Health Information Technology—Results From a Roundtable Discussion

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ABSTRACT
BACKGROUND: Health information technology (HIT), notably e-prescribing and electronic health records (EHR), have the potential to improve the quality of care, reduce medication errors and adverse events, and decrease overall health care utilization and costs. However, the United States continues to lag behind other countries in the adoption and use of HIT.

OBJECTIVE: To review the various issues surrounding the implementation of HIT in the United States and potential drivers that will influence the use of e-prescribing and EHR.

SUMMARY: The United States has been slow to embrace HIT. However, various factors, including increasing government involvement, are speeding the implementation and use of HIT. E-prescribing and EHR are both electronic means to provide better coordination of care by enabling various health care professionals to access patient medical records. Widespread adoption of HIT can be especially helpful for the elderly, since this population tends to have more chronic conditions requiring polypharmacy. Adoption of e-prescribing can reduce medication errors due to poor handwriting, while EHR can promote better clinical outcomes, improve medication adherence and refill rates, improve member satisfaction, and lower overall health care expenditures. Unfortunately, barriers to the adoption of e-prescribing and EHR still exist, including resistance to learning new technology, initial start-up costs, delay in seeing a return on investment, lack of a standardized platform, increased administrative burden, and misaligned incentives. In an effort to promote greater adoption of e-prescribing and EHR, the Centers for Medicare & Medicaid has designed several initiatives, and other private organizations are now becoming more involved to close the HIT gap.

CONCLUSION: Although the United States has been slow to implement HIT, there is reason to be hopeful. Increasing involvement by the government and other organizations will facilitate the greater adoption and use of e-prescribing and EHR in the near future. Ongoing data are needed, however, to demonstrate improvements in overall patient care and reductions in health care utilization and costs. These data are necessary to remove existing barriers that may prevent widespread implementation.


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H ealth information technology (HIT), the secure transmission and management of health information, is relatively new. Despite its availability, acceptance and use of HIT in the United States has been slow and lags behind many industrialized countries.1 Forces within the current environment—rising health care expenditures, high adverse event rates, and government and private initiatives—are increasing the speed of acceptance of HIT. Challenges to the adoption of HIT in the United States have included the high costs of the technology, general resistance to change, misaligned incentives, and the fractured payment system. Believing that HIT will improve the quality and safety of health care, President George W. Bush set a goal for most Americans to have an electronic health record (EHR) by 2014.2 The Centers for Medicare & Medicaid Services (CMS) has followed through on this directive by instituting programs aimed at increasing the adoption and use of HIT, starting with e-prescribing and EHR.

Benefits of HIT
Increased use of HIT can benefit all members of the health care system: patients, payers, prescribers, physicians, office staff, and pharmacies.3 While one particular technology may provide a more apparent benefit to a particular segment, the overall improvement in patient care that can be realized affects all stakeholders in the process.

Improvements in Quality of Care
Data drive the measurement of quality in health care. Collecting data can be cumbersome in a paper and pencil world. Capturing information electronically is a major asset of HIT and facilitates quality measurement. Data that are mined through HIT applications provide continuous feedback to providers and plans and are an invaluable tool for guiding future care decisions.

E-prescribing
E-prescribing uses technology to allow prescribers to electronically transmit prescriptions. The intent of this technology is to reduce medication errors and improve patient care by eliminating the need for interpreting handwritten prescriptions.4 Through the increased use of e-prescribing, physicians have the benefit of receiving real-time formulary, drug-drug and drug-allergy information as well as a history of drugs dispensed for the patient. The elimination of handwriting interpretation decreases medication error rates and reduces communication time between pharmacies and office staff. Payers are better able to promote increased utilization of generic and preferred brand drugs, as well as avoid costs resulting from adverse drug events. However,
even with electronic prescribing, errors in drug selection, dose, and duration of therapy may occur. Since e-prescribing is still relatively new, its overall impact on medication errors will need to be closely watched.

