

**PLAN FOR ESTABLISHING BEST IN THE NATION  
STATEWIDE HEALTH INFORMATION EXCHANGE AND  
ELECTRONIC HEALTH RECORDS ADOPTION BY 2012**

**Maryland Department of Health and Mental Hygiene  
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# PLAN FOR ESTABLISHING BEST IN THE NATION STATEWIDE HEALTH INFORMATION EXCHANGE AND ELECTRONIC HEALTH RECORDS ADOPTION BY 2012

## Executive Summary

The health care sector in Maryland and in the United States has lagged behind many other sectors of the economy in the adoption of information technology – a particularly striking lag given that health care constitutes one-sixth of the national economy. As a nation, we have also lagged behind many European countries, suggesting that the problem is not primarily technological but financial and attitudinal.

As we continue in a period of difficult economic realities, it is of paramount importance to leverage our resources as a State to create cost savings while building the necessary technological infrastructure to meet the increasingly complex needs of healthcare providers and residents.

The adoption of electronic health information systems (Health IT) greatly reduces the high administrative costs associated with health care, and provides more-comprehensive treatment capacity for hospitals and physicians by facilitating real-time access to patient medical information.

To this end, the O'Malley-Brown Administration has set the goal of putting in place by 2012 the tools for Maryland to be a national leader in adopting the components of health information technology (Health IT).

Creating “Best in the Nation” health IT status is an ambitious task, involving the successful completion at national-model levels of two core strategic components:

- Developing a method to exchange information in a private and secure manner while assuring that only appropriately authorized individuals have access to the personal health information
- Promoting the adoption of robust electronic health records (EHRs) among providers

The following plan will outline the State's efforts to create a comprehensive, multi-stakeholder driven statewide health information exchange; build strong incentives for the adoption of electronic health records by hospitals and doctors in Maryland; and tap into all available federal resources to defer costs and increase the speed of implementation of the State's efforts.

## Background

Maryland has approximately 47 acute care hospitals, with some form of EHR adoption reported in approximately 80 percent of the hospitals. Nearly 60 percent have computerized physician order entry (CPOE). About 17 percent are actively implementing technology to enable some electronic data sharing with appropriately authorized users outside the hospital.

Additionally, Maryland has roughly 13,795 physicians in active practice. These physicians treat patients in approximately 7,907 practices. Physician EHR adoption parallels the nation, at approximately 20 percent. However, many of these EHRs do not have clinical decision support, CPOE, e-prescribing, or results receipt and delivery functionalities, meaning there is great room for improvement in the implementation of Health IT, even for physicians already using some form of Electronic Health Records.

In the past year, Maryland has begun to promote community data exchanges in jurisdictions where a hospital acts as the technical hub. The number of these “service area health information exchanges” (SAHIEs) is increasing

throughout the state. Last year, the Maryland Health Care Commission convened stakeholders to develop standard policies that will enable the exchange of data among SAHIEs.

## Goal/ Strategic Approach

The Governor's overall Strategic Goal is to establish a statewide health information exchange and a system that ensures the universal adoption and utilization of electronic health records that is the best in the nation by 2012.

Building from the existing landscape of electronic health information sharing in the State, the Maryland Department of Health and Mental Hygiene (DHMH), through its Maryland Health Care Commission (MHCC), has defined the following three (3) strategies as part of its plan for Health Information Technology enhancement, the completion of which will position Maryland as having best in the nation health IT status:

1. Construction of a comprehensive multi-stakeholder driven statewide information exchange for the secure sharing of electronic health information among health care providers in Maryland
2. Widespread increases in the adoption and meaningful use of Electronic Health Records by doctors and hospitals in the State
3. Maximization of all available federal resources, including the American Recovery and Reinvestment Act, to bolster the State's Health IT efforts

## Strategy 1 – Construction of a Statewide Health Information Exchange

Implementing a statewide health information exchange is part of a long-term strategic project to improve the quality, safety, and efficiency of care that will create cost savings for the entire health care system. A statewide health information exchange will allow providers across Maryland to share critical health information to improve the quality and safety of health care to patients by ensuring that providers have greater access to secure and accurate health information. A Maryland exchange will also enhance public health initiatives such as biosurveillance, disease management, and emergency preparedness efforts. A research study published in *Health Affairs* (Walker, et al., The Value of Health Care Information Exchange and Interoperability, January 19, 2005) suggests that a fully implemented health information exchange could save states around \$500 million each year in reduced paperwork, test duplication, and community health status improvements.

