



ACCELERATING **PROGRESS**

*Using Health Information Technology
and Electronic Health Information Exchange to Improve Care*



PREFACE

Across the United States, important work is underway to achieve much-needed reforms in the American health care system. States have taken the lead in developing ambitious, innovative initiatives to drive improvements in health care quality, expand coverage, address disparities, and promote healthier living. Health information technology (HIT) and electronic health information exchange (HIE) are critical tools in these efforts to transform health care in this country.

To help states navigate the complexities of developing and using these electronic tools, the National Governors Association Center for Best Practices (NGA Center) created in 2006 the State Alliance for e-Health. The State Alliance, which held its inaugural meeting in January 2007, is a consensus-based, executive-level body of state elected and appointed officials, formed to address the unique role states can play in facilitating adoption of interoperable electronic HIE. It also is intended to be a forum through which stakeholders can work together to identify inter- and intrastate-based HIT policies and best practices and explore solutions to programmatic and legal issues related to the exchange of health information. Support for the State Alliance is provided by the U.S. Department of Health and Human Services' Office of the National Coordinator for Health Information Technology under contract #HHSP23320064106EC.

The State Alliance is chaired by **Tennessee Governor Phil Bredesen** and NGA Vice Chair **Vermont Governor Jim Douglas**. In addition to governors, its members include state legislators, attorneys general, and insurance commissioners.

The State Alliance is supported by an advisory committee composed of representatives from both the public and private sectors who provide technical expertise on critical issues related to electronic HIE. In its first year, the State Alliance also received recommendations from three taskforces, composed of key stakeholders from the public and private sector, who provided expertise and experience in addressing state-level HIT issues. The taskforces include the Health Information Protection Taskforce, the Health Care Practice Taskforce, and the Health Information Communication and Data Exchange Taskforce.

This is the first annual report of the State Alliance for e-Health. It represents an aggregation of testimony, deliberations, research, and other activities undertaken by the State Alliance members to better understand the barriers to and options for facilitating electronic HIE and HIT adoption. The report outlines findings and recommendations from the first year of the State Alliance effort (January 2007 to February 2008). It is intended to spur continued innovation in states to make the vision of an interconnected, efficient, quality-based health care system a reality for all Americans.

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EXECUTIVE SUMMARY

The U.S. health care system offers some of the most advanced and effective care in the world, with some of the best-trained providers and most advanced technology. Yet, the United States spends more per capita on health care than any other developed country while often achieving equal or poorer results in terms of health outcomes and access to services.

Health information technology (HIT) and electronic health information exchange (HIE) are critical tools in states' efforts to transform health care in this country. HIT has strong potential to drive health system improvements, and states have taken steps in recent years to promote widespread use of HIT and enable access to information through electronic exchange.

BENEFITS OF HIT AND ELECTRONIC HIE

Evidence suggests that the use of secure, standards-based HIT and HIE can improve patient care, increase efficiency, and may result in:

- Higher quality care through adherence to treatment protocols and guidelines;
- Reduction in adverse drug events;
- Fewer duplicative treatments and tests;
- Administrative efficiencies through decreased paperwork;
- Improved coordination of treatment through timely access to health information;
- Early detection of infectious disease outbreaks around the country;
- Disease management tracking; and
- Improved research capabilities.

CHALLENGES TO ELECTRONIC HIE

But with any major reform comes challenges. For electronic HIE, these include:

- High investment costs and concerns about revenue loss from lower productivity during the transition phase;
- Consumer concerns about the privacy and security of their data and lack of uniform privacy laws and data disclosure requirements governing electronic information exchange across states and jurisdictions;
- Variations in agreed-upon technical standards for interoperability, which provide a pathway for how to transmit and receive data between different HIT systems, and inconsistent implementation of standards by vendors and health systems;
- Impeded interstate practice by health care professionals resulting from variation in state professional licensure requirements; and
- The ability of publicly funded health programs to support HIT and electronic HIE is encumbered by fragmented organizational structures, disparate and antiquated data systems, limited funds, and workforce constraints.

RECOMMENDATIONS FOR STATE ACTION

Action-oriented and experienced in reform, states are poised to accelerate progress and address the challenges to widespread HIT adoption and electronic HIE development. To help their citizens reap the benefits of HIT and HIE, states must engage in collaborative, coordinated efforts with health care providers, the private sector, other states, and the federal government to achieve their HIT and electronic HIE goals.

To help states further adoption and use of HIT and electronic HIE, the State Alliance for e-Health outlines in this first annual report six recommendations for state action:

1. Provide leadership and support for e-health efforts in each state;
2. Address privacy and security;
3. Promote the use of standards-based, interoperable technology;
4. Streamline the licensure process to enable cross-state e-health;
5. Engage consumers to use HIT in managing their health and health care; and
6. Develop workforce capacity to support electronic HIE efforts.

In addition, the State Alliance offers states concrete strategies to tackle issues in each of these broad action areas. States can implement these strategies through actions such as executive orders, legislative proposals, regulatory reforms, and policy development. Among the strategies proposed, the State Alliance believes that, at this time, the highest priority should be given to e-prescribing and the privacy and security of health information.

E-prescribing is critically important to the advancement of e-health. Although the necessary infrastructure and standards for e-prescribing exist across the nation, the rate of adoption has been slow. The State Alliance recognizes e-prescribing as a gateway to other advances in e-health. Therefore, the State Alliance calls on states to lead these efforts and take action to drive adoption of e-prescribing.

Privacy protections and security measures also are key components of success in the development and sustainability of electronic HIE and HIT. Public trust and support for e-health efforts are necessary to accelerating progress. Thus, states must be proactive in their efforts to ensure consistent and appropriate policies to protect information and ensure secure exchange.

States have tremendous opportunity to drive major reforms in the U.S. health care system that are vital to improving the quality and efficiency of health care services delivered as well as the health of the American people. The transformation is long overdue. The State Alliance works to spur continued innovation in the states to make the vision of an interconnected, efficient, and quality-based health care system a reality for all Americans. Only through sustained efforts will states continue to learn and progress in the e-health arena.

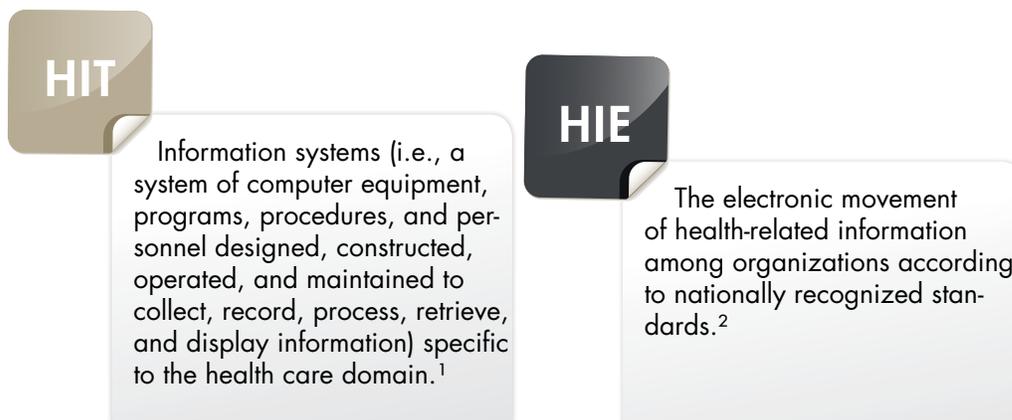
INTRODUCTION: A Vision for Transformation

Important work is underway across the United States to implement initiatives intended to achieve much-needed reforms in the American health care system. Indeed, states have taken the lead to enact ambitious, innovative initiatives to drive improvements in quality, expand coverage, address disparities, and promote healthier living. Essential to states' efforts to transform health care in the United States are health information technology (HIT) and electronic health information exchange (HIE).

Recognizing the potential of HIT to drive health system improvements, many stakeholders, including states, have taken steps in recent years to promote its widespread use and enable access to health information through electronic exchange. But with any major reform comes challenges. In the case of HIT, many of the challenges are not technical in nature, but rather are operational and policy-based.

DRIVERS FOR HIT AND ELECTRONIC HIE

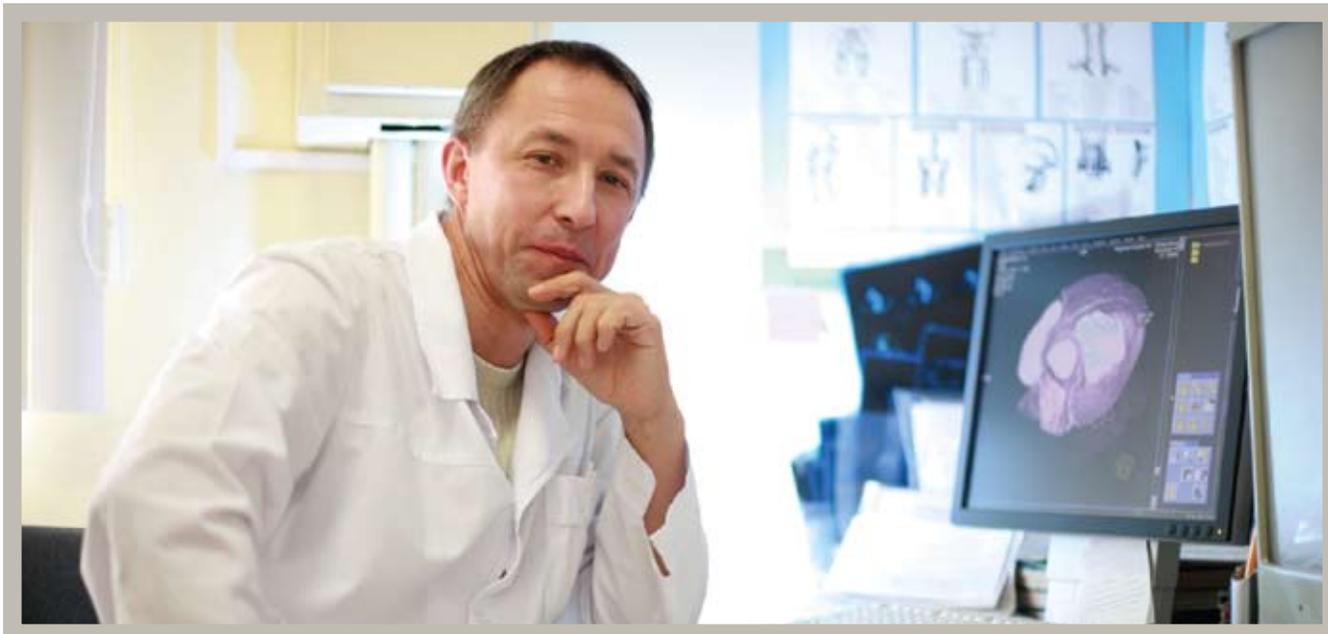
Defining HIT and electronic HIE



The American health care system is a study in contradictions. On one hand, it offers some of the most advanced and effective care in the world. It supports some of the best-trained providers and often uses some of the most cutting-edge technologies. Patients are treated in some of the most advanced clinical settings available. On the other hand, the United States spends more per capita on health care than any other developed country, but achieves equal or lower results in terms of health outcomes and access to services.³

In 2006, for example, health care spending consumed 16.5 percent of the U.S. Gross Domestic Product (GDP)—a far greater share than in any other industrialized nation. Our costs totaled \$2.1 trillion, which translated to \$7,026 per person. If trends continue, national health spending in the United States will outpace GDP growth, rising from 16 percent to 20 percent by 2015.^{4,5} Despite the significant costs, our health care system continues to fall short on preventing avoidable deaths, providing quality care, and improving health.

In 2002, the United States—when compared to 14 western European countries, Canada, Australia, New Zealand, and Japan—had the highest rate of mortality from conditions that could have been prevented by timely and effective care.⁶ Just over 101,000 deaths under age 75 could be avoided if the United States were to achieve levels of comparable mortality seen in the top three performing countries (France, Japan, and Australia).⁷



The United States also fairs poorly on infant mortality, ranking last out of 23 industrialized countries at seven deaths per 1,000 live births. Healthy life expectancy is age 60 in the United States, which is shorter compared to that of most other developed countries and reflects more years of life with poor health and disability.⁸

In addition, results from a 2006 analysis by the Commonwealth Fund on the performance of the U.S. health system continue to raise serious concerns about the quality of the health care Americans receive. In particular:

- **Americans are not always getting recommended care.** Only half of adults receive all recommended clinical screening tests and preventive care according to national guidelines. Delivery of basic vaccinations and annual preventive medical and dental exams for children varies greatly across states. In addition, only half of adults and 59 percent of children needing mental health care receive treatment.⁹
- **Shortcomings on coordination and continuity of care put patients at risk for complications and avoidable re-admissions, raising the cost of care.** One-third of adults and more than half of all children do not have a primary source of care. Patients discharged from the hospital with congestive heart failure receive written instructions only 50 percent of the time. Patients hospitalized for mental health conditions often do not receive followup care within 30 days of discharge.¹⁰
- **The safety of patients remains at risk.** Although the Institute of Medicine's report *Crossing the Quality Chasm* generated heightened awareness about the nearly 90,000 medical error-related deaths that occur annually in the United States, the country still lacks reporting systems to help address patient safety or target improvement efforts. One-third of patients in the United States report a medical, medication, or lab test mistake within the past two years, but little capacity exists to identify the system features that cause and perpetuate these errors.¹¹

The United States would have to improve its performance on key indicators, like preventive care, chronic disease control, care coordination, and timely access to care, by more than 50 percent to reach international benchmarks for quality care.¹²

Clearly, when it comes to health care value, Americans do not get what they pay for. Many factors contribute to this discrepancy. However, adopting HIT, as well as consistently using and tracking health information electronically and in real-time, can help overcome these impediments to quality care and ensure that consumers get better value for their health care buck. The three most pressing challenges are described below.

First, by failing to effectively use information technology, the U.S. health care system has perpetuated inefficiency. The U.S. health care system remains a bastion of paper-based recordkeeping and ad-hoc, inefficient information exchange. It is dramatically behind other industries in deploying information technology to share electronic information securely and avoid duplication of effort. Administrative costs account for 31 percent of total health care spending in the United States, a level almost double Canada's rate.¹³

Moreover, the nation's health care system is fragmented, with multiple insurers, providers, and health care networks all using different forms and standards. In addition, multiple providers serving the same patient rarely have access to the patient's complete and current medical information. This fragmentation and lack of information exchange results not only in increased administrative burden to the system but also in tremendous loss of efficiency and quality in patient care. Treating patients with limited information can lead to prescription overuse, duplicative tests and procedures, and/or harmful medical errors that cause unnecessary hospitalizations and death. Likewise, it makes it difficult for patients to monitor their own health or treatment.

Because they promote faster information sharing and reduce fragmentation, HIT and HIE are critical to improving health outcomes and health care system efficiency.

Second, the U.S. health care market does not emphasize quality or promote the use of evidence-based standards of care. The current reimbursement system does not reward providers based on the quality of their outcomes but rather on the complexity and volume of the clinical services they provide. In a quality-based system, doctors would be compensated based on the quality of care they provide, the use of best practices (including disease management and treatment protocols), and helping patients prevent poor health outcomes like heart disease and diabetes that lead to more costly care. In addition to providing quality clinical services, a quality-based system would include mechanisms to monitor population health outcomes and the use of data to support policy decisions that impact public health.

