



BIPARTISAN POLICY CENTER

**STATEMENT OF JANET M. MARCHIBRODA  
DIRECTOR, HEALTH INNOVATION INITIATIVE, BIPARTISAN POLICY CENTER**

***HEALTH INFORMATION TECHNOLOGY: USING IT TO IMPROVE CARE***

**BEFORE THE  
THE UNITED STATES SENATE COMMITTEE ON FINANCE  
JULY 24, 2013**

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Chairman Baucus, Ranking Member Hatch, and members of the Committee, thank you for the opportunity to join you today to discuss using health information technology to improve care. My name is Janet Marchibroda and I currently serve as the Director of the Health Innovation Initiative at the Bipartisan Policy Center (BPC).

Founded by former Senate Majority Leaders Howard Baker, Tom Daschle, Bob Dole, and George Mitchell, BPC is a non-profit organization that drives principled solutions through rigorous analysis, reasoned negotiation, and respectful dialogue, focusing on numerous issue areas, such as economic policy, energy, housing, immigration, and health care.

BPC's Health Innovation Initiative conducts research and gains input from experts and stakeholders across every sector of health care to develop recommendations that promote improvements in the cost, quality, and patient experience of care through the use of innovative strategies and health information technology (IT).

In addition to my current role at BPC, over the years I have had the privilege of serving in a number of capacities at the intersection of health care quality, innovation, and information technology, including my roles as the chief operating officer of the National Committee for Quality Assurance, the chief health care officer of IBM Global Business Services, the executive director of Connecting for Health, and the founding chief executive officer of the multi-stakeholder, non-profit eHealth Initiative.

Over the last two years, BPC's Health Innovation Initiative has released several findings and recommendations related to the health IT capabilities needed to support higher quality, lower cost, patient-centered care as well as new delivery system and payment reforms, to inform public policy and private sector investments regarding the most effective allocation of health IT resources.

BPC's first major report in this area, [Transforming Health Care: The Role of Health IT](#), identifies the common attributes of high-performance and new models of care, assesses the health IT capabilities needed to achieve these attributes, and makes recommendations for actions needed to close the gaps in such capabilities. Grounded in a review of the literature and interviews with 40 high-performing organizations, this report was developed under the guidance of BPC's [Task Force on Delivery System Reform and Health IT](#), which was led by former Senate Majority Leaders and BPC Health Project Co-Chairs Tom Daschle (D-SD) and Bill Frist (R-TN) and included several nationally respected experts and leaders from many sectors of health care.

BPC's Health Innovation Initiative subsequently released several additional reports which examined more closely issues identified by the initial report, including the electronic information needs of clinicians for transitions of care, engagement of individuals in their health and health care through the use of electronic tools, accelerating electronic health information sharing to improve quality and reduce costs in health care, and recommendations for an oversight framework for health IT that both protects patient safety and promotes innovation.

I have drawn upon these BPC's findings and recommendations in preparing today's testimony.

### **Health IT's Role in Improving Health and Health Care**

Health IT plays a significant role in improving the quality, cost-effectiveness, and patient experience of care. One comprehensive review of the literature showed that 92 percent of recent peer-reviewed articles on the effects of health IT used in clinical practice reached a positive conclusion overall, addressing such areas as efficiency of care, effectiveness of care, provider satisfaction, and patient safety.<sup>1</sup>

Health IT also plays a critical and foundational role in high-performing health care organizations and new models of care delivery and payment. Fueled by concerns over rising health care costs and uneven quality, new delivery system and payment models that promote higher quality, lower cost, and more patient-centered care are rapidly emerging, with support from the federal government, the private sector, and states. Through the Center for Medicare and Medicaid Innovation, the federal government is investing considerably in new models of delivery and payment, including accountable care organizations (ACOs), advanced primary care, the patient-centered medical home, home-based care, and bundled payments.<sup>2</sup> The private sector and states are also launching accountable care and patient-centered medical home arrangements that are designed to improve health care and lower costs. A recent study identified 227 provider organizations that had established ACO contracts with Medicare, Medicaid, private payers, or some combination thereof.<sup>3</sup> A majority of states are now advancing medical home or other accountable or coordinated care arrangements through their Medicaid or Children's Health Insurance Programs.<sup>4</sup>

In a report issued last year, BPC identified the common attributes of high performance and new models of care, and defined the health IT capabilities needed to support achievement of such attributes. A summary of those findings is provided below.