Efforts are currently underway to implement a multi-use, secure statewide health information exchange (HIE) in Maryland. This ambitious plan for advancing health information technology (HIT) balances the need for information sharing with the need for strong privacy and security policies, while maintaining a judicious approach to funding the HIE. Establishing an HIE with sound interoperability will ensure that all health information is securely delivered electronically in real-time to individuals and their providers when needed, and that this information is available for analysis for continuous improvement in the delivery of care and research. The statewide HIE will also allow providers to maximize incentive funding under the *American Recovery and Reinvestment Act of 2009* (ARRA).

Maryland has moved into the implementation phase for the statewide HIE after several years of planning. The strategic approach has consisted of the following key activities:

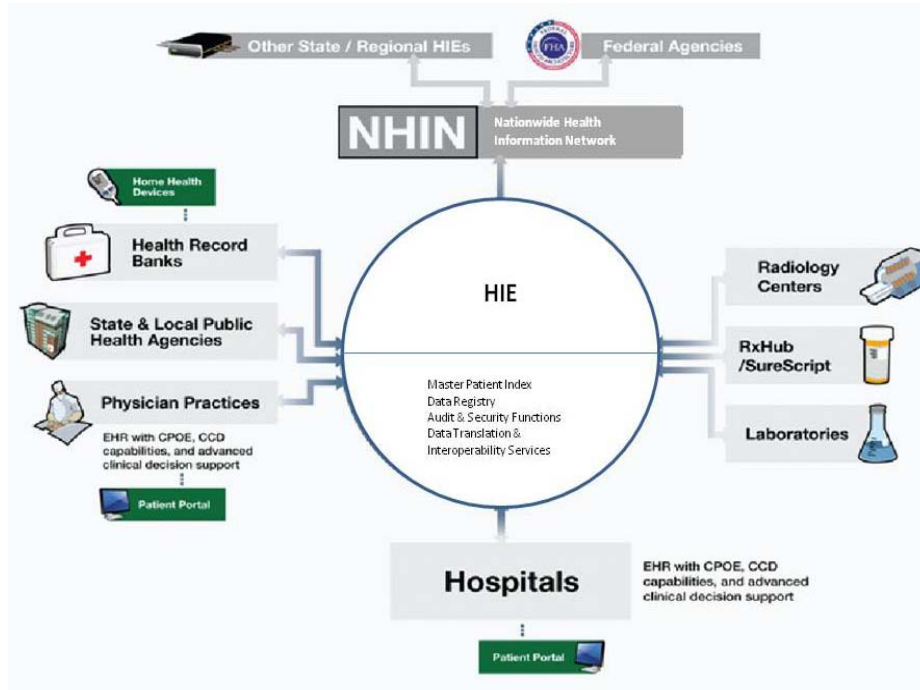
- ***Building trust and consensus:*** Maryland believes that broad agreement on key policy issues – particularly privacy, security, and data use – should precede the development of an HIE. MHCC brought together a series of multi-stakeholder groups to discuss a range of policy issues and published a number of major policy reports based on these consensus-building deliberations. These deliberations formed the foundation for further actions directed towards planning and implementing a statewide HIE.

