



July 27, 2010

California eHealth Webinar

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July 27, 2010

1. Previous and Upcoming Webinars
2. Update on CAeHC Activities
3. Setting the Stage for Laboratory Data Exchange Webinar series
4. Presentation: **Outpatient Electronic Laboratory Data Exchange in California**, with Sam Faus, Associate Consultant for Sujansky and Associates.
5. Questions

# CAeHC Webinar Series

## Webinar Series 2009 (38 Webinars)

### Webinars in 2010:

- March 9: Michele Kang, Interim CEO, CAeHC
- March 23: Chris Cruttenden, President, NetChemistry
- April 6: Wes Rishel, VP and Distinguished Analyst, Gartner
- April 20: Gerry Hinkley, Pillsbury, Winthrop, Shaw, Pittman LLP
- May 4: Steven Waldren, MD, Director, Center for Health IT, AAFP
- May 18: Cal eConnect Implementation Plan Discussion
- June 1: Cal eConnect Implementation Plan Discussion
- June 15: Cal eConnect Implementation Plan Discussion
- June 29: Robert (Rim) Cothren, Cognosante and Lorraine Fernandes, Initiate (an IBM company)
- July 13: Dr. Richard Taylor, CMIO, Providence Oregon
- July 27: Laboratory Data Exchange Industry Overview and Development of National Standards

### Upcoming Webinars:

- August 10: Electronic Laboratory Data Exchange Discussion: Part 2
- August 24: Meaningful Use Update and Discussion

# Update on CAeHC Activities

- Developing and launching “CAeHC 2.0”
- Continuing Health Information Technology and Exchange Education and Communication activities, including CAeHC Webinar series and sponsorship of HIE conferences
- Supporting Cal eConnect in developing its HIE Implementation Plan
  - Briefing new CEO - Carladenise Edwards
  - Convening and leading stakeholder group discussions to provide input to Cal eConnect on state-level services needed
- Supporting the Regional Extension Center work of CalHIPSO and L.A. Care (including supporting the Bay Area LEC led by Lumetra Healthcare Solutions)
- Advising current HIOs and encouraging and facilitating the development of new HIOs in CA

# Electronic Laboratory Data Exchange

- ONC Program Information Notice dated July 6, 2010 made it clear that State Strategic and Operational Plans need to include a concrete and operationally feasible plan to address and enable these three HIE capabilities in the next year:
  - *E-prescribing*
  - ***Receipt of structured lab results***
  - *Sharing patient care summaries across unaffiliated organizations*

# A Two Part Discussion of Electronic Laboratory Data Exchange

- Part One: **Outpatient Laboratory Data Exchange in California** with Sam Faus, Sujansky & Associates
  - Who are the players?
  - What does the current state look like?
  - What are the challenges?
  - Approaches and initiatives for standardization of lab data message format and message transport
- Part Two: Discussion of recommended role(s) for Cal eConnect in facilitating electronic lab data exchange in CA



## PRESENTS

Discussion: **Outpatient Laboratory Data Exchange in California**, with **Sam Faus**, Associate Consultant for Sujansky & Associates.

July 27, 2010



# Outpatient Electronic Laboratory Data Exchange in California

Samuel Faus  
Sujansky & Associates, LLC

California eHealth Collaborative  
Webinar

July 27, 2010

# *Who are the players?*

## ■ Data Providers

- Reference labs (Quest, LabCorp, Foundation, ...)
- Hospital labs
- In-house clinic labs
- Public health labs

## ■ Data Consumers

- EHRs (ordering provider)
- Public health agencies
- Regional HIEs, RHIOs, ...

# *Lab Result Reporting - Current*

- A large proportion of laboratory results are still faxed or sent by courier
  
- Medical Practices with EHRs can get electronic lab results from laboratories, providing...
  - Sufficient volume of business
  - EHR vendor supports lab interfaces
  - Lab can send electronic results
  - Practice can afford interface

# *Challenges of Ambulatory Electronic Laboratory Data Exchange*

- Wide variety of formats for lab data
  - HL7 (v2.x), spreadsheets, flat text files
- Variety even given same format (i.e., HL7 2.3)
  - Required/Supported segments, fields
  - Identifiers and terminologies used
  - Differences in the way results are reported
- Getting EHR-specific identifiers for matching

# *Challenges of Ambulatory Electronic Laboratory Data Exchange*

- Few smaller/hospital labs currently support standard identifiers (i.e., LOINC for analytes)
- No standard way of connecting labs/EHRs
  - Point-to-point
  - web services
  - some communities with HIEs
- New interfaces are expensive for providers

