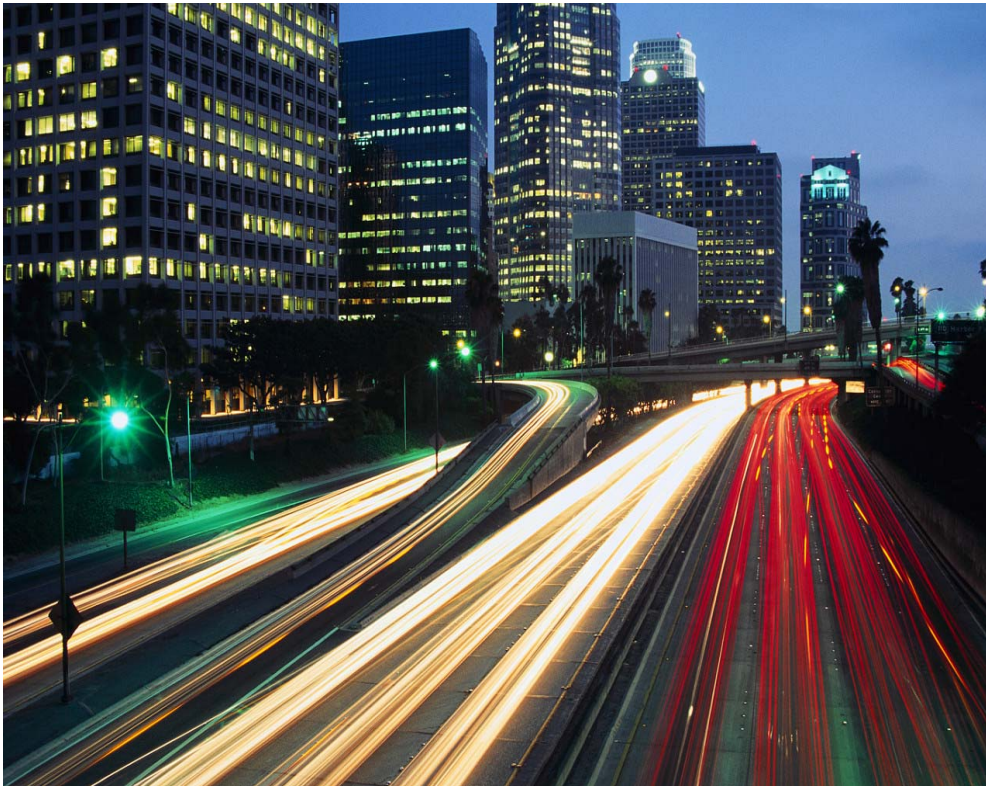


Health Information Sharing: Case Studies for Interoperability



Beverly Kennedy, President First Data Corp Healthcare



Creating Connections in Healthcare

Currently the U.S. Healthcare system is:

- Fragmented, regional-based system
- Physicians unable to access important patient health information
- Leads to redundant, costly, and in some cases, fatal treatments
- 2 million adverse events every year as a result of inadequate communications at time of discharge

Connecting Communities will lead to:

- Real-time portability of patients' electronic health records
- Reduced administrative and clinical costs
- Money and lives saved, improved outcomes, increased patient involvement in their own healthcare





California Regional Health Information Organization



- Umbrella organization bringing together healthcare stakeholders in California
- Leading the discussion to jointly develop all of the common elements that are required for the formation of one or more RHIOs within the state
- Collaborative, statewide effort to support the use of information technology to create a secure health information data exchange system
- Managed by the Health Technology Center, with initial funding from the California HealthCare Foundation

Objective

- Incrementally build a statewide information exchange for California
- Implement projects that build systems for data exchange, and demonstrate their feasibility and utility
- Ensure participation by safety net providers and underserved populations in data exchange and IT investment
- Build financial and business case models for health information exchange
- Facilitate creation of common governance, process, technology, and other elements needed for regional and statewide data exchange organizations

Participants – Major Contributors

- Sutter Health: Sutter Health affiliates serve more than 20 Northern California counties via 26 hospitals and nearly 3,500 physicians
- Kaiser Permanente: largest integrated healthcare organization covering more than 6 million members in California
- California Healthcare Foundation: independent philanthropy organization committed to improving the way health care is delivered and financed in California
- WellPoint: Approximately 28 million members and more than 38,000 associates

Santa Barbara County Care Data Exchange, Inc, (SBCCDE)