<b>Common Attributes of High-Performing Organizations and New Models of Care<sup>5</sup></b>	<b>Role of Health Information Technology<sup>6</sup></b>
Informed clinicians and care teams at the point of care and in between visits	<ul style="list-style-type: none"> <li>▪ Provides ready access to clinical decision support tools and information about the patient, to inform clinical decision-making at the point of care and between visits, through the use of electronic health records (EHRs) and health information exchange</li> </ul>
Coordinated care delivery across settings	<ul style="list-style-type: none"> <li>▪ Enables electronic access for all members of the care team to information about the patient—from across the multiple settings in which care and services are delivered—through electronic information sharing or health information exchange</li> </ul>
Engagement of individuals in their health and health care; focus on prevention and wellness	<ul style="list-style-type: none"> <li>▪ Provides patients access to information contained in their EHRs</li> <li>▪ Educates, engages, and supports individuals through the use of online, electronic, and mobile consumer e-health tools</li> </ul>
Providing timely access to care	<ul style="list-style-type: none"> <li>▪ Enable “virtual” visits or online consultations, secure email communications between clinicians and patients, and online health care transactions, through consumer e-health tools</li> </ul>
Alignment of payment incentives with quality, cost, and patient experience outcomes	<ul style="list-style-type: none"> <li>▪ Aggregates and analyzes clinical, administrative, and patient-generated data through analytics, to conduct the following: <ul style="list-style-type: none"> <li>– Measure outcomes in cost, quality, and patient experience of care</li> <li>– Identify gaps and duplications in care to inform clinical decision-making</li> <li>– Identify and predict areas requiring intervention and improvement</li> </ul> </li> </ul>
Organizational and clinical leadership	<ul style="list-style-type: none"> <li>▪ Aggregates and analyzes clinical, administrative, community, and patient-generated data through analytics to set goals, monitor progress, and improve performance</li> </ul>

As indicated above, the health IT capabilities that support higher quality, more cost-effective, patient-centered care fall into four primary categories: electronic health records or EHRs, health information exchange, consumer e-health tools, and analytical tools.

A more detailed description of each of these health IT categories, benefits, rates of adoption, and barriers to more widespread adoption, are summarized below.

## **Where We are Today: Current Status of Health IT**

### **Electronic Health Records**

EHRs enable clinicians to have ready access to reminders, alerts, and other clinical decision support tools, as well as important information about the patient, to inform clinical decision-making at the point of care and in between visits, help eliminate medical errors, and promote evidence-based care. Examples of information that can be included are medications that have been prescribed; allergies; laboratory, imaging, or other diagnostic tests that have previously been performed and the results of those tests; previous diagnoses and hospitalizations; and demographic information about the patient, along with his or her preferences.

The level of adoption of EHRs among physicians and hospitals has increased significantly over the last few years. Adoption of at least a basic EHR system among office-based physicians increased from 17 percent in 2008 to 40 percent in 2012.<sup>7</sup> The share of hospitals that have adopted at least a basic EHR system increased from 9 percent in 2008 to 44 percent in 2012.<sup>8</sup>

Research indicates that there are disparities in the levels of adoption among different groups. EHR adoption among physicians varies by specialty status, physician age, and practice size. Primary care physicians are more likely to adopt EHRs than non-primary care specialists and physicians in small practices are less likely to adopt than those who deliver care in larger practices.<sup>9</sup> Small, non-teaching, and rural hospitals tend to adopt EHRs more slowly than other hospitals.<sup>10</sup>

Commonly cited barriers to EHR adoption among physicians include lack of access to capital to support purchase of systems; concerns about the ongoing costs of maintaining and upgrading systems; uncertainty about the return on investment; lack of capacity to evaluate, select and install such systems; concerns about the lack of productivity during transition and the changes in work flow that will follow; worries about privacy and security; and lack of trained staff with the technical expertise needed for both implementation and ongoing management.<sup>11,12,13</sup>

