Law and the Public's Health

This installment of *Law and the Public's Health* explores the comprehensive reforms contained in the American Recovery and Reinvestment Act of 2009, whose implementation is expected to transform the use of health information technology as part of Medicare, Medicaid, and public health practice.

Sara Rosenbaum, JD
Hirsh Professor and Chair, Department of Health Policy
School of Public Health and Health Services
The George Washington University Medical Center, Washington, D.C.

THE HEALTH INFORMATION TECHNOLOGY PROVISIONS IN THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009: IMPLICATIONS FOR PUBLIC HEALTH POLICY AND PRACTICE

Taylor Burke, JD, LLM

This installment of *Law and the Public's Health* represents the first of a two-part review of the health information technology (HIT) provisions contained in the recently enacted American Recovery and Reinvestment Act of 2009 (ARRA).[1] This part reviews the new federal HIT legislative and regulatory infrastructure as well as the Medicare and Medicaid HIT adoption incentives. Part 2 will consider the Health Insurance Portability and Accountability Act (HIPAA) privacy reforms contained in ARRA. Because HIT represents an increasingly essential tool in public health practice, how ARRA alters the environment for public health policy and practice is of crucial importance.

BACKGROUND

There is wide consensus regarding the potential of HIT, especially the electronic health record (EHR), to improve the quality and efficiency of clinical care and to help the nation overcome the fragmented nature of the health-care system.[2,3] Equally important are the implications of HIT for public health policy-making and practice, particularly as a tool for enhancing public health agencies' ability to measure population health and develop interventions aimed at promoting and protecting health and reducing health disparities.[4–6] For example, researchers in Indiana found that electronic laboratory reporting can markedly improve notifiable-condition surveillance by consolidating the information available across numerous laboratories.[7]

THE LEGISLATION

Signed into law by President Barack Obama on February 17, 2009, ARRA marks one of the most sweeping pieces of economic legislation ever enacted, including hundreds of billions of dollars in new health and heath-care spending.[8] ARRA allocates more than $49 billion in both discretionary appropriations and mandatory spending to support and promote the adoption, implementation, and use of interoperable EHRs while at the same time establishing an overarching system of federal governance and oversight. Essentially, ARRA represents the formalization of HIT as a matter of national health policy, a position previously embraced by other nations.[9]

The product of an intensive and lengthy process of policy reform advocacy effort, as well as a reflection of numerous studies of its potential implications, the HIT component of ARRA has the potential to transform public health and health care. At the same time, implementation will raise challenges, and these challenges will, in turn, have implications for the speed with which the transformative capabilities and impact of HIT reach public health agencies, particularly with respect to those public health initiatives and activities that entail practice interface with the health-care system.

ARRA's HIT provisions address three major issues. The first two, development of a federal infrastructure to facilitate a nationwide health information network and the creation of financial incentives in Medicare and Medicaid to incentivize physician and hospital adoption, are the subject of this column. The third area, ARRA's additional health information privacy reforms, will be addressed in Part 2. In each of these areas, ARRA either creates a new law or significantly amends an existing law.

Federal HIT policy and administrative infrastructure

Most health-care providers and health insurance plans view the populations they serve in broad administrative and demographic categories, such as by age, diagnosis, or the type of payer. Public health agencies, on the other hand, perceive the populations they serve in terms of the communities in which individuals live, and the agencies rely heavily on access to both identifiable and aggregated health information to accomplish their core public health functions of surveillance, preparedness, outbreak investigations, and program evaluation. But physicians and hospitals hold the data in the form of patient medical records, and the current paper-based record system creates a major obstacle to the timely and accurate flow of vital information to these agencies outside of state-based mandatory reporting requirements for certain diseases.