Perhaps the greatest barrier to achieving a quality-based system is the limited adoption of HIT, such as electronic health records (EHRs) and electronic prescribing (e-prescribing) systems, into health care practice. Limited use of such tools is a significant contributing factor to the slow development of reporting systems for quality and outcomes, and it perpetuates the misalignment of incentives that would encourage their adoption. Because our system rewards frequency rather than quality of service, there is limited financial benefit or incentive for providers to expend funds to adopt such systems.

Third, there are few incentives and little opportunity built into today's health care system for consumers or other care purchasers to compare prices to the quality of clinical services. Currently, the system motivates consumers to find the least costly insurance plan—not to find the most effective treatment or options at the lowest cost.

To improve the value of the nation's health care system and outcomes, consumers must have better access to information and opportunities for choice. Two significant ways to help enable this are (1) building an information infrastructure so people have the knowledge and tools to analyze the cost and quality of the care provided and (2) providing incentives for consumers to better manage their health.

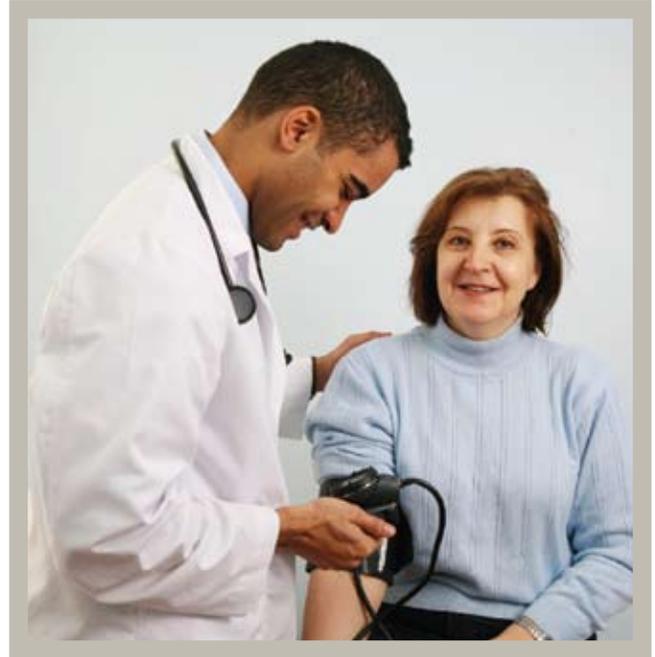
ELECTRONIC HIE IS CRITICAL TO QUALITY CARE

Policymakers from all spheres have demonstrated a strong interest in using HIT and electronic HIE as a means of shaping a health care system that is efficient, effective, safe, accessible, transparent, and affordable for all Americans. Full deployment of HIT systems, including the development of networks to support electronic HIE, is the essential foundation for the success and sustainability of meaningful health care system improvements. Without a robust HIT and HIE infrastructure, significant improvements in disease management, consumer empowerment, medical error reduction, and health care quality reporting will be limited or impossible.

These and other issues must be addressed to allow the development of an interoperable system. The *Framework for Strategic Action* developed in 2004 by the Office of the National Coordinator for Health Information Technology (ONC) frames a path forward, from the federal perspective, for achieving a Nationwide Health Information Network (NHIN).^{*} Similarly, many states have formed commissions and developed roadmaps for HIT implementation within their borders. There also are public-private collaborative efforts to form health information organizations (HIOs) that are at various stages of development. Some of these initiatives are locally based, while others are statewide or regional. Although these activities are forging a pathway toward a NHIN, it is imperative to create synergies and ensure coordinated action to prevent the siloing of these efforts.

Evidence today suggests that the use of secure, standards-based HIT and the timely, electronic exchange of health information could improve patient care, increase efficiency, and may result in:

- Higher quality care through adherence to treatment protocols and guidelines;
- Reduction in adverse drug events and detection of pending patient error;
- Fewer duplicative treatments and tests;
- Administrative efficiencies through decreased paperwork;
- Improved population health and coordination of clinical care as a result of timely and appropriate access to individual and community health information;
- Early detection of infectious disease outbreaks around the country;
- Disease management tracking; and
- More complete data sources for use in research and policy.¹⁴



**NOTE: More information and further development of the ONC efforts can be found in the recently released ONC-Coordinated Federal Health IT Strategies Plan: 2008-2012.*

ESTABLISHMENT OF THE STATE ALLIANCE FOR E-HEALTH

Transforming and modernizing the U.S. health care system through information technology is no simple feat. It is particularly challenging because there is no single model that is being implemented throughout the country. Instead, HIE is developing as numerous, often disconnected systems subject to differing jurisdictional rules. To help states navigate the complexities of electronic HIE development and implementation, the State Alliance for e-Health (State Alliance) was established in January 2007 with support from ONC.

The State Alliance is a consensus-based, executive-level body of state elected and appointed officials, formed to address the unique role states can play in facilitating adoption of interoperable electronic HIE. It also is intended to be a forum through which stakeholders can work together to identify inter- and intrastate-based HIT policies and best practices and explore solutions to programmatic and legal issues related to the exchange of health information.

The State Alliance is chaired by **Governor Phil Bredesen of Tennessee** and NGA Vice Chair **Governor Jim Douglas of Vermont**. In addition to governors, its members include state legislators, attorneys general, and insurance commissioners. The State Alliance is supported by an advisory committee made up of representatives from both the public and private sectors, who provide technical expertise on critical issues related to electronic HIE. In its first year, the State Alliance also was supported by three taskforces composed of key stakeholders from the public and private sector, who provided expertise and experience in addressing state-level HIT issues and presented recommendations to the State Alliance (see **Appendix 1** for a list of taskforce members). The taskforces are:

- **Health Information Protection Taskforce:** This taskforce examined issues regarding the protection of consumer health information that ensures appropriate interoperable, electronic HIE within and across states. The taskforce was responsible for addressing state-level issues related to preserving the privacy of consumer health information while ensuring appropriate and secure electronic exchange of consumer health data within and across states.
- **Health Care Practice Taskforce:** This taskforce was responsible for issues regarding the regulatory, legal, and professional standards that impact the practice of medicine and create barriers to interoperable, electronic HIE. The taskforce focused its work on identifying approaches for streamlining the licensure process to better enable the safe practice of e-health and advanced actionable recommendations on these issues to the State Alliance.
- **Health Information Communication and Data Exchange Taskforce:** This taskforce assessed issues regarding the appropriate roles for publicly funded health programs in interoperable, electronic HIE. It recommended several strategies that state programs like Medicaid, the State Children's Health Insurance Program (SCHIP), public health and state employee health benefits plans can use to move the HIT and electronic HIE agenda forward. It also considered strategies that encouraged state cooperation and collaboration with federal and private sector efforts.

Throughout the past year, the State Alliance has been examining issues raised by the taskforces as well as a number of other issues, particularly e-prescribing. The State Alliance has engaged in this work in a way that complements federal efforts, supports ongoing collaborations between public and private sectors, and contributes to greater coordination within and among states.



NATIONAL INITIATIVES DEMONSTRATE MOMENTUM

In addition to many state activities and the work of the State Alliance, initiatives sponsored by the federal government are underway in communities and states across the country, including efforts promoting widespread HIT adoption, assessing policy-related issues, and testing the technical feasibility of electronic HIE. Additionally, to help spur e-health efforts, President George W. Bush in 2004 set the goal of assuring that most Americans have EHRs by 2014 and issued an executive order establishing ONC to help achieve this goal.¹⁵

ONC resides within the U.S. Department of Health and Human Services (HHS). It is charged with implementing a strategic plan to guide the nationwide implementation of interoperable HIT in both the public and private health care sectors that will reduce medical errors, improve quality, and produce greater value for health care expenditures. ONC also is charged with coordinating HHS health information technology policy and programs with those of relevant executive branch agencies (including federal commissions) and with coordinating outreach and consultation by these agencies to public and private parties of interest, including consumers, providers, payers, and administrators.¹⁶

Since 2004, HHS has awarded millions of dollars in grants and contracts through its various agencies to promote the adoption of HIT and interoperable electronic HIE. Federal investments in HIT and electronic HIE have benefited states, communities, hospitals, providers, and health care systems. For example, in 2004 the Agency for Health Care Research and Quality (AHRQ) awarded five-year contracts to five states (**Colorado, Indiana, Rhode Island, Tennessee, and Utah**) to demonstrate state and regional electronic data sharing; measure system and quality improvement; and identify sustainability strategies and programmatic linkages with other regional or national efforts. In 2005, **Delaware** joined the original five states in the State and Regional Demonstrations in Health Information Technology initiative.¹⁷

Also in 2005, ONC awarded four contracts for developing prototype architectures for a NHIN to Accenture, Computer Sciences Corporation, IBM, and Northrop Grumman. Each contractor was also asked to interconnect three communities as a demonstration of the architecture. In 2007 and 2008, ONC made additional awards to focus on trial implementation through state and regional HIOs. The products of the first year's work will provide guidance for these trial implementations. The Certification Commission for Healthcare Information Technology (CCHIT) and the Health Information Technology Standards Panel (HITSP) are two public-private initiatives, supported by ONC, that are designed to promote HIT adoption and interoperability. Both efforts will be discussed later in this report.

As authorized by the Deficit Reduction Act of 2005, the Centers for Medicare & Medicaid Services (CMS) awarded Medicaid Transformation Grants to state Medicaid agencies in February and September 2007. These grants are helping states modernize the Medicaid program through HIT and HIE efforts, e-prescribing, and other initiatives to improve efficiency and service delivery. Thirty-five states and **Puerto Rico** have received grants totaling \$150 million. In 2008, CMS developed a new demonstration initiative using Medicare waiver authority to reward the delivery of high-quality care supported by the adoption and use of EHRs. Twelve communities are participating in this five-year project.

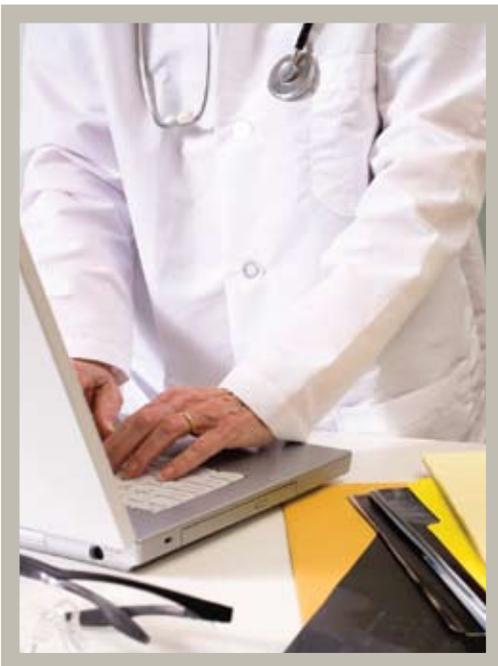
HHS has made other investments to bring expertise and assistance to state efforts, including the Health Information Security and Privacy Collaborative (HISPC), which has engaged the majority of states in addressing intra- and inter-state privacy and security issues around the electronic exchange of health information. In addition, the State Level Health Information Exchange Collaborative is examining private and public-private exchange opportunities at the state level. Also relevant to some states, the U.S. Department of Veterans Affairs health system and other federal entities have engaged in HIT and electronic HIE efforts, including system development and implementation strategies.

In addition to these federally supported projects, several health care networks have made use of HIT and electronic exchange core elements of their business models. The Geisinger Health System in north-central Pennsylvania, Kaiser Permanente, and UnitedHealth Group are some examples of health systems that have invested heavily in HIT systems and network capabilities and achieved beneficial results.

Private-sector employers also are getting involved. As large employers in communities and states, they are participating in efforts to establish local or statewide HIOs. They also are working through their health plan partners to drive HIT adoption. Private-sector employers are forming or leveraging existing coalitions to influence purchasing decisions that support HIT and electronic HIE goals.

In addition, states have begun investing in HIT and electronic HIE efforts. Governors have issued executive orders and legislatures have passed measures that support these efforts. Many federally funded health programs, such as Medicaid, SCHIP, and public health have implemented various HIT and HIE initiatives. This report highlights some of these efforts.

The multitude of HIT and electronic HIE activities suggest that many stakeholders recognize the importance of these efforts to transforming the U.S. health care system. And the high costs, avoidable deaths, poor quality, and inefficiency of the current system drive a deep urgency for transformation. But while this flurry of activities is commendable, if not smartly coordinated it may only result in an electronic version of the siloed, inefficient system we have today.



ABOUT THIS REPORT

This is the first annual report of the State Alliance for e-Health, representing an aggregation of testimony, deliberations, research, and other activities undertaken by the members to better understand the underlying impediments to and options for facilitating electronic health information exchange and health information technology adoption. The report outlines findings and recommendations from the first year of the State Alliance effort (January 2007 to February 2008) for consideration by states. It is intended to spur continued innovation in states to make the vision of an interconnected, efficient, quality-based health care system a reality for all Americans.

CHALLENGES TO THE EXCHANGE

of Electronic Health Information

The State Alliance determined that several key challenges contribute to the slow adoption of HIT systems and development of electronic HIE. These include misaligned financial incentives and questions of value that affect adoption; concerns about privacy and security of health information; limited system-to-system interoperability; variation in state licensure processes and requirements; and challenges within state publicly funded health programs.

Some of the challenges presented in this section affect all stakeholders engaged in these initiatives, while others are specific to states and public programs. As state policymakers undertake various activities to support health system transformation through HIT and electronic HIE, they should be mindful of these issues and consider the proposed recommendations to address them.

MISALIGNED FINANCIAL AND VALUE INCENTIVES

A contributing factor to the slow adoption of HIT systems and creation of electronic HIE is the misalignment of incentives between those who invest in the purchase and implementation of these systems and networks versus those who stand to gain from their use. Providers, as frontline users of HIT systems, absorb the purchase and ongoing maintenance costs but do not necessarily see equivalent return on their investment. Financial benefits more frequently accrue to health plans, employers, and government-funded coverage programs that see a decrease in redundant health care services and avoidable hospitalizations as well as costly medical errors.

