California Health eQuality (CHeQ) 2013 Rural HIE Incentive Program Webinar
July 11, 2013
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| **HIE Service Providers** | ICA – Robert Keehan  
Redwood MedNet – Will Ross  
Inland Empire HIE – Rich Swafford  
Axesson – Bill Bieghe  
Orange County Partnership RHIO – Paul Budilo |
| **Questions and Discussion** | |
| **Wrap-up** | |
California Health eQuality Program (CHeQ)

- Implementing California’s Health Information Exchange (HIE) programs with California Health and Human Services Agency (CHHS), under State’s Cooperative Grant Agreement with federal Office of the National Coordinator for Health Information Technology (ONC).

- CHeQ promotes coordinated and integrated health care for Californians by catalyzing the adoption and implementation of HIE
  - Building a trusted exchange environment
    - enabling inter-organizational and interstate exchange
    - while respecting and protecting patient privacy
  - Supporting uniform standards for exchanging health information
  - Improving public health capacity
  - Accelerating HIE implementation by supporting regional initiatives
Rural HIE Incentive Program

Problem

- Many obstacles to coordinated care in rural California
  - Patients travel long distances to receive care
  - Scarcity and distance increase likelihood providers don’t have access to all of a patient’s health information resulting in fragmented and inefficient care
- Need for additional resources and transparency in funding for rural areas; need for standardized HIE implementations
- Sizeable or under-serviced areas in many rural parts of the state

Solution

- Launch Rural HIE Incentive Program
  - Promote HIE in rural areas by subsidizing the implementation services for rural providers, clinics, and hospitals
  - Enable rural providers to adopt high-priority, standards-based HIE services from qualified service providers at manageable prices
### Rural HIE Incentive Program Snapshot

<table>
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<th>Total Funds Available</th>
<th>$1,000,000</th>
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<td><strong>Project Period</strong></td>
<td>April 1, 2013 – November 30, 2013</td>
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| **Designated Rural HIE Service Providers** | Directed Exchange: ICA, RWMN  
Directed Exchange & Longitudinal Patient Record: IEHIE, Axesson, OCPRHIO |
| **Eligible Beneficiaries of Subsidy** | Rural physicians, clinics, hospitals in qualifying rural areas |
| **Services Covered under Subsidy** | One-time implementation costs for connecting rural Provider: hardware, software, licenses, interfaces, SaaS; Year I maintenance fees |
| **Services NOT Covered** | Connectivity to non-rural end-points, rural pharmacies, independent labs or other ancillary services; Ongoing maintenance fees; Capital construction |
| **Reimbursement per Implementation** | CHeQ will reimburse **65% of the cost** of qualifying service implementations to HIE service providers; Rural Provider pays 35% of qualifying cost and ongoing fees |
Sample Models for HIE

Directed (secure email)
- Provider
- Hub(s)
- Provider

For the provider that has nothing...

Results Delivery (HL7 messages)
- Lab
- Hub
- Provider

For the provider with an EHR...

Centralized (community record)
- Provider
- Lab
- Radiology
- Data

For providers in a community...

Longitudinal Record
- Provider
- Lab
- Radiology
- Data

For providers that want to “own” the infrastructure...

Federated (virtual record)
- Provider
- Data
- RLS

For providers that want to “own” the infrastructure...
Rural HIE Incentive Program
Designated Rural HIE Service Provider

Informatics Corporation of America

integrating care. improving health.
Business Considerations for Direct

- Create a less fragmented delivery system
- Improve data sharing with a broader network of providers
- Enhance provider “stickiness” and capture referral market
  - Enhance ability to communicate PHI between referring and specialty physician
  - Notify affiliated providers about admission and discharge events
  - Facilitate delivery of discharge summary info to PCP
  - Value added service offering for recruitment / marketing to providers
Informatics Corporation of America: iCA

Direct Messaging is:

**Secure Clinical Email System**
- Secured using compliant Security Trust Agents (STA)
- Encrypted and decrypted using a set of public and private keys
- Able to attach files for transporting information
- Requires a health internet service provider (HISP)

**Health Internet Service Provider (HISP)**
- Like: AOL, MindSpring, Gmail, Hotmail
- But: with a Provider Directory (DNS & LDAP certificate services)
- And: the three As of security
  - **Authentication**
  - **Authority**
  - **Audit**
How Does Direct Work?

