



Building an Interoperable Public Health Framework: Enabling Data Exchange

Advancing Health Care Through the Adoption of EHR/PHR

Donald George, CEO

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Why does Public Health need transformation?









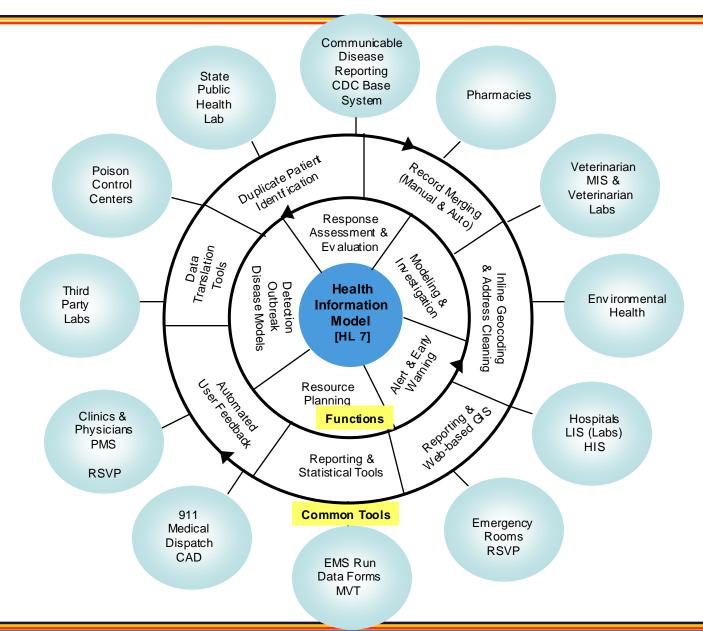
Why does Public Health need transformation?





HL7 Standards Enable Data Exchange







Types of Data: Personal vs. Population

Personal Health Data

Adult Immunizations
Childhood Immunizations
Tuberculosis Testing
STD Testing and Counseling
HIV Testing and Counseling
EPSDT
Family Planning
WIC
Prenatal Care
Dental Care
HIV Treatment
Primary Care



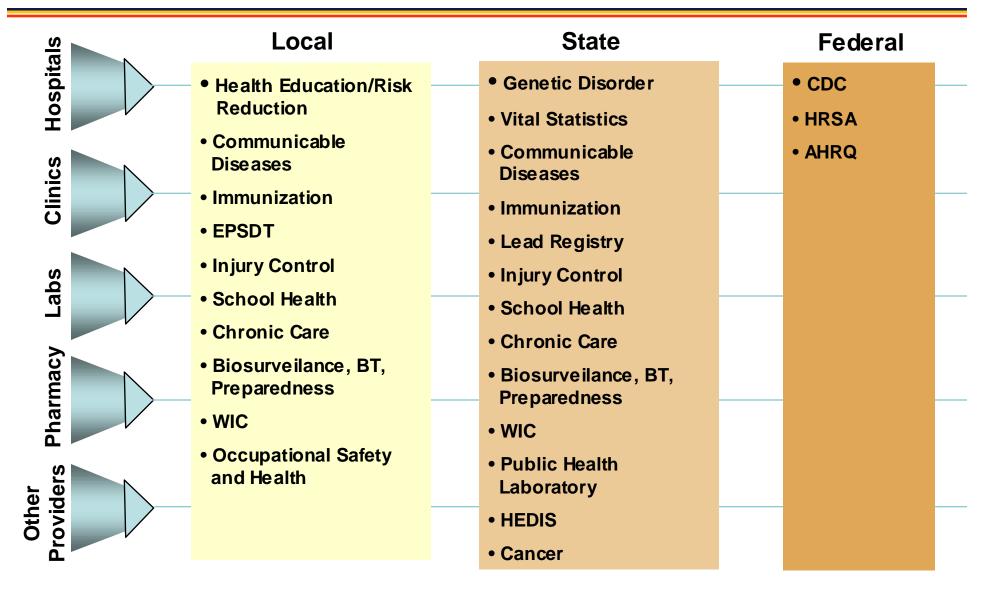
Population Health Data

Communicable Disease Control
Health Education
Epidemiology and Surveillance
High Blood Pressure Screening
Tobacco Use Reduction
Cancer Screening
Diabetes Screening
Cardiovascular Disease Screening
Injury Control
Violence Prevention
Occupational Safety and Health