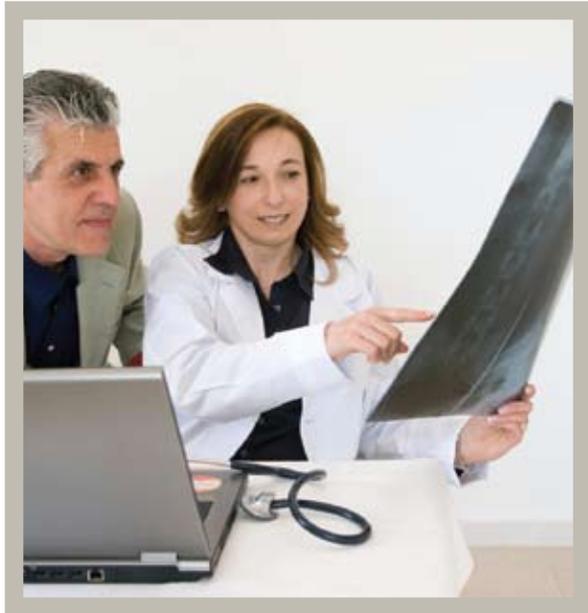
In terms of HIT adoption, only 15 to 20 percent of U.S. physician's offices and 20 to 25 percent of hospitals have implemented HIT systems.¹⁸ The cost of purchasing these systems and concerns about revenue loss from lower productivity during the transition phase are among the challenges to speeding adoption. The initial cost of purchasing an EHR system often ranges from \$25,000 to \$45,000 per physician in the practice, with maintenance and licensing fees estimated to range from \$3,000 to \$9,000 per physician per year.¹⁹

There are less costly options available to physicians than purchasing licensed software and hardware. EHRs also can be hosted and maintained by application service providers (ASP). With such systems the provider does not buy the software but licenses the use of the software, accessed through a secure Web portal hosted on the vendor's servers remotely. Therefore, the provider can expect lower costs and predictable payments, typically on a subscription basis.

In addition to initial and ongoing maintenance costs, providers also can expect revenue loss from reduced patient visits during implementation. Physician practices must undergo workflow changes and staff training, whether they are using a hardwired EHR system or an ASP system. According to one study, the potential revenue loss a physician practice may experience during the transition from paper-based to electronic recordkeeping averages \$7,473 per provider annually.²⁰

Creation of a robust HIE infrastructure also is hampered by questionable financial incentives as well as high investment costs and a lack of clarity about where the financial benefit accrues. Potential participants—such as state and federal government-funded health programs employers, health plans, providers, and consumers—often hesitate to commit large investments until a clear business case can be articulated. For now, “for the greater good” has trumped these concerns, and both the public and private sectors have made investments to seed the development of electronic HIE. However, it is increasingly clear that this approach has serious limitations for long-term sustainability.

As stakeholders experiment and test the technological potential of electronically exchanging health information, questions remain as to how best to fund development and how best to sustain their existence. The recent collapse of some of the early pilots like the Santa Barbara Community Care Data Exchange in California demonstrates the extreme difficulty of establishing a robust business model for sustainability.²¹ Certainly the failures of these early pilots are not solely a result of misaligned financial incentives. Issues like privacy and security concerns and lack of clear interoperability standards are among the contributing factors discussed in the next section.



CONCERNS ABOUT PRIVACY AND SECURITY OF HEALTH INFORMATION

The prospect of storing, moving, and sharing health information in electronic form raises questions about how to best protect patient privacy and ensure data security while enabling the appropriate exchange of health information among providers. Consumers expect appropriate safeguards to be in place to protect their personal health data. Recent and frequent news about stolen laptops and security breaches from public and private sources has alarmed consumers and jeopardizes public trust for endeavors to store and exchange health information electronically. Thus, electronic HIE efforts must be conscious of addressing consumer concerns about the security of their data.

However, consumers are also concerned about the quality of care they receive. This includes being able to provide clinicians and other appropriate stakeholders (e.g., public health) controlled but efficient access to health information. The policy dialogue around privacy and security will have to measure the potential risks of having information available electronically against the risks of having a health care system that continues to struggle to effectively treat patients and conduct public health activities because of the lack of this information. In addition to consumer concerns, providers have expressed reservations about participating in data exchange because of the potential liabilities that may result from unintentional security and privacy breaches. The essence of this balance between availability and quality is at the heart of the privacy and security challenges faced in expanding HIE and HIT.

Electronically maintaining and managing health information can be more made secure than paper-based recordkeeping because of the ability to impose access controls and audit protocols.²² The challenge is that privacy and security policies and standards are not applied consistently across entities at this time. Security and privacy benchmarks and practices are unique to each data source in health care and are often not transparent to others, which could lead to mistrust among data exchange participants and raising concerns about potential liability. For example, one hospital considering participation in electronic HIE may opt not to share data with another hospital because it employs a different approach to securing health data or because its security approach is not made available for review.

In addition to inconsistencies in the way entities apply privacy and security policies and standards, current state and federal privacy law requirements are also inconsistent, further inhibiting electronic exchange. Privacy laws that govern information exchange and requirements for data disclosure vary across states and jurisdictions (e.g., federal and state). Requirements may vary by data type (e.g., general health, mental health, or HIV); purpose of use (e.g., treatment, public health reporting, or payment); and mechanism for compliance (e.g., specific ink signature, paper form, or verbal authorization).²³ State privacy requirements are scattered into different chapters of legislation and regulation. Some are specifically written for a paper-based system.²⁴

The variability among requirements may result in potential conflicts in the way different pieces of information about the same person or provider are handled, and certainly creates a great deal of confusion. Standards and requirements may differ by source of information, source of the request for information, patient characteristics including diagnosis, and other features. When state and federal laws are layered together at the practice-level, providers may find variable privacy requirements daunting. Rather than risk non-compliance, they most often seem to take an extremely conservative approach to sharing health information.

INCONSISTENT USE OF STANDARDS FOR SYSTEM INTEROPERABILITY

Data and technical standards that provide a pathway for how to transmit and receive data between different HIT systems are critical to enabling electronic HIE and realizing the benefits of EHRs. These data and technical standards are the building blocks of a HIT system—providing the specifications for how electronic data are stored, in what format, and the technical standards for how data are securely exchanged. Data and technical standards that enable data exchanges do exist. But problems arise where there are several different types of standards that enable the same functionality and frequently standards are implemented differently because there is not enough specificity. As a result, HIT system vendors encode the standards in different ways into their software products.

In addition to inconsistent implementation of standards by software vendors, many large health systems have developed their own proprietary terminologies, codes and health information systems, and networks. Frequently, only their programmers know the codes used to build these “homegrown” systems, and it is often difficult to reprogram these systems to enable connectivity with other networks. It will be a costly endeavor to overhaul these “legacy” systems to enable interoperability.

The federal government has undertaken several major initiatives to address these issues and work toward the creation of a Nationwide Health Information Network (NHIN). First, definitive standards are identified, and detailed context for their use is written by the Healthcare Information Technology Standards Panel (HITSP). These standards are then recognized by the Secretary of the U.S. Department of Health and Human Services. Second, the Certification Commission for Healthcare Information Technology (CCHIT) tests HIT products for their use of the recognized standards to ensure proper use.

Finally, the vision for the NHIN is to use this interoperability to create a “network of networks” that will securely connect providers, health systems, consumers, and communities to electronically share health information as necessary and appropriate. The term “nationwide” is important to note because the NHIN is not intended to be a “national” system but is intended to reach across the nation. There will be no national, central repository or data store. Instead, the interconnected networks will share common services and adhere to standards and requirements to enable interoperability. Since 2005, the federal government has been investing in developing different architectures that may potentially support the NHIN.²⁵ Efforts are underway to test the capabilities of these architectures in real-world HIE community settings.²⁶

VARIATIONS IN STATE HEALTH CARE LICENSURE REQUIREMENTS AND PROCESSES

Another challenge related to electronic HIE development and promoting HIT use is the current structure for licensing health professionals. The practice of health care is rapidly evolving to meet the needs of a more mobile and Internet-savvy society. E-health—the use of telecommunications technologies for medical consultation and home-based delivery of health care—is becoming increasingly available and offered across state lines. More information about medicine and health care services is becoming available on the Internet, and individuals are seeking and receiving cross-state e-health consultations from health care providers through e-mail and other Internet-based communication methods.

The provision of health care services through e-health is enabling greater access to care for individuals residing in resource-limited areas. E-health enables individuals to link with medical experts across the country, regardless of geographic boundaries. Remote monitoring of chronic conditions, telepsychiatry, and telepharmacy are among the health care services increasingly becoming available through e-health. HIT systems, like EHRs, that are connected through electronic HIE networks can support increasing consumer demands to have remote access to health care and facilitate more efficient data sharing across state boundaries.

Although the practice of health care is evolving and modernizing, the underlying structure of most health professional licensure has not dramatically changed. Current licensure structures for most health professions do not facilitate an efficient process for ensuring that qualified, licensed providers are able to satisfy the demand and need for cross-state e-health practice. Health professionals are typically required to apply for and obtain a license in each state they wish to practice in, even though they may meet the licensure standards and requirements in all of the states.

The process for obtaining a license in every state can be burdensome to health care providers for many reasons:

- Most licensure applications are paper-based, which can be time-consuming and sometimes difficult to complete;
- Licensure application forms and their content vary across states;
- The credentials that are verified and how the credential verification processes is handled differ across states; and
- States have different requirements for criminal background checks, and the processes states use to conduct criminal background checks also vary.²⁷

The variation in requirements and processes often deters health care providers from seeking licenses in multiple states.* This poses a significant challenge to enabling e-health consultation across state boundaries and impacts states facing health care provider shortages, affecting their ability to efficiently fill their workforce shortage needs.

Licensing boards must determine whether providers are qualified to receive a license, investigate complaints and discipline those providers who violate the law. State boards have historically not trusted another state's licensure requirements, credentials verification, criminal background checks, and enforcement and discipline procedures. With the exception of some efforts in nursing and contingency plans for temporary and emergency licensure, most state boards do not have reciprocity with other state boards of the same profession, or other arrangements to address e-health.

CHALLENGES OF STATE PUBLICLY FUNDED HEALTH PROGRAMS

States can make a significant impact in accelerating HIT adoption and electronic HIE development by leveraging the publicly funded health programs. States have purview over the administration of programs such as SCHIP, Medicaid, public health, and the state employee health benefits program. However, where a particular public program resides within the state structure impacts its authority, decisionmaking capacity, and influence in HIT and electronic HIE efforts. Each of these public programs is challenged with a multifaceted set of issues that affects its ability to fully maximize

**NOTE: The State Alliance effort focused on examining the licensure structures for physicians, nurses, and pharmacists because these health professions play a vital role as frontline providers of health services for most Americans. Through its analysis, the variation of licensure requirements and processes mentioned above were evident across all three of these health professions. Details about each health profession's licensure structure and the associated challenges can be found in the reports of the State Alliance's Health Care Practice Taskforce.*

efforts or to collaborate through joint ventures. The challenges range from the internal structures in which these programs are organized, disparate and antiquated data systems, how they are financed, and limited workforce and other resources to support HIT and electronic HIE.²⁸

The ways in which publicly funded health programs are organized in the state structure vary across the country. In some states, different combinations of these programs make up a larger “umbrella” organization. In other states, one program may function as a stand-alone entity. The exception to this is that Medicaid and SCHIP often are housed under the same entity. Take for example the differences between Georgia, New York, and Washington. In **Georgia**, the Medicaid, SCHIP, and state employee health benefits programs are housed within the Department of Community Health.²⁹ Georgia’s public health department is a division within the state’s Department of Human Resources.³⁰



In **New York**, the Department of Health has responsibility over public health, Medicaid, and SCHIP.³¹ The state employee health benefits program for New York, however, is housed within the New York State Health Insurance Program.³² In **Washington**, each program functions as a stand-alone entity. The Washington State Department of Health oversees the public health program, while the Department of Social and Health Services has purview over the administration of the Medicaid and SCHIP programs.³³ The state employee health benefits program is administered by the state’s Health Care Authority.³⁴

Disparate agencies that administer these public programs have long been autonomous and often function with limited coordination across programs. Each has its own distinct mission and culture that often makes information sharing and collaboration a complex endeavor, creating challenges to coordinated action in initiatives. To maximize state investments in electronic HIE, coordination and collaboration across publicly funded health programs is crucial. A state may have many of its publicly funded health programs working on similar HIT or electronic HIE activities with limited or no coordination with each other. At times, public programs within a state may not be aware of other agency efforts thus resulting in duplication of activities. Limited, and at times poor, communication across public programs as well as bureaucratic impediments discourage public programs from achieving the organizational and cultural changes needed to advance the electronic HIE agenda.

In addition to intrinsic organizational challenges faced by public programs, the mechanisms by which they are financed also limits their ability to freely participate in collaborative efforts that promote electronic HIE and HIT. Publicly funded health programs are financed through a variety of funding vehicles. Common across publicly funded health programs are budget appropriations received through the state legislature.

For Medicaid and public health, additional monies come from the federal government such as those from:

- Entitlement match (e.g., Medicaid);
- Formula or block grant capped funding (e.g., SCHIP);
- Contracts (e.g., public health preparedness and bioterrorism response initiatives);

- Discretionary or project grants (e.g., Medicaid Transformation Grants);
- Demonstration grants (e.g., ARHQ state and regional demonstration grants);
- Direct payments (e.g., Social Security-Disability Insurance); and,
- Loan or loan guarantee programs (e.g., rural broadband access loans and loan guarantees).³⁵

Financing also is shared with city and/or county government funds. Like public health, the state employee health benefits program receives state and county revenues. However, it does not typically receive federal funding and is the only state publicly funded health program that is also financed through pension investment funds and premiums collected through employers, employees, and dependents.³⁶

Funding for the publicly funded health programs is often limited, with only enough resources to administer existing projects and programs. While multiple sources of funding enable the financial solvency of publicly funded health programs, funding for these programs is often allotted to specific initiatives, placing parameters and restrictions on diverting funds to new efforts. Restrictions on allowable uses of funds and burdensome requirements and processes make it difficult for publicly funded health programs to pursue joint ventures with each other or with other stakeholders (e.g., public-private or private sector-based efforts).³⁷

The participation of publicly funded health programs in HIT and electronic HIE initiatives also is limited by a shortage of capable workforce that can help implement related programs and projects and sustain them. HIT and electronic HIE issues are new to publicly funded health programs, and many do not have leadership and staff trained with competencies in the areas of health informatics; project management; change management; systems thinking; vendor management; provider and consumer outreach; and grant, RFP, and contract writing.³⁸ As demonstrated in this chapter, HIT and electronic HIE issues are multifaceted and complex. Tackling associated challenges requires a workforce that has the knowledge and skill-set to address them.



CALLING STATES TO ACTION: RECOMMENDATIONS FROM THE STATE ALLIANCE FOR E-HEALTH

States are poised to accelerate progress and address challenges to widespread HIT adoption and electronic HIE development. States are very experienced in reform. Often referred to as laboratories of innovation, they are practical and action-oriented, providing best practice models for national implementation efforts. States can leverage a number of roles to make significant strides in health system transformation through HIT and electronic HIE. They regulate the insurance market, for example. They also license and oversee health professionals and facilities. They purchase and fund health care services and coverage under Medicaid and other programs. They provide legal protections for consumers and set the regulatory and legal environment on health record privacy. And, they provide direct funding for public good. States also are constitutionally bound to protect the public's health.

It is within this context that the State Alliance for e-Health makes its recommendations. The State Alliance and its supporting taskforces conducted an extensive examination of the challenges and issues facing states in their efforts to support HIT and electronic HIE.

Throughout the past year, the State Alliance and taskforces heard testimony from issue experts, state and federal government representatives, private sector leaders, and individuals representing the consumer perspective. One consistent message heard and discussed by the State Alliance and its taskforces is the need for states to consider the impact of policies and actions in the context of other stakeholder efforts, including those by the private sector and federal government, to prevent further siloing and achieve desired interoperability.

