

eHEALTH INITIATIVE
BLUEPRINT
Building Consensus for Common Action



PHASE I

October 10, 2007



ACKNOWLEDGEMENTS

The eHealth Initiative would like to acknowledge and extend its thanks to the nearly 200 organizations who lent their leadership, expertise, and support to the development of the *eHealth Initiative Blueprint: Building Consensus for Common Action*.

eHealth Initiative's Leadership Council, led by eHealth Initiative President, John Tooker, MD, MBA, FACP and eHealth Initiative Foundation President, Jeffrey Kang, MD, MPH, with executive leadership support by eHealth Initiative and Foundation Chief Executive Officer Janet Marchibroda, provided strategic oversight and guidance to the entire effort.

The eHI Blueprint Committee Co-Chairs, who are listed below, provided leadership and guidance to five Blueprint Committees, made up of numerous eHI members who lent their expertise, experiences, review, and hands-on support to the effort. Each of the five committees was supported by an outstanding team of experts and staff.

Special thanks are in order for Christine Bechtel, eHI's Vice President of Public Policy and Government Relations, who spearheaded the coordination and staffing of the entire Blueprint effort.

eHI would also like to thank its members and the many, many organizations who reviewed and provided input to the Blueprint components.

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- Staffing support by Christine Bechtel, eHI and Vicki Estrin, Project Director, Vanderbilt Center for Better Health

A number of eHealth Initiative staff also directly supported the development of Blueprint including Rachel Hoefft, Program Manager; Michael Moses, Manager of Internet Communications; and Aaron Holman, Manager of Public Policy and Government Relations; as well as several others. Valjean McLenighan provided invaluable editorial assistance, supported by Michael J. Berkery of the American Medical Association, for which we are very grateful. The Deloitte Center for Health Solutions provided assistance with an environmental scan and input on web design. The overviews of key initiatives in all five areas of the Blueprint were created by Mary Beth Kiser, as part of the MPH program at George Washington University.





LETTER FROM eHEALTH INITIATIVE LEADERSHIP



On behalf of eHealth Initiative's leadership, we are delighted to share with you the results of a six-month collaborative process which has culminated in the development of the *eHealth Initiative Blueprint: Building Consensus for Common Action*, representing multi-stakeholder consensus on a shared vision and a set of principles, strategies and actions for improving health and healthcare through information and information technology.



This inclusive, collaborative, multi-stakeholder process has involved nearly 200 organizations including clinicians, consumer groups, employers, health plans, health IT suppliers, hospitals and other providers, laboratories, pharmacies, pharmaceutical manufacturers, public health agencies, and state and regional leaders.



In 2001, the eHealth Initiative (eHI) was created to serve as a forum where diverse stakeholders in healthcare could find common ground on ways to drive improvements in the quality, safety, and efficiency of healthcare through information and information technology. eHI provides a place where mutual respect for differences is supported by a spirited dialogue aimed at finding consensus on a collective path forward that is responsible, sustainable, and builds and maintains the public's trust.

In Phase I of the eHI Blueprint, we have advanced these important goals by identifying several areas of consensus that will enable coordinated efforts by healthcare organizations across the nation to improve America's health and healthcare through health information technology (IT) and health information exchange. The eHI Blueprint principles, strategies and actions fall into five categories: engaging consumers; transforming care delivery; improving population health; aligning financial and other incentives; and managing privacy, security, and confidentiality.

The eHI Blueprint also identifies areas for which there is not broad consensus, where further dialogue is needed. Over the next twelve months, as part of Phase II of the process, eHI will widely disseminate the Blueprint, gaining even further input from a wide variety of stakeholders both at the national and local levels, so that the principles, strategies and actions can continue to be refined. We will encourage national dialogue to reach agreement on those areas for which there is not yet consensus, and contribute significantly to that dialogue as it moves forward. eHI will also support implementation of the recommended actions by appropriate organizations, including eHI. Finally, we plan to take stock of progress against the Blueprint goals by measuring performance each year.

We would like to acknowledge and extend our gratitude to those who contributed their time and energy to the development of this report—especially the eHI Leadership Council; the Blueprint Committee Co-Chairs; the members of each Blueprint Committee; Christine Bechtel, our Vice President of Policy and Government Relations; and a number of members of the staff team and our expert consultants—all of whom contributed a significant amount of time and thought leadership to this endeavor. We are also grateful to those members and organizations that provided feedback on the draft during the vetting process in the summer of 2007.

We invite you to provide feedback to us on the principles, strategies and actions of the eHI Blueprint and also share this work with your colleagues and other stakeholders.

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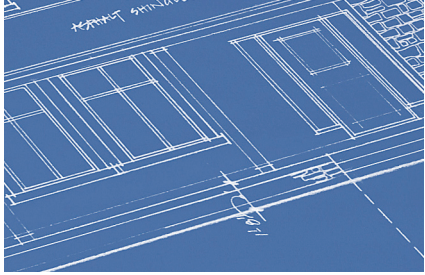




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INTRODUCTION

The *eHealth Initiative Blueprint: Building Consensus for Common Action* represents agreement among multiple stakeholders in healthcare on a shared vision and a set of principles, strategies and specific actions for improving health and healthcare through information and information technology (IT). The eHI Blueprint is designed to offer guidance to national, state and local leaders—both within the public and private sectors—and across every sector of healthcare.

The eHI Blueprint contains several areas for which there is broad consensus among multiple stakeholders regarding the principles, strategies and actions needed to not only engage consumers, transform care delivery and improve population health using health IT, but also to effectively manage privacy and confidentiality, and finance this important work.

Equally as important, the eHI Blueprint identifies areas for which there is not yet broad consensus, where further dialogue and deliberation are needed in order to continue to move this agenda forward. These areas fall into two key categories: those related to the design of financial incentives to support improvements in health and healthcare through health IT, and those related to policies for information sharing.

The Blueprint builds upon and recognizes the work of many projects and initiatives both in the federal government and in the private sector, and references this work within the “overview of key initiatives” and “resources” sections of the Blueprint. It also extends this work by building broader consensus on a path forward among the many stakeholders in healthcare.

The Need for a Blueprint for Change in Healthcare

Concerns about quality, safety, and rising costs in healthcare have driven the federal government and national and local leaders alike to look for solutions to the challenges of our nation’s healthcare system. The U.S. healthcare system is not well-equipped to address these growing challenges. Increasingly, leaders are focused on breaking down barriers to higher quality, safer, more efficient healthcare through the introduction of several new strategies including those related to health IT, given its critical and demonstrated role in improving health and healthcare.

Over the last several years, interest in and recognition of the importance of health IT and health information exchange to improve health and healthcare have grown significantly, bringing a number of policy changes and activities at the federal and state levels.

While there is broad recognition of the need for health IT to address many of these challenges, there is also a need for leadership, coordinated action, and common agreement among the many stakeholders in healthcare on the steps that need to be taken to improve the quality, safety and efficiency of healthcare through information and information technology.

eHealth Initiative’s discussions with multiple stakeholders across the healthcare system at the national and local levels reveal that there is not clarity regarding the incremental steps that must be taken. With all of the change, and the multitude of activities taking place at the national, state, and local levels, healthcare leaders find that it is often hard to keep track and make sense of what is happening, and understand the concrete actions for improving the quality, safety and efficiency of healthcare through information technology.

Responding to this challenge, eHealth Initiative’s leadership in March 2007 launched a collaborative process designed to offer practical guidance on how to improve health and healthcare using health IT and health information exchange.





OVERVIEW OF THE eHEALTH INITIATIVE BLUEPRINT

What is the eHI Blueprint?

The *eHealth Initiative Blueprint: Building Consensus for Common Action* is a shared vision, and a set of common principles, strategies and actions for improving health and healthcare through health IT and health information exchange, developed by a broad, collaborative, and transparent process led by and involving the many diverse stakeholders in healthcare.

The eHI Blueprint is designed to offer easy to understand, practical guidance to a wide range of audiences. Organizations operating in every sector of healthcare and at every level of the system can benefit from employing the principles, strategies and actions contained in the report. The eHI Blueprint also offers a listing of resources, initiatives, and online case examples for areas addressed by the Blueprint.

eHI's long-term focus since its inception in 2001 has been to improve the quality, safety and efficiency of the healthcare system through information and information technology. eHI and its leaders—who represent the many sectors in healthcare—recognize that health IT is not an end unto itself, but a means to an end—which is higher quality, safer, more value-driven, and accessible healthcare for all Americans.

With this in mind, as eHI embarked on the development of the Blueprint, it chose not to develop a “how-to guide to effectively implement health IT” but instead a guide to “enhancing health and healthcare improvement strategies through the use of health IT and health information exchange.” Key focus areas of the Blueprint are as follows:

- Engaging consumers
- Transforming care delivery
- Improving population health
- Aligning financial and other incentives
- Managing privacy, security, and confidentiality

The eHI Blueprint is intended to support current leadership efforts, including those emerging from the Administration, Congress and the many private sector organizations that have been working on healthcare information technology and information exchange for many years.

How was the Blueprint Developed? A Collaborative Process

The delivery, payment, management, and improvement of healthcare is conducted by many, many organizations in our healthcare system, including clinicians, employers and healthcare purchasers, health plans, hospitals and other providers, laboratories, pharmacies, pharmaceutical and device manufacturers, public health agencies, state and regional leaders, government at the federal and state levels, and most importantly, patients and their caregivers.


Because the healthcare system is so fragmented, collaboration across the multiple stakeholders in healthcare is crucial to defining and implementing solutions that are not only patient-centric, but also work within the system.

Research indicates that those who have been successful with health IT and health information exchange implementation have done so because they have built “social capital,” or a radius of trust that enables divergent interests to come together for a common cause to improve health and healthcare—despite market pressures to do otherwise.¹

¹ eHealth Initiative. *Health Information Exchange: From Start Up to Sustainability*. Developed by the eHealth Initiative Foundation Through a Cooperative Agreement with the Department of Health and Human Services Health Resources and Services Administration. Washington, D.C. May 2007.

"eHI and its leaders...recognize that health IT is not an end unto itself, but a means to an end—which is higher quality, safer, more value-driven, and accessible healthcare for all Americans."





In the spirit of building social capital and supporting a collaborative agenda for change, the eHI Blueprint was developed through a process led by eHI's multi-stakeholder leadership with the hands-on involvement of eHI's members—individuals and organizations representing nearly every stakeholder in healthcare, including those who deliver care; manage care; pay for care; protect the public's health; lead collaborative efforts at the state and local level; those who develop tools, services and therapies to support improvements in healthcare, and finally, and most importantly, those who receive health-care—consumers.

Multi-stakeholder committees, co-chaired by members of eHI's Leadership Council, developed the content for each of the five focus areas. Committees met over a six-month period to discuss gaps and barriers to progress, develop guiding principles for moving forward, and identify practical strategies and actions, including timelines, that will support a common path forward.

Where Was Consensus Not Reached?

The most challenging issues that arose during the development of the Blueprint centered on two key areas: the design of financial incentives to support improvements in healthcare and policies for information sharing.

Regarding financial incentives, individuals offered many different perspectives about the design of incentives, including how these incentives should be structured and paid for, and what behaviors to incentivize. For example, debate occurred around incentivizing improved patient outcomes versus incentivizing or supporting information technology adoption.

While stakeholders agreed that the end goal is improving healthcare quality, safety and efficiency, they employ different approaches for arriving at that goal. Some preferred to incentivize quality outcomes only, while others preferred also to support the adoption and effective use of health IT as an efficient infrastructure for quality improvement and measurement. There was no consensus regarding the best approach to this question, and there was no consensus that only one approach will work. More study is needed to examine initiatives that have employed both approaches to identify their benefits and drawbacks.

In addition, the question of who benefits from the adoption and effective use of health IT, and therefore who should be asked to share in the cost and at what levels, was also discussed and debated at length. Many believe that incentives cannot be meaningful or appropriately aligned without objective information quantifying the benefits of health IT adoption and identifying the stakeholders to whom those benefits accrue. The Blueprint recommends that payors and providers work together toward meaningful discussion, research, and demonstration projects that can convincingly measure these benefits.

Issues surrounding policies for information sharing spanned multiple focus areas—particularly the Engaging Consumers area and the Improving Population Health area. In the Engaging Consumers focus area, the two actions that generated the most dialogue were the following:

- Consumers should be able to limit which of their health information could be shared with which providers, in a manner compliant with HIPAA, when applicable.
- Consumers should be able to limit how their personally identifiable medical information is used outside of care delivery (e.g. for research), consistent with all applicable federal, state and local law.

When it comes to consumer control of personally identifiable information, some stakeholders are concerned about giving more control than HIPAA currently requires, primarily because of the risk that withholding key information could pose to the ability of providers to deliver safe care. At the same time, others believe that consumers should be educated on the benefits and risks of information sharing and have control. While there was consensus that mobilizing patient data in order to improve the quality, safety and efficiency of healthcare delivery is important, questions arose such as which providers should have access to what types of data, under what circumstances—for both identifiable information and de-identified information. HIPAA was not designed to address the more robust, detailed





clinical information sharing that flows from health information exchange. More agreement is needed on the details of these particular areas.

Similarly, the Blueprint section on Improving Population Health calls for consensus processes regarding policies for information sharing, including the following issues specifically:

- Privacy and consent issues with regard to both identified and de-identified data use for improving population health
- Appropriate uses of de-identified, identified and re-identified data
- Standard methods to monitor and communicate compliance with consensus principles and policies to the public

As a result, the eHI Blueprint launched in October 2007 represents Phase I of a two-phase process. During Phase II, eHI will encourage a national dialogue to reach agreement on the areas for which there is not yet consensus—in particular, those areas described above.

How Will the Blueprint be Utilized?

Phase I of the Blueprint offers practical guidance and actions for stakeholders seeking to improve healthcare quality, safety and efficiency across any of the five areas that comprise the Blueprint. It also identifies issues on which consensus was not reached. Over the next twelve months—as part of Phase II of the process eHI will widely disseminate the Blueprint and gain even further input from a wide variety of stakeholders at the national and local levels, as they consider incorporating the Blueprint's strategies and actions into their own agendas and plans. As organizations strive to operationalize the Blueprint, their feedback will be invaluable in refining and improving these actions in a way that promotes their practical use over time.

During Phase II, eHI will also support implementation of the recommended actions by appropriate organizations, including eHI, as well as track and report on progress, lessons learned and best practices in relevant areas throughout the coming year.

Finally, eHI will encourage national dialogue on those areas for which there is not consensus and actively engage in the deliberation, offering the divergent perspectives gained during the eHI Blueprint development process.

The eHI Blueprint is intended to be a living document and stakeholders are encouraged to regularly visit <http://www.ehealthinitiative.org/blueprint> for updated strategies, actions and timelines.

How Was the Framework for the eHI Blueprint Developed?

In a report published by the California HealthCare Foundation, *It Takes a Region: Creating a Framework to Improve Chronic Disease Care*, Dr. Ed Wagner and colleagues at the MacColl Institute for Healthcare state that “in the absence of substantial national healthcare reform, regional quality improvement efforts appear to offer the best hope for transforming American healthcare.”² The study examined communities and regions across the United States where public and private stakeholders were collaborating to improve healthcare through better quality and reduced costs.

Based on interviews with coalition leaders and findings from literature reviews, Wagner and his colleagues suggested a framework of four common strategies that “create the environment and provide critical paths” for transforming care, which include:

² Wagner E., Austin B, Coleman C. *It Takes a Region: Creating a Framework to Improve Chronic Disease Care*. California HealthCare Foundation, 2006.





1. Data-Sharing for Performance Measurement
2. Engaging Consumers
3. Improving Health Care Delivery
4. Aligning Benefits and Finances

These themes also align with the findings of many organizations focused on improving healthcare in the public and private sectors. As eHI embarked on the creation of the Blueprint, it became clear that the Blueprint must focus on how health and healthcare improvement strategies can be strengthened by health IT and health information exchange, in recognition of the fact that health IT is an enabling infrastructure, but not the end goal.

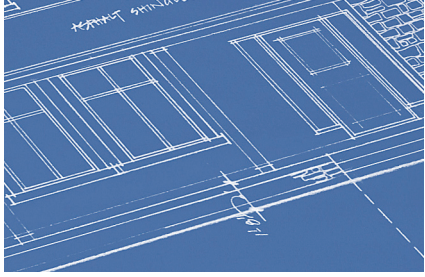
As a result, this framework was adopted for the eHI Blueprint. While Wagner and his colleagues employed a regional focus in their study, the Blueprint principles, strategies and actions are intended for a broad range of stakeholders both at the national and local levels who are committed to achieving such a challenging, but critical transformation.

In addition to adapting Wagner et al's four healthcare improvement strategies, eHI's leadership added one enabler critical to leveraging health IT and information exchange in transforming healthcare – privacy, security and confidentiality. Combined with improvement strategies, these five areas serve as the framework for the Blueprint:

eHI Blueprint Framework	Wagner Framework
Engaging Consumers	Engaging Consumers
Transforming Care Delivery at the Point of Care	Improving Health Care Delivery
Improving Population Health	Data-Sharing for Performance Measurement
Aligning Financial and Other Incentives	Aligning Benefits and Finances
Managing Privacy, Security & Confidentiality	

Consensus among the diverse stakeholders in healthcare on principles, strategies and specific actions in each of these areas became the goal of five committees that were created to develop the Blueprint.





OVERVIEW OF THE REPORT

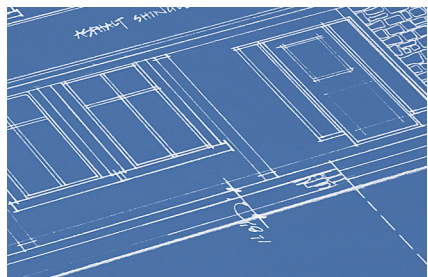
In the remainder of this report, we explain the role of health IT in addressing our nation's most pressing healthcare challenges, present our shared vision for transforming healthcare through information and information technology, and present the work of the five committees involved in the Blueprint's development.

Each of the five focus areas presents guiding principles; and four of the five areas provide broad strategies and specific actions each stakeholder can take to accelerate change and improve the quality, safety and efficiency of healthcare through health IT and health information exchange. In terms of the timelines associated with those specific actions, those who participated in the development processes agreed that timelines are generally needed to support action and track progress, but also agreed that timelines should be considered and discussed. More feedback is encouraged as stakeholders begin to consider implementation.

The introduction to each of the focus areas describes the area and reviews any issues on which consensus was not achieved, as well as other topics that were the subject of significant discussion during the development process. Finally, each area also contains an overview of key initiatives already underway, and a list of resources that contain more information.

Because of the dynamic nature of the healthcare system and all of its component parts, the Blueprint is intended to be a living document. eHI will maintain it in a manner that reflects progress and shifts in the industry and political environment over time. In this way, it is our hope that the Blueprint can continue to unite and coordinate the voices of individual stakeholders into a chorus of unified action. The ongoing evolution of the Blueprint can be tracked by going to <http://www.ehealthinitiative.org/blueprint>.





THE ROLE OF HEALTH INFORMATION TECHNOLOGY IN ADDRESSING OUR NATION'S MOST PRESSING HEALTHCARE CHALLENGES

Concerns about quality, safety, and rising costs in healthcare have driven the federal government and national and local leaders alike to look for solutions to the challenges of our nation's healthcare system.

U.S. adults receive about half of recommended healthcare services.³ Despite documented benefits of timely preventive care, a Commonwealth Fund-sponsored U.S. Scorecard on Health System Performance indicates that barely half of adults (49 percent) receive preventive and screening tests according to guidelines.⁴

Poor quality translates into higher costs. According to the same Commonwealth Fund report, the current gap between national average rates of diabetes and blood pressure control and rates achieved by the top ten percent of health plans translates into an estimated 20,000 to 40,000 preventable deaths and \$1 to \$2 billion in avoidable medical costs.⁵

In addition, chronic disease is a growing problem in the United States. More than 125 million Americans had at least one chronic care condition in 2000, and this number is expected to grow to 157 million by the year 2020.⁶ As baby boomers continue to age, the number of individuals living with chronic conditions will continue to grow. People with chronic conditions drive a majority of healthcare spending in the U.S., accounting for 78 percent of all health care spending in 1998.⁷ Seventy-six percent of all hospital admissions are attributable to people with chronic conditions. And people with chronic conditions account for 88 percent of all prescriptions filled and 72 percent of all physician visits.⁸

In a country where healthcare spending is 16 percent of the gross domestic product, and much higher than other industrialized countries, leading employers tell us that the United States is losing its competitiveness on the global market. According to the Organization for Economic Cooperation and Development (OECD), healthcare spending per capita in Switzerland—the next most costly OECD country—is only 68 percent of that in the U.S.; in Canada, it is only 57 percent; and in the median OECD country it is less than 44 percent of the U.S. level.⁹

The U.S. healthcare system is not well equipped to address these growing challenges. Increasingly, leaders both within the public and private sectors are focused on breaking down barriers to higher quality, safer, more efficient health care through the introduction of several new strategies including changing the way we pay for healthcare, increased focus on transparency, increased focus on consumer engagement and on health IT, given its critical and demonstrated role in improving health and healthcare.

In fact, the Commonwealth Fund's recent survey of healthcare opinion leaders released in July 2007 showed that 67 % of health care opinion leaders thought the acceleration of health IT would be very effective or effective in improving quality and safety in healthcare.¹⁰

³ McGlynn EA, Asch SM, Adams J, et al. "The Quality of Health Care Delivered to Adults in the United States". *N Engl J Med* 2003;348:2635-2645.

⁴ The Commonwealth Fund. *Why Not the Best? Results from a National Scorecard on U.S. Health System Performance*, New York: The Commonwealth Fund. 2006.

⁵ The Commonwealth Fund. *Why Not the Best? Results from a National Scorecard on U.S. Health System Performance*, New York: The Commonwealth Fund. 2006.

⁶ Wu S. Green A. *Projection of Chronic Illness Prevalence and Cost Inflation*. RAND Health, Santa Monica, California: RAND Corporation; 2000.

⁷ Medical Expenditure Panel Survey, 1998.

⁸ Ibid.

⁹ Reinhardt UE, Hussey PS, Anderson GF. 2004. "US Health Care Spending in an International Context." *Health Affairs*. 23(3): 10-25.

¹⁰ Commonwealth Fund Health Care Opinion Leaders Survey, July 2007.





The Role of Information Technology in Healthcare

Because of the highly fragmented nature of the U.S. healthcare system, information about the patient is stored in a variety of locations largely in paper-based forms and therefore cannot easily be accessed. As a result, clinicians often do not have comprehensive information about the patient when and where it is needed most—at the point of care, and those responsible for managing and improving the health of populations do not have all the information they need to measure progress and facilitate response and improvement.

Those responsible for public health often don't have timely access to information that supports monitoring, detection, and response to hazards and threats. Those responsible for assuring the safety of pharmaceuticals and devices don't have ready access to information to support surveillance and detection of safety issues. In addition, those who are driving new research don't have effective access to the information they need to support the creation of both improved evidence-based guidelines and new, more effective therapies to improve health and healthcare for Americans. Finally, and most importantly, consumers don't have access to information that is needed to manage their own health and navigate an increasingly complex healthcare system.

Interoperable health IT and health information exchange—or the mobilization of clinical information electronically—facilitates access to and retrieval of clinical data, privately and securely, among different entities involved in the care delivery system, to provide safer, more timely, efficient, effective, equitable, patient-centered care.¹¹

Increased Momentum for Health IT at all Levels of the System

The National Level

Over the last several years, recognition of the importance of health IT and health information exchange to improve our nation's health and healthcare have grown significantly, bringing a number of policy changes—both at the federal and state levels.

