CalOHii
State of California
Office of Health
Information Integrity

State of California HIE

The Legacy of California's State HIE Cooperative Agreement Program

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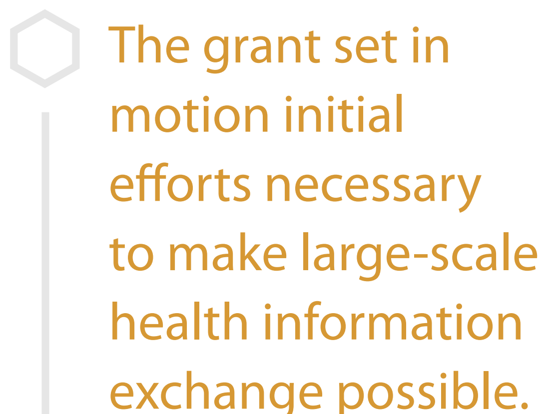
CalOHII State of California Office of Health Information Integrity

About the Report

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 of health care reform, public and population health management, patient engagement, and cost control.

In February 2010, the California Health and Human Services Agency was awarded a four-year, $38.8 million federal grant to encourage and fuel adoption of health information exchange throughout the state. Called the State Health Information Exchange Cooperative Agreement Program, the grant was part of the Health Information Technology for Economic and Clinical Health Act (HITECH).

This report highlights the lasting legacy of the unprecedented opportunity offered by the Cooperative Agreement. It is not meant as a comprehensive evaluation of the award's outcomes.[1] Rather, it describes major advancements and achievements in California that will have lasting impact and continue to stimulate HIE in California for years to come.



[1] An evaluation for ONC of the California State HIE Cooperative Grant Program is being conducted by Robert H. Miller, PhD, Adjunct Professor of Health Economics, UC San Francisco.

Background

Although California received the largest Cooperative Agreement grant given to the 50 states, it was clear at the time of the award that it would not be sufficient to solve all the challenges associated with electronic exchange. The $38.8M represented less than .001 percent of what is spent on healthcare in California in a single year. However, the funding was critical to set in motion efforts necessary to initiate large-scale health information exchange.

The grant was awarded to the California Health and Human Services Agency and administered by the **California Office of Health Information Integrity** under the direction of the Deputy Secretary for HIE, who also serves as director of **CalOHII**. To administer much of the grant's programmatic requirements, CalOHII entered into an interagency agreement in mid-2011 with California Health eQuality (**CHeQ**), a program of UC Davis Health System's Institute for Population Health Improvement. Prior to the CHeQ agreement, Cal eConnect, a non-profit organization, was responsible for the programmatic work.

The Cooperative Agreement was not prescriptive as to governance, policy, or technology, giving states the ability to experiment with different models in determining solutions best suited to their particular environment and population.

While some states developed and operated single-solution statewide HIEs, California's size and diversity did not lend itself to one statewide exchange. Further, legislative policy and stakeholder preference called for a model that was limited in scope. The result was a privately driven, publicly assisted HIE infrastructure.

Public assistance through the Cooperative Agreement focused on:

- developing necessary technical and trust standards and agreements;
- providing grants to local health information organizations (HIOs) to expand and improve their operations;
- removing barriers to HIE interoperability;

California created a privately driven and publicly assisted HIE infrastructure.

- coordinating with Medi-Cal and other state and local public health programs to support meaningful use of electronic health records and population health management; and
- **convening**, educating, and informing HIE stakeholders.

Perhaps the most important stimulus to HIE in California has been the commitment of hundreds of volunteer public and private stakeholders from the California healthcare community, working in collaboration with CHHS. Through committees, work groups, webinars, and statewide summits, these stakeholders have shared ideas and provided feedback, encouragement, and support to each other; they have served as change agents within their own communities and healthcare organizations, encouraging culture change and a focus on patient needs over competitive concerns.

With this context in mind, the following summarizes significant changes and improvements resulting from the HITECH Cooperative Agreement that will have lasting impact on California's healthcare landscape.