ARRA's HIT provisions attempt to bridge this disconnect between the medical care and public health functions of the health system by enabling providers greater communication between the two areas of endeavor, each of which depends heavily on the other. Essentially, HIT enables public health agencies to obtain data—at a personal level when necessary to public health practice—to carry out surveillance, planning, assurance, and other key public health functions. But to maintain the public's trust, these new HIT systems must incorporate the necessary privacy and security safeguards for all of the data held by public health agencies. The vulnerabilities in data security raise important concerns for all public health programs, and public health agencies must have strong privacy policies and practices in place to protect the security of personally identifiable data, such as corrective actions in the event of any potential or actual breaches of privacy or security.[10]

ARRA codifies the Office of the National Coordinator for Health Information Technology (ONCHIT) as the federal hub for developing a national health information infrastructure. This infrastructure must include several required components, such as the ability to improve health-care quality, decrease medical errors, reduce health disparities, and advance the delivery of patient-centered medical care.[11] In addition, the new law states as a clear objective that the information infrastructure allow for the electronic use and exchange of health information that "improves public health activities and facilitates the early identification and rapid response to public health threats and emergencies, including bioterror events and infectious disease outbreaks."[12] This makes clear that ARRA's significant investment in HIT is intended to go beyond the point of care in a physician's office or hospital to include systematic changes allowing for the exchange of information to improve population-based health and surveillance.

Within ONCHIT, two newly created federal advisory committees are charged with developing the standards and certification criteria to promote interoperability and coordinating HIT policy, including advising on the development of a Federal HIT Strategic Plan that must include strategies to enhance the use of HIT for "improving public health."[13] ARRA requires the HIT Policy Committee to make recommendations to the National Coordinator on the use of electronic systems "to improve the quality of health care . . . by improving population health"[14] and to ensure the comprehensive collection of patient race/ethnicity, primary language, and gender information.[15] At the same time, the law permits the committee to recommend methods to facilitate the electronic collection of quality data and public reporting as well as public health and biosurveillance activities.[16] To this end, the members of the HIT Policy Committee must include at least one public health official and one expert in health-care quality measurement and reporting.[17]

ARRA also specifies immediate investment areas for federal HIT funding, including the improvement and expansion of HIT by public health agencies and promotion of the interoperability of clinical data repositories.[18] Additionally, federal grants are available to help local and state public health agencies cover the implementation and start-up costs for "use of and access to electronic health information," as well as for "quality improvement including through quality measurers reporting."[19] The national health information infrastructure also includes two separate funds for public health support. The Public Health and Social Services Emergency Fund consists of $50 million for improvements to information technology security within the Department of Health and Human Services (HHS). The Prevention and Wellness Fund provides $1 billion for three specific tasks: (*1*) $650 million for evidence-based clinical and community-based prevention and wellness strategies that deliver specific, measurable health outcomes to address chronic disease rates; (*2*) $300 million for a Centers for Disease Control and Prevention immunization program; and (*3*) $50 million to states to implement strategies for reducing health-care-associated infections.

ARRA also provides grants to states for the promotion of HIT use, and creates several loan programs for supporting the purchase, utilization, and training of system providers in EHR technology. Furthermore, the Act establishes an HIT Research Center and component regional extension centers to provide technical

assistance and to develop best practices to accelerate efforts to adopt, implement, and effectively utilize HIT. The new legislation also establishes grants for academic programs to create curricula integrating EHR technology into the clinical education of health professionals, as well as a national privacy education initiative aimed at providing covered entities, business associates, and individuals with guidance on their rights and responsibilities related to privacy and security.

Medicare and Medicaid HIT adoption incentives

ARRA amends both Medicare and Medicaid to create financial incentives for HIT adoption by certain healthcare providers, but their payment system structures differ fundamentally. In the case of Medicare, the incentive is broadly conceived to reach both physicians and hospitals as a reward for having adopted certain types of HIT. Incentive payments are tied to reimbursement and conditioned upon the provider's "meaningful use" of the new technology. The statute, in turn, defines the broad parameters of meaningful use (discussed subsequently in this article). In contrast, the Medicaid reforms effectively treat implementation as a state option, limit the special enhanced financing only to certain classes of high-volume providers, and extend assistance to adoption activities themselves. The Medicaid reforms also provide limited incentive payments not associated with initial HIT adoption activities to certain providers tied to reimbursement and also conditioned upon the Medicaid provider's meaningful use of HIT. Although states have discretion over the definition of meaningful use within their Medicaid programs, ARRA requires that all state definitions be approved by the Secretary of HHS, address populations in the state with unique needs such as children, and be compatible with state or federal administrative management systems. The states have discretion to require providers to report clinical quality measures as part of a meaningful use demonstration.[20]