- ***Planning the statewide HIE:*** MHCC funded two independent multi-stakeholder groups in 2008 to develop two competing approaches for the governance, architecture, privacy and security, access and authentication, financing, and establishment of a sustainable business model. These reports were evaluated and the best ideas from the two groups, and from a study of HIEs in various stages of development nationwide, consolidated into a Request for Applications (RFA) released on 4/15/09.
- ***Designating and funding Maryland's statewide HIE:*** From the RFA, MHCC and a technical panel consisting of internal and external reviewers recommended that the Chesapeake Regional Information System for our Patients (CRISP) receive \$10 million in funding from Maryland's all-payor rate setting system to implement a statewide HIE. CRISP is a strong not-for-profit collaborative effort among the Johns Hopkins Health System, MedStar Health, University of Maryland Medical System, Erickson Retirement Communities, and Erickson Foundation, with notable support from two dozen major stakeholders across the state, including minority and safety net provider interests.
- ***Establishing a Policy Board with Strong Representation from the General Public:*** While a collaborative with strong provider representation will develop and operate the HIE, the Policy Board associated with the MHCC will establish the policies governing the exchange. This separation of responsibilities assures a strong role for the public in both policy development and operational oversight. Members of the Policy Board have been selected to assure expertise, breadth of stakeholder representation, and a strong consumer voice in establishing the policies essential to building trust. The statewide HIE is designed to deliver essential patient information to authorized providers at the time and place of care to help assure appropriate, safe, and cost-effective care; store and transmit sensitive health information privately and securely; provide patient access to important elements of an individual's clinical record to help engage patients in their own care; provide a means for the patient to exercise appropriate control over the flow of private health information, both as a matter of right and as a means of assuring trust; provide a secure method of transmitting administrative health care transactions; and gather information from the health care system to research efficiency and cost-effectiveness of care, to measure quality and outcomes of care, and to conduct biosurveillance and post-marketing surveillance of drugs and devices.

## **Funding**

The state has committed \$10 million in funding through its all-payor rate setting system for the implementation of a statewide HIE. These funds will be disbursed annually based upon a budget that reflects findings from an independent review and a defined set of deliverables. An incremental approach to Use Case implementation and provider connectivity balances the use of state funding along with revenue generated by the statewide HIE. Potential funding from the *State Health Information Exchange Cooperative Agreement Program* will not be used to supplant state funding. Instead, these funds will be used to expand Use Case implementation and accelerate connectivity of priority primary care providers. The \$10 million in all-payor funding will provide the matching funds required by ARRA.

## Maryland Health Information Exchange Fundamental Design



### Project Timeline/Actions

With the implementation phase of the statewide health information exchange in progress, the CRISP team has set out the following timeline through 2015 of key actions associated with construction and roll-out of the components that will make up the exchange, including the schedule for introducing the various Use Cases for exchange of information.

Maryland's Health Information Exchange Timeline																										
Task/Milestone	10/1/2009	1/1/2010	4/1/2010	7/1/2010	10/2/2010	1/1/2011	4/1/2011	7/1/2011	10/2/2011	1/1/2012	4/1/2012	7/1/2012	10/2/2012	1/1/2013	4/1/2013	7/1/2013	10/2/2013	1/1/2014	4/1/2014	7/1/2014	10/2/2014	1/1/2015	4/1/2015	7/1/2015	10/2/2015	
Core Team Selection	█																									
Technology RFP		█																								
Technology Award(s)			█																							
Develop Technology Project Plan				█																						
Master Data Use Agreement Development					█																					
Codify Initial Policies and Guidelines						█																				
Communication and Outreach Plan							█																			
Core Infrastructure Config and Roll-Out								█																		
Prescription Fill Status and/or Medication Fill History									█																	
Electronic Clinical Laboratory Ordering and Results Delivery										█																
Electronic Prescribing and Refill Requests											█															
Discharge Summary Exchange												█														
Clinical Summary Exchange													█													
Electronic Clinical Radiology Ordering and Results Delivery														█												
Electronic Eligibility and Claims Transactions															█											
Electronic Public Health Reporting																█										
Quality Reporting Capabilities																	█									
<b>Key</b>	█ <i>Develop/Implementation of Task</i>												█ <i>Task Operational</i>													

## Outcomes/Reporting

The successful development and implementation of the statewide HIE will be defined by how beneficial health information is in improving quality, reducing health care costs, and improving health outcomes. Achieving these benefits is dependent on much more than just technology. The statewide HIE will work collaboratively with DHMH to develop reporting capabilities that will allow DHMH to report required data to the Centers for Disease Control. Discussions with DHMH are already underway to develop a Use Case for testing in 2010.