Hear more about how California has benefited from the Cooperative Agreement from Pamela Lane, MS, RHIA, CPHIMS, Deputy Secretary Health Information Exchange, California Health and Human Services Agency.

Expansion and Strengthening of Community Health Information Organizations

Early in California's quest to make patients' records available electronically, stakeholders voiced a strong preference for a decentralized approach to HIE.[2] Because healthcare is provided at the local level, the prevailing sentiment was that each community is different and should develop systems that best meet their particular needs.

While California hospitals and integrated delivery systems have been steadily building their internal HIE capabilities, at the start of 2009 – a year before the federal grant was awarded -- only one community health information organization was operational and three others were in various stages of development. At the end of 2013, eight HIOs were operational and nine were in various stages of development. The growth and strengthening of HIO presence is due in large part to HIE expansion grants provided since 2010 to individual community HIOs. Grants were targeted for HIE planning, infrastructure, innovation, and demonstration projects.

With the end of the federal funding in February 2014, HIOs will continue to evaluate ways to financially sustain themselves while continuing to seek engagement of a critical mass of providers. Communities are finding **innovative ways** of bringing HIE to local providers and patients. Some communities are choosing to sign on with an established HIO to provide exchange capability, as the San Joaquin HIE has done with the **Inland Empire HIE**. Others, such as **SacValley MedShare**, are starting their own HIO backed by committed provider organizations.

[2] California Health Information Strategic and Operational Plan, March 2010

One of the State's top priorities has been to create a trust environment for clinicians to share patient information.

Hear more about the impact of grants on HIO growth and expansion from Robert (Rim) Cothren, PhD, former Technical Director, CHeQ; Executive Director, California Association of Health Information Exchanges.

Watch a visual dramatization of the growth of HIE/HIOs over the past 17 years in California.

Visit **cheqpoint.org** for a snapshot of HIE activity around California.

Creation of a Trusted Environment for Information Sharing

One of California's top priorities has been to create a trust environment for clinicians to share patient information. A "trust framework" is necessary so that physicians and organizations that want to share information within California or nationally can do so, without having to to execute a point-to-point data agreement every time.

A Model Modular Participant Agreement (**MMPA**), developed with assistance from volunteer group of stakeholders, establishes minimum standards to enable both large and small organizations to efficiently set up legal data exchange agreements. While it's not possible to have a one-size-fits-all agreement, the MMPA includes legal agreement essentials necessary for data sharing. One HIO estimated that the model reduced the time for agreement development from seven months to less than two months, with a savings of up to $25,000 in legal expenses.

As part of the Cooperative Agreement grant, CHHS helped launch two organizations that will continue to provide guidance on trust and support working relationships and collaboration among healthcare organizations that need to share health information.

The California Association for Health Information Exchange

CAHIE grew out of a statewide group of community and enterprise HIO leaders -- many working for organizations that are traditionally competitors -- who came together during 2013 to address gaps in interoperability and find solutions to ensuring safe and secure HIE throughout California.

With the support from CalOHII, participants have worked to establish a California trust framework, based on national standards and protocols for trusted exchange, and to create pathways that allow all providers to interoperate using Direct (to push data) and HealtheWay's eHealth Exchange (to query for information providers need).

CAHIE will continue working to establish a light-weight self-governance function for trusted exchange in California and address additional functions members require to achieve a trusted exchange relationship with each other, such as provider directories and patient matching.

National Association for Trusted Exchange

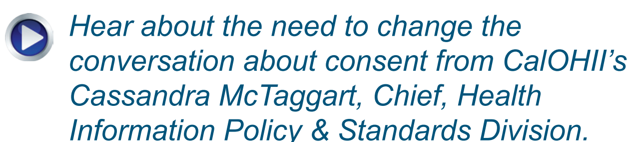
NATE is a national organization created to help state HIE officials establish standards and best practices, including the coordination of policy efforts to support interstate exchange. NATE grew out of the work of the Western States Consortium, of which California was a leading member and piloted interstate exchange with Oregon. As a member of NATE, California continues to provide leadership through identifying policy and governance drivers for interstate information exchange.