In 2004, a new office was created within the Department of Health and Human Services (DHHS) — the Office of the National Coordinator for Health Information Technology (ONC) — to provide federal leadership and coordinate efforts within the federal government around health IT. Since that time, ONC has initiated several activities designed to provide support for the adoption of health IT, including contracts that support standards harmonization, certification of health IT products, and the assessment of business rules and policies related to privacy and confidentiality across states.

On August 2006, President George W. Bush issued an executive order calling for healthcare programs administered or sponsored by the federal government to utilize health IT systems and products that meet recognized interoperability standards.¹² In addition, several grant programs and technical assistance activities designed to support health IT adoption have been initiated by several federal agencies including the Agency for Healthcare Research and Quality, the Centers for Disease Control and Prevention, the Centers for Medicare & Medicaid Services, and the Health Resources and Services Administration.

Congress has also played a considerable role in supporting the adoption of health IT, with several bills having been introduced over the last several years that address key barriers to health IT adoption, including standards for interoperability, funding, and authorization of bodies to provide coordination and technical assistance. At least nine bills related to health IT were introduced both in the House and Senate during 2007.¹³ Most recently, in June 2007, the Senate Committee on Health, Education, Labor and Pensions approved the Wired for Health Care Quality Act of 2007 (S. 1693) which includes several provisions related to the role of government, funding, standards, and the alignment of quality with health IT.¹⁴

¹¹ eHealth Initiative. *eHealth Initiative Second Annual Survey of Health Information Exchange at the State, Regional and Community Levels*, <http://toolkit.ehealthinitiative.org/assets/Documents/eHI2005AnnualSurveyofHealthInformationExchange2.0.pdf> August 2005.

¹² The White House. *Executive Order: Promoting Quality and Efficient Health Care in Federal Government Administered or Sponsored Health Care Programs*. <http://www.whitehouse.gov/news/releases/2006/08/20060822-2.html> August 22, 2006.

¹³ eHealth Initiative. *eHI Overview of Federal Legislation*. www.ehealthinitiative.org. August 2007.

¹⁴ The Library of Congress. *The Wired for Health Care Quality Act of 2007 (S. 1693)*. http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s1693rs.txt.pdf





The State and Local Levels

A number of states are also moving forward in parallel with federal efforts to develop and implement policies and plans that promote health IT and health information exchange. While there was virtually no legislation at the state level related to health IT prior to 2005, 121 bills were introduced in 38 states in 2005 and 2006, 36 of which were passed in the legislature and signed into law in 24 states.¹⁵ There has been a considerable increase in state legislative activity in 2007. As of this writing, more than 200 bills focused on health IT have been introduced in 41 states since January 1, 2007, sixteen of which have been signed into law by the governors in 11 states.¹⁶ U.S. governors are also playing a critical role in moving forward health IT policy change. To date, 20 executive orders have been issued by governors in 15 states, which are designed to drive improvements in health and healthcare through the use of IT—eight in 2007 alone.¹⁷

The number of collaborative health information exchange initiatives at the state, regional and community levels has grown considerably over the last three years. According to eHealth Initiative's Third Annual Survey of Health Information Exchange at the State, Regional and Community Levels, at least 165 such initiatives existed in July 2006, which are located in 49 states, the District of Columbia and Puerto Rico.¹⁸ Early findings from the 2007 survey results indicate that, while a handful of initiatives have closed their operations, there were at least 20 new health information exchange initiatives identified by the 2007 survey. Review of the early findings from the 2007 survey also indicate a slight increase in the number of operational health information exchange initiatives in 2007 above the 26 identified in 2006.

Recent funding initiatives sponsored by the federal government also signal recognition of the importance of regional and community collaboration, including the DHHS Secretary's October 5, 2007 announcement of contracts totaling \$22.5 million to nine state and local health information exchanges to begin "trial implementations of the Nationwide Health Information Network."¹⁹ In December 2007, the Centers for Disease Control and Prevention is expected to announce contracts to support public health surveillance by state and local entities, that will complement the NHIN awards.²⁰

Despite great interest and recognition of the value of health IT in addressing healthcare challenges at multiple levels of the system, the adoption of health IT has been slow due to a number of well-documented factors, including:

- The lack of standards adoption that would enable interoperability of health IT systems across the care system
- The misalignment of incentives that often drives volume and fragmentation and does not reward the use of information to deliver better healthcare
- Concerns about privacy and confidentiality of electronic information
- The significant work flow change required by providers to transform healthcare delivery through the use of health IT

The eHI Blueprint is designed to begin to tackle these barriers by creating multi-stakeholder consensus on common action to improve the quality, safety and efficiency of the U.S. healthcare system.

¹⁵ eHealth Initiative. *States Getting Connected: State Policy Makers Drive Improvements in Healthcare Quality and Safety Through IT*. Washington, D.C.: eHealth Initiative; August 2006.

¹⁶ eHealth Initiative. *eHI State Legislation Tracker* <http://ccbh.ehealthinitiative.org/communities/community.aspx?Section=288>. Accessed September 2007.

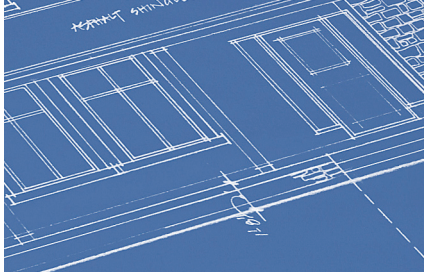
¹⁷ Ibid.

¹⁸ eHealth Initiative. *Improving the Quality of Healthcare through Health Information Exchange: Selected Findings from eHealth Initiative's Third Annual Survey of Health Information Exchange Activities at the State, Regional and Local Levels*. Washington, D.C.: eHealth Initiative; September 2006.

¹⁹ <http://www.hhs.gov/news/press/2007pres/10/pr20071005a.html>. HHS Awards Contracts for Trial Implementations of the Nationwide Health Information Network, October 5, 2007.

²⁰ Centers for Disease Control and Prevention, RFP No 2007-N-09275, *Accelerating Public Health Situational Awareness through Health Information Exchanges*, <http://www.fbo.gov/servlet/Documents/R/1675039/309666>, May 21, 2007





OUR SHARED VISION

We envision a high-performing healthcare system, where all those engaged in the care of the patient are linked together in secure and interoperable environments, and where the decentralized flow of clinical health information directly enables the most comprehensive, patient-centered, safe, efficient, effective, timely and equitable delivery of care where and when it is needed most – at the point of care.²¹

In our vision, financial and other incentives are aligned to directly support and accelerate all of the key elements of transformation — engaging consumers, transforming care delivery at the point of care, and improving population health — in a secure, private, and trusted environment.

Vision for Engaging Consumers:

Patients will be fully engaged in their own healthcare, supported by information and tools that enable informed consumer action and decision making, working hand-in-hand with healthcare providers. Tools that support consumer engagement are well designed and customized to the diversity of consumers. These tools are integrated into the delivery of care, and are conveniently available outside healthcare settings as well.

Vision for Transforming Care Delivery at the Point of Care:

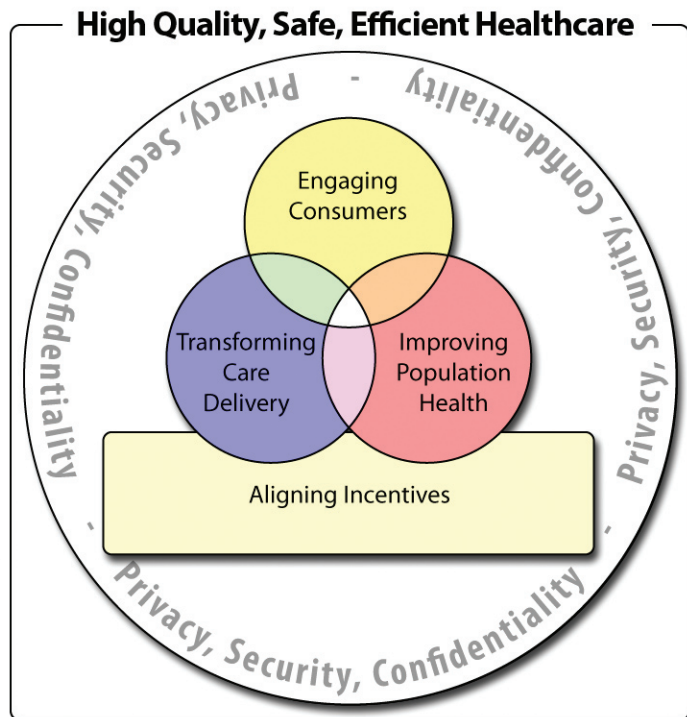
Patient care is high quality, patient-centered, for a lifetime, and reflects a coordinated and collaborative approach. Complete, timely and relevant patient-focused information and clinical decision support tools are available, as part of the provider’s workflow, at the point of care. High quality and efficient patient care is supported by the deployment and use of interoperable health IT and secure data exchange between and across all relevant stakeholders.

Vision for Improving Population Health:

Electronic healthcare data and secure health information exchange are utilized to facilitate the flow of reliable health information among population health and clinical care systems to improve the health status of populations as a whole. Information is utilized to enhance healthcare experiences for individuals, eliminate health disparities, measure and improve healthcare quality and value, expand knowledge about effective improvements in care delivery and access, support public health surveillance, and assist researchers in developing evidence-based advances in areas such as diagnostic testing, illness and injury treatment, and disease prevention.

Vision for Aligning Financial and Other Incentives:

Healthcare providers are rewarded appropriately for managing the health of patients in a holistic manner. Meaningful incentives help accelerate improvements in quality, safety, efficiency and effectiveness. Quality of care delivery and outcomes are the engines that power the payment of providers.



²¹ Institute of Medicine. Committee for Quality in Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press; 2001.

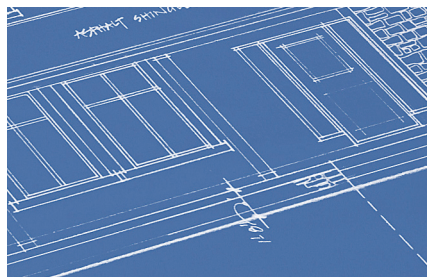




Vision for Privacy, Security and Confidentiality:

In a fully-enabled electronic information environment designed to engage consumers, transform care delivery and improve population health, consumers have confidence that their personal health information is private, secure and used with their consent in appropriate, beneficial ways. Technological developments are adopted in harmony with policies and business rules that foster trust and transparency. Organizations that store, transmit or use personal health information have internal policies and procedures in place that protect the integrity, security and confidentiality of personal health information. Policies and procedures are monitored for compliance, and consumers are informed of existing remedies available to them if they are adversely affected by a breach of security. Consumers trust and rely upon the secure sharing of healthcare information as a critical component of high quality, safe and efficient healthcare.





ENGAGING CONSUMERS

Health IT and health information exchange (HIE) can provide the knowledge and tools to enable consumers to fully engage in their own care in partnership with providers and the larger health system. Such tools allow consumers to do more for themselves, including making informed behavioral choices, knowing when to seek outside care, and coordinating the care they receive from multiple sources. Health IT can create a new standard of care in which delivering information, self-care tools and decision aids to the patient are as integral to high quality care as providing tests, medications and treatments.

While there were many areas of consensus, the broader vetting process identified some priority areas where consensus has not yet been established. Nearly all stakeholders agree strongly in principle that consumers should be able to control their own health information, but the specific policies and mechanisms to implement this principle have not yet been well defined, let alone broadly accepted or developed.

For example, there is not consensus in the industry regarding the level of consumer control with regard to de-identified health information for non-direct care purposes such as research. In addition, when it comes to consumer control of personally identifiable information, some stakeholders are concerned about giving more control than HIPAA currently requires, particularly in the areas of information necessary for treatment, payment or administrative operations. There is also ongoing discussion regarding the interpretation and application of HIPAA itself. Finally, as we seek to mobilize patient data in order to improve quality, safety and efficiency of healthcare delivery, questions arise such as which providers should have access to what types of data, under what circumstances. This applies to both identifiable information and de-identified information, which could be used for analysis, aggregation and reporting purposes beyond what is needed for direct patient care.

The consent process should include a dialogue between patients and their clinicians regarding access to detailed identifiable clinical information. In addition, policy issues remain regarding the use of personal health information – identifiable or otherwise – for purposes other than direct patient care. All of these critical issues should be addressed as part of a multi-stakeholder consensus process, which we call for under strategy number five.

Principles

The following principles, strategies and actions are designed to catalyze the development of health IT applications and the flow of information to support them in a way that emphasizes the fullest possible engagement of consumers in their own healthcare.

- 1. Consumer Engagement in Healthcare:** Engaging consumers is critical in improving health-care safety, equity, timeliness, quality, efficiency, and patient-centeredness. Health IT and health information exchange should support informed consumer action and decision-making about health and healthcare, in partnership with providers. The absence of health IT and health information exchange serves as a barrier to achieving these goals. In addition, consumers need clear information, shaped by their input, about health IT, health information exchange, and how to participate more fully in their own health and healthcare.
- 2. Consumer Access and Control of Personal Health Information:** Consumers have the right to access all of their personal health information in an understandable form, as well as to annotate and request corrections to this information. Providers, payers and others who hold personal electronic health information have an obligation to make that information readily accessible or to facilitate its availability to the consumer. Individuals should be able to limit when and with whom their identifiably personal health information is shared.





- 3. Consumer Access to Electronic Health Information Tools and Services:** Tools that engage consumers through the mobilization of electronic health information should be universally available to consumers regardless of whether or not they have health insurance, serve consumers' varied needs, be integrated in the delivery of care and conveniently available outside of care delivery settings. These tools should also be designed explicitly to meet the needs of diverse groups including the economically and geographically underserved, disabled, older, and culturally diverse populations.
- 4. Consumer Privacy:** Consumers have a right to privacy of their personal health information, consistent with all applicable federal, state and local law. *(See also additional principles in Privacy, Security and Confidentiality.)*
- 5. Consumer Trust:** Consumers must be able to trust that their personal electronic health information is kept and used, with appropriate consent, in a secure, reliable and auditable manner. All stakeholders in healthcare who handle personal health information must make their policies regarding privacy and information use public, understandable and easily accessible.
- 6. Consumer Participation and Transparency:** All entities that govern, oversee, operate and/or create policy for the electronic exchange of health information should be transparent and open to meaningful consumer participation.





Strategies and Actions Engaging Consumers

Engaging Consumers Strategies	Engaging Consumers Actions
CONSUMER ENGAGEMENT IN HEALTHCARE	
1. Compile and analyze research, literature, and best practices relevant to successful consumer engagement in HIT/HIE.	1.1 An existing, trusted Federal Agency and/or NGO should compile and analyze research, literature, and best practices relevant to successful consumer engagement in HIT/HIE. (2007-2008)
2. Lay out the value case for HIT and HIE (including benefits & risks) from consumers' perspective.	2.1 Consumer Organizations, NGOs and Federal Agencies should lay out the value case (including benefits and risks), for HIT and HIE from the consumer perspective, with an emphasis on the potential impact on quality of care. Consumers should be included as an integral part of this process through an extensive community consultation technique. (2007-2008)
3. Develop an outreach and education plan for consumers and providers.	3.1 A multi-stakeholder entity or forum (convened by an NGO) should develop an interactive outreach and education plan for consumers and providers that communicates the value case for HIT and HIE, how to evaluate and use particular tools and services, and how to participate more fully in one's own health and health-care. Consumer Organizations, with foundation support, as well as Quality Organizations, and other stakeholders should assess, encourage, and validate efforts to implement these strategies for the benefit of consumers. A community consultation technique should be incorporated into the outreach process. Implementation must also take into account the diverse needs of consumer populations, including varying levels of health literacy. (2008)
4. Execute the outreach and education plans.	4.1 Consumer Organizations and other stakeholders should execute an outreach and education plan for consumers. (2008-2009) 4.2 Provider Organizations should execute an outreach and education plan in partnership with the organizations leading the consumer outreach and education plan. (2008-2009)
CONSUMER ACCESS AND CONTROL OF PERSONAL HEALTH INFORMATION	
5. Create consensus principles and standards that support consumer-control of electronic personal health information.	5.1 Consumer Organizations, Provider Organizations and NGOs should launch an open, transparent process involving every stakeholder of healthcare from both the public and private sectors to gain consensus acceptance around the following common principles and processes to support consumer control of electronic personal health information (2008-2009): A. Consumers should have easy access to review, add notations and suggest corrections to existing information in their own records. B. Consumers should be able to limit which of their health information could be shared with which providers, in a manner compliant with HIPAA, when applicable.





	<p>C. Consumers should be able to limit how their personally identifiable medical information is used outside of care delivery (e.g. for research), consistent with all applicable federal, state and local law.</p> <p>D. Consumers should be able to easily designate others as proxies to act on their behalf (e.g. family member, caregiver, or guardian).</p> <p>E. The process and infrastructure for monitoring and certifying compliance with the common principles above among organizations, initiatives and technologies.</p> <p>5.2 NGOs such as Standards Development Organizations, HITSP, and others, in partnership with HIT Vendors and Provider Organizations, should develop technological standards for functionalities in EHRs, PHRs and other applications that reflect the principles in 5.1. (2009-2010)</p> <p>5.3 HIT Vendors should ensure that the products they offer provide appropriate functionalities that reflect the common principles and standards created in 5.1 and 5.2. (2009-2010)</p> <p>5.4 Federal Agencies (HHS and others) that fund HIT/HIE initiatives should use consumer principles described in 5.1 in setting funding requirements. (2009-ongoing)</p> <p>5.5 Certification mechanisms should be put into place by CCHIT and/or other appropriate NGOs, such as accreditation organizations, to establish product compliance (for EHRs, PHRs, and similar products) with functionalities needed to support the consumer principles outlined in 5.1. For example, EHRs and PHRs must possess compatible fields to enable granular levels of information exchange between them. (2008-ongoing)</p> <p>5.6 Consumer Organizations, Provider Organizations and Federal Agencies, along with NGOs, should educate consumers about the benefits, risks and potential consequences of choosing to limit or to share their health information with providers. (2008-ongoing)</p>
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CONSUMER ACCESS TO ELECTRONIC HEALTH INFORMATION TOOLS AND SERVICES

<p>6. Where electronically available, consumers should be able to acquire historical data from providers, payers and other entities to generate a more complete longitudinal record.</p>	<p>6.1 Federal Agencies, Purchasers and Health Plans should align incentives to support HIT adoption by providers. (2008-ongoing) (See also Aligning Incentives)</p> <p>6.2 Congress should require digitization of an agreed upon core set of health data (such as the CCD or CCR) beginning in 2017.</p> <p>6.3 Congress should require those who hold digital health data about a patient (providers, insurers, labs, etc.) to make it available to him/her in digital form upon request. (Requirements begin for some in 2010—small clinics and others not yet able to meet that requirement have until 2017.)</p> <p>6.4 Federal Agencies (HHS) should provide grants and loans to support providers and others who need help transitioning to HIT/HIE. (2008-ongoing)</p>
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<p>7. Make a variety of types of useful tools and services available to consumers.</p>	<p>7.1 Federal Agencies, NGOs, Provider Organizations and other stakeholders (including the public and private sectors) should continue to develop free health content in digital form about a variety of conditions and in a variety of formats. (2007 - ongoing)</p> <p>7.2 Congress should provide explicit long-term funding support to Federal Agencies such as the National Library of Medicine and the National Institutes of Health to develop free health content in digital form about a variety of conditions and in a variety of formats. (2007-ongoing)</p> <p>7.3 Federal Agencies (CMS) should provide personal health information tools (or financial support to acquire them) to all Medicaid and Medicare beneficiaries. (2012-ongoing)</p>
<p>8. Design content, tools, and interfaces to support different consumer needs, including but not limited to different languages, levels of health literacy, cultural perspectives, geographic access needs, and physical disabilities.</p>	<p>8.1 HIT Vendors should use focus group input and product testing that addresses consumer preferences in product development, taking into account the wide variety of consumer needs. (2007-ongoing)</p> <p>8.2 Provider Organizations and Researchers, with support from NGOs (foundations), should develop prototypes of useful electronic health information tools, with an emphasis on those that help consumers and providers to make decisions based on scientific evidence. Information from these efforts should feed into the development of guidelines described in 9.1. (2007-ongoing)</p> <p>8.3 Federal Agencies (HHS) should research the development of tools to meet the specific needs of various underserved populations, in collaboration with Consumer Organizations. Information from these efforts should feed into the development of guidelines described in 9.1. (2008-ongoing)</p>
<p>9. Develop tools that explicitly help people to make evidence based decisions about their health.</p>	<p>9.1 NGOs, in coordination with Federal Agencies (AHRQ) should study and develop guidelines and best practices for involving consumers in decision-making based on scientific evidence (e.g. information prescriptions, patient decision aids, and reminders/action items). These guidelines should be incorporated into the product certification process (See 5.5). (2007-ongoing)</p>

CONSUMER PRIVACY

<p>See Principles in Privacy, Security and Confidentiality</p>	<p>See Principles in Privacy, Security and Confidentiality</p>
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CONSUMER TRUST

<p>10. Develop, post, and adhere to Notices of Information Policies that explain how health information is handled.</p>	<p>10.1 NGOs should analyze how HIPAA applies to HIT/HIE and recommend how gaps in coverage need to be addressed. (2007-2008)</p>
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	<p>10.2 Given the lack of a comprehensive privacy-protective policy framework, any entity that may have contact with electronic personal health information (State and Community HIE Collaboratives, Health IT Vendors, Health Plans, Payers, Providers, etc.) should develop and publicly post a Notice of Information Policies. (2007-ongoing)</p> <p>10.3 A Federal Agency (such as the Federal Trade Commission) should be responsible for enforcing Notices of Information Policies. (2007-ongoing)</p>
<p>11. Establish accreditation processes for HIE networks and services and certification of HIT tools.</p>	<p>11.1 An NGO and/or Federal Agency should work with accreditation organizations to develop "policy standards" for State and Community HIE Collaboratives that establish compliance with the consumer principles described in 5.1. These "policy standards" should address attributes and/or procedures (for example, whether an HIE conducts its business in a transparent way). (2008-ongoing)</p> <p>11.2 An NGO and/or Federal Agency puts into place a process to establish compliance by HIEs and others providing related services with the consumer principles described in 5.1. (2008-ongoing)</p>

CONSUMER PARTICIPATION AND TRANSPARENCY

<p>12. Define organizational requirements for consumer participation and transparency and require compliance with those requirements.</p>	<p>12.1 An existing, trusted entity (NGO, Consumer Organization or Federal Agency) should define and catalog the types of entities that govern, oversee, operate and/or create policy for the electronic exchange of health information and produce recommendations regarding the appropriate level of consumer participation and requirements for transparency that should apply to them. (2007-2008)</p> <p>12.2 An NGO, Quality Organization and/or Federal Agency should put into place a process to establish compliance with consumer participation and transparency requirements by entities described in 12.1. (2008-ongoing)</p>
<p>13. Strengthen and expand the cadre of consumer organizations well-versed in HIT/HIE policy issues at the national, state, and local level.</p>	<p>13.1 A trusted, existing NGO should organize/support development of a larger cadre of consumer organizations well-versed in HIT/HIE policy and coordinates their activities for maximum impact. (2007-ongoing)</p> <p>13.2 State and Community HIE Collaboratives and NGOs (foundations) should pay for individual consumers to attend HIT conferences in the states and at the national level, in order to support their education and participation in HIT and HIE initiatives. (2007-ongoing)</p>



