

State of California HIE

Progress Report

November 2012



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Background

By enabling providers and patients to securely share personal health information electronically, when and where it is needed for care, health information exchange (HIE) holds great promise for improving health care quality, safety, and efficiency in California and nationally. HIE is also a critical component for success in health care reform, public and population health management, patient engagement, and cost control.

In 2009, the federal government invested in helping states stimulate HIE efforts through the Health Information Technology for Economic and Clinical Health Act (HITECH). Under HITECH, the California Health and Human Services Agency (CHHS) was awarded \$38.8 million over four years, aimed at supporting efforts necessary to advance HIE across the state.

Administration of the grant is under the direction of the Deputy Secretary, HIE, who also serves as Director of the California Office of Health Information Integrity (CalOHII). To carry out the programmatic aspects of the grant, the Deputy Secretary works in concert with California Health eQuality (CHeQ), under an inter-agency agreement. (CHeQ, a program of UC Davis Health System's Institute for Population Health Improvement, is tasked with carrying out all future programmatic work, as well as work started by Cal eConnect.)

Considering the size and diversity of California and complexity of its health care environment, making HIE available to every community – both rural and urban -- is an enormous challenge. Early in California's quest to make patients' records available electronically, stakeholders voiced a strong preference for a decentralized approach to health information exchange.¹ Because health care is provided at the local level, the prevailing sentiment was that each community is different and would develop systems that best meet their particular needs.

At the same time, there was general agreement that the State is well positioned to fill an over-arching role of removing HIE barriers, and thereby facilitate HIE expansion and collaboration. Specific roles for the State include developing necessary technical and trust standards and agreements; providing grants to local health information organizations (HIOs),² removing barriers to HIE interoperability; coordinating with Medicaid and state and local public health programs to support meaningful use and population health management; and convening and informing HIE stakeholders. This report highlights the State's progress in these areas.

Trust Environment

Demonstration projects are underway to evaluate potential HIE solutions that promote quality of care, respect the privacy and security of health information, and enhance the trust of stakeholders.³ Three demonstration project participants -- San Diego Regional Healthcare Information Exchange, Santa Cruz Health Information Exchange, and Inland Empire Health Information Exchange -- are testing privacy and security policies across a broad spectrum of stakeholders. The current focus is on evaluating various consent policies -- opt-in, opt-out, or a mixed consent model.

To address stakeholders' need for help with the contracting, Cal OHII released a Modular Model Participants Agreement (MMPA) in October 2012. The document, developed with input from stakeholders, will help California HIOs and their participants simplify the contracting process by providing a common baseline reference tool that can be adopted and modified as necessary.⁴

Having the MMPA resource available will not only promote consistent language and intent, it will also enable organizations that are working with tight budgets to control some of the costs of negotiation and make the adoption of health information more efficient. The model addresses a continuum of contracting situations and relationships,

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enabling users to easily customize contracts. Developed by a broad base of health care stakeholders, the MMPA is considered a "living document" and will be updated as circumstances warrant.

In another groundbreaking effort -- participation in the Western States' Consortium⁵ -- California and Oregon reached agreement on policies, standards, operational procedures, and technical services that create a trusted environment for interstate exchange of health information. The project sent its first test data across borders November 1, 2012. Other states in the consortium are observing the exchange and are in various stages of pursuing similar interstate arrangements.

Privacy and Security Policy

The need for privacy and security policy changes based on a “trust fabric” among thousands of providers, hospitals, clinics, labs, and pharmacies is well understood by HIT leaders in California.

In the past year, CalOHII, working with Cal eConnect, developed recommendations for comprehensive legislative reform aimed at harmonizing complex and often conflicting state and federal statutes. Through aggressive stakeholder outreach efforts, the State heard a general lack of support for the proposed recommendations from providers and other stakeholders. As a result of the feedback, CalOHII made a course change. The inclusive process and public comment opportunities provided a foundation that will be used in coming months to revise recommendations.

In other outreach and stakeholder support efforts, CalOHII:

- Sponsored three consent policy demonstration projects to explore policy options on consent -- opt-in, opt-out, and opt out with emergency provisions.
- Developed a HIPAA Security Toolkit

designed to assist medium to small providers with understanding HIPAA security standards requirements and assessing individual organization’s HIPAA security needs, necessary for meaningful use.

- Developed the California Health Information Law Identification (CHILI) search tool to assist in identifying California statutes and regulations related to the privacy, access, and security of individually identifiable health information.