Medicare. Beginning in 2011 and continuing through 2016, Medicare-participating physicians will be eligible for payment incentives if they can demonstrate meaningful use to the satisfaction of the Secretary of HHS through several methods including attestation, submission of claims with appropriate coding, a survey response, or other means specified by HHS. Subject to further clarification in upcoming regulations, ARRA defines the term "meaningful use" to include at least the following: (*1*) the use of certified EHR technology for e-prescribing, (*2*) a demonstration that the certified EHR is sufficiently connected for the electronic exchange of health information to improve the quality of health care, and (*3*) the electronic submission of clinical quality measures to the HHS.[21]

Nonhospital-based Medicare physicians who are meaningful users of HIT may, beginning in 2011, receive HIT incentive payments for up to five years. The amount of the incentive payment is equal to an additional 75% of the physician's allowable Medicare charges for the given year, subject to caps. A physician who first shows meaningful EHR use in 2011 or 2012 has a cap of $18,000 in the first year; a physician who first shows meaningful EHR use in 2013 has a cap of $15,000 in the first year; and a physician who first shows meaningful EHR use in 2014 has a cap of $12,000 in the first year. For the four years of a physician's meaningful use after the initial year, the caps fall to $12,000 for year two, $8,000 for year three, $4,000 for year four, and $2,000 for year five. These incentive payment caps are increased by 10% if the Medicare provider predominantly serves beneficiaries in any health professional shortage area.[22] Conversely, beginning in 2015, nonhospital-based Medicare physicians who are not meaningful users of HIT will be penalized in the form of a 1% to 3% reduction in Medicare payments otherwise due.[23] ARRA also creates a similar incentive program for Medicare Advantage organizations that employ physicians.

The ARRA also provides for Medicare HIT incentive payments to eligible acute care hospitals and critical access hospitals that are meaningful users, as well as reduced payments for those that cannot demonstrate meaningful use.[24] The incentive payments for hospitals will first be available in 2011 and may continue for no more than four years, and the penalties begin in 2015. For acute care hospitals, the amount of the incentive payment equals the sum of a $2 million base amount plus payments for a specific share of a hospital's discharges as defined in the law, then multiplied by a fraction reflecting the proportion of the hospital's inpatient-bed days attributable to Medicare beneficiaries.[25] The payments to acute care hospitals will be reduced by 25% in each of the three years following the initial year incentive payment.

Critical access hospitals are entitled to receive incentives in the form of bonus payments capped at the enhanced Medicare share of 101% of reasonable costs that are for the purchase of certified EHR systems and that are normally subject to depreciation. These critical access hospitals may expense these costs in a single payment year and receive prompt interim payments from the government rather than receiving reimbursement during a multiyear period. They will continue to receive cost-plus reimbursement for their remaining costs, such as ongoing maintenance of the HIT systems that are not subject to depreciation.[26]

Medicaid. The legislation provides states with 100% federal funding to assist certain named provider classes adopting HIT and rewards these providers for meaningful use. Nonhospital-based Medicaid providers are eligible for the HIT implementation funding if they are physicians, dentists, nurse midwives, nurse practitioners, or physician assistants practicing in rural health clinics or federally qualified health centers that are led by physician assistants. Moreover, these providers must have a patient volume of at least 30% attributable to Medicaid patients or, if practicing predominantly in a rural health clinic or federally qualified health center, must have a patient volume of at least 30% attributable to Medicaid patients or other needy individuals.[27] Pediatricians who have 20% of their patients on Medicaid are eligible for up to two-thirds of the amount of payments as other providers.[28] These providers must also agree to waive any right to Medicare HIT incentive payments.

The amount of the federal HIT payments to eligible nonhospital-based Medicaid providers equals $21,250 for the purchase and initial implementation of EHR technology, which must occur by 2016, and an additional $8,500 per year for up to five years for operation and maintenance of the technology, with no payments made after 2021.[29] The ARRA requires that the providers receiving payments cover any additional costs incurred in setting up and maintaining these HIT systems.

Hospitals are also eligible for Medicaid incentive payments for the purchase of EHR technology. Acute care hospitals with at least 10% Medicaid patient volume and children's hospitals of any Medicaid patient volume are eligible.[30] Payments to eligible hospitals will be limited to amounts analogous to those for hospitals in Medicare. That is, the payment limit for each hospital equals a base amount plus an amount related to the total number of discharges, then multiplied by the hospital's patient share attributable to Medicaid.[30] Following the initial start-up payment, subsequent payments to Medicaid providers will be conditioned on meaningful use of the EHR technology as defined by each state.

