Connecting California:
Building a Statewide Health Information Exchange Utility

Northern Virginia Technology Council

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Agenda

- What is CalRHIO
  - Background, Goals
- The need for Health Information Exchange (HIE)
- CalRHIO’s Utility Model
  - Overall concept
  - Details on services, phases
  - Financial principles
- Benefits to providers, patients, and payers
- Timeline for development and implementation
- Questions?
What is CalRHIO?

- A statewide collaborative initiative to build a secure, electronic health information exchange network
- Organized and funded by health care leaders in California – Sutter, Kaiser, Blue Cross, Blue Shield major funders
- January 2005 -- Incubated by HealthTech Center; January 2006 -- Became independent with its own board
- More than 60 organizations and nearly 1,000 stakeholders have participated in CalRHIO working groups, conferences, small group meetings
- Leaders from key organizations on CalRHIO Board (representing physicians, hospitals, health plans, consumer and privacy advocates, state and federal government, employers)
- Operating as 501(c)(3); application for designation with IRS
CalRHIO’s Goals – Better Care Through Better Information

- Deliver critical health information services reliably, securely, and affordably to clinicians; patients; state, county, federal health agencies; local exchange efforts throughout CA.

- Create a secure, electronically connected California population of providers, patients, and consumers.

- Offer an information infrastructure that supports optimum care delivery methodologies, transparency, patient empowerment, and integrated health care records.

- Facilitate regional health information exchanges and interconnections among them.
Disparate Clinical Systems = Information in Silos or Missing
A patient’s medical record – one of many
The integration hub

Photos courtesy of Kim J. Horowitz, MD, Director, Eastern Kern County Information Technology Assn. Assn.
Delivery to the point of care
1 day
1 doctor
115 faxes
10 ads
55 lab results
30 consult reports
19 pharmacy renewals
1 stat abnormal mammogram that needs immediate attention
Impact on Quality and Cost

- Critical information missing in nearly 14% of primary care visits
  - Adversely affects patient care in 44% of these cases
  - Delays care services 60% of the time
- In CA, 50,000 patients a day may be compromised because medical information is unavailable
- Treating physicians unaware of 1 in 4 patient prescriptions
- Drug or radiology exams duplicated unnecessarily 11% of the time
- Patients agreed to duplicate testing 50% of the time
- Problems with retrieval of information accounted for:
  - 1 in 7 admissions
  - 1 of 5 lab tests and radiology exams
- Cost of locating and obtaining information by both the data originator and the data user ranges from $12-$28 per visit

Sources: Jama, Feb. 2005; Commonwealth Fund report 2004
The concept of sharing commonly needed services is not new:

Regarding the Thomas Edison’s Pearl Street electricity generating station, which opened September 4, 1882, in New York City:

“It featured reliable central generation, efficient distribution, a successful end use (in 1882, the light bulb), and a competitive price.”

Utility services facilitate interoperability at local, regional & state levels based on varying requirements for HIE.

Core services needed for any HIE initiative:
- Patient identity management
- Access control
- Data Integration

Leveraging shared utility services equates to savings for users.
Benefits: Shared HIE Utility Service

- The CalRHIO HIE Utility Service will provide a suite of services from which individual organizations and regional efforts can choose to use some, all, or none of the available offerings.

- Services will be available to all providers at an affordable price that no single entity could achieve on its own.

- Services will be flexible and adaptable to support a wide variety of legacy systems and technical environments.

- They will be designed to permit local users to consume and pay for only those services they find valuable and are not duplicative of services provided locally.

Outcome: Rapid Deployment of HIE across CA
CalRHIO Strategy: A CA HIE Utility Service

Phase I:
Statewide On-Demand Data Service: Lab & RX

Phase II:
Addition of local data sources & more services
Phase I: HIE Utility Service

State Layer

National Data Feeds:

Statewide, On Demand, Real-time Clinical Data Access

Services
- MPI
- RLS
- EMR Gateway
- Integration Hub

Data
- Patient
- Payor
- Provider

Integration Hub

Claims History
RxHub
SureScripts
National Labs
How the CalRHIO HIE Utility Service works

- Through a secure web-based portal, authorized/authenticated providers can query the network and immediately receive patient-centric information.