Barriers to adoption among all hospitals are similar to those cited for physicians and are generally more pronounced in smaller or rural systems. They include lack of capital for upfront costs; concerns about the ongoing costs of maintaining and upgrading systems; physician resistance; and lack of trained technical staff.<sup>14</sup>

A majority of the investment in health IT brought about by the Health Information Technology for Economic and Clinical Health (HITECH) Act—\$15.5 billion of the \$17.5 billion spent to date—has been used to provide incentives to eligible health care professionals and

hospitals for their adoption and “meaningful use” of EHR technology. As of June 30, 2013, approximately \$15.5 billion had been expended under the Centers for Medicare and Medicaid Services (CMS) Medicare and Medicaid EHR Incentive Programs (informally referred to as “Meaningful Use”), \$6.3 billion of which was paid to eligible professionals and \$9.2 billion of which was paid to hospitals.<sup>15</sup>

Many of the EHR capabilities needed to support high quality, cost-effective care have been included in Stage 1 and Stage 2 requirements for Meaningful Use.

### **Health Information Exchange**

Because much of the information about a patient’s health and health care resides in multiple locations across the health care system, including the offices of primary care physicians and specialists, hospitals, laboratories, and pharmacies, as well as with patients themselves, in order for a clinician to provide well-informed, coordinated care, information sharing across the settings in which care and services are delivered for an individual patient, is required. Traditionally this information has been shared using mail, phone, or fax and in many cases, this information has not been shared at all, resulting in the repeat of tests—which can be costly and sometimes harmful—or less than optimal care.

The electronic sharing of information—or health information exchange—brings information about the patient—regardless of where care or services are delivered—to the clinician or care team caring for an individual patient, which enables better care coordination, avoidance of gaps and duplications in care, and more informed decision-making—all of which drives higher quality, more-cost effective care.<sup>16,17</sup>

Electronic health information sharing also enables the more accurate, efficient aggregation of data to support the calculation of performance measures, which are required by a multitude of federal, state, and private sector programs.

Recent surveys of clinicians indicate that a majority believe that the electronic exchange of health information across care settings will have a positive impact on the quality of patient care, the ability to coordinate care, and the ability to reduce costs.<sup>18,19</sup> A majority of clinicians believe that health information exchange will help them meet the demands of new care models—such as the patient-centered medical home and those related to accountable care—and also participate in third-party reporting and incentive programs.<sup>20</sup>

While the electronic exchange of information plays a critical role in supporting higher quality, cost-effective care, the level of health information exchange across the U.S. today is low. In a recent study, only 30 percent of hospitals and 10 percent of ambulatory practices were found to be participating in operational health information exchange efforts.<sup>21</sup>

In order to achieve electronic information sharing, electronic health record and other clinical systems must be interoperable (have the capability to exchange information across disparate systems) and those providing care and services—such as clinicians, hospitals,

laboratories, pharmacies, etc.—must be willing to share that information. It is important to note that many of the studies that forecast significant cost savings from the use of EHRs presume that such systems are indeed interoperable and that health information sharing is occurring, which largely does not represent the current state today.

The most significant barrier to exchange is the lack of a business case for information sharing. Because the predominant method of payment in the U.S. health care system today provides reimbursement for volume—or the number of visits, tests or procedures performed—as opposed to rewarding outcomes or value, there are limited financial incentives for providers to access or share information across care settings to reduce duplicative tests or procedures, or otherwise improve the quality or cost of care.<sup>22,23</sup>

Other barriers to electronic information sharing include the lack of standards adoption and interoperability of systems, lack of access to infrastructure to support exchange, the cost of exchange, concerns about privacy and security, and concerns about liability.<sup>24,25,26</sup>

The lack of agreement on methods for accurately linking a patient's data from across the health care system also serves as a barrier to electronic information sharing.<sup>27</sup>

Stage 2 of Meaningful Use, along with the 2014 Edition of Standards, Implementation Specifications, and Certification Criteria, contain more robust requirements for interoperability and exchange, particularly as it relates to transitions of care.