# *Moving Towards a Common Lab Reporting Solution for California*

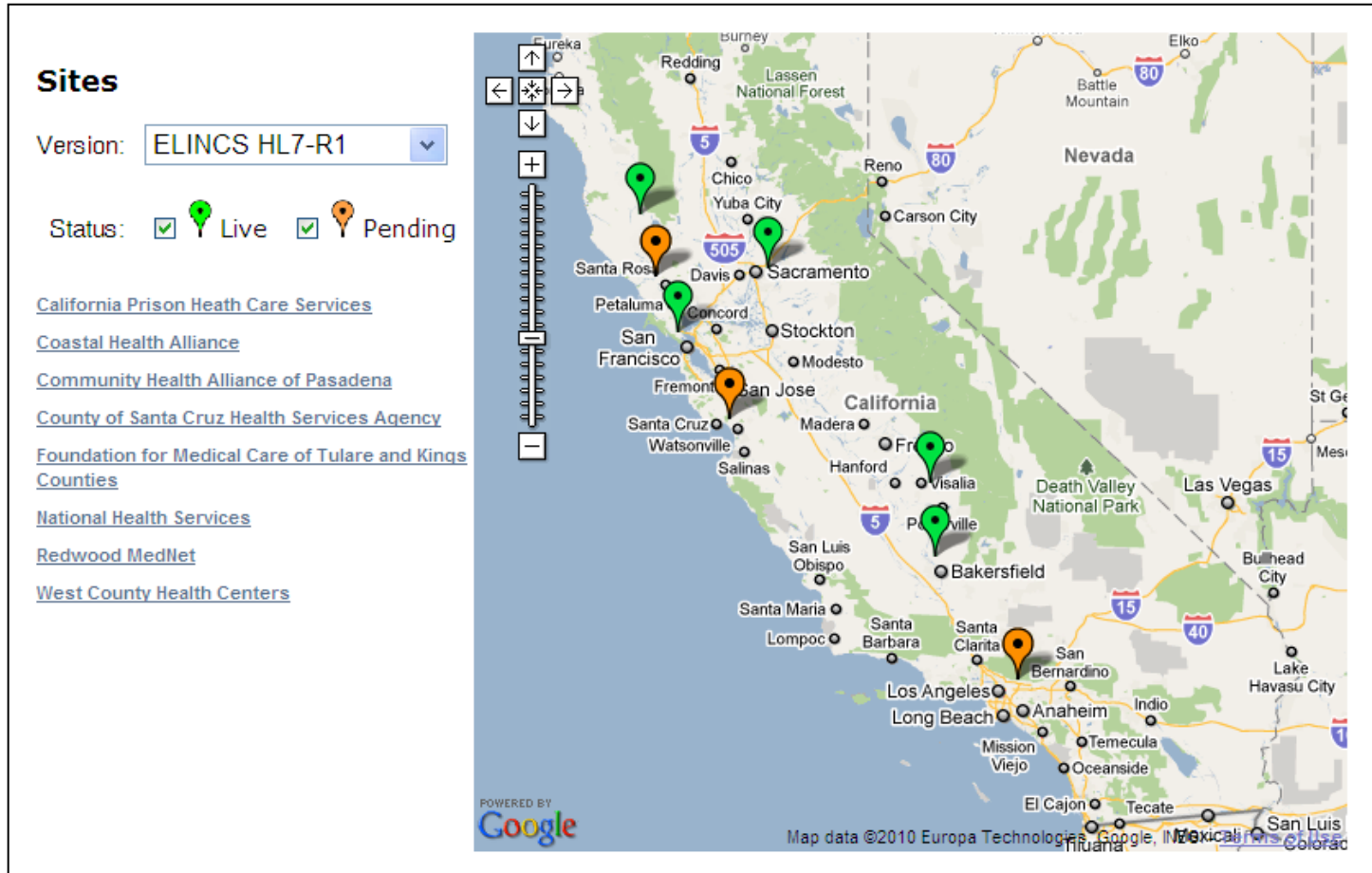
- Standardization of message format
  - Well defined use-cases
  - Highly-constrained message format/structure
  - Use of standardized identifiers
  
- Standardization of message transport
  - California Health Information Exchange
  - Industry standard transport mechanisms
  - Industry standard transport security

# *Standardization of Message Format*



- ELINCS Ambulatory Electronic Laboratory Specification (<http://www.elincs.org>)
- HL7 Approved Implementation Guide (2008)
- Developed in conjunction with major national labs, EHR vendors, and HL7