The issues surrounding HIT and electronic HIE are complex. A myriad of initiatives are underway, but little exists in the way of coherent strategy to address the challenges. The recommendations discussed in this section focus on the critical areas that state policymakers should address to facilitate electronic HIE within and across states. The purpose of the recommendations is to demonstrate avenues for coordinated action by states and offer guidance on ways in which states can enhance existing efforts and advance the policy agenda towards achieving health system transformation and realizing the full potential of HIT and electronic HIE.

In particular, the State Alliance recommends six actions that state policymakers—governors and legislators—can take to further adoption and use of HIT and electronic HIE:

1. Provide leadership and support for e-health efforts;
2. Address privacy and security;
3. Promote the use of standards-based, interoperable technology;
4. Streamline the licensure process to enable cross-state e-health;
5. Engage consumers to use HIT in managing their health and health care; and
6. Develop workforce and agency capacity to support electronic HIE efforts.

In addition, to address the multifaceted challenges of these issues, the State Alliance recommends that states strictly focus the scope of e-health projects and develop thoroughly rationalized strategic goals. States should drive toward implementing a critical mass, learn from the effort, and build on it. Working in incremental, targeted stages and in coordination with existing efforts, states can accelerate progress—both in the adoption and use of HIT and electronic HIE and in improving the efficiency, quality, and value of America's health care system.

E-PRESCRIBING: A CRITICAL FIRST STEP TOWARD HIT & ELECTRONIC HIE

The State Alliance believes that certain early actions can lay the foundation for the adoption and use of HIT and electronic HIE. In particular, the State Alliance recognizes e-prescribing as a gateway initiative that could speed the development of EHRs and widespread use of HIT, as well as provide states with a leadership opportunity in this critical arena. Infrastructure is in place that makes e-prescribing feasible and achievable in the short term, but it remains dramatically underutilized. By supporting the implementation of e-prescribing technology that is part of, or can be incorporated into an EHR in the future, states would be helping to build real momentum toward the goals of an effective health care system and improved public health. Adoption and use of e-prescribing could help prevent costly patient errors, improve quality of care, and enhance the delivery of services.

The State Alliance recognizes that there are challenges associated with implementing e-prescribing, but that states have a unique opportunity to build on the momentum growing across the nation to achieve its universal adoption and use. State policymakers could play a key role in ensuring barriers are overcome and that all relevant health care partners aid in supporting the changes that must be made to fully realize the benefits of e-prescribing.

In addition to the recommendations discussed in this report, the State Alliance has taken steps to assist states in accelerating e-prescribing implementation. On May 12, 2008, the State Alliance adopted a commitment statement calling on the National Governors Association (NGA) and its Center for Best Practices to support states in their efforts to make e-prescribing a reality.[†]



[†]NOTE: The adopted e-prescribing statement of the State Alliance can be found at <http://www.nga.org/Files/pdf/0805EHEALTHSTATEMENT.PDF>.

RECOMMENDATION 1: PROVIDE LEADERSHIP AND SUPPORT FOR E-HEALTH EFFORTS

Leadership and political support from governors and state legislators are critical to the success of HIT and electronic HIE initiatives. A key ingredient in formulating these initiatives is building the trust needed to facilitate collaboration. Stakeholders (e.g., payers, providers, consumers) engaged in e-health activities represent diverse, sometimes opposing, viewpoints and have varying needs and missions. Visible and sustained gubernatorial and legislative support that recognizes the value of HIT and electronic HIE in improving quality outcomes can help solicit coordinated, or at least complementary, action.

Because of the complexity of the issue, setting priorities is essential, as is negotiation and compromise to achieve a state's e-health goals. HIT and electronic HIE efforts that are developed by too narrow a group will fail to realize the full values of these goals, while initiatives that are too broad may never come to fruition. State leaders should play key roles to ensure balanced priority-setting. The State Alliance offers the following recommendations to governors and state legislators as they consider ways to articulate their commitment and demonstrate leadership in this area:

STRATEGY 1

Designate a single authority for state government interagency coordination and collaboration with statewide public-private efforts.

Governors and state legislatures should designate a single authority to coordinate state-government-based electronic HIE implementation activities and work in collaboration with public-private electronic HIE efforts.

Many states have HIT and electronic HIE efforts occurring simultaneously within various state agencies and communities. Uncoordinated state government initiatives fail to effectively leverage the promise of HIT and electronic HIE to improve the quality of care and reduce state health expenditures. For this reason, the State Alliance recommends each state designate or create a single authority to coordinate these public sector efforts while staying connected with local and private sector initiatives. The responsibilities of this authority should at least include improving communication and data sharing between state agencies, overseeing collaboration on public-private efforts, and liaising with other state HIT/HIE authorities to enable coordination.

The authority may be an individual or a state agency or office designated to align interagency efforts and work collaboratively with the private sector. For example, in 2006 **New York** established the Office of Health Information Technology Transformation within its Department of Health. It also created a Deputy Commissioner for HIT to coordinate all HIT-related policies and programs across relevant state government agencies and serve as the state's liaison in public-private efforts.

The Deputy Commissioner for HIT is appointed by the governor and is responsible for facilitating development of a private and secure, interoperable, regional HIE and technology infrastructure that will achieve health care system reforms needed to improve quality, reduce costs, enhance public health reporting and surveillance, and facilitate health care research in the state.³⁹

In **Washington**, the Health Care Authority administering the state employee insurance benefit was designated by the legislature in 2005 to serve as the coordinating agency for all HIT and electronic HIE efforts. One of the authority's roles is to promote and coordinate efforts to increase adoption of HIT systems by hospitals, integrated delivery systems, and providers by employing state health purchasing strategies and pilot studies. The authority collaborates with other agencies that administer state-purchased health care programs, private health care purchasers, health care facilities, providers, carriers, and other relevant stakeholders. The legislature also set the goal of widespread HIT adoption by 2012.

STRATEGY 2

Establish a roadmap articulating vision and strategy for electronic HIE development.

Each state should develop or adopt a vision for electronic HIE that leverages appropriate existing and planned public and private HIE efforts and outline by 2010 an electronic HIE roadmap that must be implemented by 2014. Components of the roadmap should, at the least, include a plan to (1) organize implementation of electronic HIE in the state; (2) engage diverse stakeholders, including consumers, providers, and payers; (3) develop and test exchange architectures incorporating existing and approved standards; (4) build financial and political support as well as legislative authority for electronic HIE development; (5) ensure consumer protections are in place; (6) train and sustain an HIT-capable workforce; and (7) enable intrastate collaboration and data exchange.

Developing thorough plans is essential to the success of any major effort. Creating a strategic roadmap to guide the development of a statewide electronic HIE represents an opportunity for state government leaders to engage and solicit input from various stakeholders and begin the process of establishing trust among different participants. In turn, the process provides stakeholders the opportunity to convene and discuss challenges and interests in addition to best practices. It is a chance for all stakeholders to articulate a shared vision and collaboratively set priorities as well as timeframe expectations for action. The roadmap should define statewide objectives, recognize and build on existing efforts, outline specific plans for implementation, and include measurable goals for adoption of HIT systems and electronic HIE development.

Arizona, Kansas, Kentucky, Minnesota, and Vermont have developed roadmaps outlining objectives, implementation plans, actors, timeframes, and measures for achieving statewide electronic HIE. Most states have done some planning in this arena, but for many it was either more targeted, or done some time ago. This arena and the connected industries are developing quickly, and states should consider updating and revising their plans to reflect new topics and emerging challenges. For states with current plans, the state should review them to ensure they cover the major issues specified above and reflect the full stakeholder community.

STRATEGY 3

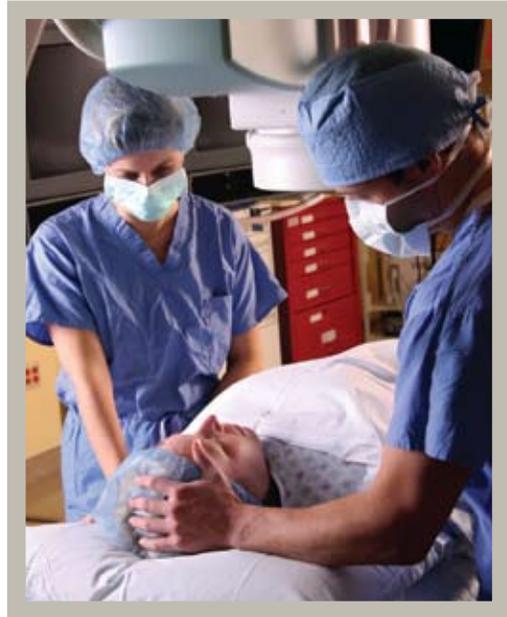
Issue executive orders and legislation furthering e-health activities.

Governors and state legislatures should issue executive orders and adopt legislation that advances HIT adoption and HIE development. At a minimum, the following should be addressed:

- Specific objectives for public program (e.g., Medicaid, SCHIP, public health, state employee) participation in electronic HIE related to quality, transparency, and cost containment;
- Procedures for designing an electronic HIE roadmap;
- An indemnity provision for electronic HIE;
- Requirements for state agencies to adopt and use interoperable HIT;
- Consumer protections;
- Commitment to inclusiveness and diversity in electronic HIE activities among health care providers, payers, and consumers; and
- State procurement rules that enable fair and flexible innovations, require the adoption of interoperable HIT applications, and align with any statewide electronic HIE and HIT policies.

Executive orders and legislation are powerful ways that state policymakers can demonstrate their commitment to advancing electronic HIE and HIT efforts. Both mechanisms are opportunities for state policymakers to articulate expectations on process, direct state programs to action, collaborate with relevant partners, and challenge other stakeholders to match their commitment. As governors and legislators contemplate the drafting of executive orders and legislation, they should ensure that the language used is flexible in order to accommodate the evolving implementation of HIT and electronic HIE, and that it will not become outdated quickly, is consistent and complementary to national efforts, and can garner broad stakeholder buy-in.

As of this writing, 20 governors have issued executive orders supporting HIT and electronic HIE. Several of these establish commissions for examining HIT and HIE issues and call for states to develop roadmaps that outline strategies for overcoming the challenges. Other executive orders outline broader health care reform efforts that incorporate promotion of HIT and electronic HIE.



Across the states, more than 250 bills were introduced in the 2007 legislative session, of which 74 bills passed in 39 states and the District of Columbia.⁴⁰ The bills addressed an array of issues, including establishing commissions or advisory committees; developing strategic plans or roadmaps for statewide implementation; providing funding to support start-up electronic HIE development; and health information security breach notification.⁴¹

STRATEGY 4

Utilize state goals of health system transformation, transparency, and quality improvement to drive HIT and electronic HIE.

As states—in cooperation with private sector efforts—plan quality and health outcomes improvement initiatives and redesign the care delivery system, they also should drive electronic HIE development and HIT adoption.

State policymakers should invest in HIT adoption and electronic HIE creation to help them achieve health system improvements and reform. The state, as a major health care purchaser and fiduciary of the public's health, is a critical stakeholder and necessary participant to ensuring the success of nationwide electronic HIE efforts. Such efforts cannot succeed without the contribution and participation of a wide range of stakeholders—including state programs—and investing in HIT and electronic HIE is one opportunity for states to lead by example.

Many of the reform efforts being considered by states will be made more effective and efficient by the use of HIT and HIE. These efforts may include medical home programs, quality measurement, and transparency efforts. With the incorporation of HIE and HIT goals and components into these efforts, states could monitor provider performance based on quality outcomes (e.g., glucose levels controlled; reduced hospital admissions for avoidable events) and more effectively conduct public health activities (e.g., disease tracking, outbreak response, disease management and control). Not only would this help the state determine the quality and appropriateness of health care services provided, but such measures also could be more easily monitored by providers for their patients and publicly measured for accountability in an electronic environment. These activities can be conducted in collaboration with private sector efforts, thereby sharing the cost burden and benefits across the health care system payer-mix. In **Minnesota**, the Department of Employee Relations and other relevant state agencies partnered with private-sector employers through the Smart Buy Alliance to develop buying principles, which all participating groups will use to collectively influence purchasing decisions.

Meanwhile in 2007, **Missouri** established the Health Care Technology Fund for state investments that “promote technological advances to improve patient care, decrease administrative burdens, increase access to timely services, and increase patient and health care provider satisfaction.”⁴² The fund will consist of donations and monies appropriated by the general assembly. Allowable uses of the fund include implementation of technologies like EHRs, community health records, personal health records, e-prescribing, and remote monitoring systems. The fund will be administered by the Department of Social Services, the entity responsible for the state Medicaid program. Procurement projects will take into consideration recommendations made by the Missouri HealthNet oversight committee, a public-private body responsible for reviewing and advising the Department of Social Services on state health improvement plans.⁴³

In 2008, **Utah’s** Health System Reform⁴⁴ legislation appropriated \$500,000 one-time developmental funds for its state-wide public-private initiative of clinical health information exchange and \$800,000 annually ongoing funding for enhancing the state’s transparency reporting.

In addition to appropriating funds or establishing grants and loan programs, state policymakers could leverage publicly funded programs like Medicaid and the state employee health benefits plan to drive use of HIT and participation in electronic exchange. State policymakers can, for example, direct the public programs to implement incentives like pay-for-performance and enhanced reimbursements to support such initiatives. This strategy is discussed later in the report.

STRATEGY 5	Make a patient-centered, interoperable, and portable EHR available for every child by 2014.
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In their planning and collaboration around HIE, governors and state legislatures should ensure that every child has a patient-centered EHR that is transferable to other providers and accessible to the patient by 2014.

One tangible area where state policymakers can demonstrate leadership and make significant strides toward widespread use and adoption of HIT is to support EHR efforts focused on children. This does not mean that the EHR must be a stand-alone children’s health record. Instead, state policymakers could emphasize the need for EHRs to have the necessary capabilities and functions to support children’s health needs. Such capabilities and functionalities should be considered as part of baseline technology, instead of a specialty. These functions may, at a minimum, include guardianship information, newborn screening, family history, growth, immunization, birth history, problem lists, medications, and allergy data. An effort such as this could go a long way toward promoting broader state goals of reform and improving public health.

RECOMMENDATION 2: ADDRESS HEALTH INFORMATION PRIVACY AND SECURITY

Consumer and provider trust are key to the success of electronic HIE. Careful consideration must be given to creating and perpetuating the balance between the need to protect consumers against privacy violations and security breaches and enabling appropriate provider access to electronic health information.

Significant financial and personal consequences exist for those caught up in a security incident or breach, and beyond those individuals, the impact on the trust of consumers and other stakeholders can be very damaging to these efforts. There is no question that mechanisms should be in place to assure individuals that their health information is protected and used appropriately. Privacy and security policies and regulations should not hinder necessary and appropriate access to stakeholders, such as providers who need the information to best treat and protect the individual from physical harm.