While Stage 1 made the provision of a summary of care record for 50 percent of care transitions and referrals optional, Stage 2 now requires it. Stage 2 also adds requirements associated with the *electronic* transmission of a summary of care record 10 percent of the time and requires at least one test of successful exchange with a recipient that uses a system designed by a different EHR vendor (with the goal of advancing interoperability across vendor systems). Finally, Stage 2 standards and certification criteria are more robust, requiring certified EHR technology to receive, display, and transmit many more types of data—using standards. Stage 2 standards specify requirements for data transport. The lack of such standards in Stage 1 has been identified by many as a barrier to more widespread exchange.<sup>28,29,30,31</sup>

An analysis of the differences in electronic health information-sharing requirements between Stage 1 and Stage 2 of Meaningful Use and related standards and certification criteria is provided below.

Stage 1 Requirements	Stage 2 Requirements
Meaningful Use Requirements <sup>32,33</sup>	
Hospitals and eligible professionals (EPs) are required to provide a summary of care record for more than 50 percent of transitions of care or referrals (which need not be transmitted electronically) (optional)	Hospitals and EPs are required to provide a summary of care record for more than 50 percent of transitions of care or referrals (which need not be transmitted electronically)
	Hospitals and EPs are required to electronically transmit a summary of care record for more than 10 percent of transitions of care and referrals.
	Hospitals and EPs must also send at least one summary of care record electronically to a recipient that uses a different EHR vendor or a CMS-designated test EHR
Summary of care document has no required elements	Summary of care document must include the following: <ul style="list-style-type: none"> <li>▪ Current problem list</li> <li>▪ Current medication list</li> <li>▪ Current medication allergy list</li> </ul>



Stage 1 Requirements	Stage 2 Requirements
Standards and Certification Requirements <sup>34,35</sup>	
<p>Certified EHR technology must be able to electronically receive, display, create, and transmit a summary record that includes the following:</p> <ul style="list-style-type: none"> <li>▪ Diagnostic test results (laboratory test results must use standards*)</li> <li>▪ Medication allergies</li> <li>▪ Medications*</li> <li>▪ Problems*</li> <li>▪ Procedures*</li> </ul> <p>*Must use standards</p>	<p>Certified EHR technology must be able to receive, display, create, and transmit a summary of care record that includes the following:</p> <ul style="list-style-type: none"> <li>▪ Care plan fields</li> <li>▪ Care team members</li> <li>▪ Cognitive status (create and transmit only)</li> <li>▪ Date of birth</li> <li>▪ Discharge instructions (create and transmit only, inpatient setting only)</li> <li>▪ Encounter diagnoses* (create and transmit only)</li> <li>▪ Ethnicity*</li> <li>▪ Functional status (create and transmit only)</li> <li>▪ Immunizations* (create and transmit only)</li> <li>▪ Laboratory tests*</li> <li>▪ Laboratory test values/results</li> <li>▪ Medication allergies* (must also be able to incorporate in EHR)</li> <li>▪ Medications* (must also be able to incorporate in EHR)</li> <li>▪ Patient name</li> <li>▪ Preferred Language*</li> <li>▪ Problems* (must also be able to incorporate in EHR)</li> <li>▪ Procedures*</li> <li>▪ Race*</li> <li>▪ Reason for referral (create and transmit only, ambulatory only)</li> <li>▪ Referring or transitioning provider's name and contact information (create and transmit, ambulatory only)</li> <li>▪ Sex</li> <li>▪ Smoking status*</li> <li>▪ Vital signs</li> </ul> <p>*Must use standards</p>

Stage 2 Meaningful Use requirements also offer another option that facilitates information sharing to support care transitions and coordination of care. At least 5 percent of patients of both eligible professionals and hospitals are required to have the ability to “view online, download, and transmit to a third party” their health information from the certified EHR after their visit or upon discharge from the hospital.<sup>36</sup>

Information that must be made available for online viewing, downloading, or transmission to a third party—summarized below—largely aligns with the information that must be transferred from provider to provider for a transition of care or referral, including specified standards.<sup>37</sup>

1. Admit and discharge date and location (hospital only)
2. Care plan field(s) including goals and instructions
3. Care team
4. Current and past problem list
5. Demographics (sex, race, ethnicity, date of birth, preferred language)
6. Discharge instructions (hospital only)
7. Laboratory test results
8. Medication allergy list and history
9. Medication list and history
10. Patient name
11. Problem lists
12. Procedures performed
13. Provider’s name and office contact information (EP only)
14. Reason for hospitalization (hospital only)
15. Smoking status
16. Summary of care record for transitions of care or referrals
17. Vital signs