## Strategy 2 – Spurring the Adoption of Electronic Health Records

Electronic health records (EHRs) contain confidential patient information such as an individual's name, address, date of birth, a summary of the patient's medical history, and documentation of each event, including symptom, diagnosis, treatment and outcome. The successful adoption of electronic health records is a requirement for exchanging patient information electronically, and is viewed by a growing number of physicians as a necessary tool for practicing medicine. Electronic health records have the potential to put the entire patient record in front of a physician on an as needed basis; the expansion of their use in the State will strengthen long-term strategic efforts to improve the quality, safety, and efficiency of health care and create cost savings for the entire health care system. Current EHR adoption rates by physicians in Maryland stand at approximately 20%, on par with the national average for states.

The O'Malley-Brown administration has prioritized the transition to electronic health records by positioning Maryland on the forefront of national initiatives to promote and incentivize the adoption of EHRs by physicians and hospitals in the State. To this end, the State is undertaking the following key initiatives to ensure the widespread adoption of electronic health records by 2012:

- ***Task Force to Study Electronic Health Records:*** The legislatively established Task Force to Study Electronic Health Records (Task Force) consisted of 26 members, including 20 appointees of the Governor. The Task Force was formed in 2005 and charged with studying the current and potential expansion of EHR utilization in Maryland, including electronic transfer, e-prescribing, computerized provider order entry (CPOE); and the cost of implementing these functions. The Task Force also studied the impact of the current and potential expansion on school health records and patient safety and privacy. The Task Force presented 13 recommendations to facilitate EHR adoption among providers. The Final Report was released in 2007 and is located at: [http://mhcc.maryland.gov/electronichealth/presentations/ehr\\_finalrpt0308.pdf](http://mhcc.maryland.gov/electronichealth/presentations/ehr_finalrpt0308.pdf).
- ***EHR Product Portfolio:*** MHCC developed an EHR Product Portfolio (Portfolio) to provide physicians with evaluation and comparison information on EHRs. The Portfolio contains a core set of product information to assist physicians in assessing EHRs and includes only those vendors that have met the most stringent and recent certification standards from the Certification Commission for Health Information Technology (CCHIT) relating to functionality, interoperability, and security. Vendors that have offered discounts to Maryland providers are included in the Portfolio and have provided details regarding product information, pricing, privacy and security policies, and user references that were developed into a consumer reference report. The Portfolio is located at: <http://mhcc.maryland.gov/electronichealth/ehr/cchitehrvendors.html>.

The MHCC expects to develop additional Portfolios for other health care sectors, such as long term care. The Portfolios are updated semi-annually to ensure that providers have state-of-the-market information available. Future enhancements will include information related to navigation and usability.

- ***Centers for Medicare & Medicaid Services EHR Demonstration Project:*** Maryland is one of only four states selected to participate in the Centers for Medicare and Medicaid Services (CMS) five-year demonstration project to encourage small to medium sized primary care physician practices to use EHRs. The project aims to

improve the quality of patient care by improving the way health care information is managed. The Maryland/DC Physician EHR Demonstration Collaborative (EHR Collaborative) was formed to assist CMS in its efforts to increase EHR adoption. The EHR Collaborative is comprised of MedChi (The Maryland State Medical Society), the MHCC, the Medical Society of the District of Columbia, and other stakeholders. Over 250 physician practices in the Maryland/DC area were selected to participate in either a control or treatment group. The EHR Collaborative promotes EHR adoption and will educate providers in becoming meaningful users of EHRs. Details of this initiative can be found at:

<http://mhcc.maryland.gov/electronichealth/cmsdemo/index.html>.