Unfortunately, state privacy laws that govern health information have not kept pace with rapidly advancing technology

and our complex health care system. It is difficult to clearly identify mechanisms to ensure coherent consumer protections because of the way privacy laws and policies are currently written. In many cases privacy and security requirements are scattered among different chapters of state legislation and regulation. Some are likely outdated, as they are written for a paper-based system.⁴⁵ The result is a patchwork of requirements that may vary state-by-state and entity-to-entity.

The complexity is perhaps most evident in patient consent requirements, which affect both inter- and intrastate exchange. State law consent⁴⁶ requirements may vary by data type, data source and intended use of the information, as well as some characteristics of the data subject (e.g., minors, Medicaid recipient). For example, in an interstate exchange where HIV data is needed for treatment purposes, some states require patient consent be obtained, while others do not require consent at all.⁴⁷

In addition, state laws sometimes dictate how the consent should be obtained. For example, if two states require consent, one might specifically require a written consent, while the other might allow for verbal consent. Consent requirements within a state may be found in different chapters of the state law and may not present consistent approaches, resulting in confusion of what exactly is required at the practice-level. Health care entities' policies often differ with respect to how consent is required, obtained, documented, and communicated to nonrelated entities.⁴⁸

States should begin organizing their privacy laws to better understand what is supportive or prohibitive of electronic HIE and address any challenges acquainted with their privacy laws. As such, the State Alliance offers the following strategy:

STRATEGY 1	Consolidate and update relevant privacy and security laws to better respond to consumer protection needs in an electronic exchange environment.
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States can conduct a review and make necessary changes to their laws to enable private and secure electronic HIE. Changes may include consolidating all relevant privacy and security laws under one chapter; using common definitions, where appropriate; and removing requirements for paper-based documentation and wet signatures.

Through numerous efforts, states have worked to identify barriers and inconsistencies in their laws that affect electronic health information exchange, and correct them. For example, **Wisconsin** passed legislation in 2008 that allows for the sharing of data with any health care provider involved in a patient's care. Previously, data could only be shared with providers in a related health care entity. By removing this requirement, providers in different health care entities can now electronically exchange data for the purposes of treatment without having to obtain additional consent from the patient.⁴⁹

In **Kansas**, the creation of a catalog of existing statutes and regulations that affect health information privacy and security and have implications for electronic exchange has stimulated a discussion around statutory and regulatory reform of privacy and security.⁵⁰ Kansas also has contributed significantly to other states' efforts to collect and assess laws involving privacy and security, having created a data collection tool to complete the task. In 2007, Minnesota began to examine ways to update the Minnesota Health Records Act to address electronic HIE. **Minnesota** now has a new law that consolidates privacy requirements in one place and reflects the needs of providers in an electronic HIE environment. Additionally, the new law defines key HIT terms, and allows for the electronic submission of consent.⁵¹

The State Alliance believes that states must address any challenges that their privacy and security laws present if HIT and HIE efforts are to be successful. States policymakers can take a lead on these issues. To raise awareness about the centrality of privacy and security and increase interaction among states, the State Alliance recommends the following actions:

STRATEGY 2

Educate leaders and support efforts to reduce variation of state privacy requirements while ensuring appropriate consumer protections.

States should continue to educate leaders of the executive and legislative branches on the importance of interstate alignment of privacy protections and sustain efforts, through financial and political support or other means, to reduce the variability of state privacy requirements within and across states in a manner that ensures appropriate consumer protections are in place.

More than two-thirds of state participants in HISPC referenced increased awareness of privacy and security issues among stakeholders, including policymakers, as a key component of success in the development and sustainability of HIT and HIE.⁵² States also, almost unanimously, reported that working with other states and territories on privacy and security proved extremely valuable toward understanding their state-specific challenges for HIT and HIE within a larger context.⁵³ Relationships between states may develop based on shared interests, common approaches, or geographical proximity. For example, **Alabama, Louisiana, Mississippi, and Texas** formed the Gulf Coast Task Force to reduce privacy and security variability and work on plans to support interoperable electronic HIE across the region.

HISPC has provided states a significant opportunity to collaborate on various aspects of privacy and security. In the present phase of HISPC, 42 states and territories are participating in efforts to increase consumer education and engagement, engage providers in adopting and using electronic HIE, draft business policies, create common legislative language, develop resources on consent, and develop model cross-state interorganizational agreements.⁵⁴ As states advance in these areas, they decrease barriers for other HIT and HIE efforts.

However, the success of state efforts will be limited without federal action to address variations in federal privacy laws, including the Health Insurance Portability and Accountability Act (HIPAA), the Family Education Rights and Privacy Act (FERPA), the Confidentiality of Alcohol and Drug Abuse Patient Records Regulation (i.e. 42 C.F.R. Part 2), and Federal Medicaid Confidentiality Regulations (i.e. 42 C.F.R. Part 431). The confusion created by inconsistencies and differences between state privacy laws and federal laws is a major concern of providers, especially in connection with access to health information, security of patient and provider information, and the implications for provider liability. The State Alliance believes that in order to support states' efforts to enable HIE, it would be of significant assistance if the federal government undergoes a review of its privacy requirements. The State Alliance further believes that a strategy of states working with the Executive Branch of the federal government to identify inconsistencies in federal statutory privacy and security requirements might generate possible approaches to better align these laws and regulations.



RECOMMENDATION 3: PROMOTE INTEROPERABLE TECHNOLOGY

Efforts are underway at the national level to standardize HIT systems to ensure they are interoperable and have the security and privacy capabilities that are needed.

Promoting standards-based, interoperable technologies and certification may help overcome these provider concerns and speed adoption of HIT systems and electronic HIE development. The certification of software applications, such as EHRs, and network components could ensure that well-vetted functional, security, and interoperability standards are implemented and that technologies will continue to meet increasingly higher benchmarks as certification requirements advance each year.

The Health Information Technology Standards Panel (HITSP) is an effort supported by HHS to identify the data and technical standards that are necessary to achieve interoperability among different HIT systems. HITSP is a public-private process with participation from more than 500 health care industries organizations that identifies interoperability standards and provides guidance to ensure uniform implementation of these standards in HIT systems.

Another essential national effort is the Certification Commission for Health Information Technology (CCHIT), which was established in 2004 and is supported by HHS. CCHIT is an independent, voluntary initiative that is charged with accelerating adoption of HIT by creating an efficient, credible and sustainable product certification program that is recognized by the federal government. CCHIT already has developed certification criteria for in-patient and ambulatory EHR applications, which include e-prescribing criteria. CCHIT has certified 150 ambulatory EHR products and 12 in-patient products and is currently developing criteria for HIE network certification.⁵⁵ In addition, it is developing EHR certification criteria for behavioral health and long-term care and certification for personal health records.⁵⁶

HITSP and CCHIT are complementary efforts that support and promote standards-based, interoperable HIT systems. As HITSP identifies standards and develops uniform implementation guides to enable secure interoperability, CCHIT facilitates the implementation of the standards through certification. In addition, HITSP identifies gaps in existing standards and notes standards not yet developed, but necessary for secure interoperability of systems.⁵⁷ The State Alliance recognizes that HITSP and CCHIT are fairly new efforts and still evolving. However, they have gained the support of stakeholders in the vendor community as well as HIT users. The State Alliance strongly encourages the federal government to continue to support efforts to identify and propagate these standards and certification of technology. To further the widespread adoption of standards-based, interoperable systems in the nation's health system, the State Alliance recommends states adopt the following strategy:

STRATEGY 1

Promote the acquisition of certified systems.

States should promote the acquisition of certified EHR applications and network components and identify CCHIT or other certification bodies recognized by the Secretary of HHS.

One method states could consider in implementing this recommendation is to require that as part of participation in publicly funded programs, any provider who engages in electronic HIE and is planning to acquire new products or network components purchase—if available—products or network components that meet nationally recognized certification standards.

Some states have begun to promote certification requirements through legislation. For example, **Virginia** enacted legislation in March 2007 that requires purchased systems and software used for storing electronic patient information,

such as EHRs, to adhere to accepted standards for interoperability and data exchange or be certified by a recognized certification body.⁵⁸ Similarly, **Utah** passed legislation authorizing its Department of Health to require the use of nationally recognized standards in statewide HIE in the 2008 legislative general session.⁵⁹

In 2007, the **Texas** legislature created the Texas Health Services Authority, a public-private entity, to promote, implement and facilitate voluntary and secure electronic HIE. To facilitate this goal the Authority is charged with establishing an interoperability framework guided by reference to the standards of CCHIT, HITSP, or other federal approved certification standards.⁶⁰

When setting policy for participation in publicly funded programs, however, states should be flexible and give providers and health care organizations sufficient time to migrate to certified EHR products without penalty or substantial expense. State policymakers should be mindful of the challenges providers face as they consider ways to support providers' efforts to transition to standards-based EHR systems. States also may consider accompanying the requirement with incentives to help providers and health care organizations transition and comply with the requirement.

States also should recognize efforts by health systems that already are using their homegrown or legacy systems to successfully exchange electronic information within their closed networks. States should be aware of early adopters in their markets, and seek ways to minimize the impact of new requirements. One approach states may consider is providing incentives for providers and health systems to map existing capabilities with those required by the certification processes in order to identify gaps and solutions. States can then determine a phased-in approach over several years while still advancing providers and health systems toward meeting certification standards and interoperability.

Finally, when developing policies related to certification, states should build in renewal and updating needs. However, states should take into account the product development cycle of software and network. EHR applications typically have a two- to three-year development cycle, but more complex applications may have longer development cycles. New certification elements can create new complexities for the vendor community, and consideration should be given to realistic expectations of what the vendor community can reasonably provide to the health care community.

STRATEGY 2

Participate in national certification and standards-setting processes.

States should become engaged in and provide input into the certification process by supporting the participation of State Chief Information Officers (CIOs), public program CIOs and state health IT coordinators (or equivalent-level personnel) in the CCHIT, HITSP, or similar federally endorsed activities to ensure that the state perspective is incorporated and to ensure applicability of the requirements in the state environment.

States' participation in CCHIT and HITSP processes is critical to ensuring that certification and interoperability standards are applicable to and considerate of states' unique environments. Both the CCHIT and HITSP efforts are public-private activities and encourage participation by various stakeholders, including state government representatives with HIT implementation experience. States, in general, should keep track of national-level HIT and electronic HIE activities and provide input to these efforts as appropriate.

STRATEGY 3**Ensure bi-directional exchange of data between clinical care and public health.**

All EHR systems supported by state funding should have public health functionalities to support objectives for bi-directional exchange of data between clinical care and public health. Upon purchasing or upgrading publicly purchased health information systems, states should establish a specific plan for continuing maintenance and staffing.

Just as certification drives the adoption of interoperable EHRs by providers, it also is necessary to ensure the certified EHRs can push and pull data from publicly funded health program systems such as public health. Bi-directional exchange between the clinical care setting and public health will make the response to and management of population health much more efficient.

State policies that promote HIT adoption and use should encourage providers to purchase EHR systems that have the capabilities to capture necessary public health and quality-based data. Such systems should be able to support bi-directional exchange between health care settings and public health to support state efforts to improve population health, surveillance, and preparedness.

STRATEGY 4**Require public program health information systems to conform to recognized HITSP standards or other standards-setting bodies recognized by the Secretary of HHS.**

States should require that public program health information systems conform to HITSP standards, as recognized by the Secretary of HHS.

The public sector must also work to implement HIT and the capacity for interoperability in HIE in its own programs and agencies. Like private sector entities, states have a long history of developing their own internal systems that must be brought into the modern world in order to support the private sectors entities that interact with public agencies, and to improve public-sector efficiency and public health outcomes.

HITSP is working to develop interoperability guidelines promoting standards-based clinical documentation, messaging, and laboratory reporting to facilitate bi-directional exchange. As publicly funded health programs upgrade antiquated legacy health information systems, they should turn to the HITSP standards recognized by the HHS Secretary.

STRATEGY 5**Align policies and laws, as appropriate, to support intra- and interstate data exchange among public programs.**

States should review their policies and laws for intra- and interstate data exchange and remove barriers to ensure that public program health information systems are interoperable across state jurisdictions (e.g., local, county, state). These information systems must have the capability to document and track, as appropriate, demographic information that reflects the needs of a diverse population to identify opportunities for community interventions, reducing health disparities, and improving overall health outcomes.

State public programs currently gather and store health data in many different ways with different requirements and data fields. Within a state, information on an individual resident may be distributed in many different places and ways. The State Alliance suggests that states consider new strategies to coordinate data they are responsible for collecting, transmitting, and tracking. Sharing data through electronic HIE would help them more efficiently and effectively carry out the core missions of all of the impacted programs. For example, if public health were to bridge its disease and immunization registries and surveillance systems with Medicaid information systems, the efforts of these programs to improve individual and population health could be maximized.

Furthermore, individuals frequently cross state lines, and public sector data must support the needs this raises. Public health information systems should be connected across local, county, and state jurisdictions and with other relevant state agency systems to enhance response efforts in emergency situations and ensure against fraud and loss of data.

STRATEGY 6

Develop and implement incentive programs or reimbursement policies that support HIT adoption and electronic HIE.

State Medicaid agencies and state employee health plans, in cooperation whenever possible, should implement incentive programs and/or reimbursement policies such as pay-for-participation, rate adjustment and quality incentives that will encourage provider adoption and use of HIT systems and participation in electronic HIE.

States could consider making the use of HIT systems a condition of participation in the Medicaid or state employee health plan, for example. States also could establish a tiered pay-for-performance system that allows providers to incrementally transition from paper-based to electronic health records. In a tiered incentive structure, Medicaid or the state employee program could start by paying providers for adopting and using HIT, and later begin to measure performance based on quality improvement process indicators (e.g., yearly eye exam for diabetic patients).

Indeed, states already have taken the initiative to finance HIT and electronic HIE through appropriations, grants, tax incentives, and loans. In 2006, for example, **Rhode Island** established a \$20 million revenue bond to create the state's electronic HIE. The revenue bond is contingent on contributions from other stakeholders like health plans. The state will pay for the fair share of costs for public program populations, which will bring Rhode Island's contribution closer to \$6 million.⁶¹ In 2007, Delaware made available \$3 million to create the **Delaware** Health Information Network.⁶² **Washington** is investing \$4.4 million to create the Washington State Health Record Bank, a consumer-based data sharing initiative.⁶³ **New York** is investing over \$100 million in grants to communities to develop the Statewide Health Information Network (SHIN-NY) and other HIE-related services.⁶⁴

To spur adoption of HIT systems, **Minnesota** passed legislation in 2007 requiring all hospital systems and clinical practices to have in place an interoperable EHR system by January 1, 2015. To help hospital and health care providers comply, the state established an account under the purview of the Health Commissioner to provide no-interest loans to eligible providers. The Commissioner has discretion over the size and number of loans made; however, the accumulative loan principle must not exceed \$1.5 million per loan.⁶⁵

RECOMMENDATION 4: STREAMLINE THE LICENSURE PROCESS TO ENABLE CROSS-STATE E-HEALTH

Patients are increasingly receiving cross-state e-health consultations from health care providers. E-health services include consultation via e-mail and telephone, as well as remote delivery of health services across state boundaries. As technology and medical procedures advance, consumers are seeking care and treatment from specialists who are licensed in another state to provide remote medical services, in-home diagnostics, and telepharmacy prescribing. In addition, as consumers become more technology savvy, the demand for such services is increasing. HIT systems and electronic HIE can support these demands and facilitate more efficient data sharing across state boundaries.