As a result, many patients who receive care from either a hospital or a health care professional that implements the “view, download, and transmit to a third party” functions required by Stage 2 Meaningful Use, will be able to either (1) download their health information described above and take it with them to their next visit or (2) have their provider “transmit” the same information from the certified EHR to the provider they are seeing on their next visit, using the same standards that are required for provider to provider exchange.

## Consumer e-Health Tools

Health IT—in the form of electronic tools that support individuals (often referred to as consumer e-health tools)—also provides significant benefits. There is a growing body of evidence that shows that patients who are more activated and engaged in their care have better health care outcomes and experiences.<sup>38,39,40</sup> There is also some evidence that indicates that more activated or engaged patients are associated with lower health care costs.<sup>41,42,43</sup>

Americans are increasingly online. Eighty-five percent of American adults use the Internet.<sup>44</sup> Ninety one percent of Americans own a cell phone and 56 percent own a smartphone.<sup>45</sup> Thirty-four percent of Americans own a tablet computer.<sup>46</sup>

The use of online, electronic, and mobile tools—which plays such a predominant role in all other aspects of American life—has the potential to accelerate and enhance consumer engagement strategies employed by a broad range of health care organizations, including clinicians, employers, health plans, hospitals, and other providers. Consumer-facing electronic tools fall primarily into two categories: those that support consumer education and self-care and those that support individuals as they interact with the health care system.

Electronic tools that support consumer education and self-care include online educational resources, interactive tools that assist with self-monitoring and tracking, online communities that enable individuals to share experiences and gain advice from others, and patient-maintained health records (often referred to as personal health records).

Electronic tools that help individuals interact with the health system include those that enable patients to access and download information from their EHRs, securely communicate with their providers using email, engage in “virtual” visits or online care—often referred to as telemedicine, and manage their health care transactions online.

Research shows that patients who are educated about their health status or conditions feel more activated and are more prepared for visits with their clinicians.<sup>47</sup> Those who use tracking tools say that they have changed their approaches to maintaining their health and their treatment of illness.<sup>48</sup> Many consumers find that information found via social media affects how they cope with their chronic conditions, whether they should seek a second opinion, or their approach to diet and exercise.<sup>49</sup>

Patient access to information from their EHRs supports more informed interactions with their clinicians, enables the identification of errors or incomplete information in their records, and improves care coordination among the various providers that provide care for an individual patient.

Secure, electronic communication between patients and their care providers provides timely, convenient, and less costly interactions between office visits—when a face to face encounter is not necessary or feasible. One study showed that the use of secure patient-

physician email was associated with improvements in health outcomes, including cholesterol levels, and blood pressure screening and control.<sup>50</sup> Enabling the management of various health care transactions online, such as renewing prescriptions, reviewing lab test results, and scheduling appointments, saves time for both patients and clinicians, and has been shown to improve patient satisfaction and retention.<sup>51</sup>

A summary of adoption rates for consumer-facing electronic tools is provided below.

<b>Electronic Tools That Support Consumers and Patients</b>	<b>Adoption Rates</b>
Electronic educational resources	72 percent of internet users have looked online for health information. <sup>52</sup>  31% of cell phone owners, and 52% of smartphone owners have used their phone to look up health or medical information <sup>53</sup>
Interactive electronic tools	69 percent of U.S. adults have tracked a health indicator like weight, diet, exercise routine, or symptom. Of those, 21 percent used some form of technology to track their health data. <sup>54</sup>
Online communities	Among online health information seekers, 16 percent have tried to find others who might share the same health concerns. <sup>55</sup>
Personal health records	Ten percent of Americans currently maintain an electronic personal health record. <sup>56</sup>
Consumer access to information contained in their electronic health records	While 65 percent of patients believe that having online access to their health information (e.g., doctor visits, prescriptions, test results, and history) is important or very important, only 17 percent report having such access. <sup>57</sup>
Electronic communication between individuals and their clinicians or care teams	While 53 percent of patients believe that being able to email their doctors is important or very important, only 12 percent say that their doctors provide these capabilities. <sup>58</sup>
Ability to conduct health care transactions online	While about half of patients believe that being able to make appointments online or receiving billing and making payments online is important or very important, only about ten percent say that their doctors offer these services. <sup>59</sup>