Direct Enabled EHRs

- EHRs with built-in capabilities allow workflow accommodation
  - Integrate with internal messaging functionality
  - Identify attachment with ability to insert document

EHRs Without Direct Enablement

- Use email client to interact with Direct participants

Clinicians Without EHR

- Use a secure portal to interact with others

Each of these can work *inter-* and *intra-*organization.
Coordinating Acute Disease Care

- Creates communication channel for diagnostic evaluation
- Pathological images are transported
- Auditable transactions of care delivery

“This technology reduces patient anxiety and speeds treatment time because of increased communication.”

Oncologist
Improving Care Transitions

- Discharge summaries to PCPs and post-acute caregivers
- PCP-to-specialist referral coordination and follow up
- ED summaries are forwarded to follow-up physician and PCP

Research shows that almost 60% of patients who receive follow-up care from acute or urgent episodes of care do not provide documentation to their primary care giver.
Reducing Administrative Burden

- Approximately 10,000 pages of medical records every day
- Estimated that 20% of those pages do not get there
- ROI achieved in weeks and it meets Meaningful Use 2
- HIPAA violations minimized

“We’ve freed up valuable human resources for patient care within weeks of implementation.”

Practice Administrator
Coordinating Chronic Disease Care

- Creates communication channel for disease management
- Meets NCQA criteria for virtual teams
- Auditable transactions of care delivery
- Transports images of the eyes from optometrist to PCP

First day of operation:

“Within the first fifteen minutes Clinical Communication met an immediate business need in the certification process with NCQA.”

Internist
Bringing Mental Health Onboard

- Allows the consent to follow the disclosure
- Creates a better care plan for mental and medical needs
- Reduces adverse effects of therapies

“We now have an auditable method of ensuring that patient consent is provided with the passage of sensitive information.”

Psychiatrist
Improving Public Health

- Immunization reporting through attachments
- Medicaid reporting via CCDs
- Fulfilling requests through portal queries

“Our goal is to reduce or eliminate the manual processes associated with populating state health reporting requirements.”

State Official
Informatics Corporation of America: iCA

iCA Leadership and Collaboration

Formal Standards Bodies & Related Initiatives

- Initial Direct Project standards development work
- ONC’s S&I Workgroup
- DirectTrust.org
- EHR/HIE Interoperability Workgroup
- Inaugural Direct Connect-athon & ONC Showcase participant

Open Testing Platform

- Collaborative, open testing environment sponsored/managed by ICA
- Free to all industry participants
- Currently testing with 40 vendors representing 80% of US EMR market
- Includes Direct, HPD+, and IHE interoperability frameworks
Rural HIE Incentive Program
Designated Rural HIE Service Provider

Provisioning clinical data supply chains in a complex adaptive healthcare system
Redwood MedNet, Inc.

- Community steering committee established in 2004
- Incorporated as 501(c)(3) in 2005
- 9 member Board of Directors
- Operates regional trust community with 40 healthcare facilities
- Building HIE services at more than a dozen new facilities
- Participant, eHealth Exchange ("NwHIN")
- Member, DirectTrust.org
- Member, Western States Consortium ("NATE")
Redwood MedNet, Inc.

- 6 Hospitals
- 1 Outpatient surgery center
- 5 Independent laboratories
- 2 Imaging centers
- 600 providers at 24 practices
- 2 public health departments
- CAIR (immunization registry)
2013 Redwood MedNet Conference

Thursday July 25th

Hyatt Vineyard Creek Hotel, Santa Rosa, California

- Mark Frisse
- Michael Hogarth
- David Kibbe
- Clem McDonald
- Deven McGraw
- Marc Overhage
- Wes Rishel

The Value of Health Care Information Exchange and Interoperability

Health Affairs, January 2005

- Eric Pan, M.D., M.Sc.
- Douglas Johnston, M.A.
- Janice Walker, R.N., M.B.A.
- Julia Adler-Milstein, B.A.
- David W. Bates, M.D., M.Sc.