**EHR**

EHR provides immediate electronic access to information at both a patient and population level and supports clinical decision making and additional information that can enhance the quality and safety of patient care. EHRs may be maintained by providers or individuals (also known as personal health records [PHRs]). However, a precise and consistent description of a fully functional EHR system remains elusive, which makes interpretation of the published literature difficult. According to the Institute of Medicine (IOM), EHRs should have 8 core care-related functionalities: health information and data, result management, order management, decision support, electronic communication and connectivity, patient support, administrative processes, reporting and population health management.5

According to a review by the Agency for Healthcare Research and Quality (AHRQ), EHR applications improve quality of care.6 A total of 84 papers related to EHRs were identified; those meeting criteria (n=7) for functionality and the ambulatory setting were included in the final analysis. The authors concluded that there is support in the literature for improvement in provider performance when clinical support decision-making tools (e.g., prompts for preventive medications, screening for drug interactions) are part of the EHR system. The key to the success of improving performance is the accessibility of data and the ability to translate the data into information that a provider can use to improve clinical practice.8

Improvements in care coordination also require access to data. Patients with chronic conditions or multiple comorbid conditions often have many caregivers, require multiple medical tests, and take more than one medication. Sharing patient-related information among caregivers is often difficult and may be unrealistic if the patient has treatment records in a variety of settings (e.g., hospitals, clinics, private practice). The use of an EHR could simplify the coordination of care and streamline access to patient medical records.

The Veterans Health Administration (VHA) is often cited as a model for the provision of coordinated care. Through the promotion of EHR and the use of outcomes indicators, the VHA strives to constantly improve care for veterans. Following the implementation of an integrated electronic medical record (EMR), males ≥35 years of age from a VHA cohort were compared to a random sample of men from 12 communities in a study using a subset of quality indicators (n=348) from RAND’s Quality Assessment Tools system, which represents both inpatient and outpatient care for acute and chronic conditions.7 The VHA cohort (n=596) scored significantly higher than the national sample cohort (n=992) for adjusted overall quality (67% vs. 51%, respectively [95% CI=14%-18%]), chronic disease care (72% vs. 59%, respectively [95% CI=10%-17%]), and preventive care (64% vs. 44%, respectively [95% CI=12%-28%]). Differences between the cohorts were greatest when the care process was also part of the VHA performance measurement system.

The impact of HIT on delivery of patient care was the focus of a recent systematic literature review that included 257 studies.8 The benefits of HIT fell into 3 main groupings: increased adherence to guidelines or protocols, improved medication safety, and enhanced surveillance and monitoring. The majority of systems included in these studies were decision-support systems aimed at providers (63%) with 37% of studies evaluating EHR. Use of EHR was more common in the outpatient setting, and provider order entry systems were more common in the inpatient setting. Promoting increased adherence to guidelines or protocols was considered the major impact of HIT. Absolute increases in improvements in quality of care ranged from 5% to 66% with most increases found in the range of 12% to 20%. Improvements in primary preventive measures with the use of HIT also occurred. Reductions in medication errors were noted in results from 4 studies, and improvements in systems evaluations focused mainly on prevention of disease outbreaks. The review also evaluated the effects of HIT on efficiency. Most of the studies (80%) that evaluated the effect of HIT systems on utilization of care and provider time showed decreased rates of health services utilization such as diagnostic tests and laboratory measurements.8

### Impact on Cost

Health information exchanges involve sharing of clinical, financial, and demographic data among health care stakeholders in support of care delivery, financing, public health surveillance, research, and other health system activities. According to a September 2008 survey by eHealth Initiative,9 most fully operational information exchange systems (29/42, 69%) reported a reduction in costs. These reductions were realized through improvements in quality of care such as avoidance of redundant tests; avoidance of hospital admissions for medication allergies, errors, or interactions; lower costs of care for patients with chronic conditions; and reductions in time spent on administration. The majority of respondents cite securing up-front funding as a significant challenge.9 Additionally, of the 130 respondents, 82% said that as a sustainable business model, HIT was a very difficult or moderately difficult challenge.

### E-prescribing

With e-prescribing, it is hoped that the improved safety and accuracy of prescribing will translate to better patient outcomes and reductions in personnel time required for prescription clarification.10 Savings in personnel time both from a prescribing and dispensing perspective could exceed $400 million. CMS estimates that over a 5-year period, the economic benefit of e-prescribing achieved by prescribers, dispensers, and beneficiaries could exceed $800 million.10
EHR