Commonly cited barriers to consumer use of electronic tools to support their health and health care include lack of awareness about the availability of tools, limited or no Internet access, concerns about usability and benefit, lack of computer skills, low health literacy, and unmet technical- or information-support needs.<sup>60,61</sup> Some consumers have concerns about the privacy and security of their online health information.<sup>62</sup>

The significant increase in the number of individuals who use mobile or smart phones is bringing down barriers to access to the Internet, creating new opportunities to expand the use of online health information tools across all patient populations. As noted previously, 91 percent of Americans own a cell phone and 56 percent own a smartphone.<sup>63</sup>

Another barrier to consumer adoption of electronic tools that support interaction with the health care system is the lack of availability of such tools, given—as noted in the chart above—low levels of adoption among providers. Barriers to the adoption of consumer-facing applications among clinicians include concerns about privacy and security, concerns about receiving an unmanageable number of messages from patients and the impact on workflow, and the lack of reimbursement for time spent.<sup>64,65</sup> Communication with patients outside the traditional office visit is generally not reimbursed in fee-for-service payment models, so providing advice or care via secure electronic means is largely uncompensated.

Stage 2 of Meaningful Use—which goes into effect on October 1, 2013, for hospitals and January 1, 2014, for eligible professionals—has robust requirements for patient engagement, which are outlined in more detail below:

<b>Types of Electronic Tools</b>	<b>Stage 1 Requirement<sup>66</sup></b>	<b>Stage 2 Requirement<sup>67</sup></b>
Electronic educational resources	Identify and provide patient-specific education resources to more than 10 percent of unique patients (eligible professionals or EPs and Hospitals—“Menu” or Optional).	Identify and provide patient-specific education resources to more than 10 percent of unique patients (EPs and Hospitals—“Core” or Required).

<b>Types of Electronic Tools</b>	<b>Stage 1 Requirement<sup>68</sup></b>	<b>Stage 2 Requirement<sup>69</sup></b>
Access to health information included in the EHR	Provide an electronic copy of health information within three business days to more than 50 percent of patients who request such information (Hospitals—Core).	Make information about the hospital admission available online within 36 hours of discharge to more than 50 percent of patients discharged from the hospital (Hospitals—Core).
	Provide an electronic copy of discharge instructions within three business days to more than 50 percent of patients who are discharged from a hospital and request such information (Hospitals—Core).	More than 5 percent of patients discharged from the hospital must view online, download, or transmit to a third party information about a hospital admission (Hospitals—Core).
	Provide an electronic copy of health information within three business days to more than 50 percent of patients who request such information (EPs—Core).	Provide timely (within four business days) online access to their health information to more than 50 percent of all unique patients seen by the EP (EPs—Core).
	Provide at least 10 percent of all patients seen by the EP with timely electronic access to their health information within four business days of the information being available to the EP (EPs—Menu).	More than 5 percent of all unique patients seen by the EP either view, download, or transmit to a third party their health information (EPs—Core).
	Provide clinical summaries to patients for more than 50 percent of all office visits within three business days (EPs—Core).	Provide clinical summaries to patients for more than 50 percent of all office visits within one business day (EPs—Core).

<b>Types of Electronic Tools</b>	<b>Stage 1 Requirement<sup>70</sup></b>	<b>Stage 2 Requirement<sup>71</sup></b>
Electronic tools that enable secure communication between providers and patients	Send reminders for preventive and follow-up care to more than 20 percent of all patients 65 years or older or five years old and younger (EPs—Menu).	Send reminders for preventive and follow-up care to more than 10 percent of all unique patients who have had two or more office visits (EPs—Core).
	n/a	A secure message was sent using the electronic messaging function of certified EHR technology by more than 5 percent of unique patients (or their authorized representatives) (EPs—Core).