Patient identification management for a broad, interoperable health ecosystem, is now recognized as a substantial challenge not only for California, but nationally. The problem is historical, the result of patient duplication in provider individual patient indexing; HIE based on community shared indices exacerbates the problem. The Deputy Secretary, HIE, Pamela Lane; CalOHII staff; and CHeQ are working together to develop possible solutions to resolve patient identification issues and increase integrity of patient data exchanged.

Interoperability

The cost and time it takes to implement bi-directional interfaces between electronic systems is a major hurdle for many providers. Meaningful use provisions for Stage 1 and Stage 2, however, require some HIE capability.⁶ Although these requirements are limited and do not cover the full range of interoperability and interface features needed for robust HIE, they are essential to demonstrate meaningful use of a certified EHR and receive incentive dollars.

The *HIE Ready Buyers' Guide*⁷ -- the first of its kind in California and offered at no cost online -- fills a void by providing users an assessment of an EHR product's readiness to exchange information between and among EHR systems and HIOs. The guide was produced by CHeQ (based on work initiated by Cal eConnect) in collaboration with the California Health Information Partnership and Services Organization (CalHIPSO) and state HIE leaders.

Those in the process of purchasing an EHR can make side-by-side comparisons of important HIE features based on commonly accepted interoperability and interface standards embedded in the EHR products listed in the guide. They can also learn how well a specific HIO supports those same standards. The

guide's usefulness will increase as more EHRs and HIOs submit their data for publication.

In another trail-blazing effort, the approach and architecture for statewide exchange in California was established through demonstrations at the March 2012 HIMSS (Healthcare Information and Management Systems Society) Interoperability Showcase.

Three HIOs in different parts of the state -- Redwood MedNet, San Diego Beacon Community, and EKCITA -- proved that they are able to securely electronically share critical patient data across organizations using new national standards.

Data standards enable diverse IT systems to talk to each other or inter-operate. Standards-based interoperable systems reduce costs and maintenance and result in improved patient care. These demonstrations represented a first step in implementing the model that leaders envision organizations within California will use to enable providers to push and pull information and to look up and verify provider addresses. The same model may be used for interstate exchange, as well.

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Grants

A major part of the statewide HIE strategy is to build and expand on local assets to foster exchange. Beginning March 2011, Cal eConnect funded five community health information organizations in different parts of the state, bringing together providers, hospitals, labs, and pharmacies in their regions to exchange data. More than 45 percent of California's population resides in counties covered by the grants.

Approximately 21 percent of Cal eConnect's expenditures were invested in HIE expansion projects. These initiatives, totaling \$3 million and generating \$4 million in matching funds, will continue to provide critical models and experience for further expansion of HIE.

HIE Expansion Grant Awardees: Central Valley California Health Information Exchange (CVCA HIE, formerly EKCITA); LA County/Los Angeles Network for Enhanced Services (LANES); North Coast Health

Information Network (NCHIN); Orange County Partnership Regional Health Information Organization (OCPRHIO); Redwood MedNet.

HIE Planning Grants: Four \$25,000 HIE Planning Grants were awarded by CHHS to "white space" organizations: HIE San Joaquin, Solano Coalition for Better Health, Tulare Kings HIE, and the Children's Health Partnership (foster care). These are areas where the Office of the National Coordinator (ONC) and our stakeholders indicate a targeted exchange need.

HIE Infrastructure Awards: Another four Infrastructure Awards support more mature efforts: HealthShare Bay Area, Inland Empire HIE, OCPRHIO, and Redwood MedNet.

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Collaboration and Education

One of the greatest challenges California has faced in becoming “wired” is bringing together hundreds of stakeholders from widely diverse communities to reach agreement on how best to connect the state, taking into account current and planned HIE assets and the wide range of community resources and needs.

Over the past two years, an extensive and time-intensive outreach and education effort by the State and its partners has created a widespread understanding of the value of HIE among California stakeholders, and encouraged stakeholder input on a range of issues. CHHS has worked with other ARRA funded organizations (including four Regional Extension Centers, the Medicare and Medicaid Electronic Health Record Incentive Programs, the San Diego Beacon Community Program, and the Western Regional HIT training program), the California Telehealth Network, the California Health Workforce Alliance, and California health care associations and organizations.⁸

Committed to collaboration that will make robust HIE a reality across California, CalOHII works closely with the Medicaid and Medicare EHR Incentive Programs, the state’s four Regional Extension Centers, and provider organizations to coordinate efforts that are bringing EHRs into thousands of medical offices and to identify future needs. For example, the innovative *HIE Ready Buyers’ Guide* (described above) is a national model for using market forces to encourage

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closer alignment of EHR adoption and HIE. CalHIPSO, an REC serving 56 of California’s 58 counties, worked with the State’s programmatic partner to develop this resource.