County profile

Population: 408,135

Major Cities

**Santa Barbara
Santa Maria
Lompoc**

5 major hospitals

~1,000 physicians

72 retail pharmacies

Total SB health care spending: approximately \$1.1 Billion*

Lompoc

Population: 43,300

75 physicians

21% of physicians in SBCMS

1 major hospitals

7 pharmacies

Major CDE participants: Lompoc Valley Community Health Organization, Lompoc Hospital

Santa Maria

Population: 72,900

184 physicians, 21% of physicians in SBCMS

1 major hospital

14 pharmacies

Major CDE participants: MidCoast IPA, Unilab, Marian Medical Center

Active CDE participation

Major hospitals 5 of 5

Physicians: 400 contributing data of 1000; but all can access data

Retail pharmacies ~60 of 72

Payors 1 of 8

Santa Barbara

Population: 92,800

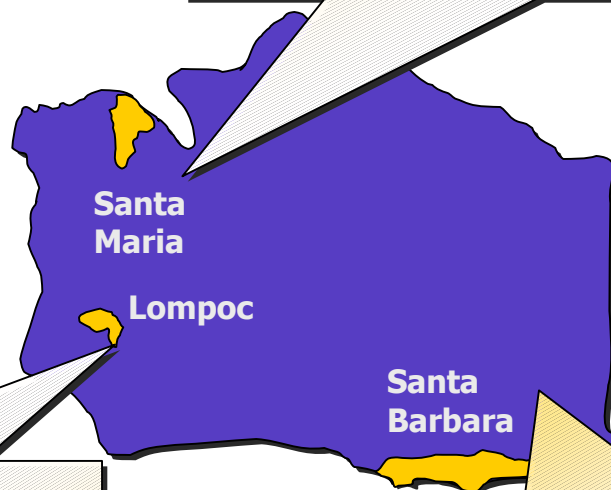
693 physicians

53% of physicians in SBCMS

3 major hospitals

32 pharmacies

Major CDE participants: Santa Barbara Regional Health Authority, Sansum-Santa Barbara Medical Found. Clinic, Santa Barbara Public Health Dept.



* Estimated

** Active participation defined by User agreement signing

Source: Santa Barbara County Medical Society; Dep't of Finance, Santa Barbara County

- ▶ Santa Barbara County Care Data Exchange, Inc. (SBCCDE) created in September 1999.
- ▶ Comprised of nine local health care organizations
- ▶ The Care Data Exchange solution (CDE)
 - first peer-to-peer clinical data exchange designed to enable healthcare providers to securely share clinical data at the point-of-care.
 - Developed by CareScience, the Santa Barbara county Care Data Exchange project, and the California HealthCare Foundation
- Recently completed three phases of User Acceptance Testing (UAT), including:
 - Phase I: security, access control and architecture testing
 - Phase II – system auditing to verify completeness and accuracy of data
 - Phase III –physician use testing during their daily office workflow

Emergency Department Linkage Project

- GOAL: To have a small number of CA hospitals able to exchange a limited amount of hospital generated information as soon as possible
- Web-based simple system to enable access to a limited set of data for patient safety in emergency departments.
 - Plug and play – hospitals agree on new Web-based data display screens; one entry point, one interface – up to hospital to connect.
 - Proof-of-concept will involve:
 - --secure address, secure user
 - --interface to internal databases
 - --organizations working together
 - --CalRHIO leadership
 - Allergies
 - To connect, hospital must be a member of CalRHIO; agree to furnish and accept minimum data set; be able to connect to CalRHIO Web interface

CalRHIO & First Data Corp Collaboration

- First Data Corp Healthcare Network OFF and ON Ramp Options:
 - CalRHIO
 - Individual RHIO
 - Santa Barbara may have the resources to build their own connection
 - 2nd RHIO will not build their own
 - 3rd RHIO will use CalRHIO connection to the First Data Network.
- Next Steps
 - Deploy administrative functions, e.g. real time eligibility, real time/right time claims
 - Personnel Health Records (PHRs), Clinical Manager





Objective

- Build and operate a regional health data exchange infrastructure in central Massachusetts
- Enable real time (or point of service) aggregation and presentation of patient's health data from providers and payers
- Allow health care providers to have the right information at the right time to improve patient safety, care quality, and operational efficiency