Overview of Key Initiatives Engaging Consumers

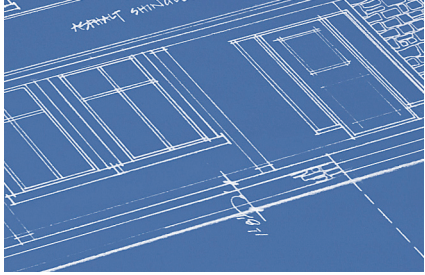
Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
America's Health Insurance Plans (AHIP), Blue Cross Blue Shield Association, National Health Council	Personal Health Record Model www.ahip.org www.bcbsa.org	A national effort to develop standards for health plan-based PHRs and policies for PHR data transfer.	Create health plan-based PHR standards	Provide a PHR that will give consumers the ability to take information with them if they change health plans as well as facilitate information provision for both the patient and providers
American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Osteopathic Association (AOA)	Patient-Centered Medical Home (PCMH) www.aafp.org/online/en/home/press/aafp_releases/20070301_releases/20070305_pressrelease_0_printerview.html	A quality improvement approach to providing comprehensive care where the patient's needs come first.	To promote a partnership between the child, family, and physician care team.	<p><u>Principles of a Patient-Centered Medical Home:</u></p> <ul style="list-style-type: none"> • Personal physician • Physician-directed medical practice • Whole person orientation • Care is coordinated and/or integrated • Quality and safety • Enhanced access to care • Payment is adjusted to reflect value of care coordination (especially as it relates to care outside of a face-to-face setting)

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Health Information Management Association (AHIMA)</p>	<p>myPHR www.myphr.org</p>	<p>A PHR template for consumers to use in creating and maintaining their personal health records electronically</p>	<p>Ensuring that all medical information collected about you is complete, accurate, and protected, yet, at the same time, readily available for your healthcare providers when it's needed.</p>	
<p>American Health Information Community (AHIC)</p>	<p>Consumer Empowerment workgroup www.hhs.gov/healthit/ahic/consumer</p>		<p>Develop a plan to realize a specific charge (deployment of pre-populated electronic registrations and medication histories) within one year that is visible to the American public and that works towards a broader charge (widespread adoption of personal health records) over time.</p>	<p><u>Broad Charge:</u> Make recommendations to the AHIC to gain wide spread adoption of a personal health record that is easy-to-use, portable, longitudinal, affordable, and consumer-centered.</p> <p><u>Specific Charge:</u> Make recommendations to the Community so that within one year, a pre-populated, consumer-directed and secure electronic registration summary is available to targeted populations. Make additional recommendations to the Community so that within one year, a widely available pre-populated medication history linked to the registration summary is deployed.</p>

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Centers for Medicare & Medicaid Services (CMS)</p>	<p>MyMedicare.gov www.my-Medicare.gov</p>	<p>An 18-month pilot project to encourage Medicare beneficiaries to optimize their health using Internet-based tools. Participants include: HIP USA, Humana, Kaiser Permanente, and the University of Pittsburgh Medical Center</p>	<ul style="list-style-type: none"> To assess the use of PHRs Identify the features beneficiaries prefer Determine how best to conduct outreach and education Determine how best to encourage adoption and ongoing use of PHRs 	<p>MyMedicare.gov features include:</p> <ul style="list-style-type: none"> View claim status (excluding Part D claims) Order a duplicate Medicare Summary Notice (MSN) or replacement Medicare card View eligibility, entitlement and preventive services information View enrollment information including prescription drug plans View or modify drug list and pharmacy information View address of record with Medicare and Part B deductible status Access online forms, publications and messages sent to beneficiary by CMS
<p>Center for Connected Health</p>	<p>www.connected-health.org</p>	<p>A division of Partners HealthCare leading efforts in the use of technology to deliver quality patient care outside of the medical setting.</p>	<p>To increase access and improve quality medical services and patient care by applying consumer technologies and online resources in innovative ways.</p>	<p><u>Remote Care:</u> Patient-provider communications which happen on a more continuous basis, instead of only during scheduled visits, improves both the efficacy of care and offers a more patient-centered approach to the exchange. Whether it's an online office visit or a messaging platform delivered via the cell-phone, we are establishing new models of engagement.</p> <p><u>Self-Care:</u> Access to physiologic data will provide patients with feedback that promote improved decision-making, healthier behavior, and motivation to change. In this area, we are interested in topics such as care plan adherence, behavioral modification, and health engagement.</p>

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Center for Health Transformation</p>	<p>Health Information Technology Project www.healthtransformation.net</p>	<p>A membership-based collaboration created to drive adoption of health information technology to help create a Nationwide Health Information Network.</p>	<p>To engage consumers on using personal health records in their health and healthcare management</p>	<p><i>Among other principles for HIT adoption, the following are specific to engaging consumers:</i></p> <ul style="list-style-type: none"> • Pass a federal law giving individuals ownership of their health records. Pass a law to preserve the confidentiality and security of electronic health records by making the unauthorized access of medical records a felony with severe penalties, including slander if published or posted online. • Engage employers to offer personal health records to their employees by combining consumer portals with incentive programs for wellness and health.
<p>Connecting for Health – Markle Foundation</p>	<p>Personal Health Technology Initiative www.connectingforhealth.org/phti</p>	<p>A consumer advocacy effort that promotes patient use of and empowerment through personal health records.</p>	<p>Envisions a future electronic health information environment that:</p> <ul style="list-style-type: none"> • Allows patients, consumers, and caregivers to take a very active role in healthcare • Supports effective and efficient communication between physicians and other health providers and the individuals and their families in their care • Improves the quality of health care • Reduces medical errors and enhances safety 	<p><u>Consumer Principles:</u></p> <ul style="list-style-type: none"> • Individuals should be able to access their health and medical data conveniently and affordably. • Individuals should be able to decide (i.e., authorize) when their health data are shared, and with whom. Individuals should be able to refuse to make their health data available for sharing (i.e., opt-out). • Individuals should be able to designate someone else, such as a loved one, to have access to and exercise control over how their records are shared. • Individuals should receive easily understood information about all the ways that their health data may be used or shared. • Individuals should be able to review which entities have had access to their personal health data. • Electronic health data exchanges must protect the integrity, security, privacy, and confidentiality of an individual's information.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
			<ul style="list-style-type: none"> Emphasizes continuity and convenience of care Safeguards patient privacy Earns and keeps the public's trust 	<ul style="list-style-type: none"> Independent bodies, accountable to the public, should oversee the electronic health data exchanges. No single stakeholder group should dominate these oversight bodies. Consumer representatives selected by their peers should participate as full voting members.
National Health Council and AHIP	HealthTracks www.ahip.org/HealthTracks	A pilot program to increase consumer awareness about electronic personal health records and information tools.	Information sharing and promotion of PHRs to those with chronic conditions, health information seekers, and patient advocates interested in improving consumers' quality of care.	
The Leapfrog Group	Leapfrog Hospital Quality and Safety Survey www.leapfroggroup.org/for_consumers www.leapfroggroup.org/hospital_quality_and_safety_survey_copy	A tool that assesses hospital performance based on quality and safety practices that are proven to reduce preventable medical mistakes and are endorsed by the NQF.	To help consumers make informed decisions about where to receive hospital care based on quality and patient safety results.	<p><u>The Leapfrog Group principles:</u></p> <ul style="list-style-type: none"> Reduce preventable medical mistakes and improve the quality and affordability of health care. Encourage health providers to publicly report their quality and outcomes so that consumers and purchasing organizations can make informed health care choices. Reward doctors and hospitals for improving the quality, safety and affordability of health care. Help consumers reap the benefits of making smart health care decisions.



TRANSFORMING CARE DELIVERY AT THE POINT OF CARE

The goal of transforming healthcare is to help providers ensure that the care they deliver meets the six Institute of Medicine (IOM) aims- it is safe, effective, efficient, equitable, timely and patient-centered. The principles below outline the need for new models of care delivery, while the strategies and actions are grouped into three major strategic categories – moving providers to adopt health IT systems, supporting that adoption, and helping providers

use health IT as a tool to enable transformation. It is important to note that while the first two strategic areas center on accelerating the adoption of health IT and supporting its use, this ultimate focus is on using health IT as a tool for quality improvement and care transformation – but health IT is not an end unto itself.

As with all areas of the Blueprint, this section should be considered in tandem with the other strategies and actions contained elsewhere in the Blueprint. For example, an important element of transforming care delivery into high quality patient-centric care is incentivizing activities such as care coordination, chronic care management, and enhanced preventive care. In addition, technology that is employed to support these functions must also protect the privacy and security of patient data.

The following recommendations are provided in the context of today’s reality, recognizing that as the actions in all areas of the Blueprint are implemented, some of these strategies will necessarily and rightly change.

Principles

1. **Patient-Centered Care:** Standards-based HIT and health information exchange (HIE) will support new models of care delivery that are patient-centered, for a lifetime, and physician-guided, reflecting a coordinated, collaborative approach. HIT and HIE will help providers and consumers improve the quality, safety, effectiveness, timeliness, efficiency and equity of care delivered across the U.S. healthcare system. In order for HIT and HIE to be truly patient-centered, the system should also provide meaningful, understandable and useful information for patients and providers at the point of care.
2. **Patient and Clinician-Centered Workflow:** The transformation to patient-centered care will be facilitated by making more complete, timely and relevant patient-focused data and clinical decision support tools available in a secure manner to both clinicians and patients as part of the workflow at the point of care. Information at the point of care through HIT and HIE will help integrate care across multiple care settings and facilitate team-based care.
3. **Everyone Plays:** All healthcare providers regardless of size, specialty, or location, and especially small physician practices (that deliver a majority of care in the U.S.) need to be engaged and supported in both local and national efforts to make patient-focused electronic health information available at the point of care. Furthermore, the acquisition strategy, support for workflow change, resources required to overcome implementation barriers, and ongoing maintenance of HIT and electronic healthcare information will differ.
4. **Across Care Settings:** There is value in adopting HIT in care settings, but greater value when the exchange of electronic health information is implemented across care settings. Care transformation will be supported by the deployment and use of HIT and secure data exchanges with all relevant stakeholders, including:

- Patients/Consumers
- Hospitals
- Emergency departments
- Laboratories and diagnostic centers
- Public health agencies
- Quality reporting and benchmarking organizations
- Health plans
- Pharmacy benefit managers
- Physician practices
- Long term care facilities
- Home health agencies
- Pharmacies
- And others





- 5. HIT and HIE Are Enabling Tools:** HIT and HIE are essential infrastructure elements that add value and efficiency for clinicians, other care providers and the patients they serve through information management and information sharing with each other and with other stakeholders in healthcare.
- 6. Overcoming Challenges:** Selecting and implementing HIT and HIE tools, as well as the required process changes, are challenging endeavors. Overcoming these challenges to maximize effective use of HIT and HIE is critical to supporting, informing and improving care delivery at the point of care.
- 7. Reality – The Journey Begins Here:** The transformation of US healthcare requires immediate attention but will happen over a period of years with multiple iterations at different paces across various care settings.





Strategies and Actions
Transforming Care Delivery at the Point of Care

Strategies	Actions
MOVE PROVIDERS TO ADOPT HEALTH IT SYSTEMS (Getting Providers to Make the Decision and Understand Effective Use)	
<p>1. Understand provider purchase motivations regarding HIT adoption</p>	<p>1.1 Provider Organizations, Quality Organizations (QIOs) and NGOs, with support from Federal Agencies (such as AHRQ and/or ONC) should examine adoption motivations among providers, including lessons from failed and successful models of HIT implementations and participation in HIE, as well as the impact of providing free technology, and make recommendations regarding best practices. (2007-2008, and ongoing)</p> <p>1.2 Provider Organizations and NGOs, in partnership with Federal Agencies, should communicate findings regarding best practices for moving providers to adopt HIT systems, use them effectively and participate in HIE. (2008-2009, and ongoing)</p> <p>1.3 NGOs (such as foundations) and the Federal Agencies should fund research conducted among State and Community HIE Collaboratives to examine HIEs that are currently operational, as well as defunct organizations, to identify best practices and lessons learned for how HIEs can play a role in supporting HIT adoption among providers. (2008-2010, and ongoing)</p>
<p>2. Educate and motivate providers to adopt HIT and use it effectively.</p>	<p>Drawing from the lessons and best practices identified in the research in 1.1 and 1.3:</p> <p>2.1 Provider Organizations should continue to help prepare providers for the increased focus on performance reporting, accountability and transparency in the healthcare marketplace through educational events, online resources, and other communications. In addition, NGOs and Federal Agencies (especially CMS) should also undertake similar education efforts to prepare providers. (2007-2009)</p> <p>2.2 Vendor Organizations, Quality Organizations, Provider Organizations and Federal Agencies (through ONC and the AHRQ Resource Center for HIT) should help educate providers about resources available before, during and after adoption (including tools developed below) to support adoption and effective use of HIT. (2007-ongoing)</p> <p>2.3 Quality Organizations (QIOs) through DOQ-IT and the hospital HIT projects, as well as Provider Organizations, NGOs and researchers, should help providers set realistic expectations regarding adoption of HIT – its benefits, uses, etc. (2007-ongoing)</p> <p>2.4 NGOs, Employers, Provider Organizations and Consumer Organizations should collaborate to undertake a comprehensive study of the value proposition and business case for HIT adoption among providers based on objective, venter-neutral case studies. (2007-2008, and ongoing)</p>





	<p>2.5 NGOs should collaborate with Health Plans and Employers to undertake a comprehensive, objective study of the value proposition and business case for health plans to provide financial or other incentives in support of HIT adoption. (2008)</p> <p>2.6 NGOs, Health Plans, Employers, Provider Organizations, HIT Vendors, Federal Agencies and Consumer Organizations should communicate the value proposition of HIT adoption and effective use to their respective stakeholder groups. (2009-2012)</p> <p>2.7 Provider Organizations, NGOs, Consumer Organizations, HIT Vendors, State and Community HIE Collaboratives, Public Health stakeholders, Quality Organizations and Federal Agencies should examine and create awareness of the benefits of sharing and using electronic health information across care settings and at the point of care. (2008-ongoing)</p> <p>2.8 HIT Vendors should focus their products and future enhancements on enabling providers to improve the quality of care, the efficiency of how care is delivered and the effectiveness of data capture. Vendors should develop work flow and change management competencies, both in sales and implementation, that contribute to the optimal use of their technology to achieve those improvements and with guidance on how to adapt current processes to those optimal work flows. (2007-2009)</p> <p>2.9 Federal Agencies (CMS), Employers, and Health Plans should increase the transparency of the quality reporting and pay for performance program development processes, strategies and timelines, with clear explanation of the benefits of using technology to participate in current and upcoming quality improvement programs. (2007-ongoing)</p>
<p>3. Educate providers regarding the availability of incentives and financing options to support adoption and effective use of HIT.</p>	<p>3.1 Federal Agencies and NGOs should work with Health Plans, Employers, HIT Vendors and others to create and maintain a centralized resource center of grants, loans, insurance savings opportunities, incentive programs and other financing options for HIT for providers. (2008-ongoing)</p> <p>3.2 Provider Organizations (at the national and state levels) should leverage the resource center (above) and their own knowledge of local options and programs to communicate information about funding sources for HIT adoption. (2008-ongoing)</p> <p>3.3 HIT Vendors, Quality Organizations (QIOs) and NGOs should provide increased support for small and rural healthcare organizations that need assistance with the grant writing process to complete applications for HIT funding support. (2008-2010)</p> <p>3.4 Providers (especially Integrated Delivery Networks, health systems and hospitals) should communicate to physicians the availability and related criteria for funding under the Stark and anti-kickback relaxation. (2007-ongoing)</p>





<p>4. Monitor adoption rates based on agreed upon methodology. Report on rates to all healthcare stakeholders, including the government, in order to continue to incentivize and support adoption and effective use.</p>	<p>4.1 Federal Agencies, in partnership with Provider Organizations and NGOs, should establish a consistent methodology for measuring adoption and effective use, and analyzing and reporting data. (2007)</p> <p>4.2 Provider Organizations, with federal funding, should promote the survey instrument to their members, assist with follow up to ensure survey completion, and communicate results back to members, Federal Agencies, and the public. (2008-ongoing)</p> <p>4.3 Using the agreed upon methodology, NGOs, the Federal Agencies, Congress, Health Plans, HIT Vendors and Employers should utilize annual survey results at the national and local level as a feedback loop that informs national and local strategies to boost adoption rates and encourage effective use. (2008-ongoing)</p>
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**SUPPORTING ADOPTION AND EFFECTIVE USE
(Providers Have Made the Decision to Adopt HIT, What Do They Do Now?)**

<p>5. Increase the availability of incentives and financing options to support adoption and effective use.</p>	<p>5.1 Providers (especially hospitals) should utilize the recent Stark and anti-kickback relaxation to help provide hardware, software and training to physician practices. (2008-2009)</p> <p>5.2 HIT and HIE vendors on a broader scale should provide more flexible contract options, reducing upfront costs through monthly fees. (2008)</p> <p>5.3 HIT Vendors should provide software that maximizes the current and future value propositions for providers based on the studies outlined in 2.5 regarding value proposition to providers. (2008-ongoing)</p> <p>5.4 Existing group purchasing organizations should increase their focus on providing HIT and HIE solutions for providers. (2008)</p> <p>See also Aligning Incentives Actions</p>
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<p>6. Provide education, tools and technical and other assistance to prepare and assist providers for selection, implementation and effective use of HIT. Education, tools and assistance should be tailored to provider size and specialty.</p>	<p>6.1 HIT Vendors, Provider Organizations, and Quality Organizations should work together to provide adaptable tools to help providers understand and assess the business case for HIT adoption, as well as the requirements for HIT implementation and effective use, including current workflow and redesign of care processes, technical requirements, current operational and business rules, staff capacity and skills and change management requirements. (2007-2009)</p> <p>6.2 Provider Organizations, NGOs, HIT Vendors and Quality Organizations should leverage conferences, online tools and other communication vehicles to educate providers about (2007-ongoing):</p> <ul style="list-style-type: none"> • The overall process and steps to adopt – selection, acquisition, implementation, and effective use. • Internal interoperability among all applications, services and products within a practice or provider organization, including practice management systems (existing and new) to facilitate efficient data entry (e.g., one-time, within the workflow, etc). • Ongoing maintenance requirements, such as back-up and recovery, technical support, upgrades, compliance with future new standards.
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	<p>6.3 Provider Organizations, Quality Organizations, HIT Vendors and NGOs should collaborate to create and make available model/standard approaches and guidelines for RFPs, vendor contracts, requirements checklist, model workflows, etc. (2007-2010, and ongoing)</p> <p>6.4 Provider Organizations, Quality Organizations, HIT Vendors and NGOs should develop and make available how-to guides regarding selection, acquisition and implementation, tailored to provider size and specialty. (2008-2011)</p> <p>6.5 Provider Organizations, NGOs (such as commercial product research organizations) and Quality Organizations, should provide peer experience information regarding HIT products and applications. (2007-ongoing)</p> <p>6.6 Federal Agencies, through the AHRQ HIT Resource Center should help providers navigate the tools and assistance available to them (including how-to guides, model approaches, workflow and other support, etc). Provider Organizations, NGOs and Quality Organizations should contribute tools and resources to the AHRQ HIT Resource Center. (2008-ongoing)</p> <p>6.7 Quality Organizations should provide engagement and hands-on support regarding practice redesign, workflow techniques, etc. to an increased number and type of provider organizations, including hospitals, small primary and specialty physician practices, and long term care providers. (2008-ongoing)</p> <p>6.8 Quality Organizations and HIT Vendors (and consultants) should provide support to providers during and after implementation to ensure effective use of all EHR functions. (2007-ongoing)</p> <p>6.9 Quality Organizations and HIT Vendors should provide ongoing support during and after implementation to help providers understand when and how to add functionality to EHR base application (lab interfaces, e-prescribing, clinical decision support, etc.), and to provide assistance adding and using that functionality accordingly. (2007-ongoing)</p> <p>6.10 HIT Vendors should work with Quality Organizations and NGOs to assess the available resources to assist small providers with implementation and effective use of HIT. (2008 – 2010)</p> <p>6.11 Federal Agencies (CMS, IRS) and Provider Organizations should develop a set of standardized principles and guidelines for the donation and acceptance of HIT under Stark and anti-kickback regulations. (2008)</p>
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**TRANSFORMING CARE DELIVERY THROUGH HIT AND HIE
(Providers Have Implemented the System, How Do They Transform Care?)**

7. Ensure interoperability between and across all relevant stakeholders, using an open and interoperable architecture based on common principles and standards to reflect changing requirements.

