “meaningful use?”

A. The HITECH Act’s Medicaid and Medicare incentive payments require the “meaningful use” of certified EHR technology to create a national infrastructure to promote and support health IT, and increase efficiency and safety in patient care.⁴¹ To qualify for the incentive payments, providers must demonstrate they meet a number of meaningful use objectives.

HHS’ Office of the National Coordinator for Health IT (ONC) has issued a series of regulations addressing “meaningful use.” ONC established standards and criteria to implement meaningful use in three stages:

- **Stage 1: Data Capture.** Begun in 2011, it started with a “core” set of 15 objectives/measures for Eligible Professionals (EPs) and 14 objectives/measures for Eligible Hospitals (EHs).⁴² EPs and EHs must satisfy the entire core set except if the criteria do not apply to the particular practice.⁴³ Among a secondary set of measures (called a “menu” set), EPs and EHs could defer up to five measures/objectives (factoring in those criteria that do not apply to the practice).⁴⁴
- **Stage 2: Advanced Clinical Processes.** Stage 2 increases the menu objectives and adds a core objective for EPs to electronically and securely communicate with 5% of patients.⁴⁵ The earliest these criteria will be effective is fiscal year 2014 for EHs and calendar year 2014 for EPs.⁴⁶
- **Stage 3: Improved Outcomes.** Scheduled to begin in 2016, Stage 3 seeks to realize improvements in quality, safety and efficiency, with a focus on decision support for priority conditions, access to comprehensive patient data, and improvements in health outcomes for various populations.⁴⁷ The proposed Stage 3 rule requires providers to give 10% of their patients the

ability to submit patient-generated health information into EHRs to increase patient engagement and improve health outcomes.⁴⁸

Among other benefits, the meaningful use rules allow patients to obtain an electronic copy of their medical records and providers must collect racial, ethnic, primary language, and gender data of a threshold number of their patients.⁴⁹ In addition, HHS included many quality health measures. However, meaningful use does not require providers to stratify patient data by health condition and demographic variables or submit reports indicating evidence of health disparities to CMS, states, or public health officials.⁵⁰

Q10 – Who is subject to meaningful use?

A. The following chart describes providers and hospitals eligible for funding to implement and use EHRs:⁵¹

PROGRAM	ELIGIBLE PROFESSIONALS (EPs)	ELIGIBLE HOSPITALS (EHs)
Medicaid	Physicians; Nurse Practitioners; Certified Nurse-Midwives; Dentists; Physician Assistants working in a Federally Qualified Health Center (FQHC) or Rural Health Center (RHC, directed by a Physician Assistant) EPs must have at least 30% Medicaid patient volume except pediatricians need only 20% Medicaid patient volume; and EPs practicing predominately in FQHCs or RHCs must have over 50% of their patient encounters there over a six-month period	Acute Care Hospitals (including Critical Access Hospitals/cancer hospitals; must have at least a 10% Medicaid patient volume); Children’s Hospitals (no volume requirements)
Medicare	Doctors of: Medicine or Osteopathy, Dental Surgery or Dental Medicine, Podiatric Medicine, Optometry; Chiropractors	Acute Care Hospitals; Critical Access Hospitals (no patient volume requirements)
Medicare Advantage (MA)	Providers must provide, on average, at least 20 hours/week of patient care services and be employed by the MA organization; or be employed by, or be a partner of, an entity that through contract with the qualifying MA organization furnishes at least 80% of the entity’s Medicare patient care services to enrollees of the qualifying MA organization	EHs must provide 80% of their Medicare patient care services to MA enrollees

Q11 – What other support exists to expand the use of health IT?

A. The HITECH Act created guidelines to provide technical support to providers, facilitate coordination within and among states, provide health IT connectivity to public health providers in emergencies, and equip providers to be EHR “meaningful users.”⁵²

In addition to the incentive programs, HITECH provides several grant programs that promote use and implementation of health IT. These include:

- **The Beacon Community program** – assists communities to build and strengthen their health IT infrastructure and information exchange capabilities;
- **The Health IT Regional Extension Centers program** – offers technical assistance, guidance and information on best practices to support and accelerate health care providers' efforts to become meaningful users of EHRs; and
- **The Strategic Health IT Advanced Research Project (SHARP)** – funds research on novel advances to address well-documented problems that have impeded health IT adoption.⁵³

Conclusion

Advancements in health IT provide a step forward in creating a patient-centered mechanism to improve individuals' health. For health IT to become an effective tool, however, all health IT stakeholders need to overcome barriers in access for low-income and other populations and use health IT to reduce health disparities. While the HITECH Act's meaningful use requirements focus attention on improving quality of care, stakeholders should ensure that underserved communities also benefit from health IT, instead of new technologies serving to impede improvements in health status.