# ELINCS HL7-R1 Implementations



- 40 additional implementations of ELINCS v1.0 & v1.1 in CA

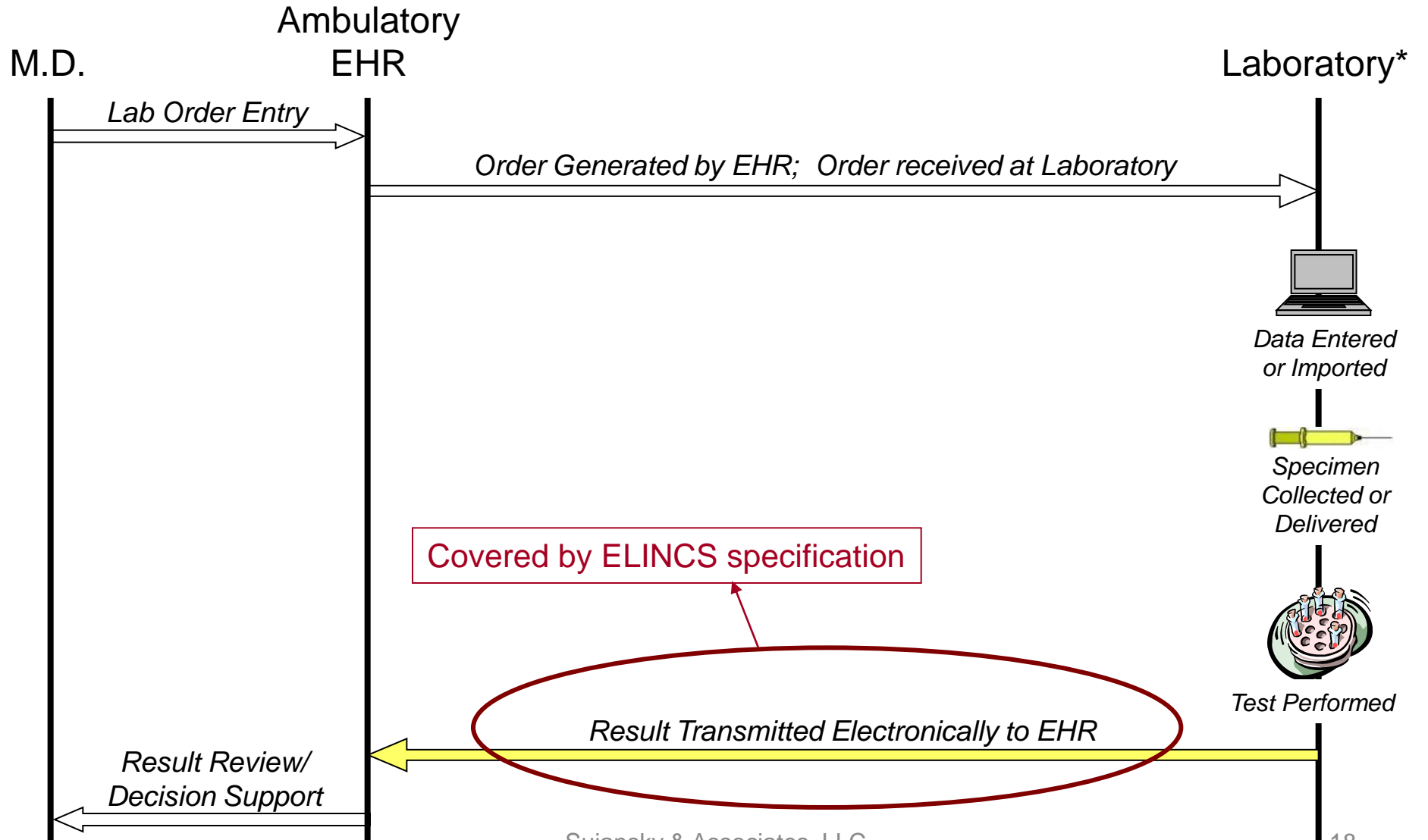
# *ELINCS HL7-R1 Implementations*

- Supporting Laboratories
  - Quest Diagnostics (All CA labs)
  - LabCorp (All CA labs)
  - Foundation Lab (Regional lab for CDCR)
  - Kaweah Delta Hospital (Hospital lab)
  - NHS Laboratory (Community clinic lab)
  - Visalia Medical Clinic (Private clinic lab)