7.1 Federal Agencies (especially HHS) should clarify and communicate the process for developing standards, the roles stakeholders can play, a timeline for specific standards development and a list of key organizations involved in standards setting. (2007)

7.2 Federal Agencies (HHS, ONC) should accelerate the work to define standards for interoperability between and across all relevant stakeholders currently being undertaken by HITSP. (2007 – 2008)

7.3 NGOs, in partnership with Provider Organizations, HIT Vendors and Community HIE Collaboratives, should make recommendations for standards for data governance (i.e. standard naming conventions; minimum data governance to be adopted by RHIO/HIEs policies to support standards) to the federal government for adoption. (2007-2008)

7.4 The Federal Agencies (HHS), HIT Vendors and State and Community HIEs should adopt those standards for data governance. (2009)

7.5 Federal Agencies should develop standards for data exchange in partnership with representatives of (2007-2009):

- Patients/Consumers
- Hospitals
- Laboratories and diagnostic centers
- Public health agencies
- Quality reporting, accreditation and benchmarking organizations
- Health plans
- Physician practices
- Long term care facilities
- Home health agencies
- Pharmacies
- HIT Vendors

7.6 The standards development process above should focus on minimum standards in the following areas (2008-2009):

- Quality improvement
- Care management
- Billing
- Decision support
- Performance data reporting
- Research and population health initiatives, including disparities reduction efforts

7.7 Federal Agencies (HHS, ONC through CCHIT) should require the incorporation of interoperability standards by vendors in HIT applications at the point of care. (2008-2009)

7.8 Federal Agencies, in partnership with Provider Organizations, State and Community HIE Collaboratives, and HIT Vendors, should facilitate national adoption of interoperability standards. (2008-2010)



	<p>7.9 Federal Agencies and Provider Organizations should communicate standards to providers and Community HIE Collaboratives. (2008-ongoing)</p> <p>7.10 Providers should adopt standards-based certified HIT products. (2007-ongoing)</p> <p>7.11 State and Community HIEs should implement interoperability standards supported by policy and process, as these standards become available. (2008-ongoing)</p> <p>7.12 Congress should expand HIPAA rule to include additional entities that receive or transfer protected health information (Schools, First Responders and Public Service Agencies; and all users of secondary and tertiary data). (2008-2009)</p>
<p>8. Design HIT and HIE processes and supporting applications to collect data at all points of care as part of the normal workflow in a way that enables utilization for multiple purposes, such as healthcare quality improvement, care management, billing, decision support, performance data reporting, and research and population health initiatives, including disparities reduction efforts.</p>	<p>8.1 Community HIE Collaboratives, Provider Organizations and HIT Vendors, with support from Federal Agencies, should identify and analyze the current workflow processes and data stewardship and reengineer those workflow processes to enable data to be captured one time at the point of care, as part of the normal workflow, such that those data can be used for multiple purposes (such as billing, patient care, quality improvement, performance measurement). (2007-ongoing)</p> <p>8.2 HIT vendors should provide functionality to standardize data capture at the point of care by defining the data capture process and standardizing it according to nationally recognized terminology and coding standards. (2009)</p> <p>8.3 Provider Organizations, Quality Organizations and Public Health should promote the importance of standardized data capture by introducing education and training programs for providers and their staff. (2008-ongoing)</p> <p>8.4 HIT Vendors and Providers should work with all relevant stakeholder groups to enhance HIT systems design and to implement HIT and HIE to improve processes and reduce inefficiencies to facilitate more time for quality and safety activities by providers. (2008-ongoing)</p>
<p>9. Utilize HIT connected to HIE to transform care at the point of care, in a team environment and across settings.</p>	<p>9.1 Consumer Organizations and NGOs, in partnership with Provider Organizations and HIT Vendors, should study and promote best practices in which patient education, patient instructions and/or patient decision support information or tools are delivered to the consumer through HIT as part of the clinical encounter. (2008-2009)</p> <p>9.2 Provider Organizations and Quality Organizations should promote inclusion of these best practices in patient education and support into the workflow of providers, and across providers. (2009-2010)</p>





	<p>9.3 Federal Agencies (DEA) should work with Pharmacy Organizations and Provider Organizations to allow for electronic prescribing of controlled substances, with appropriate safeguards. (2008-2009)</p> <p>9.4 Federal Agencies should require institutions and providers to begin sharing health information electronically with each other. (2010)</p> <p>9.5 Congress should pass legislation that supports the development of medical home models of care. (2008)</p> <p>9.6 Provider Organizations should support the development and implementation of the medical home model across the country. (2009-2014)</p> <p>9.7 Providers in all settings should implement and effectively use HIT applications at the point of care, supported by connectivity to community HIE. (2007-ongoing)</p>
<p>10. Establish and use quality measures and decision support tools.</p>	<p>10.1 Federal Agencies (HHS, CMS, AHRQ) should define and support a process and the organizations responsible for establishing and endorsing quality measures to improve the quality, safety and efficiency of healthcare. (2007-2008)</p> <p>10.2 Federal Agencies (HHS, CMS, AHRQ) should define a process and the organizations responsible for standardizing data elements used in quality measurement reporting. (2008)</p> <p>10.3 Provider Organizations, Quality Organizations, Federal Agencies and NGOs should work with the Collaborative for Performance Measurement Integration with EHRs to identify and standardize electronic measure specifications. (2007-2008)</p> <p>10.4 HIT Vendors should all utilize these standardized data elements and electronic measure specifications in their collection and reporting methodologies, and decision support functions. (2009)</p> <p>10.5 CMS should require the use of a standardized electronic data set for submission of information for quality measurement activities for the Medicare program. (2010)</p> <p>10.6 Providers should utilize their HIT systems at the point of care to improve the quality, safety and efficiency of healthcare. (2007-ongoing)</p> <p>10.7 Federal Agencies (HHS, CMS, DOD, VA), in collaboration with NGOs, should establish baseline quality measure reporting, and monitor and report on changes over time to ensure effective use of EHRs, supported by data at the point of care. (2008-ongoing)</p>



Overview of Key Initiatives Transforming Care Delivery at the Point of Care

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
American Academy of Family Physicians (AAFP)	Center for Health Information Technology www.center-forhit.org	An arm of the AAFP that promotes and facilitates the adoption and optimal use of health IT by AAFP members and other office-based clinicians.	To increase the availability and use of low-cost, standards-based information technology among family physicians.	Principles: <ul style="list-style-type: none"> Affordability Compatibility Interoperability Data stewardship
AAFP	TransformMED www.transformmed.com	An AAFP-sponsored initiative focused on redesign of care delivery to a patient-centered model of care.	<ul style="list-style-type: none"> Develop high-performance family medicine practices through a transformative process of practice redesign focused on patient care and practice team satisfaction Generate transportable new knowledge about the practice transformation process Generate means to allow for the continued financial viability of the organization 	<u>Core Components of the TransformMED Model of Care:</u> <ul style="list-style-type: none"> Team approach Comprehensive practice offering (e.g., DM, wellness) Open access to care Advanced, data-based information systems (compliant w/ AAFP ChIT guidelines) Redesigned, more functional and efficient offices Patient access to information Emphasis on quality and safety Enhanced practice management

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Agency for Health Research and Quality (AHRQ)</p>	<p>AHRQ National Resource Center for Health IT http://health-it.ahrq.gov</p>	<p>AHRQ's National Resource Center includes more than \$166 million in grants and contracts in 41 states to support and stimulate investment in health IT, especially in rural and underserved areas. AHRQ and its partners identify challenges to health IT adoption and use, solutions and best practices for making health IT work, and tools that will help hospitals and clinicians successfully incorporate new IT.</p>	<p>Help the health care community make the leap into the Information Age. In addition to providing technical assistance, the National Resource Center shares new knowledge and findings that have the potential to transform everyday clinical practice. AHRQ's National Resource Center is committed to advancing our national goal of modernizing health care through the best and most effective use of IT.</p>	
<p>American College of Physicians (ACP)</p>	<p>EHR Adoption Road Map and Tools http://www.acponline.org/pmc/IT.htm</p>	<p>A road map and tools to assist College members at each stage in the I adoption process.</p>	<p>Integration of EHRs into clinical practice will provide the tools for improving practice efficiency and clinical quality over time.</p>	<p><u>Tools for each stage of adoption:</u></p> <ul style="list-style-type: none"> • I investigation • Selection and Purchase • Installation – Getting the I up and running • Basic implementation – Achieving base I functionality • Enhanced implementation – Exploiting I into the future

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
Bridges to Excellence (BTE)	Physician Office Link www.bridges-toexcellence.org/pro-grams/pol.msp	An employer-based incentive program that promotes physician office use of health IT.	Physician practices implement information systems to improve communications and reduce medical errors.	<ul style="list-style-type: none"> Assess the use of evidence-based standards of care, maintenance of patient registries for the purpose of identifying and following-up with at-risk patients and provision of educational resources to patients. Assess whether practices use electronic systems to maintain patient records, provide decision support, enter orders for prescriptions and lab tests and provide patient reminders. Assess whether a practice's electronic systems interconnect and whether they are interoperable with other systems, whether they use nationally accepted medical code sets and whether they can automatically send, receive and integrate data such as lab results and medical histories from other organizations' systems.
Centers for Medicare & Medicaid Services (CMS)	Doctor's Office Quality - IT (DOQ-IT)	A national initiative that promotes the adoption of EHRs and health IT in small adult primary care practices	Support I adoption, improved care management processes and electronic reporting of quality data in 5% of small practices in each state.	<ul style="list-style-type: none"> Provide hands-on technical assistance to support I adoption Using a QI framework, support care process and workflow redesign for effective use of EHRs Enable ongoing provider management of patient-population health

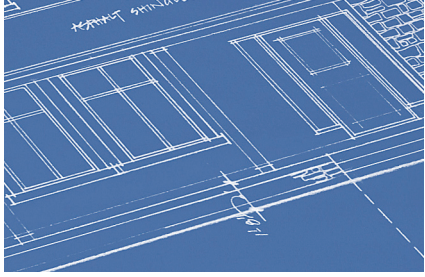
Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
Certification Commission for Health Information Technology (CCHIT)	Certification of health IT products http://www.cchit.org/about/index.asp	The Certification Commission for Healthcare Information Technology is a recognized certification body (RCB) for electronic health records and their networks, and an independent, voluntary, private-sector initiative.	To accelerate the adoption of health information technology by creating an efficient, credible and sustainable certification program.	
Connecting for Health – Markle Foundation	The Common Framework www.connectingforhealth.org/common-framework	A framework consisting of a set of mutually-reinforcing technical documents and specifications, testing interfaces, code, privacy and security policies, and model contract language intended to help health information systems share information.	A new infrastructure for health information sharing will provide the foundation for a transformed, 21st century healthcare system in which patients and families can better understand their own health and engage more fully in their care through direct access to their own health information.	Policy Principles: <ol style="list-style-type: none"> 1. Openness and transparency 2. Purpose specification and minimization 3. Collection limitation 4. Use limitation 5. Individual participation and control 6. Data integrity and quality 7. Security safeguards and controls 8. Accountability and oversight 9. Legal and financial remedies Technology Principles: <ol style="list-style-type: none"> 1. Make it “Thin” 2. Avoid “Rip and Replace” 3. Separate Applications from the Network 4. Decentralization 5. Federation 6. Flexibility 7. Privacy and Security 8. Accuracy

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Department of Health and Human Services – Office of the National Coordinator for Health IT</p>	<p>National Health Information Network (NHIN) Phases I & II http://www.hhs.gov/healthit/healthnet-work/background/</p>	<p>A critical portion of the health IT agenda intended to provide a secure, nationwide, interoperable health information infrastructure.</p>	<ul style="list-style-type: none"> • Developing capabilities for standards-based, secure data exchange nationally • Improving the coordination of care among providers • Ensuring appropriate information is available at the point of care • Ensuring consumers' health information is secure and confidential • Giving consumers new capabilities for managing and controlling their personal health records • Reducing risks from medical errors and supporting the delivery of appropriate, evidence-based medical care • Lowering health-care costs resulting from inefficiencies, medical errors, and incomplete patient information • Promoting a more effective marketplace 	<p>The four NHIN Prototype Architectures (Phase I) included core services and three AHIC priority areas/use cases:</p> <ul style="list-style-type: none"> • Consumer Empowerment - Registration and Medication History • Electronic Health Record - Laboratory Result Reporting • Biosurveillance – Connecting Clinical Care to Public Health <p>The NHIN Trial Implementations (Phase II) will implement the core services and several new AHIC priority areas/use cases:</p> <ul style="list-style-type: none"> • Emergency Responder-Electronic Health Record • Consumer Empowerment-Consumer Access to Clinical Information • Medication Management • Quality • Personalized Healthcare • Public Health Case Reporting • Response Management • Remote Consultation • Remote Monitoring • Referrals and Transfer of Care

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Health Information Technology Standards Panel (HITSP)</p>	<p>Health Information Technology Standards Panel (HITSP) http://www.ansi.org/hitsp/</p>	<p>Comprised of a wide range of stakeholders, the Panel supports the development of the Nationwide Health Information Network (NHIN) by harmonizing existing standards and recommending a single set to HHS for specific use cases related to health information sharing.</p>	<p>The mission of the Healthcare Information Technology Standards Panel is to serve as a cooperative partnership between the public and private sectors for the purpose of achieving a widely accepted and useful set of standards specifically to enable and support widespread interoperability among healthcare software applications, as they will interact in a local, regional and national health information network for the United States.</p>	
<p>The Dossia Founders Group (including large employers such as Wal-Mart, Intel, BP America)</p>	<p>Dossia Network www.dossia.org</p>	<p>An infrastructure designed to gather and store personal health information for employees of participating employers.</p>	<p>To empower individuals to manage their own health care, improve communications with their doctors, and ensure more complete and accurate information for health care providers.</p>	<p><u>Dossia's framework will possess the following features:</u></p> <ul style="list-style-type: none"> • Customizable – allowing consumers to organize and summarize their information in ways they find useful • Privacy and security – accessible to the individual only • Portability – consumers can access their information despite changing employers, health plans or doctors

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>The Leap-frog Group</p>	<p>Computer Physician Order Entry (CPOE) Standard</p> <p>www.leap-froggroup.org/for_hospitals/leap-frog_safe_tv_practices/cpoe</p>	<p>Adopted as a hospital safety standard to leverage major improvements in patient safety.</p>	<p>Leapfrog's CPOE standard requires hospitals to:</p> <ul style="list-style-type: none"> Assure that physicians enter at least 75% of medication orders via a computer system that includes prescribing-error prevention software; Demonstrate that their inpatient CPOE system can alert physicians of at least 50% of common, serious prescribing errors, using a testing protocol now under development by First Consulting Group and the Institute for Safe Medication Practices (this criterion for the Leap will not count towards the hospital's publicly reported status on this Leap until the test is available). Require that physicians electronically document a reason for overriding an interception prior to doing so. 	

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>National Committee for Quality Assurance (NCQA)</p>	<p>Physician Practice Connections http://web.ncqa.org/tabid/141/Default.aspx</p>	<p>A standards-based evaluation program that recognizes physician practices that use information systemically to enhance the quality of patient care.</p>	<p>Encourage physicians to adopt HIT for the following purposes:</p> <ul style="list-style-type: none"> • Monitor patients' medical histories • Work with patients over time, not just during office visits • Follow up with patients and with other providers • Manage populations, not just individuals, using evidence-based care • Assist patients to manage their own health better • Avoid medical errors 	<p>PPC standards evaluate the following:</p> <ul style="list-style-type: none"> • Enabling patients to communicate with and access the practice easily • Using systems to track patients, their treatments and conditions • Managing patients' care proactively over time • Supporting patients' self-management of their health • Using electronic prescribing tools • Tracking and following up lab and imaging tests • Tracking and following up referrals • Measuring performance and working to improve • Updating to interoperable electronic systems



IMPROVING POPULATION HEALTH Leveraging Electronic Clinical Data

One of modern medicine's greatest accomplishments has been the development of programs that monitor and improve the public's health. Vaccines, improved sanitation and hygiene, safer workplaces, enhanced food and drug safety, illness and injury prevention, and improved drug and alcohol abuse programs have led to improvements in the health and well-being of people of all ages and backgrounds.²²

In the broadest sense, improving population health is about "what we as a society do collectively to assure the conditions in which people can be healthy."²³ Effective efforts in this area often stem from coordination between healthcare organizations, governmental agencies, the scientific community and others to monitor, measure and promote healthy behaviors and disease prevention.

Because of the Blueprint's overall goal of improving health and healthcare through information and information technology, this section focuses on one aspect of improving population health that is directly linked to health information technology and information exchange— leveraging electronic clinical data to support improving health at the population level. Electronic clinical data can help support health and healthcare improvements including public health interventions, disease management, quality improvement, provider performance measurement, epidemiologic surveillance, research, and more.

Data describing the process of healthcare and the health of individual patients is generated from many sources. The process of collating, analyzing, and using this and other data to benefit the entire population can support improvements in the way we prevent illness and injury, provide patient care, and manage care systems – important areas of focus if we are to assure the conditions in which people can be healthy.

In most cases, patient data is recorded in their chart using pen and paper. As electronic clinical data systems become more widespread and more patient data is recorded electronically during the process of care delivery, we must give careful consideration to the opportunities and challenges of using electronic clinical data for population health purposes.

Policies for how these data should be used and shared are still in an early developmental stage, though they are emerging rapidly. In particular, important work remains to be done to build consensus around privacy issues, consent, data control, and who can profit from the use of such data. Understanding and agreement must be developed to define the appropriate uses of both identified and de-identified data. The public does not fully understand the value of using personally identifiable data for the purposes of population health improvement. Thus it is difficult to have an informed debate around the trade-offs between individual privacy and the benefit of using health information to improve the health of all individuals (i.e., the public).

The principles for Improving Population Health lay the groundwork for the policy development that must be undertaken. The strategies and actions directly support engagement of multiple stakeholders to develop and implement those policies, as well as to create the resources, tools and data to support the use of electronic clinical data to improve the health of a population. With these policies, resources and tools in place, electronic clinical data can be used to enrich population health improvement functions, including disease management and wellness programs, quality improvement of healthcare delivery, disease surveillance, and research. Phase II of the Blueprint should help develop action plans for accelerating progress in these areas.

²² Institute of Medicine, "The Future of the Public's Health in the 21st Century." 1988.

²³ *ibid.*





Principles

1. The Use of Electronic Clinical Data is Beneficial and Necessary to Improve Population Health

The use of electronic clinical data that is derived from the care delivery process is both beneficial and necessary for improving population health, including but not limited to the following critical areas:

- Improving the quality, safety, efficiency and effectiveness of healthcare
- Monitoring, detecting and responding to hazards and threats, to protect the public's health
- Expanding knowledge about disease, diagnosis and appropriate treatments and services

2. Everyone Who Uses Clinical Data for Population Health Purposes Should Abide by a Common Set of Principles and Policies

Everyone who utilizes clinical data derived from the care delivery process for population health purposes should, in addition to abiding by current federal and state laws, rules and regulations, agree to and comply with a common set of principles and policies developed through a transparent, open process involving multiple stakeholders, including but not limited to consumers, providers, payers, purchasers, and researchers to build trust and confidence in the use of such data.

3. Those Who Use Clinical Data for Population Health Purposes Should be Transparent About Their Principles, Policies and Practices

Those who utilize clinical data derived from the care delivery process for population health purposes should clearly disclose, in a transparent, easily accessible and understandable way, how the data is being used, as well as the principles and policies by which they abide.

4. Healthcare Organizations Should Support the Use of a Common Set of Data Derived Directly From Care Delivery Processes for Multiple Purposes

Healthcare organizations should seek to use the clinical data derived from electronic clinical data systems as well as other sources to support population health improvement in a "one data source, multiple uses" approach. Agreement on and widespread implementation of a set of common data elements, standards for interoperability, policies for data sharing that build trust, and agreed upon business models will accelerate the use of data to support population health and other purposes.

5. Financial or Other Incentives Will be Required to Accelerate the Use of Clinical Data for Population Health Purposes

While the results of improving population health include increases in healthcare quality, efficiency, and safety, such benefits do not always translate to financial benefits to the healthcare organizations that capture the data. Therefore, widespread use of clinical data will not occur without the creation and implementation of financial or other incentives.





**Strategies and Actions
Improving Population Health**

Strategies	Actions
POLICIES FOR DATA USE	
<p>1. Clearly characterize, explain and raise awareness of the current laws, rules and regulations governing the use of clinical data for uses other than care delivery (population health purposes).</p>	<p>1.1 Leveraging the work of many organizations, including but not limited to AHIC, AMIA, AQA, Connecting for Health, eHI, NCVHS, WEDI RTI/AHRQ and others, an NGO, in partnership with all healthcare stakeholders, should develop a clear and concise catalog of current federal and state laws, rules, and regulations governing the use of electronic clinical data for non-care delivery purposes, including, for example, awareness of a patient’s right to opt out of HIE. The catalog, to the extent possible, should be converted into a summary guide, with references, that non-lawyers can understand, to assist healthcare stakeholders in effectively complying with such laws, rules and regulations. (2007-2008)</p> <p>1.2 All stakeholders in healthcare, including but not limited to providers, consumers, employers and other healthcare purchasers, HIT Vendors, laboratories, pharmacies, pharmaceutical manufacturers, public health, QIOs, research institutions, state and local organizations and Federal Agencies, should widely disseminate the catalog and summary guide to individuals and organizations across every sector of healthcare to raise awareness and support compliance. (2008)</p>
<p>2. Gain multi-stakeholder consensus on and widely disseminate a common set of principles and policies for use of clinical data for population health purposes.</p>	<p>2.1 Leveraging the work of many organizations, including but not limited to AHIC, AMIA, AQA, Connecting for Health, eHI, NCVHS, WEDI, and others, an NGO should launch an open, transparent process involving every stakeholder of healthcare, from both the public and private sectors, which creates a set of common principles and policies for the use of electronic clinical data derived from the care delivery process for population health purposes. These principles and policies should, at a minimum, address:</p> <ul style="list-style-type: none"> • Privacy and consent issues with regard to both identified and de-identified data use for improving population health • Appropriate uses of de-identified, identified and re-identified data • Standard methods to monitor and communicate compliance with the principles and policies to the public (e.g. adherence to a “code of conduct”, etc.). (2008-2009) <p>2.2 An NGO working with multiple stakeholders should explore, and clearly articulate in a guide, issues related to de-identification and re-identification of electronic clinical data for population health improvement. The results of this work should inform the principles developed in 2.1. (2008)</p>





	<p>2.3 As part of the process outlined in 2.1, the NGO should also conduct a study on the financial implications for the use of population health data / aggregated data (this may include policy of who profits from use of data and who pays for data capture and aggregation) (2008-2009). The NGO should also develop recommendations regarding the type of entities that profit from using aggregated population health data and how they should share gains, based on the comprehensive study (2008-2009)</p> <p>2.4 Groups representing every stakeholder of healthcare should widely disseminate and publicly support adherence to the common principles and policies developed through the consensus process. (2008-ongoing)</p> <p>2.5 Organizations engaged in the use of clinical data for population health purposes should publicly disclose adherence to the common principles and policies developed through the consensus process. (2008-ongoing)</p>
<p>3. Develop and widely disseminate tools, resources and guides to support healthcare organizations' use of the common set of principles and policies.</p>	<p>3.1 NGOs, Provider Organizations, Public Health, Researchers, Pharmaceutical Organizations and other organizations with expertise in using clinical data for population health should develop tools, resources, and guides to support the implementation of the principles and policies for use of clinical data for population health by those organizations engaged in the use of clinical data for population health purposes, including but not limited to standard data use agreements, disclosure statements, public policies, etc. (2008-2010)</p> <p>3.2 NGOs, Provider Organizations, Public Health, Researchers, Pharmaceutical Organizations and other organizations with expertise in using clinical data for population health should coordinate and collectively identify best practices and create forums for sharing their learning and best practices with their constituencies, to stimulate and support compliance with the common principles and policies. (2008-ongoing)</p>

PRIORITY-SETTING AND COALITION-BUILDING FOR THE USE OF CLINICAL DATA FROM CARE DELIVERY FOR POPULATION HEALTH

<p>4. Define and prioritize a set of common data elements that are needed for multiple priority population health uses.</p>	<p>4.1 Recognizing that there are many different uses of clinical data for improving population health, yet significant time and resources are necessary to support EHR adoption and HIE implementation, an NGO or a Federal Agency should convene groups who represent the various interests of population health improvement (performance measurement, quality improvement, public health, research, etc.) and develop a "crosswalk" of the data elements needed for priority processes within each population health domain. Common data elements across population health domains (e.g. laboratory test results) should be identified and compiled to assist with priority-setting for systems implementation, workflow changes, standards needed, and alternative business models for a "one source: multiple use" approach. (2008-2010)</p>
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	<p>4.2 Organizations representing various stakeholder groups should widely disseminate the results of the priority setting process to federal and state policy makers, the various actors involved in the categories identified above, and every sector of healthcare, to facilitate adoption. (2008-ongoing)</p>
<p>5. Document and widely disseminate the benefits and risks of using clinical data for population health purposes, using language that “data sources” such as consumers, clinicians, hospitals and other providers, and laboratories as well as “data users” such as employers, health plans, researchers, and public health agencies, understand.</p>	<p>5.1 Recognizing that many consumers and healthcare organizations do not fully understand the potential benefits of the use of clinical data for population health purposes, a federal agency, research organization, NGO or group of NGOs should document, with references to the evidence, the benefits and risks of using clinical data for population health purposes, in language that is easily understandable by the public. (2008)</p> <p>5.2 Groups representing every stakeholder in healthcare should widely disseminate materials that effectively communicate the benefits and risks of using clinical data for population health purposes. (2008-2009, and ongoing)</p>
<p>6. Define the “users” of data elements for population health uses with sufficient granularity to lay the foundation for changes that will dramatically increase the demand for such data for population health purposes.</p>	<p>6.1 An NGO or group of NGOs should conduct research and engage the necessary organizations to define, for each common data element, the sources and the users of such data, the specific purposes for use, the costs of current data collection processes, and the gaps in their current methods of data collection. (2008)</p> <p>6.2 Leveraging the work conducted in strategy #2 and #5 above, the NGO or set of NGOs should clearly articulate and quantify the benefit and risks associated with transmission of data using methods that protect privacy and confidentiality, to make the case for changes that will accelerate the access of data for population health purposes. (2009)</p>
<p>7. Define where the common data elements currently reside with sufficient granularity to lay the foundation for driving changes that will dramatically increase the availability of such data for population health purposes.</p>	<p>7.1 An entity, which may be a research organization or an NGO, or another organization with expertise, should conduct research and engage the necessary organizations to define, for each common data element, where it originates (e.g. the general source of the data), its storage method (electronic or not electronic), and a breakdown of the different types of sources and their locations (e.g. national laboratories versus local independent laboratories versus hospital laboratories, versus laboratory tests performed in physician offices). (2008)</p> <p>7.2 Leveraging the work conducted in strategy #5 above, clearly articulate and quantify the benefit associated with making data available using methods that protect privacy and confidentiality, to make the case for changes that will accelerate the capture and availability of data for population health purposes. (2008)</p>