In its effort to provide stakeholders with news and tools they can use to connect to their communities, CalOHII recently launched a new website.⁹ In addition, the Deputy Secretary, HIE, publishes a regular stakeholder newsletter and hosts a bimonthly conference call that provides statewide HIE activity updates and an opportunity to ask questions and offer feedback.¹⁰

The involvement of 425 HIT and HIE stakeholders¹¹ at the November 2012 California HIE Summit (a nearly 40 percent increase over 2011) visibly demonstrated the growing enthusiasm and continuing commitment to successful HIE in California from a diverse group of providers, health care organizations, government officials and staff, consumer groups, associations, academic institutions, vendors, and others.

Environmental Assessments

An assessment of community and enterprise HIOs, published in September 2012, provides additional guidance for the State and informs efforts designed to create a trust environment and technology standards that will increase the data sharing ability among providers and HIOs.

The report, *Enabling Exchange: An Assessment of Community and Enterprise Health Information Organizations in California*,¹² cites 14 community health information exchanges and 13 enterprise or private HIOs as of March 31, 2012. The majority of study participants reported that progress establishing live data exchange with stakeholders and participants has been slow. The process of negotiating agreements and contracts, engaging with end user organizations, and building the necessary infrastructure and interfaces with participating organizations has proven difficult, time-consuming, and costly. The development of the *HIE Ready Buyer's Guide* and the Modular Model Participants Agreement are designed to address some of these critical issues.

The study further found that HIE adoption has been slowed because

provider organizations are struggling to deal with the competing demands of multiple initiatives. For example, adopting and utilizing EHRs to qualify for meaningful use is a major priority – and is proving successful in California.

Through September 2012, more than \$809 million had been distributed in Medi-Cal, Medicare, and Medicare Advantage EHR incentive payments. More than 6,400 Medi-Cal providers/hospitals had been approved for payment totaling about \$430 million, while over 14,400 California providers/hospitals participating in Medicare and Medicare Advantage EHR incentive programs administered by the federal Centers for Medicare & Medicaid Services (CMS) had been paid more than \$385 million.

Recently proposed Stage 3 meaningful use objectives require providers to exchange information across unaffiliated organizations and different EHR technologies. Hope is widely held that this may encourage the convergence of EHR and HIE adoption in the near future. Surveys and studies will continue to be conducted to measure success and identify gaps and issues that need to be addressed.

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Connecting Labs and Pharmacies

The HITECH Act does not provide financial incentives to labs and pharmacies. The State, however, has made adoption of electronic exchange of lab and pharmacy data a priority, as it is required to support provider achievement of meaningful use.

ePrescribing

In June 2012, a survey of the top 100 Medi-Cal pharmacies found that technical assistance, including workflow redesign, was high on the list of needs. Based on this feedback, CalOHII began discussions with the regional extension centers to facilitate provider/pharmacy efforts to overcome ePrescribing barriers.

The percentage of community pharmacies with the technology to connect and exchange data increased from almost 76 percent in 2008 to 90 percent in 2011, comparable to national averages. However, unless providers utilize the ability to ePrescribe, the number of connected pharmacies is of little consequence. While ePrescribing utilization increased from 9 to 25 percent between 2010 and 2012, much room for improvement remains.

To address the challenge of low ePrescribing rates among independent pharmacies, *Partners in E* was launched. The California statewide education and outreach initiative is funded by a \$2.4 million CHHS ARRA grant. In association with pharmacy residents and faculty members at the University

of San Francisco School of Pharmacy, the program reaches into independent community pharmacies serving large numbers of Medi-Cal patients, providing one-on-one assistance designed to accelerate ePrescribing adoption and utilization.

Laboratory Connectivity

An independent organization was contracted early in 2012 to track the progress of lab capacity for electronic transmission of results to comply with ONC's directive to set goals and track progress. Based on the study findings, a goal was established to increase from 33 to 50 percent by year-end the number of labs transmitting structured results to ambulatory providers outside their organization.

Having received a low response rate from labs to the offer of technical assistance and financial support for implementing technology solutions and workflows, CHHS and CHeQ are targeting lab exchange through HIOs and providers. This Interface Support program specifically targets interfaces for lab data exchange between labs and providers. Also, *HIE Ready* simplifies lab interface components between labs and EHRs to reduce implementation costs. All Expansion and Infrastructure grant awardees must enable lab data exchange in their communities.