### **Analytical Tools**

Another area in which health IT plays a critical role in improving the quality, safety and cost-effectiveness of care, is that which relates to the analysis of electronic data to support improvements in the health of populations.

Health IT enables health care organizations to access and analyze large sets of electronic health information—often referred to as “big data”—to monitor performance, identify opportunities for improvement, predict where issues in cost and quality are likely to emerge, and identify interventions that are likely to improve outcomes and patient satisfaction.

In addition to supporting care improvement, the analysis of large electronic data sets through analytics also supports other population health goals, such as clinical research to support the assessment of new and existing treatments on outcomes, the application of personalized medicine, safety surveillance of medical products, and the monitoring and prediction of emerging public health threats.

Barriers to the effective aggregation and analysis of large data sets to improve population health include limited access to data, the lack of standardization of data, the absence of a national strategy for accurately linking information associated with a particular patient across disparate data sets, and lack of clarity in rules associated with privacy.

## Where Do We Need to Go From Here? Key Imperatives

In order to fully benefit from the use of health IT to improve the quality, cost-effectiveness, and patient experience of care, the following key imperatives should be considered, which draw upon BPC findings and recommendations over the last two years:

### 1. Prioritize Electronic Sharing of Health Information in Federal Programs

The electronic sharing of health information across the many settings in which care and services are delivered for any individual patient is a central and necessary component of efforts to improve care coordination, promote accountability, and improve the quality, cost-effectiveness, and patient experience of care. The federal government can take several actions to promote electronic information sharing:

- Continue to advance expectations associated with electronic information sharing and data standards adoption among clinicians, hospitals, laboratories, and other health care organizations through federal health care programs, including but not limited to payment and incentive programs, such as the CMS Medicare and Medicaid EHR Incentive Program.
- Continue to advance requirements for standards adoption within electronic systems in health care through the Office of the National Coordinator for Health Information Technology's Standards and Certification Program.
- Collaborate with the private sector in the development and implementation of both a national strategy and long-term plan for data standards to support a broad set of health care priorities, which extend beyond the needs of Meaningful Use.
- Collaborate with the private sector to raise awareness of the benefits of information sharing for patients and highlight both leadership and opportunities for improvement in electronic information sharing among individual providers and vendors.
- Identify areas of the U.S. where there are no available options for electronic information sharing to facilitate action designed to close gaps in supporting infrastructure.
- Support the development and implementation of a national strategy to improve methods for and accuracy of matching patients to their health information across settings.



## **2. Promote Innovation to Support the Needs of New Models of Care and a Rapidly Changing Health Care System**

Since HITECH was passed and signed into law in 2009, there has been significant change in both the health care system and the technology designed to support it. Health IT must continuously evolve to support rapidly emerging changes in the health care system.

Innovations designed to drive improvements in the quality, cost, and patient experience of care are emerging at a rapid pace. Increasingly, clinicians, hospitals, health plans, and employers are forging new collaborations to facilitate better coordination of care, more seamless and patient-centered care, and achieve better outcomes in cost and quality. Health care innovators are augmenting traditional forms of care delivery by engaging patients in their homes and in between visits, to keep them healthy and more effectively manage chronic conditions.

Technology is also changing. Nearly every American is now online—whether through a computer, digital tablet, or mobile phone. Applications that support EHRs used for care delivery, electronic health information sharing, engagement of consumers, and application of analytics are increasingly being offered in several ways, ranging from stand-alone systems installed within an individual organization to web-based applications that operate in the “cloud”. The lines between these different types of applications are beginning to blur. Users are accessing these applications from a wide range of platforms, including traditional desk-top computers, laptops, digital tablets, and increasingly, mobile phones.

The amount of change in health care and the IT that supports it is expected to both continue and accelerate. This has implications for any federal programs designed to provide incentives for or otherwise regulate electronic tools used in health care.