BUILDING SUPPORTS FOR WIDESPREAD IMPLEMENTATION	
<p>8. Define the systems, filtering rules, workflow changes and functionalities needed to support electronic capture of, transmission of and access to the common data elements.</p>	<p>8.1 For each of the common data elements identified in #4, and utilizing the data collected in #6 and #7, an NGO should identify the systems needed and workflow and process barriers to electronic data capture and data availability, as well as data access and develop strategies to overcome those barriers. (2009)</p> <p>8.2 An NGO, or group of NGOs, should clearly articulate, in an easy to understand guide, the systems, the available standards, the workflow changes, functionalities and business process changes needed to facilitate capture of, transmission of, and access to the common data elements. (2009)</p>
<p>9. Develop a set of alternative business models that will support the costs of making the data available and access to such data from population health data users.</p>	<p>9.1 For each of the common data elements, as well as the uses and users of such elements, an NGO should assess, quantify and effectively articulate the value of the data, targeting each population health segment of users (e.g. performance measurement, quality improvement, public health, research, etc.). (2008)</p> <p>9.2 For each population health segment of users or “customers” an NGO or group of NGOs should work closely with organizations representing population health data users to develop a set of detailed business models alternatives to support data capture, data availability and data access. (2008)</p> <p>9.3 An organization should utilize the data created in 9.2 and develop easy to understand guides to support the development of business models for transactions between data sources, health information exchanges and data users. (2009)</p>
<p>10. Define common standards for representing such common data elements.</p>	<p>10.1 For each of the common data elements, and leveraging the work of HITSP, CCHIT, HL7 and the other SDOs, IHE, the Collaborative for Performance Measurement Integration and other groups, an NGO or other organization should “crosswalk” the common data elements to the standards that have been harmonized or agreed upon by such recognized parties, and catalog such standards in an easy to understand format. (2008)</p> <p>10.2 Any gaps identified in the process described in 10.1 should be documented and communicated to HITSP and other SDOs by the NGO to inform their work plans and priority-setting processes. The NGOs in 10.1 should engage all constituencies representing both data providers and data users to apply pressure to such bodies to assure their priorities are reflected in standards harmonization and adoption processes. (2008)</p>





<p>11. Bringing it all together, develop and widely disseminate tools, resources and guides to support health-care organizations who serve as “data sources”, addressing the common data elements, required systems, workflow and process changes, policies for data sharing, legal and regulatory considerations, and business models to support data capture, data availability, and data access.</p>	<p>11.1 An organization or NGO should clearly and effectively document, in an easy to understand format, the common data elements, the value of those elements, required systems, required work-flow and process changes, policies for data sharing, legal and regulatory considerations, and business models. The resulting “guide” should contain the steps that each “actor” in the process (including those representing both data sources and data users) should take to effectively support population health purposes in an incremental, coordinated fashion. (2009)</p> <p>11.2 Groups representing every stakeholder in healthcare should widely disseminate the guide described in 11.1 to encourage usage. (2009-2012)</p>
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<p>12. Develop and implement drivers that will rapidly accelerate the capture, availability and use of the prioritized common data elements.</p>	<p>12.1 An NGO, or group of NGOs, working with those who have great interest in the use of data for population health, should identify vehicles and mechanisms that would support and drive the capture, availability and use of clinical data for population health purposes. Such vehicles could include the following (2008):</p> <ul style="list-style-type: none"> • Changes in standard RFI, RFP or contract language in the healthcare purchasing process • Changes in standard RFI, RFP or contract language for the healthcare IT purchasing process • Changes in expectations related to public health reporting • Changes in expectations related to performance reporting (electronic, specifications regarding use of standards, etc.) • Changes in expectations in accreditation and certification processes • Changes in reporting requirements of regulatory bodies • Changes in specifications used for research processes
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BUILDING THE EVIDENCE FOR WIDESPREAD IMPLEMENTATION

<p>13. Conduct “learning laboratories” to test and evaluate the “supports” identified above, in several markets.</p>	<p>13.1 An NGO or federal agency should create a set of learning laboratories that test and evaluate the use of clinical data for priority use cases identified by those involved in performance measurement and quality improvement, public health, safety surveillance, and research. Results should be published and placed in the public domain to accelerate further implementation in the field. (2008-2010)</p> <p>13.2 Congress should authorize the Centers for Medicare & Medicaid Services to conduct a set of demonstration projects that test and evaluate the use of clinical data to support improvements in the quality and efficiency of healthcare. (2008)</p> <p>13.3 Congress should authorize the Food and Drug Administration to conduct a set of demonstration projects that test and evaluate the use of clinical data to support improvements in the safety of healthcare. (2008)</p>
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	<p>13.4 The Food and Drug Administration should conduct a set of demonstration projects that test and evaluate the use of clinical data to support improvements in the safety of healthcare. (2009-2010)</p> <p>13.5 The Centers for Medicare & Medicaid Services should conduct a set of demonstration projects that test and evaluate the use of clinical data to support improvements in the quality and efficiency of healthcare. (2009-2010)</p>
<p>14. Conduct research to gather evidence of natural experiments in using clinical data for a variety of use cases.</p>	<p>14.1 An NGO or Federal Agency should gather learning from “natural experiments” in the field to identify what’s working, what’s not working, to inform both policies and practices in the field, in support of improving population health through activities like disease management, performance measurement, research and more. (2008-ongoing)</p>

CREATE FORUMS FOR DATA SHARING AND LEARNING

<p>15. Create a forum or set of forums for sharing of learning and best practices to support success in the field.</p>	<p>15.1 An NGO, or group of NGOs, should create forums for sharing learning and best practices to support success in the field. (2009-ongoing)</p>
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**Overview of Key Initiatives
Improving Population Health**

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>AQA (Formerly known as Ambulatory Quality Alliance)</p>	<p>Data Sharing and Aggregation Workgroup – Subcommittee on HIT www.aqaalliance.org/datawg.htm</p>	<p>A subcommittee of AQA's datasharing and aggregation workgroup.</p>	<p>A subgroup formed to discuss how best to align and apply modern health information technology with the mission and goals of the AQA, namely: <i>the collaborative processes... [and]... strategy for measuring performance at the physician level; collecting and aggregating data in the least burdensome way; and reporting meaningful information to consumers, physicians and other stakeholders to inform choices and improve outcomes.</i></p>	<p>Principles for <u>HIT and Measurement Aggregation</u>:</p> <ul style="list-style-type: none"> • System design, implementation, and use should minimize costs to consumers, physicians' practices, health plans, and data aggregators. • Open networks, standards, and protocols should be promoted to ensure that compatibility, connectivity, and interoperability characterize the systems used for physician or group level quality and performance measurement. • Security and the protection of the privacy of personal health information are imperative. • Software applications for care management (e.g. EHRs, practice management systems, registries) should make standardized quality, performance, and efficiency measurement a routine by-product of their use. • Software applications for care management (e.g., EHRs, practice management systems, registries) should be designed to enable the merger of their data with others for the purpose of facilitating quality improvement efforts or the production of standardized quality, performance and efficiency measurement.



Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>AQA</p>	<p>National Health Data Stewardship Entity www.aqaalliance.org/files/Health-DataSteward-July06.doc</p>	<p>A proposed public/private entity that has the primary responsibility of setting uniform operating rules and standards for the sharing and aggregation of quality and efficiency data used in both the public and private sectors, for the purposes of performance measurement and reporting.</p>	<p><i>Proposed mission:</i></p> <ul style="list-style-type: none"> To set uniform operating rules and standards for sharing and aggregating public and private sector data on measures of quality and efficiency. Offer guidance on implementation of such national operating rules and standards. Provide a framework for collecting, aggregating and analyzing data, to afford means of more effective oversight of health care data analyses and reporting in the United States. 	<p>The scope of work shall include setting policies, rules and standards for:</p> <ul style="list-style-type: none"> Data aggregation Data collection (includes identification of data sources) Attribution Methodologies Data analysis Data validation (audits) Uses of data Data access Data sharing and reporting



Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Health Information Community (AHIC)</p>	<p>Population Health and Clinical Care Connections Workgroup www.hhs.gov/healthit/ahic/population</p>	<p>AHIC workgroup charged with making recommendations to the Community to facilitate the flow of reliable health information among population health and clinical care systems necessary to protect and improve the public's health.</p>	<p>Specific Charge: Make recommendations to the Community so that within one year, essential ambulatory care and emergency department visit, utilization, and lab result data from electronically enabled health care delivery and public health systems can be transmitted in standardized and anonymized format to authorized public health agencies within 24 hours.</p>	<p>Guiding Principles:</p> <ul style="list-style-type: none"> Utilize the conceptual framework of Confidential Morbidity Report form Local and/or state jurisdictions will receive fully identifiable data based on current state regulations for notifiable conditions The focus of the workgroup is limited to hospital/provider reporting to local and/or state health department dependent of the organizational structure of the public health jurisdiction The focus of the workgroup does not include secondary case reporting The minimum set of data elements are intended to be universally applicable to various public health data streams for electronic case reporting needs The template used to categorize data elements traditionally found in confidential morbidity report forms is based on the current structure of case and investigation report forms developed and in circulation by local, state, and federal public health programs. Common data elements and associated standardized vocabulary should apply to all forms of reporting (e.g., paper submission, web form entry, and direct extractions from EHRs).

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Medical Informatics Association (AMIA)</p>	<p>A National Framework for the Secondary Use of Health Data www.amia.org</p>	<p>An organization dedicated to the development and application of biomedical and health informatics in the support of patient care, teaching, research, and health care administration.</p>		<p><u>Data Stewardship Principles:</u></p> <ul style="list-style-type: none"> • Accountability (including governance, oversight, and the extent and level of applicable regulations) • Openness and transparency (including structure, processing and delivery of data, and business processes and practices) • Notice to patients • Privacy and security (including data quality, de-identification and costs of re-identification) • Granularity of patient consent • Permitted uses and disclosures (including data aggregation and analyses) • Enforcement and remedies
<p>Centers for Disease Control and Prevention (CDC)</p>	<p>National Electronic Disease Surveillance System (NEDSS) www.cdc.gov/nedss</p>	<p>An initiative that promotes the use of data and information system standards to advance the development of efficient, integrated, and interoperable surveillance systems at federal, state and local levels.</p>	<p>A primary goal of NEDSS is the ongoing, automatic capture and analysis of data that are already available electronically in order to design and implement seamless surveillance and information systems.</p>	<p><u>Based on the following principles:</u></p> <ul style="list-style-type: none"> • Utilization of industry standards • Reliance on off-the-shelf software • Internet-based secure transmission of data • A common “look and feel” of systems • Common reporting requirements • No requirement to use specific software

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>CDC</p>	<p>National Healthcare Safety Network (NHSN) www.cdc.gov/ncidod/dhqp/nhsn.html</p>	<p>A secure, internet-based surveillance system that integrates patient and healthcare personnel safety surveillance systems managed by the Division of Healthcare Quality Promotion (DHQP) at CDC.</p>	<p>A knowledge system for accumulating, exchanging and integrating relevant information on infectious and noninfectious adverse events associated with healthcare delivery.</p>	<p><u>Purposes of NHSN:</u></p> <ul style="list-style-type: none"> • Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the magnitude of adverse events among patients and healthcare personnel. • Collect data from a sample of healthcare facilities in the United States to permit valid estimation of the adherence to practices known to be associated with prevention of healthcare-associated infections (HAI). • Analyze and report collected data to permit recognition of trends. • Provide facilities with risk-adjusted data that can be used for interfacility comparisons and local quality improvement activities. • Assist facilities in developing surveillance and analysis methods that permit timely recognition of patient and healthcare personnel safety problems and prompt intervention with appropriate measures. • Conduct collaborative research studies with NHSN member facilities



Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>CDC</p>	<p>Public Health Information Network (PHIN) www.cdc.gov/phinf/index.html</p>	<p>A national initiative striving to enhance research and practice through best practices related to efficient, effective, and interoperable public health information systems.</p>	<p>To improve the capacity of public health to use and exchange information electronically by promoting the use of standards, defining functional and technical requirements.</p>	<p><u>CDC's role in PHIN is:</u></p> <ul style="list-style-type: none"> • Supporting the exchange of critical health information between all levels of public health and healthcare, • Developing and promulgating requirements, standards, specifications, and an overall architecture in a collaborative, transparent, and dynamic way, • Monitoring the capability of state and local health departments to exchange information, • Advancing supportive policy, • Providing technical assistance to allow state and local health departments to be full and facilitating a network of active, engaged participants active PHIN participants, and • Facilitating communication and information sharing within the PHIN community.
<p>Connecting for Health</p>	<p>The Common Framework: Architecture for Privacy in a Networked Health Environment www.connectingforhealth.org/common-framework/docs/P1_CFH_Architecture.pdf</p>	<p>A framework consisting of a set of mutually-reinforcing technical documents and specifications, testing interfaces, code, privacy and security policies, and model contract language intended to help health information systems share information.</p>	<p>The Architecture for Privacy promotes a new health network that takes into account the potential for privacy violations, and one which builds privacy and information security into its architecture from the outset, not as an afterthought.</p>	<p><u>Privacy protection principles:</u></p> <ol style="list-style-type: none"> 1. Openness and transparency 2. Purpose specification and minimization 3. Collection limitation 4. Use limitation 5. Individual participation and control 6. Data integrity and quality 7. Security safeguards and controls 8. Accountability and oversight 9. Legal and financial remedies





Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Connecting for Health</p>	<p>Connecting for Health RFI regarding a national data stewardship entity</p> <p>www.connectingforhealth.org/resources/cfh_ahraqa_rfi_073007.pdf</p>	<p>A draft of "First Principles" in this early phase of our exploration into how the Common Framework can be applied to address the requirements related to population health objectives such as quality improvement, research and public health.</p>		<p><u>First Principles for Population-Level Data Analysis and Decision-making:</u></p> <ul style="list-style-type: none"> • Designed for Decisions: A 21st century health information environment will focus on improving the decision-making ability of the many actors in the health sector. • Designed for Many: A 21st century health information environment should empower a rich variety of users. • Shaped by Public Policy Goals and Values: A 21st century health information environment should achieve society's goals and values • Boldly Led, Broadly Implemented: A 21st century health information environment should be guided both by bold leadership and strong user participation. • Possible, Responsive and Effective: 21st century health information environment should grow through realistic steps. • Distributed but Queriable: A 21st century health information environment should be comprised of a large network of distributed data sources. • Trusted through Safeguards and Transparency: A 21st century health information environment should earn and keep the trust of the public through policies that provide safeguards and transparency. • Layers of Protection: The 21st century health information environment should protect patient confidentiality by emphasizing the easy movement of queries and responses, rather than of raw data. • Accountability and Enforcement of Good Network Citizenship: A 21st century health information environment should encourage and enforce good network citizenship by all participants.



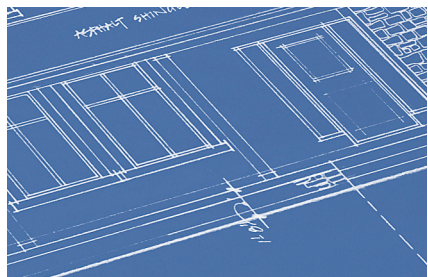


Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>National Committee on Vital and Health Statistics</p>	<p>National Committee on Vital and Health Statistics ad Hoc Work Group for Secondary Uses of Health Data http://ncvhs.hhs.gov/</p>	<p>Ad Hoc groups engage all stakeholders in healthcare regarding appropriate use of secondary data including means and ends of data usage.</p>	<p>Commissioned by the U.S. Department of Health and Human Services and the Office of the National Coordinator to develop an overall conceptual and policy framework that addresses secondary uses of health information including a taxonomy and definition of terms as well as develop recommendations to HHS on needs for additional policy, guidance, regulation and/or public education related to expanded uses of health data in the context of the developing nationwide health information network with, an emphasis on the uses of the data for quality improvement, quality measurement and reporting.</p>	



Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
National Health Service (NHS) - Connecting for Health	Secondary Uses Service (SUS) www.connectingfor-health.nhs.uk/system-sand-services/sus/index.html	The single repository of person and care event level data relating to the NHS care of patients, which is used for the following secondary use purposes: healthcare planning, commissioning, public health, clinical audit, benchmarking, performance improvement, research and clinical governance	<p><i>Primary benefits of SUS:</i></p> <ul style="list-style-type: none"> • Consistency of data collection and analysis across the country • Comprehensive coverage of data collection • Cohesion of information collection enabling the linkage of patient data across primary, community and acute care settings • Timeliness of data which, in time, would be collated directly from local sources • A secure environment where patient confidentiality is maintained • Increased ability for sharing (of aggregated data) for comparative purposes • Common approach to derivation of data 	<p><i>Principles for SUS:</i></p> <ul style="list-style-type: none"> • There is one national approach to the SUS; • User access is managed through the security and confidentiality facilities embedded within NHS CRS; • Information provided through the SUS will be anonymised or pseudonymised to remove information that could be used to identify individuals but still allow cases to be tracked and linked for research; • Data will, where possible, be collected or derived from clinical systems as a by-product of direct care; • SUS will include the tools and services for an effective and secure working environment for analysis and reporting.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>National Institutes of Health (NIH)</p>	<p>Patient-Reported Outcomes Measurement Information System (PROMIS) www.nih-promis.org</p>	<p>Establishes a collaborative relationship between NIH and individual research teams in order to create a publicly available system that allows clinical researchers to access a common repository of items and computerized adaptive tests.</p>	<p>An initiative that aims to revolutionize the way patient-reported outcome tools are selected and employed in clinical research and practice evaluation. It will also establish a national resource for accurate and efficient measurement of patient-reported symptoms and other health outcomes in clinical practice.</p>	<p><u>Specific Research Objectives:</u></p> <ul style="list-style-type: none"> • Develop a core set of questions • Develop common metrics • Create item banks using modern measurement theory • Develop computer-adapted tests • Create a Web-based, user-friendly repository • Plan to maximize acceptance • Conduct feasibility studies • Plan for a public-private partnership



ALIGNING FINANCIAL AND OTHER INCENTIVES

Aligning incentives is a critical underpinning of many of the strategies and actions contained in other areas of the Blueprint. The primary goal of aligning financial and other incentives is to improve the quality, safety and efficiency of healthcare. While larger scale payment reform is needed, this committee sought to prioritize the development of consensus strategies and actions according to what could be incrementally accomplished over the next 24-36 months, in both the public and private sectors.

In terms of the timelines associated with specific actions in this area, many of those who participated in the development or vetting processes agreed that timelines are generally needed to support action, but also agree that timelines are debatable and should be discussed. Thus, the specific timelines included here are preliminary, and more feedback is encouraged as stakeholders such as employers and health plans begin to consider implementation.

In developing the principles, strategies and actions in this focus area, many discussions occurred around incentivizing improved patient outcomes versus incentivizing or supporting technology adoption. While stakeholders agree that the end goal is improving healthcare quality, safety and efficiency, they employ different approaches for arriving at that goal. Some prefer to incentivize quality outcomes only, while others prefer also to support the adoption and effective use of health IT as an efficient infrastructure for quality improvement and measurement. There is no consensus regarding the best approach to this question, and there is no consensus that only one approach will work. More study is needed to examine initiatives that have employed both approaches to identify their benefits and drawbacks.

Many initiatives are currently underway that offer promising strategies for aligning incentives in a manner that supports improved outcomes for patients, and those initiatives should also be supported and studied.

Principles

The principles below cover four key areas the committee believes are important aspects of any incentive program. There was strong consensus on the first three principles, but there was also a strong recognition that the fourth principle will require more work and more consensus in terms of its implementation. While it is easy to agree with this principle in concept, there is no common agreement or understanding around who benefits from health IT adoption, and by how much they benefit.

Hypothetically, health plans should benefit through better care and cost avoidance due to improved health, but it is unclear how this really occurs and how much the true future savings might be. Physician practices should benefit with greater efficiency and effectiveness at the same payment rate, but no one knows how much efficiency and how much effectiveness. Incentives cannot be meaningful, phased or appropriately aligned until decision-makers have incontrovertible and quantitative information describing the benefits. This means that all payors and providers will need to work together toward meaningful pilots or demonstration projects that are appropriately designed to convincingly measure these benefits before any significant change in financial incentives will occur.

- 1. Meaningful Incentives:** Any financing or incentive program involving health IT should be meaningful and result in improvements in quality, safety, efficiency or effectiveness in health care.
- 2. Phased Approach:** Financing or incentive programs should utilize a phased approach involving health IT beginning with the implementation of health IT and leading up to the use of electronic information to support performance improvement.
- 3. Assure Interoperability:** Any financing or incentive program involving health IT should lead to the use of existing standards to assure interoperability.
- 4. Cost Reflects the Benefit:** Stakeholders that benefit should share some of the cost related to health IT financing or incentives. To achieve this, more study is needed to ascertain specifically who benefits, and by how much. This information is critical to ensuring that incentives programs can be meaningful, phased, and appropriately aligned. In addition, incentive structures should be altered to accommodate those groups that do not have the ability to pay (e.g. underserved populations).