Participants

- Central Massachusetts health data exchange project initiated in October 2003 by:
 - Fallon Community Health Plan, with more than 172,000 members, is the largest health care services company in Central Massachusetts offering a broad range of products and services, including HMO, PPO, POS, Medicare, Medicaid, PACE program and effective 1/1/06, Qualified high deductible products with preferred HSA custodial arrangements.
 - Fallon Clinic: group practice with 240 physicians, 26 sites, and over 1 million patient visits per year
 - UMass Memorial Health Care: 1,500 physicians, 12,000 employees, multiple hospitals, primary care practices, ambulatory outpatient clinics, long term and home care facilities, and a 700-member faculty group practice



High-level Design Goals

- ✦ Preservation of data and transaction ownership
- ✦ Secure
- ✦ Protects patient privacy
- ✦ No central clinical data repository
- ✦ No central demographic repository
- ✦ Scalable and high performance
- ✦ Interoperable with other local health information infrastructures and the National Health Information Infrastructure.
- ✦ No rip and replace – leveraging existing systems
- ✦ Integrates into physician workflow

Levels of Participation

- ✦ Portal access – web browser access to display patient information
- ✦ Practice management system – medical summary prints out automatically when patients arrive
- ✦ EHR integration – One or two-way integration with existing information systems to display patient information within those systems and supply data to the SAFE Health network.
- ✦ Clinical information supplier– Ancillary systems or health plans that feed patient data to SAFE Health network.