However, providing e-health services across state lines is hampered by the current processes for obtaining health professional licenses. As previously noted, licensure processes differ by health profession and by state. Variation exists in the types of licensure laws, scope of practice definitions, licensure application procedures, credentialing requirements, and approaches to past disciplinary actions.



The State Alliance proposes two stages for addressing these issues: First and more immediately, states should streamline the licensure application and credentials verification processes to allow providers to more easily apply for a license in multiple states. The current system for most health professionals is burdensome and time consuming, thereby discouraging practitioners from seeking the multiple licenses required to delivery e-health services, including in times of emergency. As a second and more long-term effort, the State Alliance is encouraging states to consider ways to accommodate e-health (including telemedicine and telepharmacy) practice while still maintaining state-based jurisdiction and authorities.

STREAMLINE THE LICENSURE APPLICATION PROCESS

The State Alliance identified a number of mechanisms state policymakers can use to ease the licensure application process for the medical, nursing, and pharmacy professions, outlined below:

STRATEGY 1

Direct each state health professional board to develop or adopt common core licensure applications.

Governors and legislatures should work through their state nursing and pharmacy boards and corresponding boards in other states to develop common core licensure application forms for each of these professional categories. State medical boards should adopt the Federation of State Medical Board’s Common Licensure Application Form (CLAF). Individual states may include state-specific requirements as addendums to the common application developed or adopted by the licensing boards of each health profession.

STRATEGY 2

Direct each state health professional board to implement and promote the use of online licensure applications.

Governors and legislatures should work through their state medical, nursing, and pharmacy boards to implement and promote online licensure applications.

These recommendations address two key barriers in streamlining the licensure process: the variation across states in the content of the licensure application forms required by each profession and the often onerous and lengthy paper-based process of submitting licensure applications. States, such as **North Carolina**, have implemented an online licensure application for physicians and found that it not only reduced the timeframes for obtaining a license, but it also reduced administrative errors and costs. Similarly, state medical boards that adopted the CLAF found that it allowed for the collection of uniform information and reduced the number of incomplete applications received. The CLAF has proven to be convenient for physicians applying for licensure in multiple states.

Credentialing for a license includes the documentation, verification, and approval of a provider's credentials to practice in a state. Credentials verification almost always includes obtaining primary source documentation, such as the applicant's exam scores, training and education, and work history. Some states conduct criminal background checks for some or all professionals in addition to verifying credentials. Completing numerous and varying applications to obtain multiple state licenses can be very taxing and costly, and can deter providers from seeking more than one license. The credentialing process is also time consuming and expensive for state boards. To streamline the credentialing process, the State Alliance recommends the following actions:

STREAMLINE THE LICENSURE CREDENTIALING PROCESS**STRATEGY 3**

Direct each state health professional board to work with its counterparts in other states to develop a nationwide core set of credentialing parameters.

States should require that each health care professional board (e.g., nursing, medicine, pharmacy) develop, with its counterparts in other states, a nationwide core set of credentialing requirements that their respective health professionals would have to meet in order to obtain a license. Individual states may layer on state specific requirements in addition to the core requirements.

STRATEGY 4

Direct each health professional board to utilize a single, centrally coordinated credential verification organization (CVO) to conduct primary source verifications.

To reduce and/or eliminate the need for repeated primary source verification, states should require their medical, pharmacy, and nursing regulatory boards use a single, centrally coordinated CVO for each profession to conduct the primary source, one-time-only verification of license applicants' static credentials (e.g., professional school graduation) and update and maintain the verification of dynamic credentials (e.g., licensure status). These CVOs should collect and verify a core set of credentials established by each profession (see Strategy 3 above). They should have a means of identifying practitioners with a high degree of confidence, such as requiring the use of the national provider identification number or using such functionality as a master provider index algorithm.

The Federation's Credentials Verification Service (FCVS) and its trusted agent platform, operated by the Federation of State Medical Boards (FSMB), is an example of a service that could assume this role for the boards of medicine.

The pharmacy and nursing boards should work with their professional organizations, certification organizations, or other similar organizations with a mission to facilitate public protection to develop and implement centrally coordinated CVOs for their professions.

A reduction in the length of time required for obtaining a license will increase the number of health care professionals willing to apply for multiple licenses and thus facilitate cross-state consultation via electronic means as well as the remote delivery of health care services. State boards can reduce these timeframes by establishing a centrally coordinated CVO for each profession to conduct the primary source verification of applicants' credentials.

An example of a centralized CVO currently being used by several state medical boards is the FCVS. This service could be a model for pharmacy and nursing boards to use to achieve the above recommendation. FCVS was established by FSMB in 1996 to provide a centralized, uniform process for state medical boards to collect a verified primary source record of a physician's medical education, postgraduate training, examination history, board action history, board certification and identity. This repository of information allows a physician to establish a confidential, lifetime professional portfolio that can be forwarded to other medical boards.⁶⁶ It has been effective in reducing the workload of the state board credentialing staff and in decreasing duplication across states in the verification process. At least 12 states require FCVS, and an additional 35 states accept FCVS but do not require it. Only three states do not accept FCVS.

Technological advancements of credentialing verification systems have improved data collection methods and the costs associated centralized credentials verification system, which may make states are more willing to collaborate on verifying credentials. Testimony by the Federation of State Medical Boards confirm that state boards increasingly are recognizing that a centralized CVO is a valuable tool in achieving uniformity in the licensure application process without compromising the boards' control over the details of the credentialing process and requirements to obtain a license.⁶⁷

To coordinate collection and verification of licensure credential requirements, the State Alliance believes that the establishment of a centrally coordinated CVO is essential. It is important to note that previous attempts to create a centralized CVO have been made but were met with resistance from the states.⁶⁸ However, the State Alliance recommends the development of a centralized credentials verification system because it would result in a savings of both time and money to boards. The system recommended by the State Alliance would increase the efficiency of the initial licensure and licensure renewal processes, but it also would facilitate the licensing of health care professionals for the purposes of coping with natural disasters, state emergencies, and other necessities. Health care facilities might also access CVOs to aid in their credentialing and privileging processes. However, before a CVO can be employed or developed, the state boards of each health care profession must agree on a nationwide core set of credentials requirements.

One of the key issues that must be addressed is criminal background checks. The variations in criminal background check requirements increase the reluctance of state boards to recognize professional licenses issued by other states. To address this challenge, the State Alliance recommends states:



STRATEGY 5

Direct each state health professional board to require state and federal criminal background checks from all applicants seeking an initial state license.

Governors and state legislatures should direct their state boards to require that applicants seeking initial professional state licensure and licensure renewals undergo state and federal criminal background checks as part of the application process. To ensure public safety, state legislatures should provide the health professional boards with the necessary statutory authority to enable implementation of this recommendation.

Instituting a thorough criminal background check would increase the level of trust among state professional boards while facilitating greater licensure portability. The State Alliance recognizes that a state board will need to make a number of policy decisions before implementing a criminal background check program. The State Alliance calls on state legislatures to endow their state's health professional boards with the capacity and resources to implement this process where it does not exist.

STREAMLINE THE LICENSURE STRUCTURE

The State Alliance thoroughly examined the opportunities and challenges in pursuing options for multistate practice and e-health expansion. Among these were licensure structures to support cross-state e-health consultations, and remote delivery of health care services; the need to enable mail-order pharmacies, telehealth, and telemedicine; and the potential of the current Nurse Licensure Compact as a model for other health professions. The mutual recognition model of nurse licensure allows a nurse to have one license (in his or her state of residency) and to practice in other states (both physically and electronically), subject to each state's practice law and regulation. Under mutual recognition, a nurse may practice across state lines unless otherwise restricted.⁶⁹ In hopes of encouraging dialogue on these critical issues, the State Alliance offers the following strategies to enhance the gains via the licensure recommendations outlined above.

**STRATEGY 6**

Direct the state medical and pharmacy boards to individually participate in a collaborative effort with their respective state board counterparts to establish a process that ensures licensure recognition by other states.

To facilitate e-health, states must move toward requiring at least one state license that is recognized by the other states. This will enable a physician or pharmacist to practice across jurisdictional lines. States must create a licensure system that, in a uniform manner, permits open provider-to-provider consultation and doctor to patient interaction across jurisdictional boundaries. State boards must be empowered, through the statutory authority, to discipline physicians practicing in their respective states/territories, regardless of the state of licensure.

This model should be based on agreements and information-sharing among the states/territories to facilitate a licensure process that enables coordinated action among the states/territories and should not be considered national licensure. This model should be used to promote e-health (which includes telemedicine and telepharmacy), but it also may serve as a model for other forms of medical practice.

Governors and state legislatures should provide financial support to the medical boards that ensures necessary funding to enable public protection operations, including disciplinary investigations and actions, criminal background checks, development of secure infrastructure for credentials verification, and interagency communication.

The State Alliance has directed NGA to convene state and territory medical boards, in collaboration with FSMB, to establish a consensus-based approach that will enable implementation of the strategy above. As state boards participate in this collaborative process, they should consider incorporating the following:

- A physician licensed in a different state or territory from where he or she is seeking to practice must notify that state or territory medical board using a common electronic notification form. Accordingly, states should create common electronic form to be used by physicians who are licensed in one state/territory but intend to practice in another;
- A physician practicing e-health must be subject to the jurisdiction of the states in which the patient is located at the time of the physician-patient interaction and the jurisdiction of the state of licensure; and
- State medical boards must cooperate with each other and actively enforce, in a uniform manner, applicable disciplinary rules and legal standards.

Rather than prescribing the mechanism through which to achieve transformation of the current licensure structure, the State Alliance believes state medical boards should discuss the recommendations and build consensus on solutions to meet the intent stated. Given the significance of what the vision lays out and the complexity of issues and concerns that were expressed by many stakeholders that may be affected by such a transformation, the State Alliance wants to ensure more time is spent on understanding the serious considerations needed to ensure success. While the recommendation above was developed with input from the physician community and state medical boards, the State Alliance believes that the collective voice of state medical boards, board administrators and other relevant stakeholders should determine the opportunities and ramifications of the proposed recommendation.

Many state nursing boards, unlike the medical board community, have come together to participate in a compact to recognize each other's licenses. Twenty-two states currently participate in the NLC. They are **Arizona, Arkansas, Colorado, Delaware, Idaho, Iowa, Kentucky, Maine, Maryland, Mississippi, Nebraska, New Hampshire, New Mexico, North Carolina, North Dakota, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, and Wisconsin.**⁷⁰ Each participating state still sets its own licensure requirements, which may vary slightly, but each state must enact legislation or regulations authorizing the NLC. Nurses regulated under the NLC are licensed in their state of residence but are under the jurisdiction of each remote state, as well as their home state. The NLC enables remote states, the home state, or both to take disciplinary actions allowed by law. The home state can take action against the license (e.g., probation, revocation) and the remote state against the privilege. Nurses with restricted licenses cannot participate in the NLC.

Given the level of activity across the country of state nursing boards supporting the NLC and the NLC's benefits to enabling e-health, the State Alliance encourages the remaining state nursing boards to join the compact as well.

STRATEGY 7

Direct the state nursing board to participate in the Nurse Licensure Compact.

Governors and state legislatures should direct the state's nursing board to participate in the NLC, given the importance of the NLC for e-health purposes. Governors and state legislatures should provide financial support to the nursing boards for the initial implementation of the NLC and ensure that the boards are funded at levels needed to assure public protection operations.

The NLC, however, does not include or apply to advance practice credentials or licensure. Advance practice nurses of various types provide nursing care as well as limited medical care services to patients. As with other health professions, standards for credentialing and regulating advance practice nursing vary across states. However, in contrast to nurses and physicians, the scope of practice for different fields of advanced practice nursing (e.g., nurse practitioners, nurse anesthetists, nurse midwives, and clinical nurse specialists) may be less well-defined.

The State Alliance for e-Health is mindful of the complexities of the issues around advance practice nursing and recommends that states “pursue” the standardization of credentials and regulatory framework for this profession.

STRATEGY 8

States should pursue standardization of the regulatory framework for each field of advanced practice nursing.

States should pursue standardization of credentials and regulatory framework in defining the different fields of advanced practice nursing (e.g., nurse practitioners, nurse anesthetists, nurse midwives, and clinical nurse specialists). Thereafter, states that agree to the common standards should consider the mutual recognition model for advanced practice nurses to facilitate e-health.

The State Alliance does not prescribe the mechanism or approach that states should use to implement the recommendation above. Instead, the members of the State Alliance believe that state nursing boards should come together to further examine the challenges as well as benefits of standardization in supporting their mission to protect the public in an increasingly e-health-accessible environment.

RECOMMENDATION 5: ENGAGE CONSUMERS TO USE HIT AND HIE IN MANAGING THEIR HEALTH AND HEALTH CARE

Since its first meeting in January 2007, the State Alliance has made consumer considerations a central underpinning of its deliberations. Consumers are important stakeholders of any HIE effort. State Alliance members and experts noted that consumers should be engaged in discussions about the potential risks and benefits of electronic HIE, particularly regarding privacy and security, early on in the process of building the electronic exchange environment. Consumer engagement is critical to gaining public trust. And without public trust, electronic HIE efforts may fail.

Many of the participants in the discussions expressed the challenges associated with engaging consumers. The primary challenge is getting consumers to the discussion table. There is no simple way for electronic HIE efforts to include the consumer perspective in discussions. Whereas other stakeholders in the HIE arena have coordinated groups to represent their interests, consumer perspectives are harder to secure because of a lack of coherence of interests and other challenges.

Some consumers’ interests are represented by disease-specific advocacy organizations, employee unions, or other topically based advocacy organizations. Privacy advocates also represent consumer interests. The State Alliance recognizes that advocates’ representing consumer viewpoints have been critical to electronic HIE efforts. Reaching out to consumer and privacy advocacy organizations is one approach to having the necessary consumer perspective represented in decisionmaking processes about electronic HIE policies. However, advocacy organizations are also challenged in their efforts to represent the consumer viewpoint. Electronic HIE is a highly complex issue that requires some knowledge of law, technology, and the health care sector. This level of knowledge is rarely found in consumer organizations and almost never among the general consumer population. This knowledge needs to be cultivated to ensure informed, appropriate, and active consumer participation.

States such as **Michigan, Oregon, and Rhode Island** have employed strategies to more directly reach individuals and obtain their perspectives on electronic HIE. They have conducted detailed interviews or focus group sessions of consumers to gauge their knowledge and attitudes about HIT, electronic HIE, and privacy, as well as to identify their concerns and preferences. By directly reaching out to individual consumers, these states were able to incorporate consumer viewpoints and preferences in their policy development process for electronic HIE.⁷¹ As states increasingly use interview and focus group techniques, however, a rigorous methodological approach for evaluating consumer awareness and preferences with respect to electronic HIE would be useful.

