



Health Data Interoperability in California

California Trusted Exchange Network

Robert M. Cothren, PhD
Executive Director, CAHIE

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Agenda for today

Introduce CTEN

- Where are we in California?
- How does trust figure in?



In the beginning...

- We started with immobile stovepipes of paper data.
- **EHRs fix it all!**

We now have electronic data in interoperable systems and physicians are informed.



OK, not really, but...

- We started with immobile stovepipes of paper data.
- EHR Incentive Program created stovepipes of electronic data.
- **HIE fixes it all!**

Providers can use HIE to get data to their EHRs.



What we know (or think)...

Assumptions / Facts

- Care is delivered locally.
- Different environments will have different information needs.
- Different exchange models are emerging.



The case for regional HIE...

- Concentrate on local information delivery to support local care delivery.
- Address the information needs of the community or enterprise.
- Do so in the best way possible using emerging models.

This is still where innovation takes place.



BUT, it's all a lie...

- We started with immobile stovepipes of paper data.
- EHR Incentive Program created stovepipes of electronic data.
- California's community and enterprise HIE successes created regional and organizational stovepipes.
- ONC's State HIE Cooperative Agreement Program created state stovepipes.

*Now
what?*



A solution...

A framework that allows (otherwise) unaffiliated organizations to trust each other for the purposes of exchanging health information...

...that scales across states and nationwide...

...that reduces the cost of data sharing agreements.

A *Trust Framework*



Trusted Exchange

- Know your conversation is not overheard
- Know how the information will be used
- Know who you are talking to
- Know who you are talking about
- Know you have permission to speak



Trust Framework

Current Focus

- Know your conversation is not overheard
 - Security and trust services
- Know how the information will be used
 - Policies and trust services
- Know who you are talking to (and how to find them)
 - Directory services
- Know who you are talking about
 - Patient matching
- Know you have permission to speak
 - Consent services



First complication...

- We started with immobile stovepipes of paper data.
- EHR Incentive Program created stovepipes of electronic data.

CAHIE ⇨ California's community and enterprise HIE successes created regional and organizational stovepipes.

- ONC's State HIE Cooperative Agreement Program created state stovepipes.



What is CAHIE?

California Association of Health Information Exchanges

In the beginning...

- Thought leaders in HIE convened by CalOHII .
- Charged with “figuring it out” ...

Now...

- A collection of community and enterprise HIOs, service providers, payers, state agencies...
- Promote inter-organizational exchange through voluntary self-governance.



What does CAHIE do?

1. Represents California interests in HIE
- ⇒ 2. Operates California Trusted Exchange Network (CTEN)

Using...

- Multiparty data sharing agreement
- Policies for transaction patterns
- Trust bundles
- Directory services



Second complication...

- We started with immobile stovepipes of paper data.
- EHR Incentive Program created stovepipes of electronic data.
- California's community and enterprise HIE successes created regional and organizational stovepipes.

NATE ⇨ **ONC's State HIE Cooperative Agreement Program** created state stovepipes.



What is NATE?

National Association for Trusted Exchange

- Collaboration of states
(formerly the Western States Consortium)

In the beginning...

- Establishing exchange of PHI and provider information across state lines.

Expanded to...

- Establishing exchange among large organizations with differing regulatory requirements.



What does NATE do?

1. Interstate exchange between providers for treatment purposes.
2. Patient-mediated exchange using Direct-enabled PHRs.

Using...

- Policies for trusted exchange
- Trust bundles
- Provider directories



Do we need it?

- Many *California Connects* demonstrations illustrate trust frameworks.

See CTEN, as well as DirectTrust, eHealth Exchange, and NATE at California Connects.

Check out

[http://www.ca-hie.org/projects/california-connects-2014/demonstrations/trust-frameworks.](http://www.ca-hie.org/projects/california-connects-2014/demonstrations/trust-frameworks)



Basis for CTEN

0. Need to enable both push and query-based transitions, and to discover changing organizational capabilities.
1. Policies (CalDURSA and transaction policies), processes (standards and procedures), and technologies (trust bundles and directory services).

Landmark date!

CalDURSA approved on the 24th!

Check out <http://www.ca-hie.org/projects/calduresa>.



How does CTEN work?

2. Certificate-based authentication of systems and individuals through trust bundles.
3. Service discovery through directory services, first using HPD but expanding with emerging standards and adoption.

*Have been operating in a transitional state.
Re-launching services this week!*

Check out <http://www.ca-hie.org/projects/cten> and <https://bundles.ca-hie.net/>.



Does it play well with others?

- CTEN is compatible with DirectTrust, eHealth Exchange, and NATE.
- More agile to meet California needs.



How does NATE extend CTEN?

- Extends inter-organizational trust to interstate trust.
- Links to California's directory services to bridge provider and service discovery to organizations beyond California.
- Exploring patient-mediated exchange using Direct-enabled PHRs, including BB+.

See patient-mediated exchange today at California Connects.



We're done!

No. But we can see the way forward.



What about tomorrow?

- Know your conversation is not overheard
- Know how the information will be used

Many of our current tools for managing identity, authenticating individuals and organizations, and authorizing access are too blunt.



What about tomorrow?

- Know your conversation is not overheard
- Know how the information will be used
- Know who you are talking to (and how to find them)

We are just getting started, and our current tools are not extensive or simple, and may be insufficient.



What about tomorrow?

- Know your conversation is not overheard
- Know how the information will be used
- Know who you are talking to
- Know who you are talking about

Stand on the shoulders of giants.



What about tomorrow?

- Know your conversation is not overheard
- Know how the information will be used
- Know who you are talking to
- Know who you are talking about
- Know you have permission to speak

We have yet to really get started...



And the day after that?





Contact Information

Robert M. Cothren, PhD

Executive Director

California Association of Health Information Exchanges

- p** 925-934-2280
- e** robert.cothren@ca-hie.org
- w** <http://www.ca-hie.org>