¹ U.S. Dep't of Health & Human Services, *FAQs for Patients and Families: What is Health IT?*, available at <http://www.healthit.gov/patients-families/faqs/what-health-information-technology>.

² David Blumenthal & John Glaser, *Information Technology Comes to Medicine*, 356 NEW ENG. J. MED. 2527, 2528 (June 14, 2007).

³ U.S. Dep't Health & Human Services, Office for Civil Rights, *Personal Health Records and the HIPAA Privacy Rule*, available at <http://www.hhs.gov/ocr/privacy/hipaa/understanding/special/healthit/phrs.pdf>.

⁴ Blumenthal & Glaser, *supra* note 2. Some insurance carriers also offer PHRs to insured members to provide online access to claims data.

⁵ American Health Information Management Association, *Why Should You Keep A Personal Health Record?* (2013), available at http://www.myphr.com/StartaPHR/why_keep_a_phr.aspx.

⁶ *Id.*

⁷ See generally U.S. Dep't of Health & Human Services, Office of the Nat'l Coordinator for Health Info. Tech., *Health IT Terms - Glossary of Selected Terms Related to Health IT* (Dec. 4, 2009), available at <http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&cached=true&objID=1256>.

⁸ The Commonwealth Fund, *Using Electronic Health Records to Improve Quality and Efficiency: The Experiences of Leading Hospitals* (July 2012), available at http://www.commonwealthfund.org/~media/Files/Publications/Issue%20Brief/2012/Jul/1608_SilowCarroll_using_EHRs_improve_quality.pdf.

⁹ See *id.* Unaffiliated hospitals that use the same type of EHR systems could exchange patient information, particularly when local hospitals refer patients for specialty care services.

¹⁰ See U.S. Dep't of Health & Human Services, *Multiple Chronic Conditions: A Strategic Framework* (Dec. 2010), available at http://www.hhs.gov/ash/initiatives/mcc/mcc_framework.pdf.

¹¹ Wendy Meyeroff, *Data Quality Study Shows the Potential for Electronic Health Records*, Data Informed (Feb. 11, 2013), available at <http://data-informed.com/data-quality-study-shows-the-potential-of-electronic-health-records/>.

¹² The Commonwealth Fund, *supra* note 8.

¹³ Jerry Langley & Carol Beasley, Inst. for Healthcare Improvement, prepared for U.S. Dep't of Health & Human Services, Agency for Healthcare Res. & Quality, *Health Information Technology for Improving Quality of Care in Primary Care Settings* (July 2007), available at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&ved=0CFYQFjAF&url=http%3A%2F%2Fhealthit.ahrq.gov%2Fportal%2Fserver.pt%2Fgateway%2FPTARGS_0_661809_0_0_18%2FAHRQ_HIT_Primary_Care_July07.pdf&ei=ZDQZUZTTNbDW0gHy9YDYDw&usq=A FQjCNFKOBxyPHgy1Q9kAY8ob2rSG6WKlq&bvm=bv.42080656.d.dmQ. See also Ricardo Custodio, *et al.*, *Health Information Technology: Addressing Health Disparity by Improving Quality, Increasing Access, and Developing Workforce*, 20 J. HEALTH CARE POOR & UNDERSERVED 301 (2009), available at http://www.clinicians.org/images/upload/Health_IT.pdf.

¹⁴ Sherril Gelmon & Oliver Droppers, *Community Health Centers and Electronic Health Records: Issues, Challenges, and Opportunities* (2008), available at http://nwhf.org/images/files/Electronic_Medical_Record_Handbook.pdf. See also U.S. Dep't of Health & Human Services, The Office of the National Coordinator for Health Information Technology, *Beacon Community and EHR Vendor Collaboration: A Catalyst for Interoperability and Exchange* (June 12, 2012), available at <http://www.healthit.gov/sites/default/files/ehr-vendor-beacon-topic.pdf>.

¹⁵ Bipartisan Policy Center, *Clinical Perspectives on Electronic Health Information Sharing for Transitions for Care* (Oct. 2012), available at http://bipartisanpolicy.org/sites/default/files/Clinician%20Survey_format%20%282%29.pdf.