Immunization Gateway and State Reporting

California has incrementally developed a collaborative system of regional and county immunization registries, collectively known as the California Immunization Registry (CAIR). Within each region, CAIR enables users to view patient demographic data, immunization history, immunization forecasting, contraindications, overdue immunizations, and other related functions. The majority of exchange between immunization registries and EHRs involves the transfer of updated immunization data. For this type of information, prompt, rather than real-time, exchange is sufficient.

For submitting immunization records, CHHS has established as a consensus standard the specification identified in Stage 1 Meaningful Use EHR certification criteria. The State strategy is to utilize community and enterprise HIOs to aggregate immunization records from EHRs among their data-sharing partners, and submit them using a single public health gateway service, which interfaces to CAIR and/or other individual regional and county registries. Providers that do not have access to an HIO may connect to the

gateway directly. This single gateway will provide a uniform interface that insulates individual EHR or HIE implementations from developing immunization registry capabilities, and properly routes among differing registry jurisdictions.

While initially focused on providing a capability for immunization registries, this project will provide a general approach to accessing other public health resources, such as reportable disease registries and surveillance systems.

Further, to enable receipt of lab results by local health departments, the State will initiate a technical assistance program to enable existing public health systems to receive electronic lab reports routed from the gateway. The intent is to continue to use standards required by Stage 1 Meaningful Use certification criteria rather than create a California-specific standard.

Clinical Quality Reporting

Enabling electronic reporting of meaningful use and clinical quality measures to Medicare and Medi-Cal will see significant advances in the near future. Two of the country's leading experts in the area, CHeQ Director Kenneth Kizer, MD, MPH, and the new Chief Medical Information Officer within the Department of Health Care Services, Linette Scott, MD, MPH support these efforts.

Kizer has a long history of public and private experience in the areas of health information technology and data. Before joining IPHI, he was president and CEO of Medsphere Systems Corporation, the nation's leading commercial provider of open source healthcare information technology. Prior to that he was founding president and CEO of the National Quality Forum, a Washington, DC-based

quality improvement and consensus standards setting organization and Under Secretary for Health, U.S. Department of Veterans Affairs where he initiated the VA's transition to electronic health records and health information exchange.

Scott has long been an advocate of applying analytics to health care and her experience as Deputy Director, Health Information and Strategic Planning with the California Department of Public Health and Interim Deputy Secretary for HIT at CHHS give her the necessary perspective and experience to utilize available data to improve care.

Transition to a New Cooperative Agreement Partner

In February 2010, Cal eConnect was selected by the State to lead many of the efforts related to HIE under the federal Cooperative Agreement. Cal eConnect had a 22-member, widely representative board, which initially was thought to be a way to ensure that all viewpoints were heard. In practice, the board's size and complexity, combined with the inherent challenges of overseeing a start-up organization with a complex task, slowed necessary decision-making. In April 2012, the Cal eConnect Board informed CHHS of its intention to step down as the State's partner.

To expedite the remaining work, the Deputy Secretary, HIE, immediately approached the Institute for Population Health Improvement (IPHI) at the UC Davis Health System, whose director is one of the country's leading experts on electronic data, Kenneth Kizer, MD, MPH. An interagency agreement was completed in October.

HIE stakeholders have overwhelmingly supported the transition to IPHI. Demonstrated leadership and swift action have enabled essential HIE programs and priorities to continue under IPHI's management.

In its reports to the California State Legislature,¹³ CHHS noted that Cal eConnect met 31 of 41 deliverables over an 18-month period ending in 2011. Of the 10 not accomplished, five were cancelled based on dynamic changes in the marketplace, three were pending CHHS review, and two were pending ONC guidance. Of 11 deliverables due in the first and second quarters of 2012, nine were completed, and two were in progress.

For two years, Cal eConnect and CalOHII worked collaboratively on privacy and security efforts, as well as policy, program, and technology architecture projects to support ePrescribing, share structured lab reports and summary-of-care documents, and enable public health and clinical quality measures reporting – all federal HIE grant requirements.

Cal eConnect spent \$12.6 million from February 2010 to September 31, 2012, out of an approved initial \$14.8 million ARRA-funded budget, or 15 percent less than budgeted. The budget was roughly spent a third on programs, \$4.8 million; a third on salaries, \$4.6 million; and third on operations, \$4.8 million. Program funds targeted for a specific technology solution were not used when stakeholder input and further analysis indicated that the approach was wrong for the California marketplace. This pivotal decision resulted in potential cost avoidance of up to \$15 million.