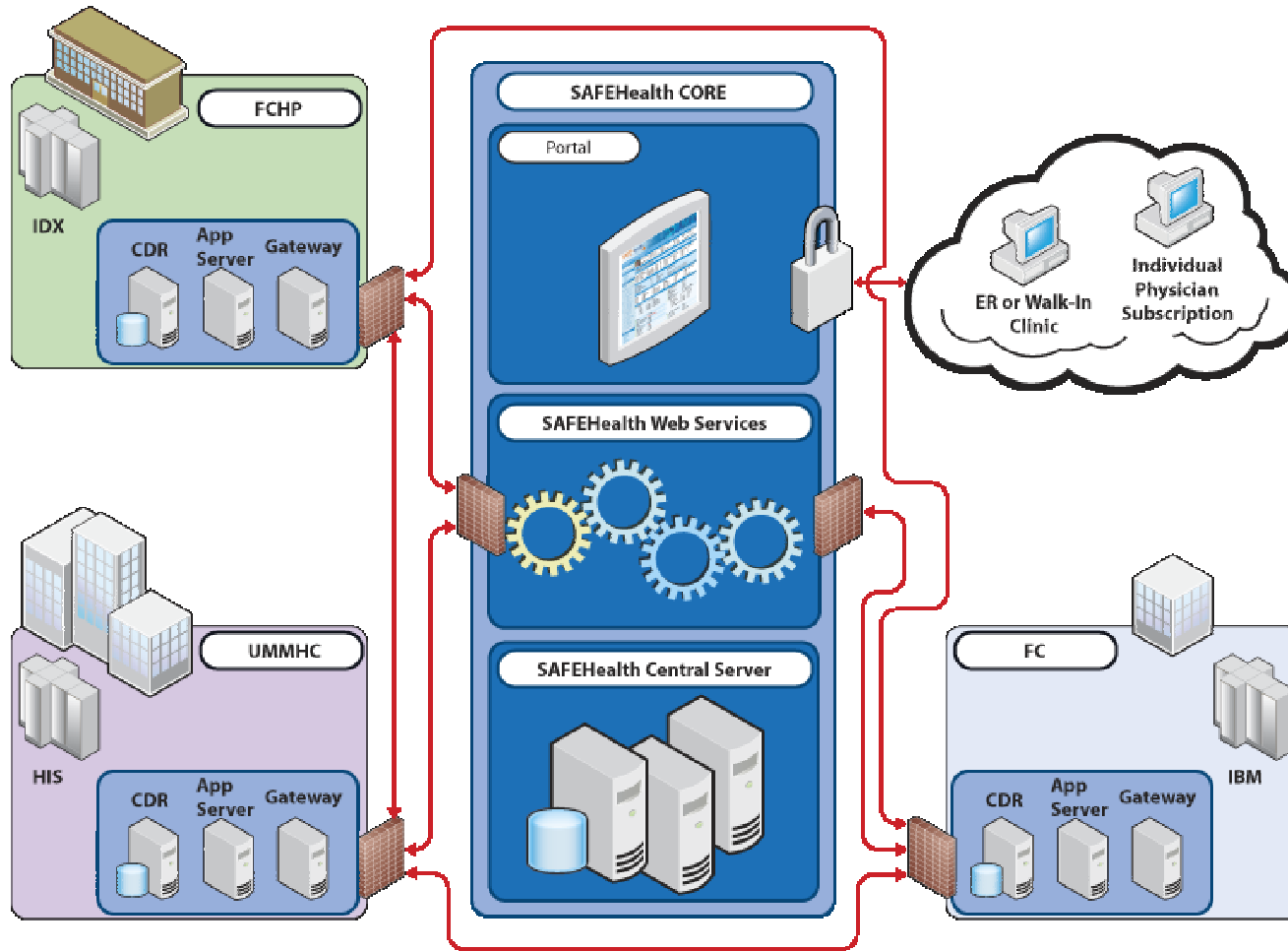
Technology

- SAFE Health Application
 - SAFE Health portal (as electronic health record viewer)
 - Authentication
 - Patient look-up with SAFE Health record locator service (RLS)
 - Audit trail and transaction logging
- Enterprise Integration
- Infrastructure
 - Secure, single log-on
 - Federated master person index (MPI)

Solution Highlights

- Zero or minimal central data repository (metadata only)
- Web service and HL7 connectivity
- Preservation of data and transaction ownership

Architecture



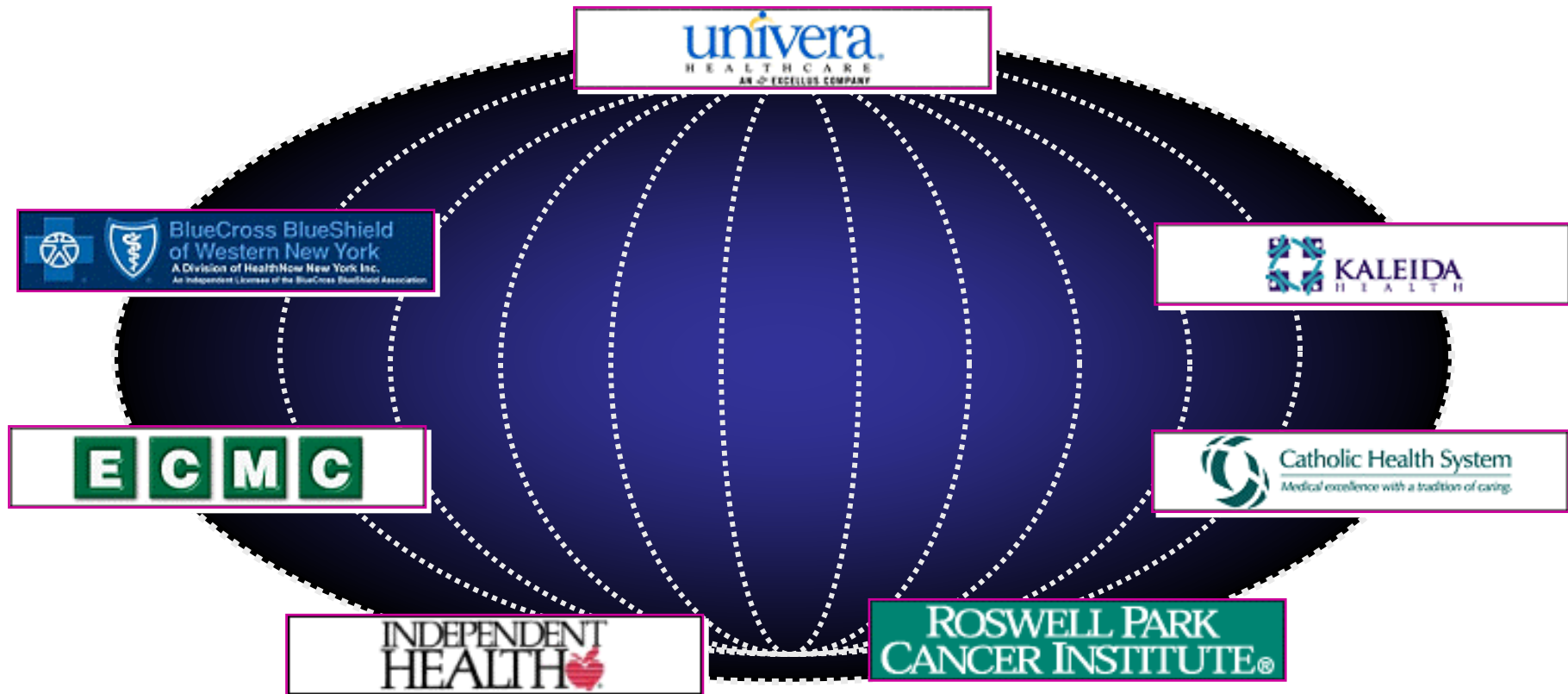
Project Status

- Proof of concept completed
- Prototype developed
- Basic working features as of May 2005
 - Authentication
 - Record location and aggregation
 - HL7 messaging
 - Portal as the record viewer
 - Audit trail and transaction logging
 - Patient registration and lookup
 - Probabilistic matching algorithms
 - Basic support for single sign-on and user management