# *ELINCS HL7-R1 Implementations*

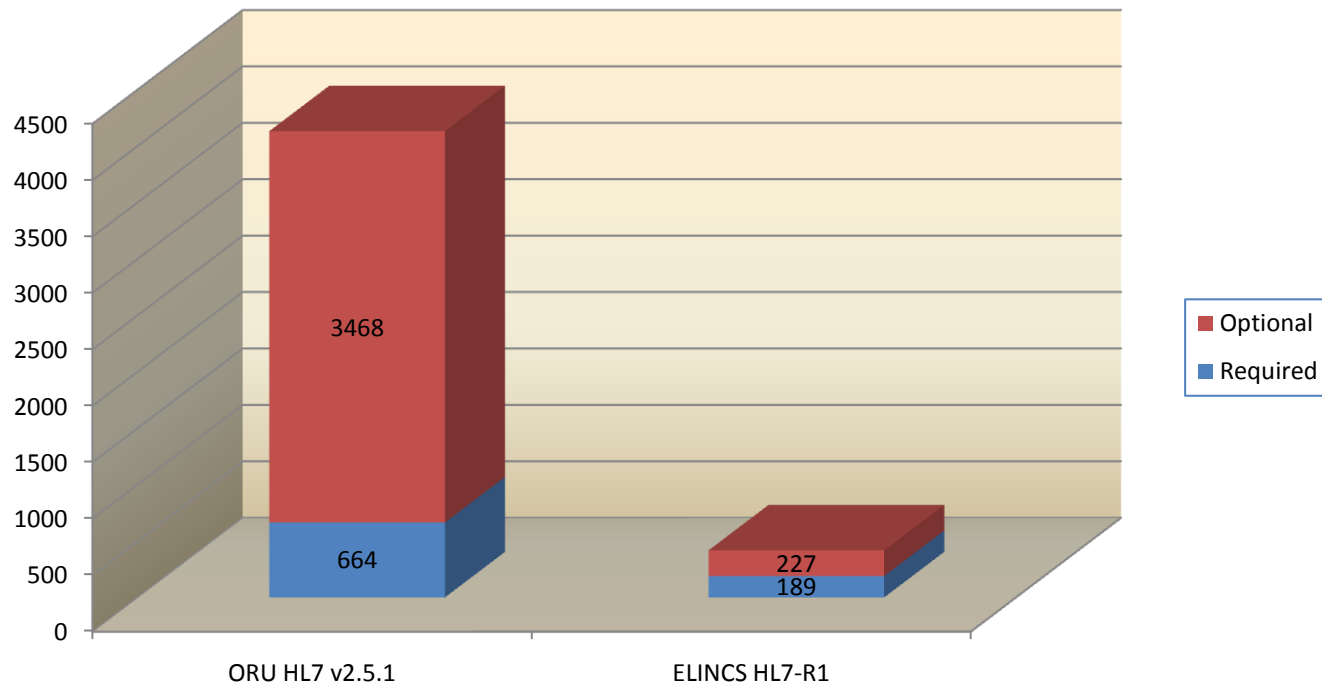
- Supporting EHR Vendors
  - CliniPro CDMS
  - eClinicalWorks 8.0 EHR
  - EpicCare Ambulatory
  - i2iTracks
  - Oracle Healthcare Transaction Base 6.0
  - SpringCharts EHR
  - ...

# ELINCS Use Case: Outpatient Lab Testing



# *Tightly Constrained HL7 ORU Message*

- HL7 v2.5.1 ORU: 4,321 Data Elements
- ELINCS HL7-R1: 416 Data Elements



# *ELINCS HL7-R1 Features*

- Supports variety of message types
  - Preliminary results
  - Final results
  - Corrections
  - Deletions
  - Test cancellations
  - Specimen received notifications

# *ELINCS HL7-R1 Features*

- Reflex Reporting
  - Formal rules for relating reflex results to original results
- Required Reporting of EHR-specific Identifiers
  - Reporting laboratory must capture & return EHR identifiers (Patient ID, Provider ID, Requisition ID)
- LOINC Codes for analyte identifiers
  - Top 95% most common analytes reported (~160)

# *ELINCS HL7-R1 Features*

- Copy-To Results
  - Rules for sending copies of results to providers other than ordering provider
- Structured Med-microbiology Reporting
  - Rules for discrete reporting of microbiology results
  - Requirements & recommendations for standardized coding
  - Rules for associating organism identification results with anti-microbial sensitivity results

# *ELINCS & Ordering*

- ELINCS does not currently define a specification for formatting electronic order messages
- Defines a Virtual Order
  - Specifies the data elements that must appear in any order (paper or electronic)
- Challenges arise due to lack of round-trip electronic specification

# *Standardization of Message Transport*

- Current efforts on-going at the state and federal level to define a “standardized” mechanism for transport of health data (including laboratory results)
- One of the efforts under discussion by CAeHC and Cal eConnect
- Data Security & Trust of paramount importance

# *HIE Lab Data Formatting Approaches*

- Lab-centric: All laboratories responsible for sending data in standard format
  - e.g., Utah Health Information Network (UHIN)
  - All data sent via HIE must be formatted correctly
- HIE-centric: Network takes responsibility for data format
  - e.g., Indiana Health Information Exchange (IHIE)
  - Network transforms data into standardized format



Thank you.  
Questions?

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# Q&A



## **Next Webinar: August 10, 2010, 1:00 PM**

- 1. Update on California eHealth Collaborative (CAeHC)**
- 2. Laboratory Data Exchange Barriers and Potential Solutions**



**Established February 2009**

Thank you for attending the CAeHC Webinar!

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