- Privacy and security protections:
  - Users must be authorized and authenticated and have either obtained a patient’s consent or documented an emergency.
  - All queries/responses will be event-logged.
  - All data sharing will be carried out pursuant to state and federal laws involving patient consent, privacy, and security.
  - All appropriate parties must agree on data sharing scope, methodology.
Statewide HIE Utility Service: Applications & Data

- **Starting with making data available to EDs**

- **Data:** State and multi-regional clinical feeds
  - Lab/pathology reports from national labs
  - Meds from RxHub and SureScripts
  - Claims history from payers

- **Applications:** MPI, RLS, e-Prescribing

- **Options (for regions that are ready):**
  - **Integration Hub:** Translates patient-centric health information between various EMR vendor applications
  - **EMR Gateway:** Clinical feeds to physician office EMRs from lab/path reports from national labs and others, Meds from RxHub and SureScripts
Phase II: Adding Regional Data and More Services

State Layer

Region A
Statewide, On Demand, Real-time Clinical Data Access

Region B

Region C

Regional Layer

EMR Gateway  Regional Reporting

Local Data (From Labs, Hospitals, EMR)

Statewide Online, On Demand Clinical Information Services

MPI  RLS  EMR Gateway  Integration Hub

Services

Data

Patient  Payor  Provider

Data Sources

Claims History  RxHub  SureScripts  National Labs

National Data Feeds:

Connecting California
Phase II: Regional HIE Utility Service: Applications & Data

- **Additional Data:** clinical data from local hospitals, labs, and imaging facilities
- **Application Services:**
  - MPI; RLS
  - EHR (electronic health record) & PHR (Personal Health Record)
  - medication management (e-Prescribing and medication reconciliation)
  - clinical messaging (referral, lab, and imaging orders and results)
  - data warehouse for reporting and analysis.

- **Integration Hub Service:** translates patient-centric health information between various EMR vendor applications.

- **EMR Gateway Service:** streams clinical data from national/local labs to doctor’s EMR application.
Regional HIE Utility Service: Functionality

- “Push” reporting from: hospitals, labs, transcription services, and any other connected source
- Any authenticated provider can query the network and receive both state and regional data
- The regional layer would leverage the technology services offered by the state layer
- Secure messaging:
  - Provider to provider
  - Provider to patient
CalRHIO HIE Utility Service
Financial Model

- Participants DO NOT fund development
  - Avoids the front-loaded expenses that penalize early adopters and reward those that sit on the sidelines
  - No major investment in hardware or software is required of participating facilities and, as a result, this will be a sustainable system for private and public hospitals and clinics. Facilities only need access to the Internet.

- Participants pay only for what is needed and used

- No changes/alterations required in current IT systems
Benefits to Providers, Patients, and Payers

- Provides pathway to improved care, quality, patient outcomes
  - Potential to reduce errors, improve clinical decision making, provide quicker care
  - Improve continuity of care for members
  - Help manage chronic disease – focused PHR
  - Enable widespread data capture for analysis of quality and performance measurements, utilization data

- Supports value driven health care and P4P
  - Helps meet required IT investment to support “clinical quality through the ability to integrate data at the group level or to provide physicians with data to support clinical decision-making at the point of care.”
Benefits to Providers, Patients, and Payers

Potential to lower costs

- Reduce number of unnecessary, redundant, and/or ineffective services
- Increase formulary compliance and generic substitutions
- **Potential savings of $604 per ED admission** (HealthCore)

Strengthens relationship with providers

- Providing access to test results and the ability to track medication history

Improve health care benefits management

- Improve level of accountability, visibility, and efficiency
High-Level Roadmap and Timeline

Implementation of the HIE Utility Service Framework

Q1 2007
Planning
RFP Review

Q2 2007
Select Tech Partner
Finalize Business & Financial Models
Develop Strategic Alliances

Q3, Q4 2007
Secure Financing
Finalize Implementation Roadmap

Q4 2007, Q1 2008
Select Phase I Test Sites
The End Points of the Critical Path: Better Care Through Better Information

Starting Point:
- Santa Cruz – functioning
  - Results “push” to physicians
  - eRx
- 10 other local and regional HIE efforts identified in various stages of development
- About a third of CA counties have some level of HIE activity

Completion:
- All major metropolitan areas exchanging comprehensive data
- Rural areas
  - Lab results from national laboratory companies
  - Medication history
- Collectively, 90% of state patients have health information that can be accessed by their providers and by Personal Health Records (approx. 35 million patients)
- Research
  - New therapies
  - Disease management

7 year effort
Completion by 2014 Target (established by Pres. Bush, Gov. Schwarzenegger)
Better Care Through Better Information

www.calrhio.org

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