Strategies and Actions Aligning Financial and Other Incentives

Strategies	Actions
<p>1. Create demonstration projects and private payer pilots to develop and test strategies for aligning incentives.</p>	<p>1.1 Federal Agencies, Researchers and/or NGOs should perform an independent evaluation to quantify and account for all of the costs incurred and benefits received by specific stakeholders from the adoption and effective use of health IT by providers. The results of this study should be utilized to inform future policy decisions. (2008-2009, and ongoing)</p> <p>1.2 CMS should consider expanding the DOQ-IT program in 2008 to include a "pay for use" pilot that would provide a one-time bonus payment to small physician practices post-implementation of a certified system when the physician demonstrates proper use of functionality, evaluating whether higher quality outcomes were achieved as a result of such use. The pilot should also explore the most appropriate definition of a "small" practice. (2008)</p> <p>1.3 Federal Agencies, including CMS, should consider introducing a demonstration project (using provider submitted add-on codes) that evaluates the impact on the quality or efficiency of care of additional reimbursement for providers that use information from an active health data exchange (basic, intermediate and advanced levels of functionality). At a basic level, the provider might access information (such as laboratory results or medication history) electronically through a portal or electronic health record. At an intermediate level, the provider might demonstrate the ability to transfer clinical data electronically to other providers, plans or patients. At an advanced level, the provider might document the use of such information to support functions such as decision support, patient reminders, e-consults, or e-prescribing. (2009)</p> <p>1.4 The Federal Government and other payers (Health Plans) should consider establishing a demonstration program in which provider recognition and reward is based on achieving quality, cost and service objectives, and a certain percentage of which is dependent on implementation and use of EHR systems and information from other sources. The percentage dependent on EHR use decreases over time. The program could be coupled with financial assistance from the federal government for small providers to implement an EHR. The definition of "small" provider should be explored, studied and further defined. (2008-2010)</p> <p>1.5 As preferred networks begin to proliferate in 2008, Employers and Health Plans should consider using documentation of implementation and use of certified EHR and participation in health information exchange as important criteria, among others, for network inclusion. (2008)</p>





	<p>1.6 Health Plans, Federal Agencies and NGOs should share, and eHI and other NGOs should publicize in an ongoing manner, the results of various pilots and demonstrations regarding incentives for HIT adoption and quality improvement, measuring the impact on EHR uptake, especially among small providers, as well as the cost to Health Plans. (2008-ongoing)</p> <p>1.7 As EHR adoption evolves to support effective quality and efficiency improvements, demonstration projects from Health Plans and the Federal Government should evolve to test other more broad payment reform strategies. (2009-2011)</p>
<p>2. Implement provider recognition strategies to encourage effective use of certified systems.</p>	<p>2.1 NGOs, in partnership with providers, Health Plans and other stakeholders, should develop mechanisms to measure effective use of information from EHRs in both hospital and physician office settings. (2008-2009)</p> <p>2.2 Health Plans should consider listing in their directories those providers who have adopted certified EHR systems and are using them effectively, based on consensus measures of effective use. The listing should include an explanation to members about the significance of the EHR to patient care, impact on quality, and facilitation of improved patient access to the system. (2009)</p> <ul style="list-style-type: none">• Consumer Organizations should provide additional education about choosing a physician with an EHR and using quality ratings. (2008)• State and Community HIE Collaboratives should work with Health Plans to indicate physician participation in an HIE initiative and communicate that information to consumers through these directories. (2011) <p>2.3 As the use by providers of certified and interoperable EHR systems becomes more prevalent in a geographic area, those who sponsor health plans (Employers) should consider implementing member financial and other incentives to encourage consumers to select practices and hospitals that use certified EHR systems, among other things. (2009)</p>
<p>3. Work with malpractice carriers to develop risk reduction strategies to lower malpractice insurance premium rates for providers who implement and effectively use certified systems to improve quality and safety.</p>	<p>3.1 Provider Organizations and other NGOs should work with the malpractice insurance carrier industry to collect actuarial evidence of the benefit of health IT use by providers. (2007-2008)</p> <p>3.2 Malpractice insurers should calculate a premium discount that reflects the proportionate savings. (2008-2009)</p> <p>3.3 NGOs and Provider Organizations should identify and publicize the names of malpractice carriers in various states who already provide premium rate reduction for providers who implement certified systems. (2008)</p> <p>3.4 NGOs, such as HITSP and HISPC, should work with industry stakeholders to establish standards for compliance functions in an EHR, so that all EHRs have proper compliance controls in place (e.g. inability to turn off audit controls, etc.). (2007-2008)</p> <p>3.5 CCHIT should certify EHRs against these legal and compliance standards. (2009)</p>





<p>4. Educate small practices and small hospitals to empower them to make wise purchasing decisions and provide them with the tools to make necessary workflow changes to improve the health and healthcare of their patients using EHRs and health information exchange.</p>	<p>4.1 CMS should increase QIO funding for the DOQ-IT program and provide personalized support for additional small physician practices. (2008)</p> <p>4.2 CMS should expand the QIO program to assist additional small hospitals with the effective use of CPOE and EHRs to promote higher quality healthcare. (2008)</p> <p>4.3 Quality Organizations (QIOs) and Provider Organizations should help all providers, and especially small and rural providers, to make wise purchasing decisions, leveraging certification and other programs and ensuring that an EHR is able to capture the right data to participate in quality reporting or improvement incentive programs. (2008-ongoing)</p> <p>4.4 Quality Organizations (QIOs) and Provider Organizations should help educate providers on the cost and value of system acquisition and care process redesign, as well as value derived from increased data capture, improved administrative efficiencies, and ability to participate in quality reporting or improvement incentive programs. (2008-ongoing)</p> <p>4.5 State Governments should provide grants to small hospitals and small practices to help offset the cost of EHR acquisition and health information exchange and facilitate group purchasing and education. (2008-2009)</p> <p>See also Transforming Care Delivery Actions in this area.</p>
<p>5. Implement tax incentives to encourage improvements in health and healthcare through HIT adoption by physicians in small practices and small hospitals.</p>	<p>5.1 Federal Agencies and NGOs should study the impact of providing tax incentives for small and rural providers to adopt HIT and use it effectively. (2008)</p> <p>5.2 Congress should consider instituting tax incentives for small and rural providers to adopt HIT and use it effectively. (2009-2010)</p> <p>5.3 State Governments should offer tax incentives to or small and rural providers to adopt HIT and use it effectively. (2008-2009)</p> <p>5.4 Federal and State Governments should consider creating low cost guaranteed loans and a loan forgiveness program where small providers can receive low-cost loans from federal and state dollars, administered by a private sector entity. Low cost loans could be used to purchase certified HIT systems. For providers meeting a minimum set of benchmarks in practice/provider performance improvement, a portion per year of the loan is forgiven for each year the provider meets the benchmarks. (2009-ongoing)</p> <p>5.5 NGOs should study the feasibility and benefits of tax incentives to employer groups and plans to financially incentivize providers (in a meaningful way) to encourage adoption and effective use for quality improvement. (2008)</p> <p>5.6 Based on the results of the study above, Congress should consider instituting tax incentives for employers and plans that provide meaningful incentives. (2009)</p>





<p>6. Examine HIEs that are sustainable and study the data to identify exact sources of sustainability and provide a how to guide to sustainability, recognizing that one size doesn't fit all.</p>	<p>6.1 Federal Agencies (such as HRSA and ONC) should fund research and development of lessons and tools to support sustainability of HIEs (2008)</p> <p>6.2 NGOs should work directly with successful and unsuccessful HIEs to study their processes for creating the organization, identify and learn from business models, and create models for ongoing sustainability. (2008)</p> <p>6.3 Based on this research, NGOs should develop guides and tools to support sustainability that are adaptable to individual HIE network needs. (2009)</p>
<p>7. Provide grants and loans to offset start up costs of exchanges in geographic areas where no or limited data exchange currently exists.</p>	<p>7.1 Congress should establish a matching funds loan program for states to make initial low cost loans to start-up HIEs in areas where no or limited HIEs exist. Funding should be available to allow providers to acquire the systems/infrastructure needed to connect to the exchange. (2008)</p> <p>7.2 NGOs (philanthropies) and Federal Agencies should continue to fund early developmental phases of HIEs, tied to specific performance goals and deliverables to help ensure sustainability. (2008-ongoing)</p>
<p>8. Harmonize and leverage efforts of current organizations that are creating evidence-based performance measures to maximize impact, streamline and standardize reporting.</p>	<p>8.1 All stakeholders should agree on a national measurement harmonization strategy to create an initial set of consistent and uniform quality measures that are meaningful and whose use will likely lead to improvements in quality, safety, efficiency or effectiveness in health care. (2007-2008)</p> <p>8.2 All stakeholders in quality measurement and improvement should utilize the resulting uniform measure set in quality reporting initiatives, in order to minimize burden of reporting and financial costs related to the collection of data. (2009)</p> <p>8.3 NGOs should continue to study the impact of, and best practices for, engaging consumers in a dialogue about healthcare quality, including the use of quality measures in selecting a provider, and electronic health records use. (2007-2008)</p> <p>8.4 Consumer Organizations should work with consumers to help them effectively understand and use quality measures in selecting a provider, including electronic health records use. (2008-2009)</p>





<p>9. Identify and standardize electronic data elements for each consensus performance measure (as part of the development/approval process) so that measures can be readily incorporated by vendors into EHR systems and by health information exchange initiatives, and data can be electronically transmitted and collected from clinical sources and rewarded.</p>	<p>9.1 The Federal Government should designate a lead organization to standardize data elements used in quality performance measurement reporting. (2008)</p> <p>9.2 NGOs, Provider Organizations and HIT Vendors (through organizations such as the National Quality Forum) should continue to identify established high-priority measures for the near-term implementation of data capture for quality measurement. (2008)</p> <p>9.3 NGOs, including Standards Development Organizations, as well as Provider Organizations and HIT Vendors, through the Collaborative for Performance Measure Integration, should continue to identify import and export mechanisms to standardize methodologies for data capture. (2008-ongoing)</p> <p>9.4 Employers, Health Plans, State Governments, CMS, other Federal Health programs and business coalitions (Employers) should utilize the standardized data elements and electronic measure specifications outlined in 9.1 in their collection and reporting methodologies. (2009)</p> <p>9.5 CMS should require the use of a standardized electronic data set for submission of information for performance measurement activities for the Medicare program. (2010)</p> <p>9.6: Federal Agencies, through HITSP and CCHIT, should begin to include the data elements and standardized methodologies identified in 9.1 for data capture in their work. CCHIT should use these as certification criteria beginning in 2009. (2009-ongoing)</p>
<p>10. Coordinate HIE and quality data aggregation activities to assure interoperability and make administrative start up and ongoing costs associated with them as efficient as possible, thereby reducing burden of participation by both payers and providers.</p>	<p>10.1 The Federal Government and Employers should support the creation of "value exchanges" and State and Community Health Information Exchange Collaboratives, and incentivize their collaboration with each other, as well as QIOs who can serve as quality partners. (2008-2009)</p> <p>10.2 NGOs should study, identify and recommend best practices for convening and operating multi-stakeholder value exchanges and health information exchanges. (2008-2009)</p> <p>10.3 Multi-stakeholder value exchanges (NGOs) should coordinate data submission for performance measurement activities. (2011)</p>
<p>11. Transition from performance measures that rely on manual chart abstraction and claims data to measures that rely on not only claims data but also electronic clinical data sources.</p>	<p>11.1 The Federal Government should work with Quality Organizations to determine a timeline to transition to standardized electronic data reporting, including measures that rely on multiple electronic data sources to encourage data sharing. (2007-2008)</p> <p>11.2 Federal Agencies (CMS) and State Governments should lead by mandating electronic data submission for participation in quality reporting programs. (2011-2020)</p>



**Overview of Key Initiatives
Aligning Financial and Other Incentives**

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Medical Association (AMA)</p>	<p>Guidelines for Pay-for-Performance Programs www.ama-assn.org/ama1/pub/upload/mm/368/guidelines4-pay62705.pdf</p>	<p>Principles provide AMA leaders, staff and members with guidelines regarding the formation and implementation of fair and ethical pay-for-performance programs.</p>	<p>To provide safe, effective and affordable health care.</p>	<p><u>Principles for Pay-for-Performance Programs (Specifically, Program Rewards):</u></p> <ul style="list-style-type: none"> • Programs must be based on rewards and not on penalties. • Program incentives must be sufficient in scope to cover any additional work and practice expense incurred by physicians as a result of program participation. • Programs must offer financial support to physician practices that implement IT systems or software that interact with aspects of the PFP program. • Programs must finance bonus payments based on specified performance measures with supplemental funds. • Programs must reward all physicians who actively participate in the program and who achieve pre-specified absolute program goals or demonstrate pre-specified relative improvement toward program goals. • Programs must not reward physicians based on ranking compared with other physicians in the program. • Programs must provide to all eligible physicians and practices a complete explanation of all program facets, to include the methods and performance measures used to determine incentive eligibility and incentive amounts, prior to program implementation. • Programs must not financially penalize physicians based on factors outside of the physician's control. • Programs utilizing bonus payments must be designed to protect patient access and must not financially disadvantage physicians who serve minority or uninsured patients.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Bridges to Excellence (BTE)</p>	<p>Physician Office Link www.bridges-toexcellence.org/programs/pol.mspdx</p>	<p>An employer-based program that promotes physician office use of health IT.</p>	<p>Rewards physicians for adopting health IT or EHRs.</p>	<ul style="list-style-type: none"> Assess the use of evidence-based standards of care, maintenance of patient registries for the purpose of identifying and following-up with at-risk patients and provision of educational resources to patients. Assess whether practices use electronic systems to maintain patient records, provide decision support, enter orders for prescriptions and lab tests and provide patient reminders. Assess whether a practice's electronic systems interconnect and whether they are interoperable with other systems, whether they use nationally accepted medical code sets and whether they can automatically send, receive and integrate data such as lab results and medical histories from other organizations' systems.
<p>Blue Cross Blue Shield of Massachusetts</p>	<p>Primary Care Physician Incentive Program www.bcbs.com/innovations/blueworks/provider/pay-for-performance-programs.html</p>	<p>An incentive program that gives PCPs the opportunity to earn additional reimbursement above the HMO fee schedule based on their performance on specific quality measures.</p>	<p>To ensure that members receive important preventive services, create performance-based reimbursement opportunities for PCPs and provide PCPs with actionable patient data to enable improvements.</p>	<p><u>Program Elements:</u></p> <ul style="list-style-type: none"> Provides annual reports to physicians on five different measures, a list of patients yet to receive preventative care for those measures, educational tools and materials and payments based on performance. In 2003, BCBSMA expanded its pay-for-performance initiative to engage groups and specialists in quality improvement efforts through the Group Performance Incentive Program. BCBSMA will leverage these programs' resources in 2004 to encourage physicians to invest in and use electronic technologies for disease management, decision support and electronic prescribing. BCBSMA expects this to have far-reaching effects in the delivery of quality care to their members and all the citizens of Massachusetts.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Center for Health Care Strategies</p>	<p>Pay-for-Performance Purchasing Institute www.chcs.org/info-url_nocat3961/info-url_no-cat_show.htm?doc_id=37513Z</p>	<p>Through a competitive process, CHCS selected seven states who are designing, implementing, and testing financial or non-financial incentives; different performance measures; and ways of engaging provider participation.</p>	<p>To assist states in developing Medicaid provider incentive programs.</p>	<p>The <u>seven states and their agendas include:</u></p> <p>Arizona is partnering with its managed care organizations to develop a statewide provider-level incentive program. The state is currently working on pay-for-performance arrangements targeting hospitals, nursing homes, home health agencies, and health plans.</p> <p>Connecticut seeks to institutionalize incentives for care coordination, preventive care, and other activities for children enrolled in its Medicaid program under a pay-for-performance program.</p> <p>Idaho is incorporating pay-for-performance into its primary care case management Chronic Disease Management Program. The initial pilot focuses on diabetes, using six evidence-based quality indicators. Idaho is in the process of adding depression and hypertension diagnoses to the program. Providers will receive a \$50 incentive payment for every person with diabetes who is enrolled, and \$10 for each of the selected indicators that have been performed or completed.</p> <p>Massachusetts seeks to implement pay-for-performance within its primary care case management program. The state's goals for provider-level pay-for-performance include:</p> <ul style="list-style-type: none"> • Establishing a framework for MassHealth pay-for-performance activities that focuses on improving the quality of care delivered to members across care delivery settings. • Using a phased approach to implementing pay-for-performance in MassHealth.

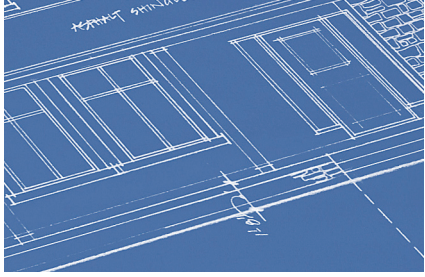
Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
				<p>Missouri proposes to implement financial incentives for providers who actively participate in its disease management program.</p> <p>Ohio Medicaid is planning to coordinate provider pay-for-performance into a statewide managed care program. The state is currently identifying performance indicators for preventive care and for the most costly and prevalent chronic diseases.</p> <p>West Virginia is developing a provider-level “pay-for-play” program to go hand-in-hand with its Medicaid Redesign goals. In the initial year, providers will be reimbursed for time spent with patients explaining the state’s member agreement and establishing a self management plan. In the second year of the program, provider incentives will be tied to performance measures.</p>
<p>Centers for Medicare and Medicaid Services (CMS)</p>	<p>Medicare Pay for Performance Demonstrations – specifically: Hospital Quality Initiative Premier Hospital Quality Incentive Demonstration Performance Based Payments for Physician Groups Demonstration</p>	<p>Federal demonstration projects apply incentive payments for different methodologies a wide range of provider types under the Medicare program.</p>	<p>To determine the impact of offering incentive payments to different providers for improving the quality of care rendered to Medicare beneficiaries when such quality of care results in reduced need for additional services and, consequently, reduces cost.</p>	

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
	<p>Medicare Chronic Care Improvement Program</p> <p>Medicare Care Management Performance Demonstration</p> <p>Standards and Performance Measures Development</p> <p>www.cms.hhs.gov/apps/media/press/release.asp?Counter=1343</p>			
<p>Integrated Healthcare Association (IHA)</p>	<p>Pay for Performance</p> <p>www.iha.org</p>	<p>A Pay for Performance Initiative that was launched in 2002. Measures cover clinical areas (50%), patient satisfaction (40%) and IT investment (10%).</p>	<p>This statewide collaboration is designed to create the business case for quality at the physician group level. The goal is to reward physician groups for performance in clinical care and patient experience by providing a clear set of health plan expectations, use of common metrics, and public reporting. Six health plans participate</p>	<p>IHA's principles of Pay for Performance are (1) common performance measures for physician groups, developed collaboratively by health plan and physician group medical directors, researchers, and other industry experts; and (2) significant health plan financial payments based on that performance, with each plan independently deciding the source, amount, and payment method for its incentive program.</p>

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
MedEncen- tive	The MedEncen- tive Program www.medencentive.com	A program that provides evidence-based medicine guidelines and information and therapy to physicians and, in turn, financially rewards physicians (and their patients) based on their usage of this information.	To improve the standard of care and control costs through financial incentives to doctors and their patients for incorporating evidence-based medicine and information therapy methods.	Designed to “bolt-on” to existing health plans to improve the standard of care and control healthcare costs. MedEncen- tive accomplishes quality improvement and cost containment by dispensing evidence-based medicine (EBM) treatment guidelines and information therapy (IX) to physicians and their patients through MedEncen- tive’s proprietary Internet Website applications
Medicare Payment Advisory Commission (MedPAC)	Report to Congress on Pay for Performance in Medicare, March 2005 http://www.medpac.gov/publications/congressional_reports/Mar05_EntireReport.pdf	Recommended that CMS move towards using financial incentives that rewards quality of care.	To financially incentive physicians to provide a higher quality of care.	<p><u>Pay-for-performance measurement criteria:</u></p> <ul style="list-style-type: none"> Measures must be evidence-based, to the extent possible, broadly understood, and accepted Providers and plans must be able to improve quality by using the measures; otherwise care may be improved for only a few beneficiaries Incentives should not discourage providers from taking riskier or more complex patients Information to measure the quality of a plan or provider should be collected in a standardized format without excessive burden on the parties involved. Establish a process for continual evolution of measures. <p><u>Principles for physician payment:</u></p> <ul style="list-style-type: none"> Reward providers based on both improving care and exceeding certain benchmarks. Medicare should fund the program by setting aside a small share of payments in a budget neutral approach. Distribute all payments that are set aside for quality to providers achieving the quality criteria.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>National Business Coalition on Health (NBCH)</p>	<p>eValue8 www.nbch.org/eValue8</p>	<p>A performance tool used by purchasers to compare quality and efficiency of health plans including their use of IT.</p>	<p><u>eValue8:</u> Seeks to provide standardized information in order to improve their management, administration and/or delivery of health care services.</p> <p><u>NBCH:</u> Seeks to accelerate the nation's progress towards safe, efficient, high-quality health care and the improved health status of the American population.</p>	<p><u>NBCH Principles:</u></p> <ul style="list-style-type: none"> • Value-based health care purchasing • Measuring the comparative quality and efficiency of hospitals, physicians, and health plans in the community to identify the best value • Creating incentives to provide higher-value care through integrated delivery systems and continuous quality improvement • Improving the overall health of the community
<p>Prometheus Payment Inc.</p>	<p>Prometheus Payment Model www.prometheuspayment.org</p>	<p>Seeks to create a payment environment where the patient receives the highest quality of care and the providers and insurers gain a more efficient work environment, in addition to financial savings and additional bonuses.</p>	<p>To improve health care quality, lower administrative burden, enhance transparency, and support a patient-centered, consumer driven environment.</p>	<p><u>Tenets of Prometheus Payment:</u></p> <ul style="list-style-type: none"> • Providers have the opportunity to negotiate meaningfully their payment amounts in accordance with the Evidence-Based Case Rate. • Mechanisms of payment and systems of reporting are transparent and public. • Providers have the option to configure themselves in whatever aggregations they choose. • The implementation of PROMETHEUS explicitly seeks to lower administrative burden wherever possible. • Providers measured for efficiency will have information about other providers in order to facilitate effective referral choices. • Providers have the opportunity to speak to scorecard issues (e.g., data, findings before they are made public.

Source/ Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
The Leapfrog Group	Leapfrog Hospital Rewards Program www.leapfrog.medstat.com/rewards	A hospital pay-for-performance program based on NQF-endorsed quality measures. A solution to help purchasers and payers obtain more value from their inpatient care in collaboration with their hospital community by creating incentives and rewards for high-value care.	Provides a foundation for hospitals to become national leaders in the movement to improve quality health care and provide exceptional value for the communities they serve.	The Leapfrog Group principles: <ul style="list-style-type: none"> • Reduce preventable medical mistakes and improve the quality and affordability of health care. • Encourage health providers to publicly report their quality and outcomes so that consumers and purchasing organizations can make informed health care choices. • Reward doctors and hospitals for improving the quality, safety and affordability of health care. • Help consumers reap the benefits of making smart health care decisions.
United Healthcare	UnitedHealth Practice Rewards www.unitedhealthcareonline.com/b2c/CmaAction.do?channelId=b80ee7a1e193-b010VgnVCM100000c520720a	A program that rewards, through fee schedule enhancements, solo practitioners and medical groups who have met the quality and efficiency of care criteria.	To improve the quality of clinical care by supporting physicians in their practice of evidence-based and efficient health care delivery.	



MANAGING PRIVACY, SECURITY AND CONFIDENTIALITY

In order to produce work that is and will remain relevant given the shifting environment and rapid developments in the areas of privacy, security and confidentiality, the committee sought to take a simple and clear approach to the underlying core issues most often encountered in these areas. To do so, the committee drafted a set of consensus principles, a core set of “common questions” (instead of strategies and actions) and a strong bibliography of leading

articles on related subjects. The Committee recommends that eHI establish a multi-stakeholder task force to continue to monitor, address and give guidance on emerging questions and issues related to privacy and security.

Consensus was reached on the principles; however, given the environment there are a number of questions that must be applied at the organizational level. The “common questions” are intended to be a starting place for facilitating the dialogue that must occur. The Blueprint does not suggest answers to these questions. They are intended to be applicable for any organization that stores, transmits, and/or uses personal health information and should guide the organization in the development of internal policies and procedures related to privacy, security and confidentiality.