- ***Electronic Health Records – Regulation and Reimbursement:*** The Maryland General Assembly passed (HB 706) legislation titled *Electronic Health Records – Regulation and Reimbursement*, which was signed into law on May 19, 2009 by Governor O’Malley. The law aims at expanding the adoption of EHRs through incentives from state-regulated payers to providers who use certified EHRs that are capable of connecting to an HIE. The law requires the MHCC to complete a number of support activities specifically aimed at fostering the adoption of HIT, including the development of the reimbursement regulations. Developing these regulations will require the involvement of stakeholders in the discussions. MHCC will use the feedback from these discussions to develop the regulations.
- ***Management Services Organizations:*** MSOs are considered a viable alternative to the traditional stand-alone EHR client-server model, which requires practices to individually negotiate pricing and maintain the technology required to support the software. MSOs are capable of supporting multiple EHR products at reduced costs through economies of scale and bulk purchasing. The MSO approach uses the Application Service Provider (ASP) model to host one or more EHR systems through the Internet. MSOs often provide (24/7/365) product support through a Network Operation Center (NOC).  
In accordance with legislation, the MHCC is required to designate one or more MSOs. The MHCC’s vision of designated MSOs is one that offers choices of EHR products, meets national certification requirements, and uses an NOC that, at a minimum, complies with the *Health Insurance Portability and Accountability Act of 1996* (HIPAA), Administrative Simplification Provisions. The MHCC will designate these MSOs by October 2012.
- ***School Health Records:*** The Task Force included school health records in its study of EHRs and recommended the encouragement of EHR adoption in school-based health centers. The MHCC is acting upon this recommendation and has completed a market scan on the use of EHRs in public schools, and has identified EHR vendors in the industry that may be helpful in the adoption of EHRs in public schools. The Task Force noted that the laws governing the protection of health information and those governing education records are not always consistent and need further attention. The MHCC intends to convene a workgroup of stakeholders, such as school officials and vendors, to develop an outreach and education program to help increase the adoption of EHRs in Maryland’s public schools. MHCC will engage these stakeholders to assist in the development of a Portfolio that assists schools in the assessment and selection of EHRs.

## Challenges

Funding is a leading barrier to electronic health record adoption. Absent reimbursement reform, there is a poor, or even a negative, incentive for physicians to implement an electronic health record system. An electronic health record system can cost around \$15,000 - \$35,000 per practice with additional fees based on the number of users. The complexities of implementation pose unique challenges for physicians that choose to implement an electronic health record. Installing the system takes about nine months to one year for full integration by a small practice. Physicians often maintain two technology systems during the installation period as a way to ease potential installation problems, some practices run parallel systems using both paper charts and an electronic health records for a short period of time. In some cases, the transition period can negatively impact patient waiting time, claims processing, and staff production time.

## Outcomes/Reporting

The Maryland Health Care Commission will closely track electronic health records adoption totals and percentages by region and statewide, including adoption attributable directly to specific interventions undertaken by the State. This information will be used to target strong areas of growth as well as regions in need of stronger focus and intervention to steward the transition to electronic records adoption.

## Strategy 3 – Maximizing Available Federal Funding

Much of Maryland's recent work on Health IT advancements parallels a prioritization at the national level of electronic health records adoption and exchange. A key component of the State's Health IT strategy is identifying all federal funding opportunities and maximizing the use of these funds in the state. As mentioned previously, Maryland in 2009 became the first state in the nation to legislate an incentive structure for EHR adoption parallel to new federal incentive guidelines. These efforts have been largely in preparation for the release of funding for Health IT as provided for by the American Recovery and Reinvestment Act (ARRA) of 2009. Overall, ARRA includes \$19.2 billion in total funding for Health IT.

To ensure the maximization of ARRA and other federal funding opportunities, MHCC will closely monitor all guidance issued by the national Department of Health and Human Services relating to intended utilization of electronic health information and will apply for any available funding to boost Maryland's efforts to have the best in the nation statewide health information exchange and electronic health records adoption.