Project Status

- Next Steps:
 - Deploy administrative functions, e.g. real time eligibility, real time/right time claims
 - Clinical data repository for local organizations
 - Smart data routing to minimize network traffic
 - Data subscription/publication
 - Live release in mid 2006 with limited data types for a significant portion of population in central Massachusetts

Community Healthcare Partnership





What is WNYHealthNet

A consortium whose members studied the feasibility of jointly developing a community-wide approach to addressing compliance with Title II of the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

Electronic Transactions

Why did we form a consortium?

- Opportunity to collaborate to achieve regulatory compliance
- All healthcare entities have to be compliant
- For an accelerated role through a collaborative approach to HIPAA
- Take advantage of existing FDDI connection
- Lowers development & operating costs through shared resources

Guiding Principles

- Equal Shared Funding (To Date)
- No data stored at any site
- No operations run by any member
- Equal Voting - Consensus if possible
- Must be HIPAA Compliant
- Must be used for non-competitive, commodity type functionality

Project should benefit broader community

Accomplishments

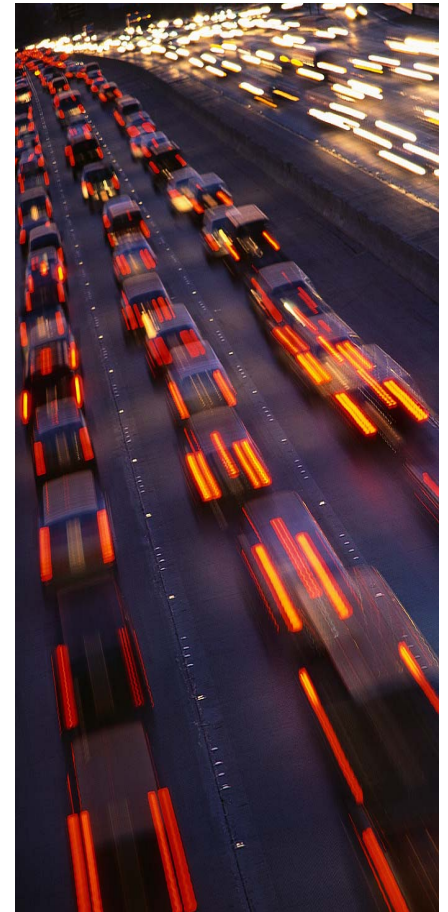
- Implemented 270/271 eligibility transaction - web, batch & system to system
- Implemented 276/277 claim status inquiry & response transaction – web
- Implemented 278 Referral Request & Response, Referral Inquiry/Authorization Inquiry & Response – web and system to system (Kaleida)
- Completed community standards for 837 & 835 guides

Operational Information

- ▶ 1.6 million transactions processed monthly
- 17,000 users authorized for www.wnyhealthenet.org
- Community providers using system free of charge
- Network availability exceeds 99.5% since June 2002 launch

Next Steps: Connecting the Communities

- Deploy Administrative transactions
 - Real time eligibility
 - Real time / Right Time Claims administration
- Create the standards, protocols and interfaces for:
 - EMR/PHR
 - Labs, pharmacy and clinical information
- Develop the fabric that will interconnect the healthcare information from within each community



Health Information Sharing Conclusions

- Changing healthcare is a process, not an event
- Solutions must be incremental and flexible to allow constituents with varying levels of automation to join within their timetable and ability
- Health Information sharing initiatives must provide the industry with a non-exclusive national switch used to securely transport and exchange virtually any type of healthcare information
- The infrastructure must enable connectivity among all healthcare participants – patients, payers, providers, hospitals, laboratories, Pharmacy Benefit Managers (PBMs), and Third Party Administrators (TPAs)
- Initiatives must involve all constituents that are willing to conform to basic standards, privacy, and security requirements that are outlined in service level agreements
- First Data's vast history and experience with interconnecting and interoperability within the banking industry sets a strong foundation and model for healthcare.

“In the long history of humankind, those who have learned to collaborate most effectively have prevailed.”

—Charles Darwin