¹⁶ Margarita Alegría, *The Role of Patient Activated Communication on Patient Provider Communication and Quality of Care for U.S. and Foreign-Born Latino Patients*, 24 J. GEN. INTERNAL MED. 534-41 (2009) (Supp. 3), available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2764038/pdf/11606_2009_Article_1074.pdf. The researchers found that after adjusting for demographics, health status, other language and service use factors, patient activation was strongly associated with self-reported quality of care and better doctor-patient communication among U.S. and foreign-born Latino respondents.

¹⁷ Catherine Chen, *et al.*, *The Kaiser Permanente Electronic Health Record: Transforming and Streamlining Modalities of Care*, 28 HEALTH AFFAIRS 323-33 (2009), available at <http://content.healthaffairs.org/content/28/2/323.full.pdf+html>. The implementation of a comprehensive EHR system in an ambulatory care setting decreased primary care visits (25.3%) and specialty care visits (21.5%) in 2004 - 2007. However, telephone visits increased more than eight-fold and secure e-messaging increased six-fold during this same period.

¹⁸ NORC at the U. of Chicago, *Health IT and Health Disparities – the Columbia Basin Health Association* (June 2012), available at http://www.healthit.gov/sites/default/files/pdf/CBHA_CaseStudyReport.pdf.

¹⁹ *Id.* The health center also exceeded prevention goal by obtaining a rate of 70% for osteoporosis screenings or therapy for women 65 years or older.

²⁰ Blumenthal & Glaser, *supra* note 2. See also Nat'l Alliance for Health Info. Tech., Report to the Office of the National Coordinator, *Defining Key Health Information Technology Terms* (Apr. 28, 2008), available at http://www.himss.org/content/files/Code%203_Defining%20Key%20HIT%20Terms%20-%20ONC%20-%204%2028%2008.pdf.

²¹ Bipartisan Policy Center, *supra* note 15.

²² Robert Wood Johnson Foundation *et al.*, *Health Information Technology in the United States: The Information Base for Progress* (2006), available at

http://www.providersedge.com/ehdocs/ehr_presentations/Health_Information_Technology_in_the_US-The_Info_Base_for_Progress_2006.pdf. Functionality measures can vary in inpatient and ambulatory settings.

²³ *Id.*

²⁴ Helen Burstin, *Achieving the Potential of Health Information Technology*, 23 J. GEN. INTERNAL MED. 502 (2008), available at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2359514/pdf/11606_2008_Article_552.pdf.

²⁵ U.S. Dep't of Health & Human Services, *Frequently Asked Questions: How Much is This Going to Cost Me*, available at <http://www.healthit.gov/providers-professionals/faqs/how-much-going-cost-me>.

²⁶ Richard Reece, *Electronic Health Records: Going Up in the Clouds and Bringing Costs and Ease of Use Down to Earth*, Medinnovation (April 6, 2011), available at <http://medinnovationblog.blogspot.com/2011/04/electronic-health-records-going-up-in.html>. The total cost of putting in an EHR system for an individual primary care physician is approximately \$50,000 for hardware, software, staff and physician training. This amount excludes time away from patients, learning how to enter data, and trying to interface with a hospital system.

²⁷ Medical News, *Health Information Technology Still Faces Significant Barriers: Survey* (July 8, 2010), available at <http://www.news-medical.net/news/20100708/Health-information-technology-still-faces-significant-barriers-to-implementation-Survey.aspx?page=2>.

²⁸ Burstin, *supra* note 24.

²⁹ David Pitman, *Dissatisfaction with EHRs Rising – Survey Finds*, MedPage Today (Mar. 7, 2013), available at <http://www.medpagetoday.com/PracticeManagement/InformationTechnology/37723>.

³⁰ Medical News, *supra* note 27.

³¹ Gelmon & Droppers, *supra* note 14.

³² Alexandra Shields *et al.*, *Adoption of Health Information Technology in Community Health Centers: Results of a National Survey*, 26 HEALTH AFF. 1373 (Sept. 2007), available at <http://content.healthaffairs.org/content/26/5/1373.long>. In 2006, the minimal set of functionalities for EHRs at CHCs included patient demographics, computerized orders for prescriptions, tests and lab results, and clinical notes. Additional capacities included maintenance of disease-specific registries, access to patient registries funded through HRSA's Health Disparities Collaborative, having a dedicated IT staff person, and plans for installing a new EHR system or replacing an existing system within the next three years.

³³ See also Randall Cebull *et al.*, *Electronic Health Records and Quality of Diabetes Care*, 365 NEW ENG. J. MED. 825 (Sept. 1, 2011) (discussion of EHR systems of safety-net providers versus EHR systems of non-safety net providers and the impact on health quality).

³⁴ 42 U.S.C. § 17931-39.