Although cost is often cited as a barrier to adoption of EHR, several studies indicate that start-up costs are often balanced with cost savings, resulting in a cost-neutral change. In a model framed from the perspective of the health care organization, EHR costs were compared to traditional paper-based medical records for a 5-year period. Both system costs (software, implementation, support and maintenance, hardware) and induced costs (costs stemming from an initial loss of productivity due to new processes) were included in the model. Benefits included costs avoided and increases in revenue generation. Despite an annual cost of $46,400 (in 2002 dollars) associated with EHR, an annual benefit of $154,900 was realized when EHR was implemented. Improvements in productivity have been noted following implementation of an in-house EHR. In the VHA, a shift to EHR from 1996 to 2004 was accompanied by an increase in the number of patients treated (69.4%) and a net decrease of 23.3 full-time employee equivalents per 1,000 patients (37% reduction). Implementation of the EHR system at the VHA also enabled the provision of care at an overall cost per patient that was 26% lower than Medicare’s cost per patient (Figure 1). Retrospective qualitative case studies of 14 solo or small-group primary care practices were conducted to determine the costs and benefits of EHRs. Costs were based on one-time and ongoing EHR-related expenses as well as productivity loss, training needs, and telecommunications. Average costs per full-time equivalent provider per year were $43,826 initially, with ongoing costs averaging $8,412. Average benefits per full-time equivalent provider per year were $32,737; thus, approximately $23,000 in net benefits per full-time equivalent provider per year were realized within two and one-half years of EHR use.

E-prescribing

E-prescribing is expected to reach the 100 million mark in 2008, reflecting 7% of all eligible prescriptions (new and renewal transactions) (Figure 2). In 2007, there were approximately 35,000 prescribers employing e-prescription technology and the number of e-prescribers is expected to more than double to 85,000 by the end of 2008. While an increase is expected, physician use of e-prescribing in the United States still lags behind many other countries (Figure 3).

EHR

As with e-prescribing, the adoption of EHR in the United States trails many other countries. DesRoches et al. described the state of EHR adoption in 2007 and 2008 by conducting a national survey of 2,758 physicians (62% response rate; Figure 4). Physicians were identified from the 2007 Physician Masterfile of the American Medical Association. Overall, the adoption rate

![Figure 1: Overall Health Care Costs Per Patient By Year—Lower With EHR Use in a VHA Population (No EHR use in Medicare Comparator)](image)

![Figure 2: Annual E-prescription Transactions Are on the Rise)](image)
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was low, with only 4% of physicians reporting that they used a fully functional EHR system. A basic system was used by 13% of surveyed physicians. Primary care physicians utilized this technology more often than physicians who are not in primary care practices \((P<0.001)\). Adoption of EHR was higher if the practice was associated with a hospital or medical center \((P=0.008)\). Larger physician practices were also more likely to utilize EHR than small practices \((P<0.001)\). Physicians with a fully functional system were more likely to be satisfied with the reliability of the technology than physicians with a basic system \((90\% \text{ vs. } 79\%, \ P<0.01)\). Overall, a positive response to survey questions regarding the beneficial effects of EHR on their practice was more frequently reported by physicians who used a fully functional system (Figure 4). Financial incentives for technology purchases and payment for use of the EHR system were cited as facilitators of adoption.\(^{16}\)

**Pushing HIT Adoption Forward**

Major efforts are underway to increase HIT adoption. The cost of health care is skyrocketing; for 2007, total spending for health care was \$2.3\ trillion, representing 16% of the U.S. gross domestic product (GDP).\(^{17}\) Health care expenditures for the United States exceed health spending in other countries even though health care benefits are not offered to all U.S. citizens. These costs are expected to continue to grow; at the current rate of growth, health care is expected to reach 20% of the GDP within a decade.\(^{17}\) Means to provide high quality care at the lowest cost continues to spur the use of technology forward. When technological advances improve care and prevent medical misadventures, costs reductions are realized.

High rates of medication errors and adverse events related to treatment are also driving the push for adoption of HIT. The Institute of Medicine Report *To Err Is Human* has been instrumental in pushing issues of patient safety to the forefront of public discussions.\(^{18}\) Each year, medication errors alone are responsible for an estimated 1.5 million injuries and \$3.5\ billion in excess costs.\(^{19}\) Increased use of HIT is often cited as one key component of reducing this high error rate and the associated costs.

Efforts from several levels—federal, state, professional organizations, and industry—have championed increased use of HIT. One of the largest drivers is the U.S. government. CMS has initiatives designed to promote the adoption of 2 key components of HIT: e-prescribing and EHR.