Privacy & Security Policy Direction Setting

California stakeholders have long been divided over the best way to promote and enhance the electronic movement of health information while still protecting Californians' constitutional right to privacy. Although many stakeholders pressed for legislation that would dictate a single patient consent policy, advancing a legislative solution was not within CalOHII's authority.

To learn more about the impact of different consent policies, CalOHII conducted **demonstrations projects** with three HIOs. Findings revealed the following: When offered the choice, a large majority of patients elect to share their health information electronically. Both opt-in and opt-out policies are effective means of managing consent when implemented as part of a comprehensive privacy and security framework. The success of a consent management policy depends on numerous factors, including provider engagement, training and education of provider and office staff, patient demographics, and HIE governance.

Both opt-in and opt-out policies have benefits and risks and the model chosen by an HIO and its participants is an individual business decision that reflects the organization's needs and business processes. No matter what the policy, keeping patients well informed about how their information will be shared and used is key.



It is critically important to change the conversation about consent.

Support for Electronic Health Record Adoption

Electronic health records (EHRs) are fundamental to building the HIE infrastructure. The federal Medicare and Medicaid **EHR Incentive Program** is aimed at encouraging providers and hospitals to adopt EHRs by offering financial incentives to upgrade or install and progressively use an EHR in a meaningful way. HIE functionality is necessary to demonstrate "meaningful use" at different "stages" of progress.

While the Cooperative Agreement did not directly fund EHRs, it enabled CalOHII to coordinate with the **Department of Health Care Services** and Regional Extension Centers[3] to leverage and support each other's efforts and help drive EHR adoption and meaningful use of health information technology and HIE.

As of November 2013, more than 10,000 Medi-Cal providers and 216 hospitals were using EHRs and had met meaningful use requirements to qualify for incentive payments totaling about $630 million. More than 28,000 California providers/hospitals participating in Medicare and Medicare Advantage EHR Incentive Programs administered by the federal Centers for Medicare & Medicaid Services (CMS) were using EHRs and had met meaningful use requirements qualifying for over $910 million in payments.

More robust convergence of EHR and HIE adoption is anticipated in the near future with the proposed Stage 3 meaningful use objectives, which require providers to exchange information across unaffiliated organizations and differing EHR technologies.

[3] There were three regional extension centers (RECs) in California: Health Information Technology Extension Center for Los Angeles (HITEC-LA), serving Los Angeles County, Cal Optima Regional Extension Center (COREC), serving Orange County, California Health Information Partnership and Services Organization (CalHIPSO) serving all counties except LA and Orange. In addition, the California Rural Indian Health Board, which is a sub-grantee of the National Indian Health Board (NIHB) served areas throughout the state.

Investing in improving public health information has long lasting impact for managing public and population health.

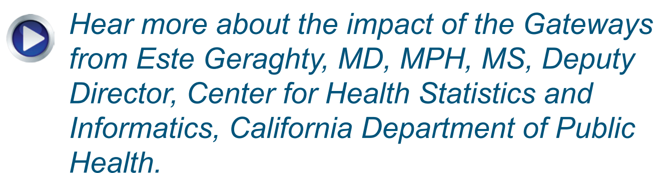
Support for Population Health Management: Registries and Gateway

Investing in improving public health information has long lasting impact for managing public and population health, such as tracking immunizations and patients with chronic diseases and cancer.

Among investments made by the Cooperative Agreement was an updated system for the California Department of Public Health (CDPH) to help providers meet meaningful use requirements for electronically submitting immunization data. The new California Immunization Gateway Service replaces a manual process for registering, testing, and submitting immunization data to the **California Immunization Registry** (CAIR).

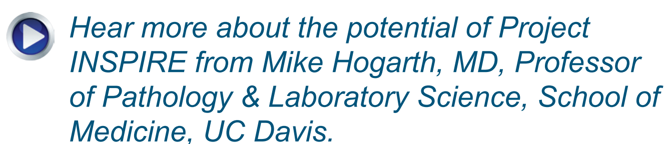
Long term, the goal is to develop an integrated, statewide-computerized registry to network each child's full immunization history. The system will ensure that health care providers have rapid access to complete and up-to-date immunization records so they can avoid both missed opportunities to immunize and unnecessary duplicate immunizations.