To encourage and engage consumers in using HIT for better managing their health and health care, the State Alliance offers the following strategies for consideration by states.

STRATEGY 1

Direct public programs to develop consumer engagement tools.

Governors and state legislatures should expand the mission of state public health departments to engage consumers and promote the benefits of HIT and HIE. Public health should avail itself of the opportunity that EHRs provide and connect with providers and assist them in pushing consumer-specific information and health education. Additionally, public health should enable direct consumer access to any personal health information databases that they operate (e.g., immunization registries, newborn screening, and lead testing programs). As a participant in e-health activities, public health also should provide resources to build health literacy and ensure cultural and linguistic appropriateness. In collaboration with public health, state Medicaid agencies and state employee health plans also should develop consumer engagement tools, including education materials that provide information on the benefits, content, and functions of HIT systems as well as on safeguards and protections for consumer health data.

Raising consumer awareness about the purpose and potential value of electronic HIE is a necessary step to gaining public trust and commitment of resources. At the same time, states face several challenges with regard to designing communication strategies to engage lay consumers in discussions about the electronic exchange of their health information and use of information technology to manage their health. For instance, there is uncertainty about what messages to communicate, how much information is optimal without overwhelming the consumer, and what appropriate communication vehicles exist for raising awareness.

Fortunately, state programs have developed programs and processes for involving consumers in many aspects of state government and planning. State policymakers should leverage the expertise of publicly funded health programs in consumer engagement. Public health, in particular, is very experienced in developing communication and messaging strategies on various health topics for public consumption. Public health is often considered a trusted, neutral entity that consumers can turn to for guidance and support.

Other public programs like Medicaid and the state employee plan should work in collaboration with public health to develop common messages and tools that inform consumers about the benefits of HIT and electronic HIE, as well as the associated risks and their rights. These public programs should coordinate with consumer and privacy advocates to maximize outreach activities.

As state policymakers leverage these programs to engage consumers, however, it is also important to consider the limitations these programs face in terms of workforce competency. There has always been a need for publicly funded health programs to have a workforce that can respond to the unique cultural and literacy needs of the populations they serve. Medicaid, SCHIP, public health, and state employee programs serve the most diverse and vulnerable of populations. These populations are diverse in many ways: socioeconomically, ethnically, racially, education level, etc.

It is because of this diversity that publicly funded health programs have a critical responsibility to communicate the risks and benefits of and what it means to participate in electronic HIE to the populations they serve. As such, the State Alliance agreed that investments in workforce development by states should include cultural and linguistic considerations:

STRATEGY 2

Provide publicly funded health programs with resources to develop cultural and linguistic competency.

States should provide human and financial resources to develop cultural and linguistic competency required to engage diverse Medicaid, SCHIP, and state employee health plan enrollees in HIT and electronic HIE.

As discussed in the previous strategy, programs like public health, Medicaid, and SCHIP have dedicated considerable resources to ensuring that tools and education materials that are linguistically and culturally appropriate. State programs should turn their attention to implementing these methods and approaches to advance consumer literacy and involvement in electronic HIE efforts. High levels of concern remain in disadvantaged communities about the protection of their information and government involvement in health care decisions, so there is an increased obligation on the part of the public programs to ensure that consumers of all characteristics understand and engage in dialogue on these efforts.

STRATEGY 3

Direct the Medicaid and state employee health plan programs to implement standards-based personal health records (PHRs).

State Medicaid and SCHIP agencies and state employee health plans should ensure their enrollees have portable, private, and secure access to personal health information through HIT systems such as PHRs.

A direct way of engaging consumers is by encouraging the use of HIT systems like PHRs and making such technologies available and accessible. A national survey of 1,003 Americans found that 65 percent of the public is interested in accessing personal health information electronically.⁷² Tools like PHRs can empower individuals to take greater responsibility over their health care and well-being. PHRs can help individuals improve compliance with physician recommendations and disease management plans; regularly monitor important data about themselves; verify accuracy of their medical information; facilitate communication about health issues with their families and providers; flag interactions, contraindications, side-effects, and allergies; and improve care outcomes.⁷³ There currently are national efforts to enable the portability of PHRs so that consumers can have their personal health information available and accessible to them and their providers.

States can leverage public programs such as Medicaid and state employee plans to stimulate adoption and use of PHRs by consumers. Medicaid and state employee plans can turn to the private sector and CMS for examples of related initiatives. Businesses including IBM and Carlson Companies have made PHRs available to their employees. Both firms offer employees incentives to populate the PHR and engage in healthy lifestyle activities, such as taking a health risk assessment, committing to smoking cessation, and exercising.⁷⁴ Similarly, CMS currently is conducting a pilot project to encourage Medicare beneficiaries to use PHRs. Launched in June 2007, the 18-month project enables certain Medicare beneficiaries to access and use a PHR, populated with Medicare claims data, through participating health plans and through www.mymedicare.gov. This is an effort by Medicare to empower beneficiaries to use Internet-based tools to track their health care services and provide them with other resources to better communicate with their providers.⁷⁵

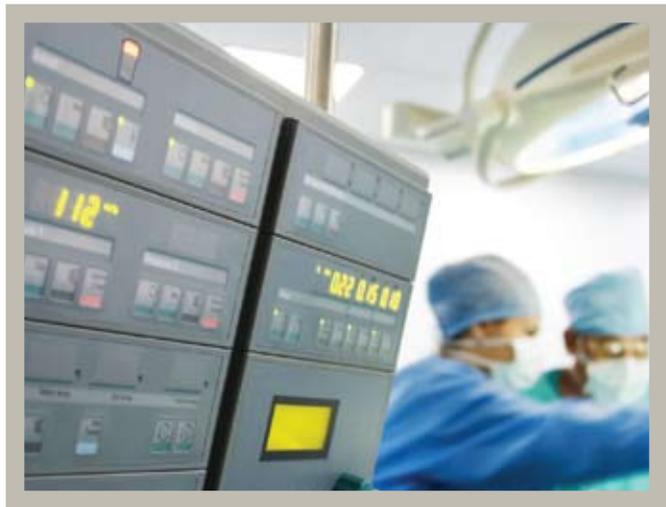
Similar to Medicare's pilot project, state Medicaid and employee health programs also can populate PHRs with historical, claims-based clinical data. Real-time information can be populated if the EHR system implemented has a PHR function or can support bi-directional connectivity with a PHR.

RECOMMENDATION 6: DEVELOP WORKFORCE AND AGENCY CAPACITY TO SUPPORT ELECTRONIC HIE EFFORTS

As states and state agencies have engaged in HIT and electronic HIE efforts across the country, they have increasingly recognized the need to support the capacity of state workforces to assess, procure, and implement these complex technologies. Public sector entities have the same need for these skills and competencies, but the need comes at a time when state health care workforces already face significant challenges.

For example, states face operational challenges, particularly related to employee recruitment and retention. Because of state balanced budget requirements, state agencies often struggle to support competitive salaries—especially in the areas of health care, information technology, and project and program management—

posing significant challenges for both recruitment and retention. As the average age of state employees has increased to over 45 years, the need for recruitment and staff training has become ever more important.^{76,77,78}



As noted, publicly funded health programs lack internal resources for strategic and policy planning related to HIT and electronic HIE issues. State agencies face significant difficulties when ramping up to support various HIT and electronic HIE projects, citing lack of internal experience and skills in project management and RFP processes associated with these complex projects.⁷⁹

The State Alliance highlighted three primary areas of employee development needed to facilitate HIT and electronic HIE:

- Leadership and management skills development;
- Resources to support program specific HIT/electronic HIE workforce development; and
- Development of cultural competency to address the wide reach of HIT and electronic HIE projects.

For state agencies to implement effective HIT and electronic HIE projects, executive leadership and program management staff must understand both the breadth and complexity of HIT and electronic HIE, as well as the potential impact of these technologies on their programs and on the quality and safety of health care in general. State policymakers should be mindful of workforce needs and support efforts by the publicly funded health programs as they undertake HIT and electronic HIE projects on behalf of the state. As previously noted, states can leverage publicly funded health programs to drive major HIT and electronic HIE initiatives. These programs require informed and skilled leadership and staff who understand both policy, business, and technical needs necessary to effectively launch and sustain such initiatives. To support this rationale, the State Alliance offers the following strategy for states:

STRATEGY 1

Support publicly funded health programs in their efforts to secure executive leadership who are trained in and understand the complexities involved with HIT and electronic HIE projects.

Governors and state legislatures support publicly funded health programs by making available resources and seeking outside expertise to support the development of executive leadership and programmatic management in the areas of health informatics, change management, project management, HIT provider and consumer communication, outreach and involvement, vendor management, and systems-thinking competencies.

The Medicaid system provides a good example of workforce training needs. Medicaid agency staff information technology experience often revolves around the Medicaid Management Information System (MMIS), the claims processing system. Many Medicaid agencies are faced with the need to modernize these MMIS systems to both be more effective, but also to further the systems' capabilities to support other HIT systems and support electronic HIE. The CMS Medicaid Information Technology Architecture (MITA) initiative is meant to give guidance to Medicaid agencies as they modernize their MMIS. Despite having a framework for modernizing Medicaid systems, however, many Medicaid agencies have identified as a key challenge the need for workforce education and training on the functions and appropriate uses of new data systems to move MMIS toward MITA-compliance.⁸⁰ Recognizing the workforce challenges Medicaid programs face, the State Alliance recommends that states:

STRATEGY 2

Provide Medicaid with technical assistance resources.

To successfully implement health IT and electronic HIE initiatives and to adopt MITA, state Medicaid agencies will require new technology, project management, policy, legal, and programmatic competency development. Therefore, states should fund greater development of technical assistance resources for state Medicaid, SCHIP, and information technology agencies to build workforce competency for electronic HIE.

Akin to the specialized knowledge and skills needed to modernize antiquated Medicaid information systems, public health agencies also face workforce challenges in their efforts to upgrade public health systems to be more capable of interoperable electronic data exchange. Public health systems have many functions. Some have epidemiologic functions, enabling the tracking and monitoring of diseases and conditions for surveillance and population health purposes. Others support clinical care functions, such as immunization and disease registries, that support delivery of care through public health clinics and other settings. In many cases, public health information systems are developed and maintained by a software programmer who is the only one who knows the program coding structure. Modernizing these systems is a huge challenge, let alone enabling interoperability across different, siloed public health systems. But to fully realize the benefits of electronic HIE in enabling population health improvements, updating these systems is necessary. Public health will need financial resources to train current staff on public health informatics and attract a new generation of workers that can modernize homegrown systems. The State Alliance, therefore, recommends states:

STRATEGY 3

Provide public health agencies with resources necessary to train and hire workforce to support public health system modernization efforts.

Governors and state legislatures should make available resources (e.g., funding in state budgets) to publicly funded health programs to support their ability to secure staff experienced and educated in public health informatics and train their existing workforce to develop leadership and maintain competency in this area.

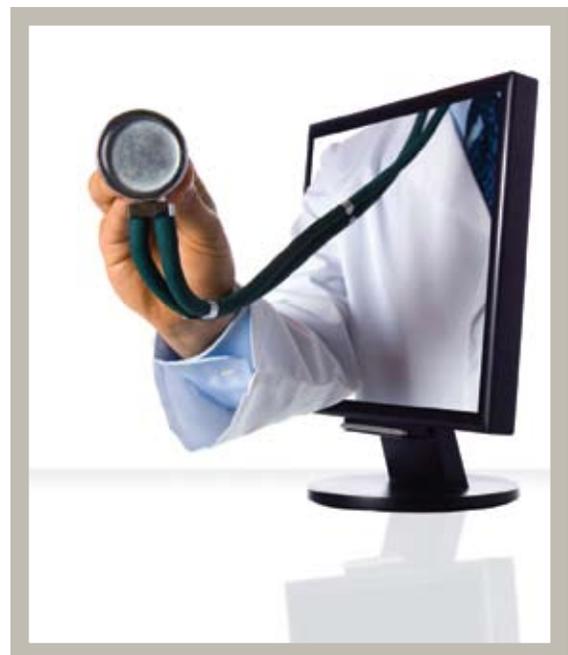
The State Alliance recognizes that these changes will take time. As staff expertise is being developed by individual states, groups of states might consider collaborating with each other to network and share expertise and resources to increase workforce capacity.

STRATEGY 4

Establish flexible financing mechanisms to maximize public program, cross-agency investments.

Governors and state legislatures should align to establish flexible financing mechanisms (e.g., pooling funds across relevant state agencies, bridge funding between federally funded programs) across public agencies and within state jurisdictional boundaries to develop and support electronic HIE and ensure that state data partners (e.g., Medicaid, public health, state employee health plans) can operationally and financially sustain electronic HIE for the purposes of it being a necessary public benefit and utility to improve public health and health care value to state residents.

As part of supporting public programs in their efforts to enable electronic exchange of health information and HIT adoption through workforce development and training, state policymakers should consider ways to maximize their investments by enabling these programs to conduct joint ventures with each other and across jurisdictions. Currently, state processes for financing and administering publicly funded health programs are fragmented and inflexible. Given state budget limitations, it may be useful to bring together similar agencies that plan to implement HIT and electronic HIE to identify financing mechanisms to jointly invest in these efforts. For example, in some states, agencies that administer Medicaid, mental health, substance use, juvenile justice, and developmental disabilities all provide direct care, often to common populations and have brought these disparate agencies together to plan for joint ventures in HIT and electronic HIE.



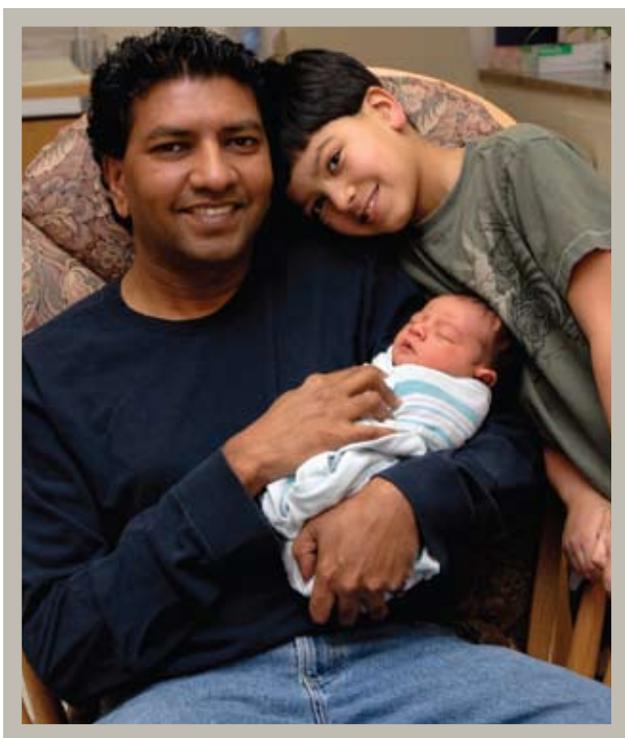
CONCLUSION

States have tremendous opportunity to drive major reforms in the health care system that are necessary to improving the quality and efficiency of health care services delivered, and certainly, the health of the American people. The transformation is long overdue, and states have a major role to play in accelerating efforts to achieve the needed changes.