**E-prescribing**

On July 15, 2008, Congress overrode a presidential veto and enacted the Medicare Improvements for Patients and Providers Act (MIPPA) of 2008.\(^{20}\) This act makes changes to the Medicare program; in particular, a section of this act targets e-prescribing and is intended to strongly encourage its use among Part D participants. In effect, this new law provides physician incentives for e-prescribing with the intent of providing better coordinated care, improving patient outcomes, and reducing overall health care costs. Beginning in 2009, physicians who use e-prescribing for Medicare Part D recipients are eligible for an incentive payment of 2% of annual charges for Medicare services.\(^{21}\) The incentive is available for a 5-year period with a decreasing incentive bonus over time. Additionally, providers who fail to use e-prescribing will be penalized beginning in 2012. The penalty increases from 1% to 2% of the annual Medicare payment by the year 2014. The law does have a safety net to exempt certain prescribers from penalties—i.e., those for whom implementing e-prescribing would be cost prohibitive (e.g., rural practitioners with limited Internet access).\(^{21}\) It is hoped that the money spent on incentives will be recouped through cost savings. Over a 10-year period, Medicare has the potential to save an estimated \$156\ million through avoidance of adverse drug events and an additional \$410\ million in savings through generic medication use due to e-prescribing.\(^{10}\)

The recent Medicare mandate advocating financial incentives for e-prescribing will most certainly drive increased utilization.\(^{21}\) Other financial incentives may further increase e-prescribing. The Medicare Electronic Medication and Safety Protection (E-MEDS) Act of 2007 was introduced to Congress in December

*FIGURE 3* United States Lags Behind in the Adoption of Electronic Medical Records and E-prescribing

![United States Lags Behind in the Adoption of Electronic Medical Records and E-prescribing](image-url)
2007. If passed, this bill allows for a one-time bonus of $1,000 to $2,000 for e-prescribing to physicians who meet a threshold volume or proportion of claims for physician services for Medicare beneficiaries. To encourage adoption, the higher one-time payments ($2,000) will be provided to physicians who demonstrate early use of e-prescribing. This bill also offers ongoing incentives for the use of e-prescribing, as well as 10% reductions in reimbursement per claim if e-prescribing is not used. These reductions will be waived, however, for 1 to 2 years due to unforeseen circumstances or hardship. Since its introduction, however, no additional legislative activity has occurred, and the bill remains in committee.

The push for e-prescribing extends beyond the government. Several professional organizations have launched a website (www.GetRxConnected.com) in conjunction with the Center for Improving Medication Management that supports the conversion to e-prescribing. Through this website, prescribers can generate a report that identifies whether their EMR system is certified for e-prescribing. For those without EMR capabilities, the site provides information on the evaluation of e-prescribing technology and also offers a feature to help organizations determine the financial impact of e-prescribing. The Center for Information Management also offers consumer-directed materials that provide education about e-prescribing. To further support the adoption of e-prescribing, free software is available from the National ePrescribing Patient Safety Initiative (NEPSI), a joint project of

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**FIGURE 4 Rates of Positive Survey Responses on the Effect of Adoption of Electronic Health Record Systems**

<table>
<thead>
<tr>
<th>Category</th>
<th>Basic system</th>
<th>Fully functional system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Clinical Decisions</td>
<td>63</td>
<td>82</td>
</tr>
<tr>
<td>Quality of Communications with Other Providers</td>
<td>59</td>
<td>72</td>
</tr>
<tr>
<td>Quality of Communications with Patients</td>
<td>86</td>
<td>92</td>
</tr>
<tr>
<td>Prescription Refills</td>
<td>85</td>
<td>95</td>
</tr>
<tr>
<td>Timely Access to Medical Records</td>
<td>96</td>
<td>97</td>
</tr>
<tr>
<td>Avoiding Medication Errors</td>
<td>80</td>
<td>86</td>
</tr>
<tr>
<td>Delivery of Preventive Care That Meets Guidelines</td>
<td>55</td>
<td>85</td>
</tr>
<tr>
<td>Delivery of Chronic-Illness Care That Meets Guidelines</td>
<td>56</td>
<td>82</td>
</tr>
</tbody>
</table>

*P < 0.001, P = 0.03, P = 0.02, P = 0.19, P = 0.52, P = 0.02*

organizations with a goal to address the current crisis in preventable medication errors.24