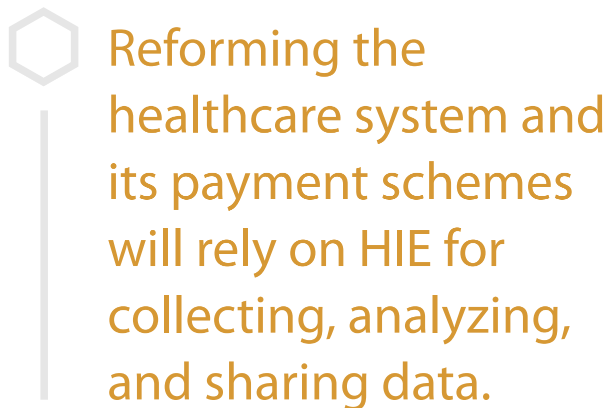
By design, the technology used for the Immunization Gateway enabled CDPH to develop the **Health Information Exchange Gateway**, which improved CDPH's capabilities for data exchange, analysis, and reporting. CDPH exchanges data with a wide range of stakeholders, including clinicians, hospitals, laboratories, local public health jurisdictions, and federal agencies. The Gateway serves as a single point of entry for submitting data to many state public health programs, enabling providers and hospitals to meet meaningful use requirements of the EHR Incentive Program in the short term, and greatly improving efficiency of all submissions in the long term.


Hear more about the impact of the Gateways from Este Geraghty, MD, MPH, MS, Deputy Director, Center for Health Statistics and Informatics, California Department of Public Health.

Related to this effort is **Project INSPIRE**, based at UC Davis and funded by the Cooperative Agreement through the CHeQ program. The premise of Project INSPIRE is that the same key patient data elements that are useful for registries are also critical for good care of high impact conditions such as cancer. Project INSPIRE focuses on more efficiently and effectively capturing data at the point of care and creating a "health information home" for a longitudinal record "registry" that is accessible to all of a patient's providers.

Inputting data into disease registries has been a challenge with paper records. However, with the widespread adoption of EHRs, key data can be taken directly from the EHR and, with a few intermediate electronic steps, sent to the appropriate registry in nearly real time. Individual care outcomes will improve as clinicians gain a clearer view of their patients' conditions and can better coordinate care. Population health will improve as well when public health officials and researchers have access to de-identified patient data in the registries.


Hear more about the potential of Project INSPIRE from Mike Hogarth, MD, Professor of Pathology & Laboratory Science, School of Medicine, UC Davis.



Increased ePrescribing Rates Through Pharmacy Education

California made adoption of electronic exchange of pharmacy data a priority. Increasing the rate of ePrescribing has long-term effects of improved accuracy, efficiency, and patient compliance monitoring.

The **Partners in E** program was funded to address the challenge of low ePrescribing rates among independent pharmacies. A survey revealed that many pharmacists do not feel technologically prepared to take on the processes of continual electronic communication and to tackle the technical dilemmas presented during the workday.

To drive interest and adoption, an innovative train-the-trainer program was developed. Students from California's eight schools of pharmacy provide one-on-one assistance to independent community pharmacists that serve large numbers of Medi-Cal patients. As of the end of 2013, nearly 1,000 pharmacy students had completed the program.

With its success attracting widespread recognition, Partners in E is collaborating with the Healthcare Information and Management Systems Society (HIMSS) and the American Association of Colleges of Pharmacy (AACP) to fill the critical gap in pharmacy education nationally.

Support for Emergency Medical Services' Adoption of HIE

The transfer of patients from ambulances to emergency rooms is one of the most critical and information-dependent points in healthcare. Hour-old information is considered useless. CalOHII and the State Emergency Medical Services Authority (**EMSA**) collaborated to make HIE an integral part of California's emergency medical services and enable real-time exchange of patient health information between providers in the field and healthcare facilities.