IMPLICATIONS FOR PUBLIC HEALTH POLICY AND PRACTICE

ARRA's HIT provisions carry clear and important implications for public health policy and practice. ARRA establishes HIT adoption as a national priority for both clinical, patient-focused care and population-wide purposes. For relatively obvious reasons, priority is given to clinical adoption and use; indeed, it is the establishment of the electronic patient record as a health-care practice norm that is paramount to the long-term success of efforts to gain greater population-wide understanding of cost, quality, and health outcome-related implications of health-care practice. To this end, ARRA represents the first major legislative step in tying national health information policy to health-care practice.

Public health agencies stand to benefit significantly from the establishment of HIT as a formal piece of U.S. health policy. The use of EHRs in patient-focused care enables health data to be transmitted to the appropriate agencies in a much less burdensome manner, thus allowing public health professionals to have real-time data they need to monitor health threats and respond to injury, disease, and disability among the population. The ARRA clearly includes the "wiring" of public health agencies as a key priority in the creation of the national health information infrastructure, and the Act requires representation by a public health official on the infrastructure's policy advising committee. The funding streams and technical support for the adoption of HIT by public health agencies seem to be in place, but it remains to be seen whether adequate amounts actually reach the agencies, and whether the technology implemented indeed functions to properly protect the public's health.

The implementation of the Medicare incentives also has implications for public health policy and practice. As a major driver of U.S. health policy, the federal Medicare definition of meaningful use will be critical in determining how quickly we as a nation adopt HIT in the clinical practice setting.[31] If the definition is too onerous or burdensome, Medicare providers may rebel and decide to forgo the incentives and accept the penalties. If the definition is too loose, then the whole point of interoperability may be lost as Medicare providers buy and implement systems that cannot effectively communicate with one another or with public health agencies.

The implications of the Medicaid incentives are even greater from a public health perspective. Because states have the freedom to define meaningful use as they see fit, subject to some limitations, the operationalization of the Medicaid incentive payments after the initial start-up funding will be disjointed and not uniform. This, of course, affects any state's most vulnerable populations, as the flow of data from Medicaid providers to public health agencies could be critically diminished if the provider fails to become a meaningful user of the technology. This, in turn, will reduce to a large extent the ability of public health agencies to track and assist these vulnerable populations. In addition, low-volume

Medicaid providers are not eligible for the start-up funds or the incentive payments for meaningful use, essentially leaving them to fend for themselves regarding HIT acquisition. These providers may choose to forgo adoption as cost-prohibitive, thereby removing any quality improvement possibilities that HIT can provide.

CONCLUSION

The real work to actually operationalize these new programs and rules still lies ahead, with many difficult decisions still to be made. The ultimate success of this massive federal HIT effort will depend in no small measure on the direction that policy makers take us. Do we invest in a flexible information infrastructure that can facilitate innovations in health care and public health, or do we design a national system by committee to be imposed on all users? Clearly, the Medicare and Medicaid definitions of meaningful use will signify the direction and have a direct effect on how quickly the health-care system can bridge the gap between information in the hands of providers and information in the hands of public health officials.

ARRA is seen by many as a significant and necessary step toward comprehensive health-care reform, and the rollout of the HIT provisions provides a vital opportunity to transform for the better the data-exchange part of this effort. At one extreme, the language of the Act allows for an incremental series of HIT investments that are relevant to the public and providers alike. At the other extreme, the Act also appears to permit a top-down bureaucratic approach to produce a monolithic and overengineered HIT system that only works if every device is tightly integrated with every other device. Simply automating a broken health-care system will do more harm than good, and the direction that policy makers take us will make all the difference in the world.

Taylor Burke is an Assistant Professor in the Department of Health Policy at The George Washington University School of Public Health and Health Services in Washington, D.C.

Address correspondence to: Taylor Burke, JD, LLM, Department of Health Policy, The George Washington University School of Public Health and Health Services, 2021 K St. NW, Ste. 800, Washington, DC 20006; tel. 202-994-4226; fax 202-994-4040; e-mail <taylorb@gwu.edu>.

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