Recognizing the many barriers faced by early adopters of e-prescribing, such as incompatible systems, companies in the private sector are working together to create solutions. One recent example of this cooperation is the merger between the e-prescribing networks of community pharmacies (SureScripts) and the largest pharmacy benefit managers (RxHub) in July 2008. This merger creates a single, secure, nationwide network for e-prescriptions that is expected to further catapult the presence of e-prescribing and increase its ease of use.25 This joining of these 2 networks helps close the gap between community and mail-order pharmacy and will allow prescribers to access information regarding patient prescription use in both arenas. With the new network, prescribers can transmit new or renewal e-prescriptions to both community and mail-order pharmacies. This breaks down additional barriers to e-prescribing. One obstacle that remains is the prescribing of controlled substances. If e-prescribing for controlled substances becomes plausible and payers and vendors offer incentives, further e-prescribing growth can be expected. It appears that regulating the e-prescribing of controlled substances is on the horizon. The Drug Enforcement Agency (DEA) has proposed regulations that would allow e-prescribing of controlled substances as long as stringent guidelines are followed.26 The legislation is designed to supplement existing controlled-substance regulations and would allow pharmacies to receive, dispense, and archive electronic prescriptions for Schedule II-V controlled substances. It would enable the better integration of prescription and medical records for pharmacies and hospitals.25

**EHR**

With a goal of fostering EHR implementation as a vehicle to improve quality of care, CMS recently identified participating locations for a 5-year demonstration initiative based on 2 separate incentive payments.27 The first offers a financial reward for physician practices that adopt and use EHR and the second for reporting 26 selected quality measures beginning in the initiative’s second year. Organizations who participate in this project must provide the initial financial investment. Participating practices receiving the financial incentive will need to have a Certification Commission for Healthcare Information Technology (CCHIT)-certified EHR by the end of the second year. Practices are reimbursed annually for completing an Office Systems Survey that measures the number of EHR functionalities incorporated into daily practice, with payments made for the reporting of quality measure (beginning in year 2), and performance on clinical quality measures for year 3. Over a 5-year period, the maximum per provider reimbursement is $58,000, with a maximum reimbursement of $290,000 per practice.27

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**Challenges to HIT Adoption**

Despite the fervor surrounding potential improvements in quality of care and cost reductions, the adoption of HIT faces substantial challenges. There are individuals in every field who are slower to embrace technology. These reluctant individuals will need support in various areas to encourage adoption of HIT. Contributing factors to low adoption rates include a paucity of data supporting improved patient outcomes, privacy concerns, lack of a national standard platform for information exchange, legal concerns, and high system costs.28

In Massachusetts, where almost half of physicians use EHR, a random stratified survey was mailed to 1,921 physician practices in 2005.29 One physician from each practice was chosen at random to participant in the survey, and an alternative physician was selected in the event the initially chosen physician was no longer at the practice, had retired, or was deceased. Use of an EHR was evident in fewer than 25% of practices overall; larger practices were more likely to use EHR. More than half (57%) noted physician skepticism as a barrier to adoption. Lack of computer skills, technical support, and time to learn about EHR systems were also reported by 59%, 66%, and 77%, respectively.29

It seems that this skepticism is not without premise. In a systematic review of published literature, Poissant et al.30 evaluated the impact of EHRs on documentation time for physicians and nurses. For physicians, an average increase of 17.5% in documentation time was identified. Increased documentation time varied depending on the type of system, with desktop applications producing the most inefficiencies for physicians (work time increased an average of 238.4% per working shift). These authors concluded that decreased documentation time is not likely to be realized with EHR.30 Another study conducted in dual-eligible patients of psychiatric practices found that practitioners spent an additional 45 minutes on administrative tasks for each one hour of patient care for this population.31 Any technology that ends up increasing the administrative burden of the user, such as the increase in documentation time, will be problematic. End users will continue to be reluctant to embrace technology that pulls caregivers from their primary objective—patient care. Demonstrated benefits of HIT in decreasing administrative tasks are needed to move HIT forward.

To further complicate this problem, the incentive for physicians to invest in EHR is out of alignment in the present environment. Benefits of HIT are often noted as reductions in overall health care costs. These benefits may not be realized by providers who make the financial investment in a system. Of the estimated $77 billion that could be saved at a level of 90% EHR adoption, $23 billion would be allocated to Medicare, and $31 billion would be allocated to private payers.11 Incentives also vary depending on the reimbursement model. In a fee-for-service model, an incentive to use an EHR would only be realized if improvements in revenue per time were improved.32 In mixed models, the contributions of EHR to improvements in quality or performance measures may
increase the allure of adopting EHR.