An **environmental assessment** funded by the Cooperative Agreement grant found that all the EMS providers that work with the state's 33 local EMS agencies are converting from paper to electronic patient care records. However, most are still in the early stages of being able to electronically transmit information about patients to the hospital where they are being transported. As yet, none are receiving information about patients' conditions after hospital admission, which could assist with care improvement.

The **grant** helped three local EMS agencies — Contra Costa, Monterey, and Inland Counties Emergency Medical Agency — carry out demonstration projects to advance HIE in their service areas and funded a two-day statewide **summit**, which sparked collaboration among EMS agencies and EMSA that will continue into the future.

Hear more about the importance of HIE to transforming pre-hospital care in California from Howard Backer, MD, MPH, FACEP, Director of the California Emergency Medical Services Authority (EMSA).

Support for Helping Patients Electronically Coordinate Their Care

A project funded in part by the Cooperative Agreement and administered by NATE is aimed at ensuring the successful transfer of provider-held medical data into a patient-controlled personal health record. **The PHR project** is focused on creating trust among providers of the information uploaded from a patient's PHR. This is an important step toward finding ways to speed health information exchange and address physicians' concerns that "patient mediated exchange" may not be complete or accurate. Patient choice to disclose data expedites receipt of the patient's records and simplifies compliance with privacy laws and rules. By making patient medical records more portable, communication can occur faster, patients become more engaged in their care, and they can coordinate their care online across multiple providers.

Support for Healthcare and Payment Reform

A variety of federal and state programs aimed at reforming the healthcare system and its payment schemes will rely on HIE for collecting, analyzing, and sharing data. The list includes Medicare payment reform, quality initiatives, Patient-Centered Medical Homes, Accountable Care Organizations, and Covered California, the state's health insurance exchange.

The HIE infrastructure created under the Cooperative Agreement -- and the timely information HIE will produce -- is critical to the success of two major California health and healthcare improvement initiatives. Governor Jerry Brown's **Let's Get Healthy California**, launched in December 2012, establishes six major goals and 39 health indicators to track California's progress toward becoming the healthiest state in the nation. California is participating in the State Innovation Models Initiative, a federally-funded program to plan, design, and test new payment and service delivery models aimed at improving health system and payment performance.

Under healthcare reform, healthcare financing is quickly moving away from fee-for-service and toward payment systems based on performance and value. Both health plans and physician organizations will benefit when data can be securely and easily shared and analyzed, an essential step in "pay for performance" (P4P). Shared data will also be necessary for other performance programs, including CMS's Medicare "Stars," which offers millions of dollars in incentive payments to Medicare Advantage health plans based on meeting performance measures. Through a grant to the Integrated Healthcare Association (**IHA**), physician organizations and health plans prepared for the new programs by evaluating the use of HIE and Direct query architecture for quality performance measurement and analysis.

Conclusion

It is clear that the HITECH HIE State Cooperative Agreement Program played an essential role in stimulating California's healthcare system's transition from an information poor culture to one in which information is rich, available, and useable. HIE has improved accountability, interdependency, and evidence-based treatment in California. HIE is making it possible to more easily and quickly measure and improve the quality of care. At the heart of every effort is the patient, who has always been the intended beneficiary of HIE.

Hear more about the impact of the HITECH Cooperative Agreement from Linette Scott, MD, MPH, Chief Medical Information Officer, California Department of Health Care Services.

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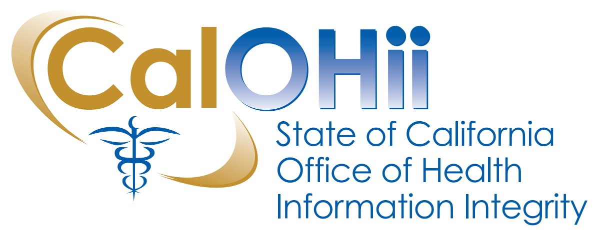
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