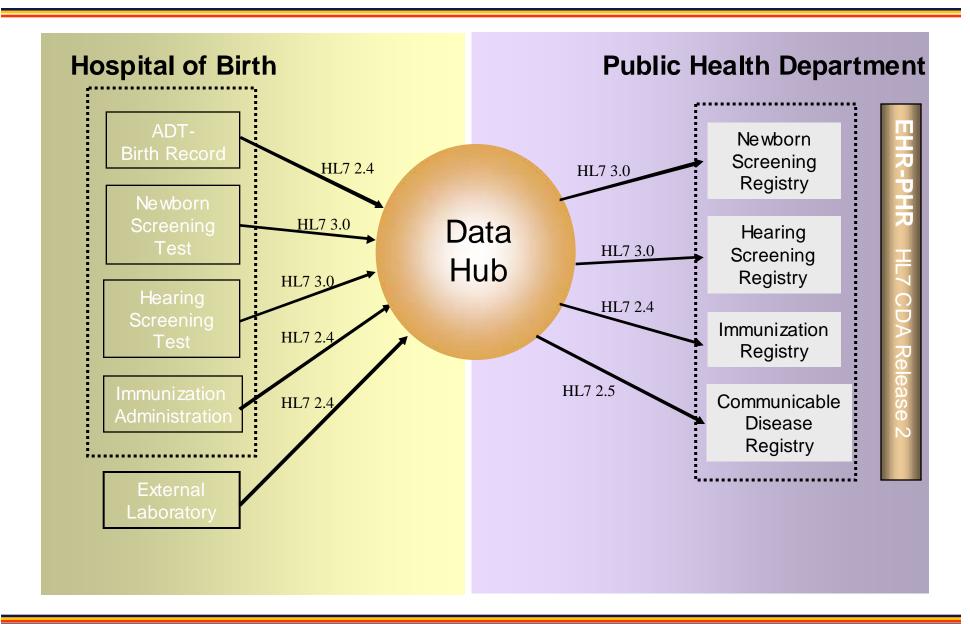


Clinical-Public Health Data Exchanges: Local / State / Federal Health Agencies





Creating an Interoperable EHR for Public Health





Connect the Information Systems

Integrated Health Framework

Standards for Enabling an Integrated Public Health Systems

Standardized

Oata Structures

HL7

ICD-9-CM

CPT-4

SNOMED CT

LOINC

CCR/CCD

CDISC

- 1. Health Level Seven (HL7)
- 2. Integrated Health Enterprise (IHE) Profiles

Standardized collaboration processes help bring about interoperability.