http://content.healthaffairs.org/content/suppl/2005/02/07/hlthaff.w5.10.DC1
10-Year Cumulative Net Return by HIEI Level

- Level 1: PAPER
- Level 2: FAX
- Level 3: EHR
  - "Perfect transport of unclear content"
- Level 4: EHR + INTEROPERABILITY

B. MIDDLETON, 2005
Best of Breed Open Source Software Tools

Focus on clinical data provisioning, not on selling HIE software

1. CONNECT gateway service on eHealth Exchange (NwHIN)
2. Co-tenanted edge proxy clinical data repositories
3. Federated provider directory and push transport options
4. “HIE Plug” secure local nodes
Optimizing Clinical Data Transport

RWMN seeks to optimize site level workflow, not to impose external portals or out of band transactions on local users.

Interoperability project phases

1. DISCOVERY phase creates a detailed bill of materials and a project plan
2. DEVELOPMENT phase builds the new interface
3. TESTING phase completed before release to production
Three Interoperability Transport Patterns

1. For the **PUSH** transport pattern, the SENDER and the RECEIVER jointly determine the data transport method
   a) CONNECT gateway unsolicited push
   b) Direct secure email unsolicited push

2. For the **QUERY-RESPONSE** transport pattern, the originating site is active, the sending site is passive

3. For the **PUBLISH-SUBSCRIBE** transport pattern, both ends of the transaction actively participate in the process

Redwood MedNet uses all three patterns

eHealth Exchange DURSA allows all three patterns
Enable bidirectional orders and results between outpatient practice and hospital
Redwood MedNet HIE Services

Enable transitions of care between outpatient practice and hospital
Enable bidirectional tests & results between hospital laboratory, outpatient imaging center and two outpatient practices
Redwood MedNet Expansion Schedule

Incentive funding available for qualifying interoperability tasks
Healthcare facilities must be prepared to
1. Sign the Redwood MedNet Participation Agreement (join the trust community)
2. Pay the 35% portion of the project budget
3. Establish narrowly scoped interoperability tasks that can be completed by November 15, 2013
4. Immediately and fully resource the interoperability tasks

Contact services@redwoodmednet.org
Rural HIE Incentive Program
Designated Rural HIE Service Provider
Inland Empire HIE

- Collaborative of 100+ facilities
  - Hybrid public/private HIE setting

- 65 facilities currently participating:
  - 900 physicians
  - 10,500 beds
  - Over 7 MM patients
Inland Empire HIE

- Services Provided for Exchange Partners:
  - MPI/RLS
  - CDR (longitudinal patient record)
  - Population/Chronic Disease Management
  - Patient Portal
  - Business Intelligence/Clinical Analytics
  - Public Health Reporting
  - EMR Lite
Rural HIE Incentive Program
Designated Rural HIE Service Provider

Owned By Physicians Medical Group of Santa Cruz, an IPA, since 1993

Bill Beighe, CIO
831.465.7874
bbeighe@pmgsc.com
Axesson Powers the Santa Cruz Health Information Exchange
Axesson Powers the Santa Cruz HIE

- Lab
- Radiology
- Transcription

2 Hospitals - 8 Feeds
Santa Cruz HIE Data Types & Features

✓ Community Patient Index (MPI)
✓ Lab Results, ADT feeds, Chart Notes
✓ Radiology Reports from Hospitals and Independents
✓ Referrals and Authorizations
✓ Hospital – Dictations, Op Reports, ED, H&P, etc.
✓ Discharge Summaries, Consultant Reports
✓ Patient Summaries (Print and CCD)
✓ EHR / EHR Interface (Allscripts / McKesson and 8 others)
✓ Problems, Allergies, Immunizations, Consent
✓ Provider to Provider Secure Communications
✓ Direct (3 different HISP offerings)
✓ Virtual Health Record (Longitudinal Patient Record)
✓ NwHIN Santa Cruz / Sacramento in final testing
Clients in 20 States and Counting

- EHR Interfaces:
  - Hospitals
  - Labs
  - Surgery Centers
  - Referral Partners
  - Health Information Exchange Organizations

- HIE Software and Operational Services

- NwHIN Direct and NwHIN Exchange

- Device Interfaces
Directed Exchange HL7 Interfaces

Health Information Exchange Organization

Source

- ADTs
- Orders
- Structured Labs
- Radiology Reports
- Other Reports
- Immunizations
- Chart Notes
- Care Summaries (CCD)
- Quality Metrics

Interface Service (Virtual, PC, Appliance, etc.)