The federal government should consider the following to assure that it continues to derive value from its investments and accommodates and promotes innovation in health care and health IT:

- Future federal requirements for Meaningful Use incentives—such as those to be developed for Stage 3—should transition towards rewarding standards-based information sharing and measurement and achievement of outcomes. Over time, requirements should transition away from features and functions that will need to evolve rapidly to support the needs of a changing health care system, and can be supported by market forces.
- As the federal government develops a risk-based regulatory framework related to health IT, including mobile medical applications, in response to the Food and Drug Administration Safety and Innovation Act of 2012 (FDASIA), it should take into consideration the following:

- First and foremost, any oversight framework for health IT should recognize and support the important role that health IT plays in improving the quality, safety, and cost-effectiveness of care, as well as the patient's experience of care;
- Any framework for patient safety in health IT should be risk-based, flexible, and promote innovation;
- Assuring patient safety is a shared responsibility that must involve the entire health care system;
- Existing health care safety and quality-related processes, systems, and standards should be leveraged for patient safety in health IT; and
- Reporting of patient safety events related to health IT is essential; a non-punitive environment should be established to encourage reporting, learning, and improvement.

### **3. Provide Support to Those Who May Need Assistance in Making the Transition**

As noted previously, EHR adoption among physicians and hospitals varies. Among those eligible for Meaningful Use incentives, adoption rates for small practices continue to lag behind those for larger practices.<sup>72</sup> Large urban hospitals continue to outpace rural and nonteaching hospitals in adopting EHR systems.<sup>73</sup>

Adoption rates also continue to lag for those providers who are not eligible for CMS Medicare and Medicaid EHR Incentives, including home health and long-term care organizations, some specialties, and behavioral health care providers. Participation of such providers is critical to efforts designed to promote coordinated, accountable care.

EHR adoption is a foundational component of the health IT needed to increase the coordination of care and improve the quality, cost-effectiveness, and patient experience of care.

The federal government should consider the following to support adoption of EHRs among all providers:

- Create incentives for and advance education, training, and implementation support for providers that continue to lag in EHR adoption, including small physician practices, rural hospitals, and those who do not qualify for incentives under the CMS Medicare and Medicaid EHR Incentive Programs.
- Explore other opportunities for supporting adoption among providers that do not qualify for incentives under the CMS Medicare and Medicaid EHR Incentive Programs, including home health and long-term care providers and behavioral health care providers.

#### **4. Improve Medicare Care Delivery and Payment Systems to Promote Coordinated, Information-Driven Care**

The prevalent fee-for-service reimbursement model in traditional Medicare is a major barrier to improvements in cost and quality and is increasingly an impediment to private-sector efforts at payment reform.

In its recently released report, [A Bipartisan Rx for Patient-Centered Care and System-Wide Cost Containment](#), BPC calls for the acceleration of the transition to value-based payment models that would help providers work together to improve care coordination, improve care for patients, and take responsibility for cost and quality.

Models which facilitate payment for high-value, coordinated care offer the most compelling “business case” for electronic information sharing and engagement of individuals using electronic tools—the primary gaps in health IT that are in place today.

### **Conclusion**

The U.S. health care system is undergoing significant change, brought about by concerns related to rising health care costs, uneven quality, and eroding coverage. Delivery system and payment reforms which promise to improve both the quality and cost-effectiveness of care are rapidly emerging with leadership by the federal government, states, and the private sector. Such reforms cannot be successful without a strong health information foundation which health IT provides.

Key capabilities needed for these new models of care, including electronic information sharing across the many settings in which care and services are delivered, more effective engagement of patients using electronic tools, and more effective linking and analysis of data to support measurement and improvement, are currently not widely adopted.

Stage 2 of the CMS Medicare and Medicaid EHR Incentive Programs provides a strong foundation for engagement of individuals in their health and health care, and the adoption of standards for interoperability of EHR systems.

The initial phase of investments in health IT has focused on moving EHRs into physician practices and hospitals. Over the coming years, the U.S. health care system must leverage and expand upon these investments to address the need for information-sharing capabilities across settings, more effective engagement of individuals in their health and health care, and standardization and linking of electronic data sets to more effectively predict, manage, and improve health care outcomes.

Health IT in and of itself is not the “silver bullet” that will improve health and health care in the U.S. However, it is the necessary and critical foundation for the delivery and payment

changes, as well as the increased focus on prevention and wellness, that are needed to transform the U.S. health care system into one which is less fragmented and more coordinated, accountable, and transparent; one which puts the patient in the center; and one which delivers higher quality, more cost-effective care for all Americans.

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