Transition to a New Cooperative Agreement Partner (cont)

Approximately 21 percent of programmatic expenditures were invested in HIE expansion projects; 4 percent on an HIE sustainability plan. Substantial operating costs were required for building the HIE community of practice and engaging hundreds of stakeholders and dozens of communities through listening tours, roundtable sessions, statewide stakeholder summits, advisory groups, and a wiki and a robust web site. These efforts were essential to assure a transparent and open process.

During their two-year ARRA-funded HIE history, both Cal eConnect and CHHS underwent leadership changes. CHHS and the Cal eConnect Board worked diligently to minimize the impact on programmatic activities, maintaining progress on projects to advance HIE in California. Further, CHHS placed a high priority on the HIE Cooperative Agreement and the role of the Deputy Secretary by ensuring that the leadership positions were filled with individuals with strong clinical, information management, and leadership experience.

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Conclusion

While much remains to be accomplished, significant progress is being made in a number of critical areas that will have lasting impact for Californians. For example, funding is being invested to support broader state initiatives including public health infrastructure and immunization and other registries. These priorities were highlighted in the California HIE Strategic and Operational Plan and discussed extensively at the November 2012 Statewide Stakeholder Summit.

Commitment to these issues is perhaps best exemplified by the new partnership with IPHI and Dr. Kizer, one of the nation's preeminent authorities on public health and the implementation of electronic health records.

A solid foundation for health information exchange has been established, including engaging stakeholders from across the state in planning the next phase of work with IPHI and its CHeQ program. Transition to IPHI has gone smoothly and the focus for the next year is on concrete deliverables that will build critical infrastructure for HIE and support efforts already underway in communities across the state.

HIE leaders around the state understand that all stakeholders must be engaged in a sprint to complete as much work as possible under the Cooperative Agreement. Collaboration and leveraging resources are key. The State is optimistic that stakeholders will remain committed and work hard to reach the ultimate goal of improving care and safety for patients, while developing sustainability models that will enable HE to live long past the conclusion of ARRA funding. CHHS will continue to focus on better health for all Californians.

Additional information on HIE and California's eHealth Initiative, along with continually updated news and information, videos, reports, and events can be found at www.ohii.ca.gov.

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Endnotes

1 California Health Information Strategic and Operational Plan, March 2010

2 In the past several years, two types of health information organizations (HIOs) have emerged across the state. One type is community-based and supported by a number of unaffiliated health care organizations. The other is supported by a single hospital, hospital chain, or an integrated delivery network (IDN). These are often referred to as *community HIOs* and *enterprise HIOs*. In both cases HIOs provide governance for exchange, distinguishing them from Health Information Services Providers (HISPs) or other vendors offering HIE services.

3 AB278 authorizes CalOHII to approve up to four demonstration projects annually to address HIE implementation barriers, test potential security and privacy policies, and identify differences between state and federal laws.

4 The agreement and background on the MMPA's purpose and development can be accessed on the CalOHII website: <http://www.ohii.ca.gov/calohi/PrivacySecurity/ToolsToHelpYou/mmpa.aspx>

5 The Western States Consortium is comprised of Oregon, California, Nevada, New Mexico, Arizona, Utah, Hawaii, and Alaska.

6 For more information on meaningful use criteria see <http://www.healthit.gov/providers-professionals/how-attain-meaningful-use>

7 To access the *HIE Ready Buyer's Guide* go to <http://www.ucdmc.ucdavis.edu/iphi/Programs/cheq/HIEReady.html>

8 For a complete list of HIE partners, see <http://www.ohii.ca.gov/calohi/eHealth/OurPartners.aspx>.

9 Among the new website's features are stories and video interviews with HIE leaders around the state, sharing lessons learned and inspiring others to make health information exchange a reality. See www.ohii.ca.gov.

10 See the CalOHII events calendar for the bimonthly conference call schedule: <http://www.ohii.ca.gov/calohi/AboutCalOHII/Events.aspx>

11 Another nearly 100 people were on a waiting list that, because of capacity limitations, could not be accommodated.

12 To access the report, *Enabling Exchange: An Assessment of Community and Enterprise Health Information Organizations in California* go to <http://www.ohii.ca.gov/calohi/eHealth/MakingHIEHappen/PlansReports.aspx>

13 Reports to the California State Legislature can be found at http://www.ohii.ca.gov/calohi/Portals/0/Documents/eHealth/Making%20HIE%20Happen/Plans%20and%20Reports/20121116_%20CA_HIE_Status_Report.pdf

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