Principles

1. Transparency

- Policies for the permissible use of personal health information by those other than the patient should be clearly defined, accessible, and communicated in an easily understood format.
- Individuals have the right to know how their personal health information has been used and who has access to it.

2. Collection and Use of Personal Health Information

- Personal health information of the individual consumer should be obtainable consistent with applicable federal, state and local law. It should be accurate, up-to-date, and limited to what is appropriate and relevant for the intended use.
- Consumers have a right to privacy of their personal health information, taking into account existing exceptions under law. Consumers should be apprised when they have a choice in how their personal health information will be used and shared and when they can limit uses of their personal health information.

3. Individual Control

- Individuals should be able to limit when and with whom their identifiable personal health information is shared. Individuals should be able to delegate these responsibilities to another person.
- Individuals should be able to readily obtain an audit trail that discloses by whom their personal health information has been accessed and how it has been used.

4. Security

- Measures should be implemented to protect the integrity, security, and confidentiality of each individual’s personal health information, ensuring that it cannot be lost, stolen, or accessed or modified in an inappropriate way.
- Organizations that store, transmit, or use personal health information should have in place mechanisms for authentication and authorization of system users.





5. Audit

- Each such organization must have a comprehensive audit process to examine compliance with its internal privacy, security, and confidentiality policies and procedures.
- Organizations have a responsibility to ensure that an individual is notified when the organization learns of unauthorized or inappropriate access to that individual's personal health information.

6. Accountability and Oversight

- Individuals should be apprised as to who monitors policy compliance with privacy, security and confidentiality policies, how complaints will be handled, how individuals will be informed of a violation and existing remedies available to them.

7. Technology and Privacy

- Technological developments must be adopted in harmony with policies and business rules that foster trust and transparency.
- Privacy protections must be at the forefront of all technological standards. Privacy issues cannot be addressed post-system design and implementation.

Common Core Questions About Privacy and Security

Given the dynamic nature of public and private sector developments for privacy, security and confidentiality, a specific direction or set of rules for stakeholders to follow is lacking. Further complicating the situation are the questions that are asked — to which the relevant answers depend on the stakeholder.

Today there are inconsistencies in federal and state privacy and security laws and this is further complicated by stakeholders' interpretations of the laws and the reconciliation of the inconsistencies. There are a number of projects underway at the federal and state level to reconcile these issues; however, it is important to understand what exists today and to have stakeholders achieve consensus on relevant interpretations.

The common core questions below are intended to help organizations examine and address the underlying issues most often encountered in the areas of privacy and security. Organizations ranging from health information exchanges (HIEs) and provider organizations, to researchers, vendors, policy experts and lawmakers at the national, state, and local levels can apply these questions. Because the context in which stakeholders operate will vary, these questions serve as a guide to facilitate relevant answers given different environments. These questions are not meant to be asked only one time — as the environment changes, organizations will need to readdress these questions to ensure they continue to be compliant.

Policy decisions should be the driver of technology; however, these questions should be asked in the context of the technology and its capabilities.

1. What federal and state privacy and security laws are you subject to? Are partner stakeholders subject to the same laws? What are the implications if stakeholders are subject to different laws?
2. There may be differences under federal and state laws as to how different types of health information are handled (e.g. mental health and substance abuse). What are the implications of having different laws for different types of health information?
3. What are the implications of having different federal and state laws affecting privacy and security? Is there consensus on how the laws apply to each stakeholder? What are the implications of having different laws across states?
4. Not all entities are covered by the same laws, even in the situation where they perform the same services. What are the implications of having some entities performing similar services covered by





federal law (e.g., HIPAA) and others not?

- How does this impact your competitiveness?
 - How does this impact your ability to exchange information with others?
 - Does contracting with non-covered entities create different levels of accountability and/or enforceability in the exchange of health information?
 - Assuming you are not a covered entity or its business associate, what would be the implications of complying with enforceable confidentiality, privacy, and security requirements at least equivalent to relevant HIPAA principles?
5. Should there be different confidentiality, privacy, and security protections for electronic records as compared to paper records, whether in whole or in part?
 6. Is there a minimum set of confidentiality, privacy, and security protections that you think any organization that stores, transmits, and/or uses personal health information should follow? If not HIPAA, then what?
 7. How and when should privacy and security policies be available to employees? How will employees be held accountable for following these policies?
 8. How do you collect, maintain, store, share or transmit personal health information?
 9. What is your approach for dealing with breaches of privacy and security?
 10. How and at what point in time do you communicate your privacy and security practices to patients/consumers? How and at what point in time do you communicate changes in your practices?
 11. What level of consent and how much control are consumers given over the flow of their information, i.e., "authorization and consent," before disclosure, "ability to review and correct information," and so on? What level of control should consumers have over the use of de-identified patient data for population health initiatives or research that is outside the direct care delivery process? What is the best way to educate consumers about these issues and the impact of their choices?



**Overview of Key Initiatives
Managing Privacy, Security and Confidentiality**

Source / Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Health Information Community (AHIC)</p>	<p>Confidentiality, Privacy & Security workgroup www.hhs.gov/healthit/ahic/confidentiality</p>	<p>A workgroup focused on developing recommendations to ensure the confidentiality, privacy, and security of individually identifiable health information in an electronic health information exchange environment.</p>	<p><u>Broad Charge:</u> Make recommendations to the Community regarding the protection of personal health information in order to secure trust, and support appropriate interoperable electronic health information exchange.</p> <p><u>Specific Charge:</u> Make actionable confidentiality, privacy, and security recommendations to the Community on specific policies that best balance the needs between appropriate information protection and access to support, and accelerate the implementation of the consumer empowerment, chronic care, and electronic health record related breakthroughs.</p>	<p>Workgroup will address the following issues:</p> <ul style="list-style-type: none"> • Methods of patient identification • Methods of authentication • Methods for securing data • Methods for securing access to health information • Policies for breach of health information • Guidelines and processes to determine appropriate secondary uses of information • A scope of work for a long term independent advisory body on privacy and security issues.

Source / Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>American Medical Association (AMIA)</p>	<p>Invitational Conference on Secondary Use of Health Data</p> <p>http://www.amia.org/inside/initiatives/health-data/2007/index.asp</p>	<p>AMIA initiated three technical working groups that informed the larger gathering in order to develop a comprehensive taxonomy of use and users of secondary health data, to review technologies that are used to de-identify data sets and re-identify data sets of “anonymous” data, and to define data stewardship and related policy issues.</p>	<p>Develop a national framework for the secondary use of health data that includes:</p> <ul style="list-style-type: none"> • A taxonomy describing types of uses and users of health data • Guiding principles that balance the risk, sensitivity, benefits, obligations, and protections of various uses of health data • Clarifications of terminology associated with various uses of health data 	<p><u>Data Stewardship Principles</u></p> <ol style="list-style-type: none"> 1. Accountability (including governance, oversight, and level of applicable regulations) 2. Openness and transparency (including structure, processing and delivery of data, and business processes and practices) 3. Notice to patients 4. Privacy and security (including data quality, de-identification, and costs of re-identification) 5. Granularity of patient consent 6. Permitted uses and disclosures (including data aggregation and analyses) 7. Enforcement and remedies
<p>Connecting for Health – Markle Foundation</p>	<p>The Common Framework</p> <p>www.connectingforhealth.org/common-framework</p>	<p>A comprehensive resource of policy and technical specifications intended to help health information systems share information.</p>	<p>A new infrastructure for health information sharing will provide the foundation for a transformed, 21st century healthcare system in which patients and families can better understand their own health and engage more fully in their care through direct access to their own health information.</p>	<p><u>Policy Principles:</u></p> <ol style="list-style-type: none"> 1. Openness and transparency 2. Purpose specification and minimization 3. Collection limitation 4. Use limitation 5. Individual participation and control 6. Data integrity and quality 7. Security safeguards and controls 8. Accountability and oversight 9. Legal and financial remedies <p><u>Technology Principles:</u></p> <ol style="list-style-type: none"> 1. Make it “Thin” 2. Avoid “Rip and Replace” 3. Separate Applications from the Network 4. Decentralization 5. Federation 6. Flexibility 7. Privacy and Security 8. Accuracy

Source / Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Consumer Coalition for Health Privacy</p>	<p>www.health-privacy.org/homepage2307/index.html</p>	<p>A diverse network of patient, disability and consumer advocacy organizations actively engaged in the national and local debate on health privacy.</p>	<p>To inform and empower the consumer community, including the disabled and those with serious illnesses, to more fully engage in the national and local debate on health privacy.</p>	<p><u>Principles</u> – Committed to the development and enactment of public policies and private standards that:</p> <ul style="list-style-type: none"> • Guarantee the confidentiality of personal health information • Promote both access to high quality care and the continued viability of medical research.
<p>Health Privacy Project</p>	<p>www.health-privacy.org</p>	<p>An organization dedicated to raising public awareness on the importance of ensuring health privacy.</p>	<p>To raise public awareness of the importance of ensuring health privacy in order to improve health care access and quality, both on an individual and a community level.</p>	<p><u>Principles</u> (as identified in the Best Principles for Health Privacy report):</p> <ul style="list-style-type: none"> • For all uses and disclosures of health information, health care organizations should remove personal identifiers to the fullest extent possible, consistent with maintaining the usefulness of the information. • Privacy protections should follow the data. • An individual should have the right to access his or her own health information and the right to supplement such information. • Individuals should be given notice about the use and disclosure of their health information and their rights with regard to that information. • Health care organizations should implement security safeguards for the storage, use, and disclosure of health information.

Source / Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>National Consumers League</p>	<p>www.nclnet.org</p>	<p>An non-profit advocacy group whose mission is to identify, protect, represent, and advance the economic and social interests of consumers.</p>		<ul style="list-style-type: none"> • Personally identifiable health information should not be disclosed without patient authorization, except in limited circumstances. • Health care organizations should provide patients with certain choices about the use and disclosure of their health information. • Health care organizations should establish policies and review procedures regarding the collection, use, and disclosure of health information. • Health care organizations should use an objective and balanced process to review the use and disclosure of personally identifiable health information for research. • Health care organizations should not disclose personally identifiable health information to law enforcement officials, absent a compulsory legal process, such as a warrant or court order. • Health privacy protections should be implemented in such a way as to enhance existing laws prohibiting discrimination. • Strong and effective remedies for violations of privacy protections should be established.
				<p><u>Health Information Privacy Policies:</u></p> <ul style="list-style-type: none"> • Right to privacy • Informed consent and notice • Security safeguards and penalties • Individual right to access • Right to private access • Research access • Education • Consumer information programs

Source / Reference	Initiative	Summary	Goals	Strategies / Principles / Tools
<p>Office of National Coordinator, AHRQ, Research Triangle Institute</p>	<p>Health Information Security and Privacy Collaboration (HISPC) Toolkit www.rti.org/hispc</p>	<p>The toolkit provides guidance for conducting organization-level assessments of business practices, policies, and state laws that govern the privacy and security of health information exchange.</p>	<p>To create long-lasting collaborative networks in states and communities to support future work and inform future health information exchange activities.</p>	<p><u>Obtaining Interoperable HIE:</u></p> <ol style="list-style-type: none"> 1. Identify the variations in organization-level business privacy and security policies and practices and state laws that affect electronic HIE. 2. Engage stakeholders in discussions where they can come to agreement on the common and necessary elements of current practices that will need to be retained and to identify gaps in current protections that are inadequate to cover the requirements for electronic HIE. 3. Identify the policy or legal driver or other underlying rationale for the current practice and work toward identifying consensus-based solutions. 4. Develop a plan to implement the solutions. 5. Work through the implementation process, collaborating openly with stakeholders.
<p>Patient Privacy Rights Foundation</p>	<p>www.patient-privacyrights.org</p>	<p>A national consumer watchdog organization whose mission is to empower Americans to protect and preserve their human rights to medical privacy.</p>	<p>To guarantee that all Americans control access to their health records.</p>	



APPENDIX A – RESOURCES

Engaging Consumers Resources

- American Health Information Community (AHIC), Chronic Care Workgroup Visioning Statement, October 2006. http://www.hhs.gov/healthit/ahic/materials/meeting10/cc/Virtual_Care_Vision.doc
- AHIC Proposed Principles for Consumer Empowerment Breakthrough, 2006. http://www.hhs.gov/healthit/ahic/materials/meeting02/cemp/Cemp_principles_breakthrough.doc
- America's Health Insurance Plans (AHIP), Issue Brief: Improving Health Care through Personal Health Records, December 2006. <http://www.ahip.org/content/fileviewer.aspx?docid=18328&linkid=156982>
- America's Health Insurance Plans, PHR Data Elements, <http://www.ahip.org/content/fileviewer.aspx?docid=18328&linkid=156990>
- BlueCross BlueShield Association, Consumer Preferences and Usage of Healthcare Information, November 2006. <http://www.bcbs.com/issues/transparency/research/Consumer-Research-Study-Nov-2006.pdf>
- California HealthCare Foundation: It Takes a Region: A Framework to Improve Chronic Disease Care, Wagner, 2006. <http://www.chcf.org/documents/chronicdisease/CreatingAFrameworkToImproveChronicDiseaseCare.pdf>
- California HealthCare Foundation. "Online Patient-Provider Communication Tools: An Overview," 2003. <http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=21600>
- California HealthCare Foundation, National Consumer Health Privacy Survey 2005, Forrester Research. <http://www.chcf.org/topics/view.cfm?itemID=115694>
- Cynthia Baur, PhD, Office of Disease Prevention and Health Promotion, US Department of Health and Human Services. Presentation: "Health Literacy as a Factor in the Adoption and Use of Personal Health Records", September 18, 2006.
- Health Information Technology-Consumer Principles, March 2006. <http://justicematters.national-partnership.org/site/DocServer/HIT.pdf?docID=991>
- Institute of Medicine, Crossing the Quality Chasm, (see especially Ten Rules for Care Delivery Redesign). 2001. www.iom.edu
- Lansky, David, PhD, Senior Director, Health Program at Markle Foundation Summary of email concerning barriers to engaging consumers in HIE. August 8, 2007.
- Markle Foundation, Connecting Americans to their Health Care Working Group on Policies for Electronic Information Sharing Between Doctors and Patients. July 2004. http://www.markle.org/downloadable_assets/consumer_principles_101105.pdf
- Markle Foundation, Connecting Americans to their Health Care: A Framework for Networked Personal Health Information. December 2006. http://www.connectingforhealth.org/commonframework/docs/P9_NetworkedPHRs.pdf
- Markle Foundation, Consumer Survey on Attitudes Toward PHRs and Electronic Health Info Exchange, October 2005. http://www.connectingforhealth.org/resources/101105_survey_summary.pdf
- Moyer CA, Stern DT, Dobias KS, Cox DT, Katz SJ. Bridging the electronic divide: patient and provider perspectives on e-mail communication in primary care. *Am J Managed Care* 2002; 8: 427-33.
- Tang P et al. Personal Health Records: Definitions, Benefits, and Strategies for Overcoming Barriers to Adoption. *J Am Med Inform Assoc.* 2006 Mar-Apr; 13 (2):121-126.
- Value-Driven Healthcare: A Purchaser Guide. February 2007. http://www.bridgestoexcellence.org/pdf/Purchaser_Guide_REVISED_v1.2_2-2-07.pdf

Transforming Care Delivery at the Point of Care Resources

- American College of Physicians, Linking Physician Payments to Quality, 2005. http://www.acponline.org/hpp/link_pay.pdf
- American College of Physicians. The Paperless Medical Office: Digital Technology's Potential for the Internist. 2004. <http://www.acponline.org/hpp/paperless.pdf>
- American Hospital Association, Continued Progress: Hospital Use of Information Technology, 2007. <http://www.aha.org/aha/content/2007/pdf/070227-continuedprogress.pdf>
- American Medical Association, Guidelines for Pay-for-Performance Programs, February 24, 2005. <http://www.ama-assn.org/ama1/pub/upload/mm/-1/finalpfpguidelines.pdf>

- Brailer DJ, Terasawa EL. Use and Adoption of Computer-Based Patient Records. Prepared for California HealthCare Foundation; October 2003.
- California HealthCare Foundation: It Takes a Region: A Framework to Improve Chronic Disease Care, Wagner, 2006. <http://www.chcf.org/documents/chronicdisease/CreatingAFrameworkToImproveChronicDiseaseCare.pdf>
- Commission on Systemic Interoperability: Final Report, Ending the Document Game, 2005. www.gpo.gov.
- CSC Connecting for Health Team, Revenue and Cost Model for a Nationwide Health Information Network, 2007.
- Digital Health Recovery for the Gulf Coast (2007). eHealth Initiative and Foundation.
- eHealth Initiative, Connecting Communities Toolkit, 2006. <http://toolkit.ehealthinitiative.org/>
- eHealth Initiative Common Principles – Upfront Funding and Sustainability, www.ehealthinitiative.org
- eHealth Initiative, Parallel Pathways for Quality Healthcare, 2005. <http://www.ehealthinitiative.org/assets/documents/ParallelPathway5-25-052PM.doc>
- eHealth Institute. eHealth: Striving for Critical Mass. A Summary Report of The Fourth Annual eHealth Developer’s Summit. May 2004.
- eHealth Initiative Value and Sustainability Model, Telemedicine Special Project Grants Development of Health Information Exchanges. 2007.
- Federation of American Hospitals, Comment Letter on Value-Based Purchasing, January 2007. http://www.fah.org/issues/comment_letters/2007/CMS%20P4P%20Comment%20Letter%201-24-07%20%202.pdf
- Health Information Technology in the United States: The Information Base for Progress. Institute for Health Policy at Massachusetts General Hospital and the School of Public Health and Health Services at George Washington University. 2006.
- Institute of Medicine, Pathways to Quality Healthcare Series, Rewarding Provider Performance, 2006. www.iom.edu/bppi.
- Institute of Medicine, Pathways to Quality Healthcare Series, Aligning Incentives in Medicare, 2006. www.iom.edu/bppi.
- Lansky, David, PhD, Senior Director, Health Program at Markle Foundation Summary of email concerning barriers to engaging consumers in HIE. August 8, 2007.
- Linder JA, Schnipper JL et al. Barriers to Electronic Health Record Use during Patient Visits. AMIA Annu Symp Proc. 2006; 2006: 499–503.
- Miller RH, Sim I. “Physicians’ Use of Electronic Medical Records: Barriers and Solutions”. Health Affairs; March/April 2004: 116-126.
- Markle Foundation, Financial, Legal and Organizational Approaches to Achieving Electronic Connectivity in Healthcare, October 2004. http://www.connectingforhealth.org/assets/reports/flo_sustain_healthcare_rpt.pdf
- Moyer CA, Stern DT, Dobias KS, Cox DT, Katz SJ. Bridging the electronic divide: patient and provider perspectives on e-mail communication in primary care. Am J Managed Care 2002; 8: 427–33.
- Overcoming Barriers to Electronic Health Record Adoption. Results of Survey and Roundtable Discussions Conducted by the HFMA. February 2006.
- “Parent and Physician Attitudes Regarding Electronic Communication in Pediatric Practices,” Pediatrics, May 5, 2002, 109(5): 740-744.
- Value-Driven Healthcare: A Purchaser Guide. February 2007. http://www.bridgestoexcellence.org/pdf/Purchaser_Guide_REVISED_v1.2_2-2-07.pdf
- Wang SJ, Middleton B, et al. “A Cost-Benefit Analysis of Electronic Medical Records in Primary Care”. The American Journal of Medicine; 114(5): 397-403, 1 April 2003.

Improving Population Health Resources

- American Health Information Community, Population Health Workgroup, Visioning Matrix, 2006. http://www.hhs.gov/healthit/ahic/materials/meeting10/bio/Visioning_Matrix.doc
- American Health Information Community (AHIC), Quality Workgroup End State Vision, 2007. http://www.hhs.gov/healthit/ahic/materials/qual_vision_execsum.doc
- AHRQ Conference on Data Collection and Reporting. Collecting and Reporting Data for Performance Measurement: Moving Toward Alignment. November 8-9, 2006
- AMIA June 14-15, 2007 Secondary Data Conference: Secondary Use of Data for Commercial Pur-



- poses: Challenges, PowerPoint, Lou Diamond
- AMIA: Toward a National Framework for the Secondary Use of Health Data, Safran et al, September 2006. http://www.amia.org/inside/initiatives/healthdata/finalpapertowardanationalframework-forthesecondaryuseofhealthdata_09_08_06_.pdf
 - AMIA: Background Materials for AMIA June 14-15, 2007 Secondary Data Conference, <http://www.amia.org/inside/initiatives/healthdata/2007/index.asp>
 - AQA Data Sharing and Aggregation Principles for Performance Measurement and Reporting, January 2006. <http://www.aqaalliance.org/files/DataAggPrinciples-May06.doc>
 - AQA Principles for Reporting to Clinicians and Hospitals, April 2006. <http://www.aqaalliance.org/files/ProviderPrinciplesMay06.doc>
 - AQA Principles for Health Information Technology and Measurement Aggregation, April 2006. <http://www.aqaalliance.org/files/PrinciplesforHITandMeasAgg-May06.doc>
 - California HealthCare Foundation: It Takes a Region: A Framework to Improve Chronic Disease Care, Wagner, 2006. <http://www.chcf.org/documents/chronicdisease/CreatingAFrameworkToImproveChronicDiseaseCare.pdf>
 - Collaborative ONCHIT Request for Information Response, facilitated by Connecting for Health, January 18, 2005, www.connectingforhealth.org
 - de Brantes, Emery, Overhage, Glaser, Marchibroda, The Potential of HIEs as Infomedaries. Journal of Healthcare Information Management, Vol. 21, No. 1. <http://www.ehealthinitiative.org/assets/documents/Winter07JHIMArticle-deBrantesetal.PDF>
 - eHealth Initiative, Connecting Communities Toolkit, 2006. <http://toolkit.ehealthinitiative.org/>
 - eHealth Initiative. Health Information Exchange: From Start-up to Sustainability. Developed by the eHealth Initiative Foundation with support from the Department of Health and Human Services Health Resources and Services Administration. Washington, D.C. May 2007. http://toolkit.ehealthinitiative.org/value_creation_and_financing/tools.msp?Section=381&Category=395&Document=1160
 - eHealth Initiative. Improving the Quality of Healthcare through Health Information Exchange: Selected Findings from eHealth Initiative's Third Annual Survey of Health Information Exchange Activities at the State, Regional and Local Levels. Washington, D.C.: eHealth Initiative; September 2006. <http://toolkits.ehealthinitiative.org/assets/Documents/eHI2006HIESurveyReportFinal09.25.06.pdf>
 - HHS: Framework for Strategic Action, Brailer and Thompson, July 2004. <http://www.hhs.gov/healthit/framework.html>
 - International Security, Trust & Privacy Alliance Presentation to Health Information Protection Taskforce of State Alliance for eHealth, April 25-26, 2007.
 - Markle Foundation, Connecting Healthcare In the Information Age: The Steering Group Report, 2003. http://www.connectingforhealth.org/resources/steering_grp_report_6.5.03.pdf
 - Markle Foundation, Connecting for Health Common Framework, <http://www.connectingforhealth.org/commonframework/>
 - Markle Foundation, Connecting for Health, Response to Federal Request for Information on Data Stewardship, http://www.connectingforhealth.org/resources/cfh_ahrq_aqa_rfi_073007.pdf
 - National Committee on Vital and Health Statistics. Information for Health: A Strategy for Building the National Health Information Infrastructure. November 15, 2001.
 - Physician Quality of Care, 2004. http://www.acponline.org/hpp/performance_measure.pdf
 - Safran et. Al., Toward a National Framework for the Secondary Use of Health Data: an American Medical Informatics Association White Paper. J Am Med Inform Assoc. 2007;14:1-9. DOI 10.1197/jamia.M2273
 - The learning healthcare system: A workshop of the IOM roundtable on evidenced-based medicine: Presentation abstracts. 2006. Washington, DC.