Promoting HIT adoption and developing electronic HIE can help us change for the better. At the least, the U.S. health care system will be modernized—updated to the latest technology that other industries have had years to benefit from. At the most, the technology will be interconnected so that we can begin to experience quality-based care and feel safe in accessing health services. We also can feel confident that our health system is prepared to keep us safe and quickly respond to public health needs.

The State Alliance for e-Health calls on states to act now—and to act collaboratively— to make the needed reforms happen. As noted earlier, a flurry of activities—while commendable—if not smartly coordinated may only result in an electronic version of the siloed, inefficient system we have today. With this understanding, the State Alliance works as a forum through which stakeholders can come together. For the past year, the State Alliance has been developing the guidance contained in this report on ways in which states can take coordinated action to enhance existing HIT and HIE efforts and accelerate health system transformation. It is eager to make the vision of an interconnected, efficient, quality-based health care system a reality for all Americans.

The State Alliance recognizes, however, that this report does not address all the challenges that contribute to slow adoption of HIT and development of electronic HIE. There are complexities still in need of exploration. These include privacy and security of interstate electronic HIE transactions; the role of states in supporting implementation efforts; and models for financing, accountability, oversight and sustainability of electronic HIE. Over the next year, the State Alliance will examine these issues. The State Alliance hopes that the guidance in this report and in future reports will be of great assistance to states in shepherding e-health efforts and pushing toward reform.



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APPENDIX 1

MEMBERS OF THE STATE ALLIANCE TASKFORCES (2007–2008)

HEALTH INFORMATION PROTECTION TASKFORCE

The co-chairs for the Health Information Protection Taskforce are William D. Hacker, MD, FAAP, CPE, Commissioner, Kentucky Department for Public Health, and Sallie Hunt, Chief Privacy Officer, West Virginia Health Care Authority.

Members include:

- Holt Anderson, Executive Director, North Carolina Healthcare Information and Communications Alliance, Inc.
- Thomas W. Arnold, Deputy Secretary for Medicaid, Florida Agency for Health Care Administration
- Justin T. Barnes, Vice President of Marketing and Government Affairs, Greenway Medical Technologies, Inc.
- Jim Bryant, PhD, Chief Information Officer, State of South Carolina
- Jane Cheeks, JD, MPH, State AIDS Director, Alabama Division of HIV/AIDS Prevention & Control
- Bobbie Holm, Chief, Policy Branch, California Office of HIPAA Implementation
- Kathy Hudson, PhD, Director, Genetics & Public Policy Center, and Associate Professor, Berman Institute of Bioethics, Institute of Genetic Medicine, Department of Pediatrics, Johns Hopkins University
- JoAnn Lamphere, DrPH, National Coordinator, State Health & LTC Team, Government Relations and Advocacy, AARP
- Scott Morgan, National Privacy and Security Compliance Officer, Kaiser Foundation Health Plan, Inc.
- Michele O'Connor, MPA, RHIA, Senior Director Healthcare Practice, Initiate Systems, Inc.
- John Prestridge, Senior Manager, Industry & Technical Marketing, Citrix Systems, Inc.
- Alison Rein, MS, Senior Associate, AcademyHealth
- Kristen Rosati, JD, Partner, Coppersmith Gordon Schermer & Brockelman
- Vera Rulon, MS, RHIT, CCS, Director, Program Development & Administration US External Medical Affairs Chief Medical
- W. Ob Soonthornsima, Senior Vice President and Chief Information Officer, Blue Cross and Blue Shield of Louisiana

HEALTH CARE PRACTICE TASKFORCE

The co-chairs for the Health Care Practice Taskforce are Thelma Armstrong, Director, Eastern Montana Telemedicine Network, Billings Clinic, and Darleen Bartz, PhD, APRN, Chief, Health Resources Section, North Dakota Department of Health.

Members include:

- Howard Burde, Attorney and Chair, Health Law Group, Blank Rome LLP
- Mary DeVany, Director, Avera Telehealth
- L. Allen Dobson, Jr., MD, President/CEO, Cabarrus Family Medicine
- William Harp, MD, Executive Director, Virginia Board of Medicine
- Eileen Koski, mPhil, Director, Informatics Research, Quest Diagnostics Inc.
- William Kramer, Deputy Chief Legal Officer, Networks & Health Delivery, Aetna Inc.
- Len Lichtenfeld, MD, Deputy Chief Medical Officer, American Cancer Society
- John Maese, MD, Physician, Island Internists
- Holly Miller, MD, MBA, Vice President and Chief Medical Information Officer, University Hospitals and Health System
- Judy Monroe, MD, Health Commissioner, Indiana State Department of Health
- Sarah Ratner, Senior Legal Counsel, CVS Minute Clinic
- Dalora Schafer, Assistant Commissioner, Oklahoma Insurance Department
- Andrew Wiesenthal, MD, SM, Associate Executive Director, Permanente Federation
- William Winsley, Executive Director, Ohio State Board of Pharmacy
- Rowen Zetterman, MD, MACP, MACG, Chief of Staff, VA Nebraska/Western Iowa Health Care System and President, Nebraska Medical Association

HEALTH INFORMATION COMMUNICATION AND DATA EXCHANGE TASKFORCE

The co-chairs for the Health Information Communication and data Exchange Taskforce are Rhonda Medows, MD, FAAFP, Commissioner, Georgia Department of Community Health, and Anthony Rodgers, Director, Arizona Health Care Cost Containment System.

Members include:

- Patricia Anderson, Commissioner, Minnesota Department of Employee Relations
- Ann Boynton, Undersecretary, California Health and Human Services Agency
- Devore Culver, Director, Maine HealthInfoNet
- Christine Dutton, Chief Counsel, Office of Legal Counsel, Pennsylvania Department of Health

- Edward Ewen, MD, FACP, Physician, Director of Clinical Informatics, Christiana Care Center for Outcomes Research
- Gregory Farnum, President, Vermont Information Technology Leaders, Inc.
- David Gifford, MD, MPH, Director, Rhode Island Department of Health
- Steve Hill, Administrator, Washington State Health Care Authority
- Steven Hinrichs, MD, Director, Nebraska Public Health Laboratory
- J. Michael Leahy, Chief Executive Officer, OCHIN
- Ruth Turner Perot, MAT, Executive Director and CEO, Summit Health Institute for Research and Education, Inc.
- Michele Romeo, Chief Information Officer, Division of Medical Assistance and Health Services, New Jersey Department of Human Services
- Will Saunders, President, ACS Heritage, Inc.
- Teresa Takai, Chief Information Officer, Michigan Department of Information Technology
- Alan E. Zuckerman, MD, FAAP, Attending Pediatrician, Georgetown University Hospital, Primary Care Informatics Program Director, Department of Family Medicine, Georgetown University School of Medicine

APPENDIX 2

RESOURCES FOR FIRST ANNUAL REPORT

All resources available at www.nga.org/center/ehealth.

ANALYSIS OF LICENSURE LAWS, RULES, AND PROCEDURES AS THEY RELATE TO E-HEALTH AND TELEHEALTH. *CENTER FOR TELEHEALTH AND E-HEALTH LAW, AUGUST 2007.*

To support the Health Care Practice Taskforce, the Center for Telehealth and e-Health Law analyzed state licensure laws and regulations to assess how these laws can be a barrier to the practice of telehealth within the physician, nursing and pharmacist professions. The findings include examples of the barriers and administrative hurdles created by the current licensure system. The report also sets forth five concrete solutions that can address the various reasons that state licensure is a barrier to telehealth.

ELECTRONIC PRESCRIBING ISSUE BRIEF. NATIONAL GOVERNORS ASSOCIATION CENTER FOR BEST PRACTICES, EXPECTED RELEASE FALL 2008.

This report, developed by the NGA Center for Best Practices with leadership from the State Alliance, examines state and national progress related to e-prescribing adoption and use in the American health care system and the obstacles that remain. It summarizes the benefits of e-prescribing and identifies opportunities to maximize health care improvements through its use.

FACILITATING ELECTRONIC HEALTH INFORMATION EXCHANGE IN STATE PUBLICLY FUNDED HEALTH PROGRAMS: FINDINGS FROM INTERVIEWS WITH STATE AGENCY LEADERS. ALFREDS, SHAUN, ET AL., UNIVERSITY OF MASSACHUSETTS MEDICAL SCHOOL CENTER FOR HEALTH POLICY AND RESEARCH, APRIL 2008.

To support the Health Information Communication and Data Exchange Taskforce, the University of Massachusetts Medical School conducted an analysis of state agencies across the country that have significant HIT and electronic HIE initiatives planned or underway. Interviews as well as a two-hour expert panel call were conducted to develop recommendations to address the challenges and issues related to intrastate agency data sharing.

The report presents a current view of the level of HIT and electronic HIE initiatives undertaken by Medicaid, public health, and state employee health plans, the challenges and obstacles these agencies have encountered in the planning, development and implementation of these initiatives, and their recommendations to address those challenges and obstacles.

REPORT FROM THE HEALTH INFORMATION PROTECTION TASKFORCE TO THE STATE ALLIANCE FOR E-HEALTH. AUGUST 2007.

This report reflects the outcomes of the Health Information Protection Taskforce of the State Alliance. It describes the taskforce's findings and recommendations with respect to the current status of state privacy laws, security challenges to electronic health information exchange, implementation of federal privacy requirements, and consumer education.

REPORT FROM THE HEALTH CARE PRACTICE TASKFORCE TO THE STATE ALLIANCE FOR E-HEALTH. AUGUST 2007.

This is the first of two reports from the Health Care Practice Taskforce of the State Alliance. In this report, the taskforce begins to identify and address licensure and liability issues that create barriers to electronic HIE. The primary focus of this report is state licensure requirements.

REPORT FROM THE HEALTH INFORMATION COMMUNICATION AND DATA EXCHANGE TASKFORCE TO THE STATE ALLIANCE FOR E-HEALTH. OCTOBER 2007.

This report reflects the early outcomes of the Health Information Communication and Data Exchange (HICDE) Taskforce of the State Alliance. It identifies challenges as well as opportunities that publicly funded health programs possess in this arena—in particular, the structure of the HIT/HIE initiative; leadership; financial and contributory responsibility; interoperability; and consumer involvement. The report sets forth recommendations that the taskforce felt were necessary for the success of electronic HIE initiatives driven by publicly funded health programs.

SECOND REPORT FROM THE HEALTH CARE PRACTICE TASKFORCE TO THE STATE ALLIANCE FOR E-HEALTH. OCTOBER 2007.

This is the second report from the Health Care Practice Taskforce of the State Alliance. It identifies several barriers to electronic HIE in the current credentialing process, including the way credentialing verification is conducted, the lack of uniform core credentials and variations in requirements related to criminal background checks. It also sets forth recommendations that address these credentialing issues.

STATE E-HEALTH ACTIVITIES IN 2007: FINDINGS FROM A STATE SURVEY. SMITH, VERNON, ET AL., THE COMMONWEALTH FUND AND NATIONAL GOVERNORS ASSOCIATION, FEBRUARY 2008.

This report is based on a 2007 survey of states and the District of Columbia. The purpose of the survey was to identify current e-health initiatives, priorities, and challenges within state governments. It finds virtually all states now are actively engaged in e-health strategies to facilitate the use of information technology to make the health care system more effective while providing greater value and higher quality. States see e-health initiatives as high-priority; however, they and their private sector partners face significant challenges that accompany such initiatives, including the issues of cost and time required for implementation and for realizing a return on investment. Nevertheless, as reflected in the wide range of e-health activities across the states, a consensus has emerged that these policies and initiatives are significant and well worth the effort.

Available at the State Alliance or Commonwealth Fund Web page: http://www.commonwealthfund.org/publications/publications_show.htm?doc_id=669309

STATE LEGISLATIVE ACTIONS IN HEALTH IT AND ELECTRONIC HEALTH INFORMATION EXCHANGE FINANCING. NATIONAL CONFERENCE OF STATE LEGISLATURES, AUGUST 2007.

This study examines how states are financing HIT. It looks at what HIT states are financing, how legislators view HIT financing and analyzes state legislation. It identifies current and proposed state activities and points to issues that continue to be debated within and among states. NCSL gathered information by analyzing recent legislative activity related to HIT funding, by interviewing key state legislators and legislative staff and by talking with state budget and financing experts.

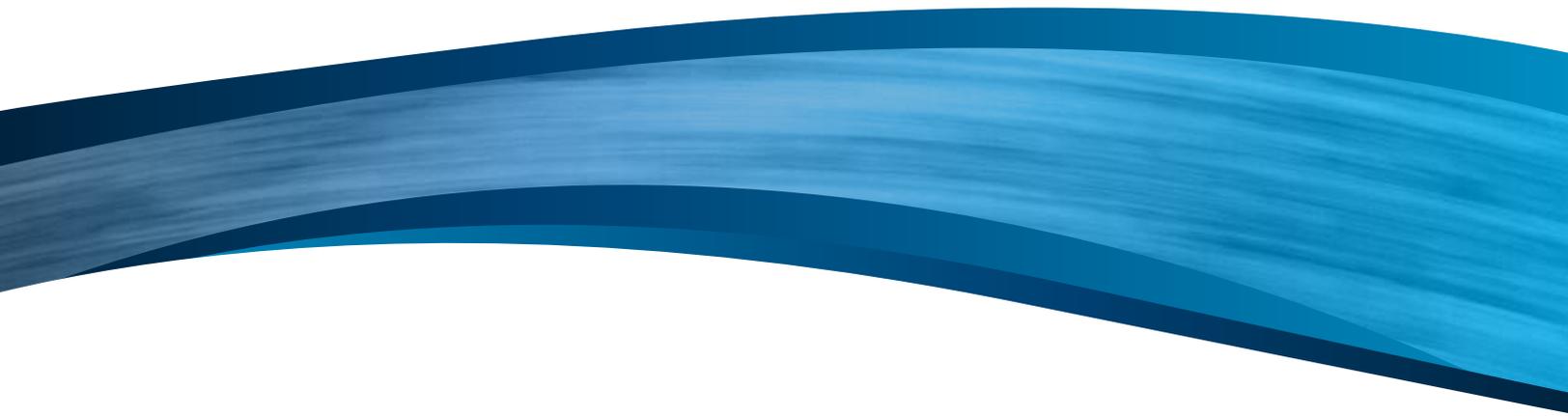
The report provides a discussion of the variety of HIT activities states are financing, and describes where this issue sits with states and what states still want to better understand, such as the business case and true incidence of costs, so they can play a role in aligning the benefits and incentives of HIT.

STATE LEGISLATIVE OPPORTUNITIES AND OPTIONS RELATING TO E-HEALTH. NATIONAL CONFERENCE OF STATE LEGISLATURES, AUGUST 2007.

The development of HIT policies is taking place in a rapidly changing environment, with federal, state and philanthropic organizations playing important roles. States, as usual, are the laboratories. HIT policymaking can be as simple as updating medical record laws and as profound as health system reform. This paper identifies opportunities for states to act, outlines alternatives, and illustrates them with options that have been proposed by states.

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