³⁵ 42 U.S.C. § 1396b.

³⁶ CMS, Dear State Medicaid Director, *Federal Funding for Medicaid HIT Activities*, (Aug. 17, 2010).

³⁷ *Id.*

³⁸ 42 U.S.C. § 1395w-4.

³⁹ CMS, *EHR Incentive Programs* (April 16, 2013), available at <http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html?redirect=/ehrincentiveprograms/>.

⁴⁰ CMS, *Payment Adjustment and Hardship Exceptions Tipsheet for Eligible Professionals* (Aug. 2012), available at http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Downloads/PaymentAdj_HardshipExcepTipSheetforEP.pdf. See *id.* Acceptable hardship categories include infrastructure issues, newly practicing EPs who have not had time to become meaningful users, unforeseen circumstances, practices

at multiple locations, and lack of face-to-face interaction with patients or need to follow-up with patients.

⁴¹ CMS, *Overview: EHR Incentive Program* (Aug. 27, 2012), available at <https://www.cms.gov/EHRIncentivePrograms/>.

⁴² Medicare and Medicaid Programs - Electronic Health Record Incentive Program, 75 Fed. Reg. 44,314 (July 28, 2010).

⁴³ *Id.* at 44,436.

⁴⁴ *Id.* See National Partnership for Women and Families, *Meaningful Use Incentive Program Structure* (July 2010), available at

http://www.nationalpartnership.org/site/DocServer/HIT_Meaningful_Use_Incentive_Program_Structure_2010.pdf?docID=7064. Core objectives include: maintaining active patient medication and allergy lists, recording smoking status, recording demographic information, e-prescribing (for EPs only), and providing patients with an electronic copy of their discharge instructions (EHs only). Menu objectives include: identifying and providing patient-specific education resources, sending reminders to patients for follow-up care (EPs only), and performing medication reconciliation. See also 75 Fed. Reg. at 44,434; Medicare and Medicaid Programs - Electronic Health Record Incentive Program – Stage 2, 77 Fed. Reg. 53,968, 54,002 (Sept. 4, 2012). Originally, in 2012, EPs and EHs were required to submit selected clinical quality data in an electronic format to CMS or the states through certified EHR technology. However, the final rule eliminated this requirement.

⁴⁵ 77 Fed. Reg. at 54,031-33.

⁴⁶ *Id.*

⁴⁷ Request for Comment Regarding the Stage 3 Definition of Meaningful Use of Electronic Health Records (EHRs), 77 Fed. Reg. 70,444 (Nov. 26, 2012). *But see* Matthew Weinstock, *HIMMS Live: CMS' Tavenner, No Stage 3 Regs in 2013, But Maybe More Stark Exemptions*, Hospitals & Health Networks Daily (Mar. 7, 2013), available at <http://www.hhnmag.com/hhnmag/HHNDaily/HHNDailyDisplay.dhtml?id=8820002249>. CMS Acting Administrator Marilyn Tavenner announced in March 2013 that Stage 3 rulemaking would not begin in 2013.

⁴⁸ *Id.*

⁴⁹ Medicare and Medicaid Electronic Incentive Program Final Rule, 42 C.F.R. Parts 412, 413, 422 *et. al.*

⁵⁰ See e.g., U.S. Dep't of Health & Human Services, *Electronic Health Records in Action*, available at <http://www.hhs.gov/open/initiatives/hhsinnovates/ehealthrecords.html>. For example, during the 2009 influenza pandemic, the Indian Health Service (IHS) used its existing EHR to collaborate with the Centers for Disease Control and Prevention (CDC) and the Food and Drug Administration (FDA), to quickly develop and implement a national electronic surveillance system for over 60% of its facilities serving the American Indian and Alaska Native population.

⁵¹ See generally CMS, *Electronic Health Record Incentive Program FAQs* (Feb. 2012), available at <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/FAQsRemediatedandRevised.pdf>

(Medicare EHs must be general acute care and short-term ("Subsection (d)") hospitals that are paid under the prospective payment system and are located in the 50 states or Washington, D.C.); CMS, *Overview: EHR Incentive Program*, *supra* note 41.

⁵² U.S. Dep't of Health & Human Services, *Certification and EHR Incentives*, available at <http://www.healthit.gov/policy-researchers-implementers/hitech-act-0>.

⁵³ See generally U.S. Dep't of Health & Human Services, HITECH Programs and Advisory Committees, *Health IT Adoption Programs*, available at <http://www.healthit.gov/policy-researchers-implementers/health-it-adoption-programs>.