A lack of widespread HIT results in an inability to achieve desired outcomes. One of the main benefits proposed for EHRs is improved coordination of care, particularly for individuals with chronic conditions or with multiple comorbidities who see multiple physicians and other ancillary services as part of their care. This benefit can only be fully realized if secure, patient-related data can move freely between providers. The low adoption rate of this technology has negated realization of this benefit in many outpatient settings.

Another problem slowing the acceptance of HIT is a lack of standards for EHR systems. Standards are needed to permit communication and interoperability between systems. There has been little incentive for businesses in the free market environment to develop standards, and purchasers of systems have not demanded this feature despite research suggesting that a savings of $78 billion could be realized with a fully integrated health care information system in the United States. Returns are diminished if health information exchange is not standardized. Although the federal government has made some strides in the environment to develop standards, and purchasers of systems have not demanded this feature despite research suggesting that a savings of $78 billion could be realized with a fully integrated health care information system in the United States. Returns are diminished if health information exchange is not standardized. Although the federal government has made some strides in the environment to develop standards, the marketplace remains a considerable distance from adoption of functional standards.

Still, one of the major hurdles for HIT is the high cost associated with the one-time start-up and ongoing maintenance of the technology. Organizations and practice groups may agree that these systems have the potential to improve patient outcomes. Yet, skepticism about whether the initial monetary outlay will be cost beneficial remains; this is especially relevant given the state of the U.S. economy. Initial EHR costs can be prohibitive for some organizations and individual practitioners. Cost estimates for implementing an EHR system in the ambulatory setting must include the start-up outlay for hardware, software, and licensing, as well as costs related to the process of implementation (e.g., training, temporary loss of productivity). Per physician start-up costs have been reported to vary between $15,000 and $50,000; benefits such as decreased staffing costs and increased revenue may not be realized and are dependent on the specific EHR system. Physicians have cited initial technology costs as a major barrier to adoption of EHRs. Return on investment (ROI) remains a sticking point for many providers. In a recent national survey, 50% of physicians who had not adopted EHR technology cited uncertainty of achieving an ROI as a barrier to adoption.

In a review of 14 solo and small physician group practices, EHR costs (one-time and ongoing costs for hardware, software, information systems staffing, external contractor services, installation, training, abstraction, productivity loss, and telecommunications) and EHR benefits (decreases in compensation for medical records and other support staff, decreases in transcription and paper supply costs, increased visits due to reduced provider time per visit, decreased provider time at work, and revenue enhancement from higher payment for increased levels of coding for visits) were calculated to determine the time to achieve an ROI. The average time to pay for EHR was 2.5 years with a profit realized soon after. However, it would take 1 practice 9 years to see a positive ROI, and 2 practices would never realize a positive return.

Current initiatives by public and private sectors to improve adoption of HIT through providing either up-front support in the form of software and hardware or monetary incentives for using the technology coupled with results from the literature on positive ROI for physicians who adopt HIT will help to increase its acceptance and use.

**HIT: What Will the Future Bring?**

The low current adoption rate appears to make attainment of the 2014 goal an improbable task, yet there are positive signs that acceptance may be increasing. The emphasis placed on increasing adoption through CMS initiatives should attract the attention of physicians. If initiatives such as demonstration projects support improved quality and lower costs, leaders in the health care industry can use this to encourage further adoption of HIT.

CMS and the Office of the Inspector General have also created rules in response to concerns about how existing regulations may impact the adoption of HIT. The intention is to remove barriers that prohibit the transfer of software and systems hardware to enable provider collaboration to develop effective HIT systems. While the e-prescribing rules are more stringent than EHR regulations, the new provisions allow for donations of technology under certain conditions. Any EHR software donation must include an e-prescribing capability that is compliant with the Medicare Drug Benefit Standards. The new rules require a written agreement outlining the terms of the donation, and recipients are required to pay 15% of the donation’s cost.

**Conclusion**

It is believed that through public and private incentives for using HIT, the adoption rate of this technology will increase. It is only through increased adoption that the potential benefits, such as improved care coordination, will be realized. Studies must continue to provide data to support improvements in quality of care and cost reductions that accompany HIT adoption. Recognizing the barriers to HIT adoption and creating systems to address these barriers will also be critical to promote increased use. While this may seem to be an unachievable goal today, the adoption and use of EHR continues to slowly grow. This pace could potentially accelerate with continued support and ongoing initiatives from the government, medical organizations, and industry.

**DISCLOSURES**

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REFERENCES