Practice/Clinic

- ADTs/Orders/IZs/Notes/CCDs/Metrics
- Results/Reports

EHR Server

Hospital

Lab

User Workstation

User Workstation

Might also be a hosted solution, with the EHR servicer and Interface Service located in a hosting center, and workstations connected over the internet.
Call us for a Demo.

Thank you for your time!

Come visit us in Santa Cruz.
Rural HIE Incentive Program
Designated Rural HIE Service Provider

Orange County Partnership
Regional Health Information Organization, Inc.
OCPRHIO HIE Overview

- **Hybrid Model**
  - Combination of Federated and Consolidated model for storing clinical data

- **Provider Portal**
  - Access via Internet Browser such as Internet Explorer, Google Chrome, Safari, etc.
  - Download complete patient summary
  - Query results by patient name, diagnosis codes, procedure codes, etc.
OC Unites Core Components

- Classic HIE
- IHE Connectivity
- Public Health Event Notification
- Health Event Notification
## OCPRHIO Services

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<td>Admit, Discharge, Transfer (ADT) Information</td>
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<td>Continuity of Care Documents (CCD)</td>
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<td>Lab and Pathology Results</td>
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<tr>
<td>Medication Records</td>
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<td>Diagnostic Images and Reports</td>
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<td>Real-Time Alerting of Patient Updates</td>
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<td>Physician ED Notes and Patient Face Sheets</td>
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UCDAVIS

INSTITUTE FOR POPULATION HEALTH IMPROVEMENT
California Health eQuality
Interface Library (Partial List)

- AllScripts
- Cerner
- eClinicalWorks
- Epic
- GE Healthcare
- Greenway
- MedAZ
- MediTech
- MedPlus
- McKesson
- NextGen
- Office Ally
- Practice Fusion
- Sage / Vitera
- Siemens Healthcare
OCPRHIO Service Matrix

Classic HIE

- Provider Portal
- Longitudinal Patient Record
- Lab and Radiology Results
- Help Desk Support and Training
- System Maintenance
- Data Backload

IHE Connectivity

Classic HIE services plus...
- Interface Development
  > Record Locator Service (RLS)
  > Master Patient Index (MPI)
- Health Event Notification
- CAIR Submission
- Meets Meaningful Use Stage 2 Requirements for HIE
HIE Enterprise Solutions

- HIE Environment
- Governance Structure
- Liability Indemnification
- Policy & Procedures Manual
- Privacy & Security Manuals
- Project Management
- Branding & Marketing
- HIE Administration & Support
- Provider Onboarding
- HIE Rollout & Support
- Interface Development
- System Maintenance & Monitoring
- Help Desk Support
- End-User Training
Questions & Discussion
Emerging HIEs in California

ConnectHealthcare
Fresno
Marin
North State Health Connect
RAIN
San Luis Obispo Medical Education and Research Foundation
SacValley MedShare (SVMS)
Tulare Kings HIE

Both North State Health Connect and SVMS have a presence in Tehama County

Both RAIN and San Luis Obispo Medical Education and Research Foundation have a presence in San Luis Obispo County

NOTE: Shading indicates a presence but not necessarily full coverage in a county. Additionally, shading in counties with two HIE efforts represents only the presence of both efforts, not geographic coverage.
Contact Information

HIE Service Providers for Rural Incentive Program:

Directed Exchange:
- Redwood MedNet – RWMN
  - Will Ross 707-462-6369
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- Informatics Corporation of America – ICA
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Directed Exchange and Longitudinal Patient Record:
- Inland Empire HIE – IEHIE
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CHeQ Rural Incentive Program Website:
- http://www.ucdmc.ucdavis.edu/phi/Programs/cheq/cheqrural.html