Aligning Financial and Other Incentives Resources

- Aligning Physician Incentives: Lessons and Perspectives from California; September 2005.
- American College of Physicians, Linking Physician Payments to Quality, 2005. http://www.acponline.org/hpp/link_pay.pdf
- American Medical Association, Guidelines for Pay-for-Performance Programs, February 24, 2005. <http://www.ama-assn.org/ama1/pub/upload/mm/-1/finalpfpguidelines.pdf>
- Baker, G at MedVantage, Inc. Pay-for-Performance: On the Race Track presentation at Pay-for-



Performance Summit on February 15, 2007.

- California HealthCare Foundation: It Takes a Region: A Framework to Improve Chronic Disease Care, Wagner, 2006. <http://www.chcf.org/documents/chronicdisease/CreatingAFrameworkToImproveChronicDiseaseCare.pdf>
- Commission on Systemic Interoperability: Final Report, Ending the Document Game, 2005. www.gpo.gov.
- Connecting for Health Working Group on Financial, Organization, and Legal Sustainability of Health Information. Achieving Electronic Connectivity in Healthcare: Summary of Financial Incentives Recommendations. July 2004.
- CSC Connecting for Health Team, Revenue and Cost Model for a Nationwide Health Information Network, 2007.
- eHealth Initiative Common Principles – Upfront Funding and Sustainability, www.ehealthinitiative.org
- eHealth Initiative Value and Sustainability Model, Telemedicine Special Project Grants Development of Health Information Exchanges. 2007.
- eHealth Initiative, Parallel Pathways for Quality Healthcare, 2005. <http://www.ehealthinitiative.org/assets/documents/ParallelPathway5-25-052PM.doc>
- eHealth Initiative, Connecting Communities Toolkit, 2006. <http://toolkit.ehealthinitiative.org/>
- Federation of American Hospitals, Comment Letter on Value-Based Purchasing, January 2007. http://www.fah.org/issues/comment_letters/2007/CMS%20P4P%20Comment%20Letter%201-24-07%20%202.pdf
- Institute of Medicine, Pathways to Quality Healthcare Series, Rewarding Provider Performance, 2006. www.iom.edu/bppi.
- Institute of Medicine, Pathways to Quality Healthcare Series, Aligning Incentives in Medicare, 2006. www.iom.edu/bppi.
- Lorenzi, NM. Strategies for Creating Successful Local Health Information Infrastructure Initiatives. December 16, 2003.
- Markle Foundation, Financial, Legal and Organizational Approaches to Achieving Electronic Connectivity in Healthcare, October 2004. http://www.connectingforhealth.org/assets/reports/flo_sustain_healthcare_rpt.pdf
- Provider Incentive Models for Improving Quality of Care. March 2002. Report provided by Bailit Health Purchasing (BHP) on behalf of The National Health Care Purchasing Institute (NHCPPI). An Initiative of the RWJ Foundation.
- Rosenfield S, Zeitler E, Mendelson D. Financial Incentives: Innovative Payment for Health Information Technology. Foundation for eHealth Initiative. March 2004.
- Thrall, JH. The Emerging Role of Pay-for-Performance Contracting for Health Care Services. Radiology 2004; 233:637-640.
- Value-Driven Healthcare: A Purchaser Guide. February 2007. http://www.bridgestoexcellence.org/pdf/Purchaser_Guide_REVISIED_v1.2_2-2-07.pdf

Managing Privacy, Security and Confidentiality Resources

- American Health Information Community (AHIC) "Privacy and Security Framework," March 13, 2007. <http://www.hhs.gov/healthit/documents/AHICMaterials031307.pdf>
- American Health Information Community, Confidentiality, Privacy and Security Work Group. Request for Information. May 2007. URL: http://www.hhs.gov/healthit/ahic/materials/06_07/cps/florida_center.pdf
- America's Health Information Plans (AHIP), statement on the Confidentiality of Medical Records. <http://www.ahip.org/content/default.aspx?bc=39|341|317>
- Assessment of Variation and Analysis of Solutions. Health Information Security and Privacy Collaborative Report, pg ES-8. June 30, 2007.
- Connecting for Health. Notification and Consent. January 2005. URL: www.connectingforhealth.org
- eHI Connecting Communities Toolkit "Policies for [HIE] Information-Sharing Common Principles," (2006) http://toolkit.ehealthinitiative.org/policies_for_information_sharing/common_principles.msp
- Healthcare Leadership Council "Confidentiality of Patient Information: Principles," October 2002



<http://www.hlc.org/html/principles4.html>

- Health Privacy Project "The Promise of e-Health: Putting Patients First"
- Markle Foundation and Robert Wood Johnson Foundation, "Connecting for Health Common Framework: Resources for Implementing Private and Secure Health Information Exchange," April 6, 2006. <http://www.connectingforhealth.org/commonframework/>
- National Committee on Vital Health Statistics. Ad Hoc Work Group on Secondary Uses of Health Data. PowerPoint Presentation, June 2007.
- National Health Information Security and Privacy Collaboration <http://www.rti.org/page.cfm?nav=7&objectid=6D0A81F4-6A6D-44A5-BD5E14B2A7077ED6>
- Patient Privacy Rights. Privacy Notes. URL: www.patientprivacyrights.org
- Privacy and Security Solutions for Interoperable Health Information Exchange: Interim Assessment of Variation, Executive Summary, December 29, 2006.
- Public Attitudes Toward Medical Privacy. Gallup Survey. September, 2000. URL: <http://www.healthfreedom.org/Gallupsurvey>
- The Collaborative Response to the ONCHIT Request for Information, January 18, 2005. http://www.connectingforhealth.org/resources/collaborative_response/collaborative_response.pdf





APPENDIX B – STAKEHOLDER LIST AND BLUEPRINT DATES EXPLAINED

Stakeholder List:

In developing the strategies and actions in each of the five Blueprint areas, all committees drew from the same list of core groups in order to organize the actions in a way that lends itself to consistent presentation of the information, which will support search functions for the online version of the Blueprint. This list was as follows:

List of Stakeholders with a Possible Role in the Actions

- Consumer Organizations
- Providers/Provider Organizations (e.g. medical societies, professional associations, etc.)
- Payers (Employers/purchasers)
- Health Plans
- Health IT Vendors (includes network & applications vendors and related consultants)
- State and Community HIE Collaboratives
- Congress
- Federal Agencies (HHS, CMS, etc)
- State/Local Government
- NGOs (includes foundations, membership or stakeholder organizations, commercial product research organizations and others not outlined elsewhere in this list)
- Public health, Researchers, etc.
- Pharmaceutical Manufacturers
- Pharmacy Organizations (includes pharmacy-related trade and professional organizations)
- Quality Organizations (includes Quality Improvement Organizations, accreditation organizations such as URAC and the National Committee for Quality Assurance, as well as other quality organizations such as the National Quality Forum)

Dates in the Blueprint:

The committees sought to identify timelines for all of the actions contained in the Blueprint out of the desire to accelerate action where possible by assigning a meaningful timeline. Thus, all actions have a date range associated with them, and it is our hope that stakeholders can look to the Blueprint as a resource when developing their organizational agendas in out years. However, these dates should be considered and discussed. More feedback is encouraged as stakeholders begin to consider implementation.

In addition, it is important to note that where a committee provides an initial date but then adds, “and ongoing”, the committee envisioned that the activity would evolve and continue over time.





APPENDIX C – PROCESS FOR DEVELOPING THE BLUEPRINT

The Blueprint was developed over a six-month period, involving nearly 200 organizations and individuals representing every sector of healthcare, including clinicians, consumers, employers, health plans, healthcare IT suppliers, hospitals and other providers, laboratories, pharmacies, pharmaceutical manufacturers, public health agencies, and state and local organizations, who participated in either the direct development or review of Blueprint components.

Multi-stakeholder committees, co-chaired by members of eHI's Leadership Council, developed the content for each of the five focus areas. Committees met over a six month period to discuss gaps and barriers to progress, develop guiding principles for moving forward, and identify practical strategies and actions, including timelines, that will support a common path forward.

Blueprint Development Process Overview

- In February 2007, the eHealth Initiative and Foundation Boards approved the framework and approach for the launch of eHI's Blueprint development process, which was formally kicked off in March 2007.
- With oversight and guidance by the eHealth Initiative Leadership Council and the work of five Blueprint Committees led by eHealth Initiative Leadership co-chairs, the Blueprint was developed collaboratively with the hands-on support of eHI's multi-stakeholder membership.
- Over 30 meetings were held between April and September to review, discuss and improve elements of the Blueprint involving over 100 individuals throughout the eHI membership.
- In addition to extensive deliberations by Blueprint Committee members during face to face meetings and multiple phone conferences, eHI members provided input through eHI's monthly member WebEx/calls and monthly Connecting Communities calls.
- The eHI Blueprint materials were also widely available to the eHI membership throughout the process, with revisions posted on the eHI members-only website (and links highlighted on eHI's weekly newsletters).
- During the month of August, the Blueprint was vetted with additional stakeholders outside the eHI membership.
- The eHealth Initiative Leadership played a critical role in developing the Blueprint by reviewing the framework in February 2007, reviewing and discussing the principles across all five areas in June 2007, and reviewing and providing comments on a detailed draft document during the September 2007 Leadership Council meeting.
- The eHealth Initiative Board of Directors approved the final Blueprint in October 2007.

This highly collaborative process resulted in the shared vision, principles, strategies and actions contained in the Blueprint.





APPENDIX D – COMMITTEE MEMBERS AND LEADERSHIP

Engaging Consumers

Co Chairs:

Rachel Block
United Hospital Fund

J. Leonard Lichtenfeld, MD, FACP
American Cancer Society

Expert:

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Committee Members:

Krista Carlow
Microsoft Health Solutions Group

Paul Cotton
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Stacie Durkin, MBA, RNC, RHIA
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Care EnTrust

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Selene Kepila
CareData

Laura Kneale
Altarum

Laura Kolkman
Mosaica Partners

John Lau
Maximus

Arthur Aaron Levin
New York eHealth Collaborative

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Managing Privacy, Security and Confidentiality

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SureScripts, LLC





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(President-Emeritus, eHealth Initiative)

Edward N. Goodman, Vice President, Public Policy, VHA Inc.

Kevin Hutchinson, President and Chief Executive Officer, SureScripts

George J. Isham, MD, MS, Medical Director and Chief Health Officer, HealthPartners

William F. Jessee, MD, FACMPE, FACPM, President and Chief Executive Officer, Medical Group Management Association

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Jeffrey Kang, MD, MPH, Senior Vice President and Chief Medical Officer, CIGNA Healthcare (President, eHealth Initiative Foundation)

Y. Michele Kang, Vice President and General Manager, Health, Northrop Grumman

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Susan L. Penfield, Vice President, Booz Allen Hamilton

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Russell J. Ricci, MD, Independent

Craig Richardson, Vice President, Johnson & Johnson

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Raymond W. Scott, Founder and Chief Executive Officer, Axolotl Corp.

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Alan P. Spielman, President and Chief Executive Officer, URAC

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Dennis J. Van Liew, Senior Director, Strategic Management Group, Pfizer Global Research and Development, Inc.

Deward R. Watts, Vice President and Managing Partner, Computer Sciences Corporation, Global Health Solutions

Andrew Webber, President and Chief Executive Officer, National Business Coalition on Health





APPENDIX F – THE VETTING PROCESS

Vetting of the Blueprint With Key Stakeholders

Because the healthcare system is so fragmented, collaboration across the multiple stakeholders in healthcare is crucial to defining and implementing solutions that are not only patient-centric, but also work within the system.

The eHI Blueprint was developed through a process led by eHI's multi-stakeholder leadership with the hands-on involvement of eHI's members—including individuals and organizations representing nearly every stakeholder in healthcare, including those who deliver care; those who manage care; those who pay for care; those who develop tools, services and therapies to support improvements in healthcare; those who protect the public's health; those leading healthcare collaborative efforts at the state and local level; and finally, and most importantly—those who receive healthcare—consumers.

Nearly 200 organizations and individuals participated in the development and vetting process in various ways. They were not asked to endorse the Blueprint report; rather, they provided invaluable feedback on its contents and organization:

3M Health Information Systems
AARP
AdvaMed
Alaska Tribal Health Consortium
Altarum
American Academy of Family Physicians
American Academy of Pediatrics
American Cancer Society
American Clinical Laboratory Association
American College of Physicians
American College of Emergency Physicians
American Health Information Management Association
American Health Quality Association
American Heart Association
American Hospital Association
American Medical Association
American Medical Group Management Association
Arkansas Center for Health Improvement / University of Arkansas for Medical Sciences, College of Public Health
Arkansas Foundation for Medical Care
Association for State and Territorial Health Officials
Axolotl Corporation
Berkshire Health Systems
BlueCross BlueShield Association
BlueCross BlueShield of Florida
BlueCross BlueShield of Kansas City
Booz Allen Hamilton
Boundary Information Group
California Medical Association
CAQH
CareData
CareEntrust
CareEvolution, Inc.
Cascades Healthcare Community
Cedars Sinai Medical Center
Center for Community Health Leadership
Center for Democracy and Technology
Center for Information Therapy
Christus Health
CIGNA
Claredi





Cleveland Clinic
College of American Pathologists
Colorado Foundation for Medical Care
CompTia
Computer Sciences Corporation
CONEXIS
Covisint
CVS/pharmacy
Danbury Hospital
Davis Wright Tremaine LLP
Delmarva Foundation for Medical Care
DocSite, LLC
DrFirst, Inc.
Durkin & Associates
Eastman Kodak
EDS
Electronic Health Record Vendors Association (EHRVA)
Eli Lilly and Company
Elsevier Sciences
Emergint
Epocrates
ERISA Industry Committee (ERIC)
ESRI
Express Scripts
Federation of American Hospitals
First Data Resources
Ford Motor Company
Fresno Healthy Communities Access Partners
GE Healthcare
Geisinger Health System
General Motors
Georgetown University
Georgia Medical Care Foundation
Gila Regional Medical Center
GlaxoSmithKline
Governor's Health Information Infrastructure Advisory Board
Greater Rochester RHIO
Group Insurance Commission, Commonwealth of Massachusetts
Gunderson Lutheran
HCA Healthcare
Health Care For All Massachusetts
Health Services Advisory Group
HealthBridge
Healthcare Association of New York State (HANYS)
Healthcare Quality Strategies, Inc.
Healthcare Reform Collaboratory
Healthcare Transaction Processors
HealthInsight
HealthPartners
Healthwise
Hewlett Packard
HLTH Corporation/WebMD
IBM Corporation
IBM Global Well-being Services – Western U.S.
Indiana Health Information Exchange (IHIE) and Regenstrief Institute, Inc.
Information & Quality Healthcare (IQH)
Initiate Systems
Inland Northwest Health Services
INSservice





Intel Corporation
InterComponentWare
IPRO
Island Peer Review Organization
Johnson & Johnson
Kaiser Permanente
Kansas Foundation for Medical Care
KDH Systems, Inc.
Los Angeles Care Health Plan
Louisiana Health Care Review, Inc.
Louisville Health Information Exchange
Madison Patient Safety Collaborative
Maimonides Medical Center
Marriott International
Massachusetts eHealth Collaborative
Masspro
Maximus
Mayo Clinic
McCutcheon & Company
McKesson Corporation
M.D. Anderson Cancer Center
Medco
Medical Group Management Association
Medical Information Technology, Inc.
Medical Review of North Carolina
MediCity
MedStar Health
MedVirginia, LLC
Memorial Hermann Healthcare System
Michiana Health Information Network
Microsoft Health Solutions Group
Minnesota Department of Health
Mississippi Federation of Medical Care/Information Quality Healthcare
Misys Healthcare Systems
Montefiore Medical Center
Mosaica Partners
National Association of Chain Drug Stores Foundation
National Association of County and City Health Officials
National Business Coalition on Health
National Partnership for Women and Families
Network PDF
New Mexico Medical Review Association
National Rural Electric Cooperative Association
New York City Department of Health
New York eHealth Collaborative
New York-Presbyterian Hospital
NextGen Healthcare Information Systems
North Carolina Healthcare Information & Communications Alliance, Inc. (NCHICA)
Northrop Grumman
Norton Healthcare
NTT Data-AgileNet
Ohio KePro
Pennsylvania eHealth Initiative (PAeHI)
Pitney Bowes
Partners HealthCare System
Pfizer, Inc.
Pharmaceutical Research & Manufacturers of America (PhRMA)
Planned Parenthood Federation of America
PriceWaterhouseCoopers





The Procter & Gamble Company
Puerto Rico HIN
Qsource
Qualis Health
Quality Health Network
Quality Insights of Delaware
Quest Diagnostics
RxHub, LLC
Saint Louis University, Dept. of Health Information Management
Shared Health
Sharp Healthcare
Siemens Corporation
SimpliciTY Healthcare Systems
SNOMED International
Spectrum Health
State of Florida Agency for Healthcare
Strategies for Tomorrow, Inc.
Stratis Health
SureScripts, LLC
Taconic IPA
Tellurian Networks
Thomson Healthcare
United Health Services
United Hospital Fund
University of Pittsburgh Medical Center
URAC
Vanderbilt Center for Better Health
Vecna Technologies
Verizon Communications, Inc.
Vermont Information Technologies Leaders (VITL)
VHA Inc.
Virginia Health Quality Center
Vision Tree Software
WayPoint Advisors
Wellogic
Whatcomm Health Information Network
Wisconsin Department of Health & Family Services
Wisconsin Health Information Exchange
Wisconsin Physicians Service



APPENDIX G – IMPORTANT ACRONYMS

AHIC	American Health Information Community
AHIMA	American Health Information Management Association
AHRQ	Agency for Healthcare Research and Quality
AMA	American Medical Association
AMIA	American Medical Informatics Association
ANSI	American National Standards Institute
AQA	AQA alliance (Formerly, Ambulatory Quality Alliance)
BTE	Bridges to Excellence
CDC	Centers for Disease Control and Prevention
CDISC	Clinical Data Interchange Standards Consortium
CHI	Consolidated Health Informatics
CCHIT	Certification Commission for Healthcare Information Technology
CCR	Continuity of Care Record
CDS	Clinical Decision Support
CHC	Community Health Centers
CHCF	California HealthCare Foundation
CMS	Centers for Medicare & Medicaid Services
CPOE	Computerized Physician Order Entry
DEA	Drug Enforcement Administration
DoD	Department of Defense
DOQ-IT	Doctor's Office Quality – Information Technology
eHI	eHealth Initiative
EHR	Electronic Health Record
EHRVA	Electronic Health Record Vendors Association
FACA	Federal Advisory Committee Act
FDA	Food and Drug Administration
FHA	Federal Health Architecture
FORE	Foundation of Research and Education (part of AHIMA)
HHS	Department of Health & Human Services
HIE	Health Information Exchange
HIMSS	Healthcare Information Management Systems Society
HIPAA	Health Insurance Portability and Accountability Act
HISPC	Health Information Security and Privacy Collaborative
HIT	Health Information Technology
HITSP	Health Information Technology Standards Panel
HL7	Health Level 7
IHE	Integrating the Healthcare Enterprise
IHS	Indian Health Service
IOM	Institute of Medicine
IT	Information Technology

JCAHO	Formerly, the Joint Commission on the Accreditation of Healthcare Organizations (now The Joint Commission, TJC)
MUA	Medically Underserved Areas
NAHIT	National Alliance for Health Information Technology; "The Alliance"
NCI	National Cancer Institute
NCQA	National Committee for Quality Assurance
NCSL	National Conference of State Legislatures
NCVHS	National Committee on Vital and Health Statistics
NGA	National Governors Association
NGO	Non-Governmental Organization
NHIN	Nationwide Health Information Network
NIH	National Institutes of Health
NLM	National Library of Medicine
NQF	National Quality Forum
OHITA	Office of Health Information Technology Adoption
OMB	Office of Management & Budget
ONC	Office of the National Coordinator (preferred abbreviation for ONCHIT)
ONCHIT	Office of the National Coordinator for Health Information Technology
OPC	Office of Programs & Coordination
OPR	Office of Policy & Research
PFP	Pay-for-Performance
PHR	Personal Health Record
PITAC	President's Information Technology Advisory Committee
PQRI	Physician Quality Reporting Initiative
PVRP	Physician Voluntary Reporting Program, now known as PQRI
QUAL	Quality
QIO	Quality Improvement Organization
RHIO	Regional Health Information Organization
RFP	Request For Proposal
RWJF	Robert Wood Johnson Foundation
SDO	Standards Development Organization
SAMHSA	Substance Abuse and Mental Health Services Administration
SNOMED	Systematized Nomenclature of Medicine
TJC	The Joint Commission (Formerly, the Joint Commission on the Accreditation of Healthcare Organizations)
URAC	Utilization Review Accreditation Commission
VA	Veterans Administration
VistA	Veterans Health Information Systems and Technology Architecture
VOE	VistA Office EHR
WEDI	Workgroup for Electronic Data Interchange



APPENDIX H - WHY A "BLUEPRINT?"

Like healthcare, the building design and construction industry is highly information-dependent. The industry also happens to be in the middle of its own transformation in the way it creates, maintains and disseminates information.

"AutoCAD," the computer modeling software that has dominated the industry for more than 20 years, is the program architects use to create blueprints. But the AutoCAD program was created during a time when collaboration among architects, builders and engineers was thought to be a conflict of interest.²⁴ In effect, that meant that the software created asymmetries by stripping critical information from the architectural blueprint, which engineers and builders needed to execute the plan, resulting in the need to recreate that information, opening the door to errors and delays. But in the new millennium, the building design and construction industry began to change as new software programs were created that maintained the integrity of information and permitted access and use by others, thus generating significant efficiencies and improvements in quality.

There are obvious parallels to healthcare, where information asymmetries are commonplace and information tends to sit in the healthcare silos in which it was created. In healthcare, we seek to unlock that resultant flow of data to facilitate improvements in quality and efficiency.

The eHI Blueprint is modeled after the next generation of architectural blueprints, where stakeholders have access to the information they need to support their movement forward. In other words, the eHI Blueprint is not just a framework for action, but also a tool containing the consensus principles, broad strategies, specific actions and resources that all stakeholders in healthcare can use to build the high quality and efficient healthcare system we all envision.

²⁴ Foley, John. "Blueprint for Change," Information Week, January 2004. Article accessed April 2007 at: <http://www.information-week.com/story/showArticle.jhtml?articleID=17500908>.





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The eHealth Initiative and its Foundation are independent, non-profit affiliated organizations whose missions are the same: to drive improvements in the quality, safety and efficiency of healthcare through information and information technology.

eHI engages multiple stakeholders, including clinicians, consumer and patient groups, employers, health plans, healthcare IT suppliers, hospitals and other providers, laboratories, pharmaceutical and medical device manufacturers, pharmacies, public health, and public sector agencies, as well as its growing coalition of more than 250 state, regional and community-based collaboratives to develop and drive the adoption common principles, policies and best practices for improving the quality, safety and effectiveness of America's healthcare through information and information technology.

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