ARRA funding for Health IT falls into two general categories (*specific funding amounts are detailed on the chart on the following page*):

1. ***Grant Programs to States and Institutions for use of electronic health information***
2. ***Medicare/Medicaid Incentives for EHR adoption by providers, physicians, and hospitals***

While much of the ARRA funding allotment for Health IT will not be introduced for some time, MHCC, on behalf of Maryland has submitted applications for two initial grants to aid in the implementation of the CRISP statewide health information exchange, as follows:

1. **State Health Information Exchange Cooperative Agreement Program**: for states or designated state-entities to construct statewide health information exchanges - States will be awarded "formula" funds between \$8-40 million depending on the size of the state and on the level of advancement of the statewide exchange, as determined by the grant application submitted. Maryland, in March 2010, was awarded the maximum possible allocation of \$9.3 million by demonstrating that the State is in the implementation phase of its health exchange efforts and will be able to use the full allotment at this time, rather than waiting until future award cycles to receive the remainder of its formula funds.

2. **Health Information Technology Extension Program**: Federal HHS has allocated \$600 million to fund through a competitive grants process up to 70 "regional extension centers", which will serve as initial connection points for efforts to construct a nationwide health info exchange. Funding as part of the regional information center grants will go primarily towards education and outreach for smaller providers to link into statewide health exchange efforts. Maryland has applied for funding for the CRISP exchange to be part of the first wave of extension centers, which will keep Maryland on the cutting edge for implementation of Health IT with the designation as a regional hub for health information exchange. Anticipated possible funding is in the \$8-9 million range.

## Application of Funding

The MHCC will use any funds from the *State Health Information Exchange Cooperative Agreement Program* and/or the *Health Information Technology Extension Program* to advance Use Case implementation throughout the statewide HIE. The statewide HIE will explore opportunities to collaborate with the recipients of ARRA funding related to workforce development initiatives, wellness and prevention programs, comparative effectiveness research, and grants to community health centers.

In addition to the aforementioned funding sources, the following chart highlights all Health IT ARRA grants, and the expected timetable of their release to states:

<b>ARRA Health IT Funding</b>				
<b>Item</b>	<b>Type of Funding</b>	<b>Eligible Recipients</b>	<b>Amount</b>	<b>Date of Release</b>
<b>1. Grant Programs to States</b>	<b>Grants</b>	<b>States/Non-Profits</b>	<b>\$2 B</b>	<b>Various</b>
a. HIE Planning & Implementation	Tiered Formula Grants	States	min. \$300 M total, est. \$9.3 M for MD	9/09, application submitted 10/16/09
b. EHR Adoption Loan Program	State Loan Match (\$1 State to \$5 fed)	States w/ qualifying loan programs	TBD	TBD
c. Health IT Research Center	Tech Support, Grants to Support Best Practices	Non-Profits/ Academic Inst.	TBD	TBD
d. Regional Extension Centers	Competitive Grants	States/Non-Profits	\$600 M total; Avg. \$1-2 M/center	9/09, application submitted 11/3/09
e. Integration of IT into Clinical Education	Competitive Grants for Demonstration Projects	Academic Inst.	TBD, no more than 50% of project cost	TBD
f. Workforce Development	Grants	Academic Inst.	TBD	TBD
g. New Tech and Research Dev.	Competitive Grants	Academic Inst.	TBD	TBD
<b>2. Medicare/Medicaid Incentives for EHR Adoption</b>	<b>Incentive Payments</b>	<b>Docs/Hospitals/ Providers</b>	<b>\$17.2 B</b>	<b>2011</b>
a. for Physicians	"	Physicians	up to \$44K / doc	2011
b. for Hospitals	"	Hospitals	Average \$6-8 million per hospital	2011
c. for Providers	"	Providers	100% FFP for State incentive payments & 90% FFP for State admin costs	TBD, 2011
		<b>Total</b>	<b>\$19.2 B</b>	