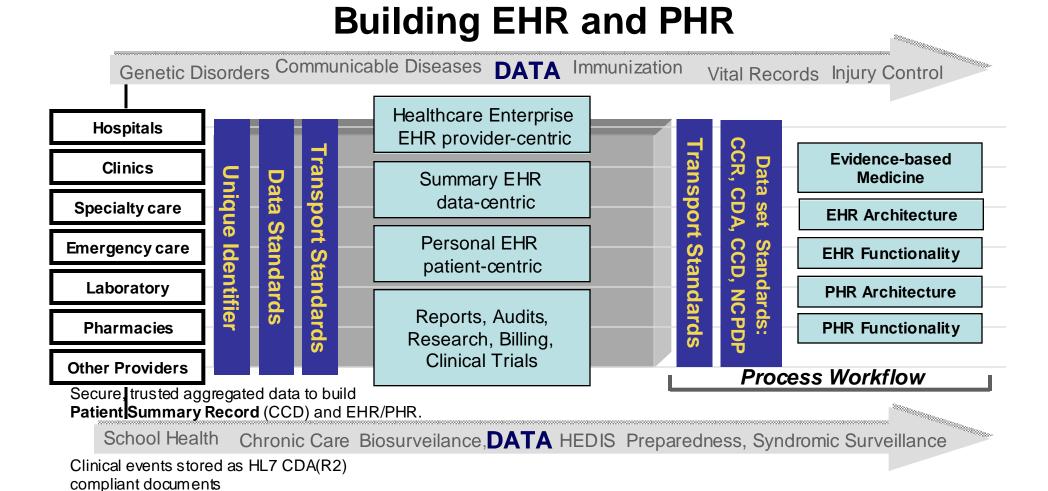
SOA

Federal Health Standard Groups

- 1. HITSP
- 2. AHIC
- 3. HISPC

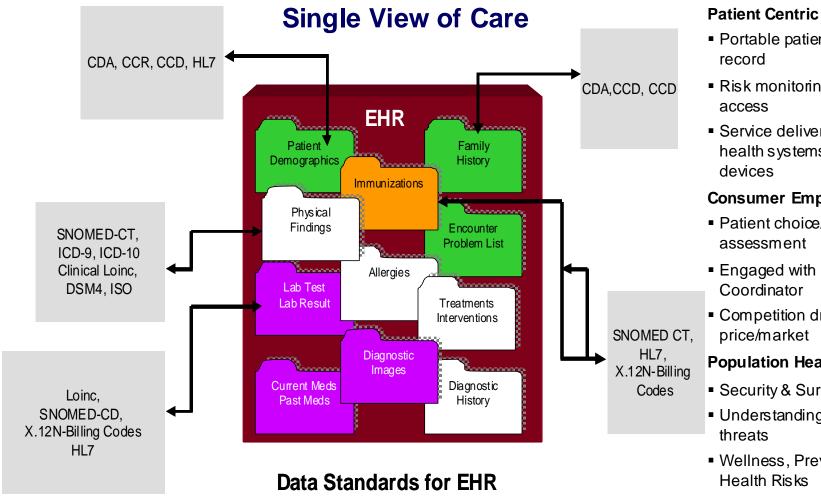


Building EHR and PHR





Achieving a Continuum of Care - Public Health EHR-PH



Patient Centric Care

- Portable patient health
- Risk monitoring/ better
- Service delivery to all health systems and

Consumer Empowerment

- Patient choice/ risk
- Engaged with Health Care
- Competition drives

Population Health

- Security & Surveillance
- Understanding of Health
- Wellness, Preventive Care,



Connect the Information Systems

The business needs will be met by using the Service Oriented Modeling and Architecture (SOMA) to:

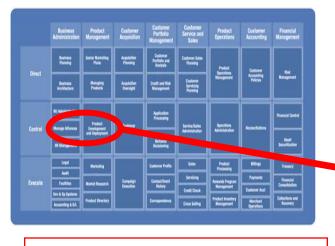
- Integrate HL7 standards
- Transform the public health business model across multiple functional health domains



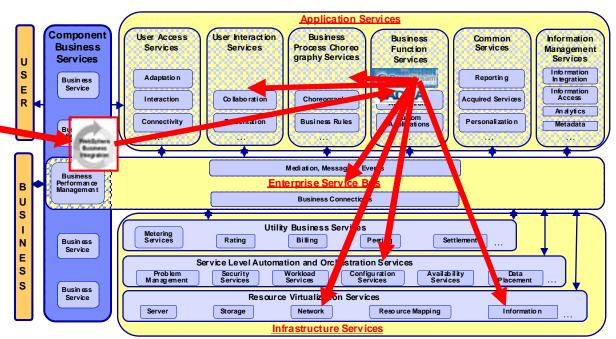
Move from Strategy to Implementation

Health Services Model

Building an EHR-PH Component Services Model For Health Information Exchange

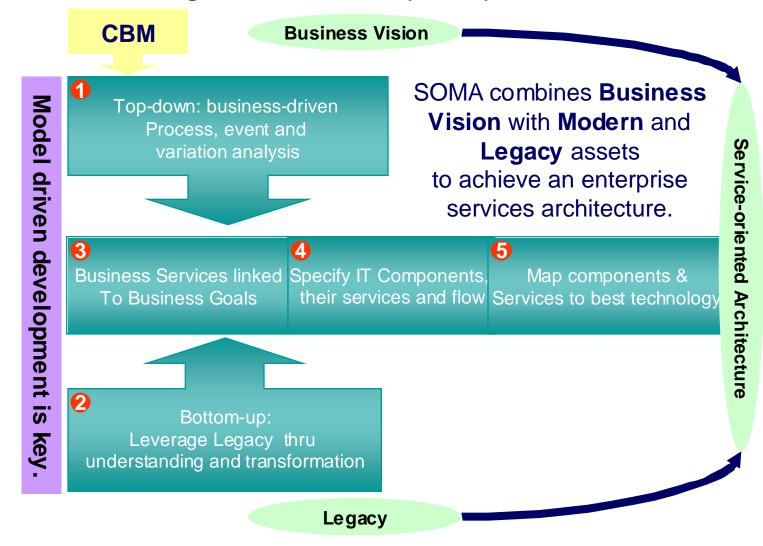


- Start with a "hot" component area product identification
- Define a model of the component to be transformed
- Understand the underlying applications infrastructure and how it needs to change
- Identify and design the required supporting infrastructure





Service-oriented Modeling and Architecture (SOMA)





How do you choose Service Providers?

Intro to Service Oriented Architecture Modeling The best practices of service orientation which is the process **Service Oriented Analysis** Service and practices that How do you understand the business as Requirements guide the delivery of a services? How do you enable business agility? SOA is in the early stages of adoption for many organizations **Service** Service Oriented Design Design What is the precise behavior of services? **Service** How do you ensure scalability, reliability, etc? Build How do you enable technical agility? **Service Development** Service Oriented Provisioning How do you determine which Services to use? **Service Oriented Programming**

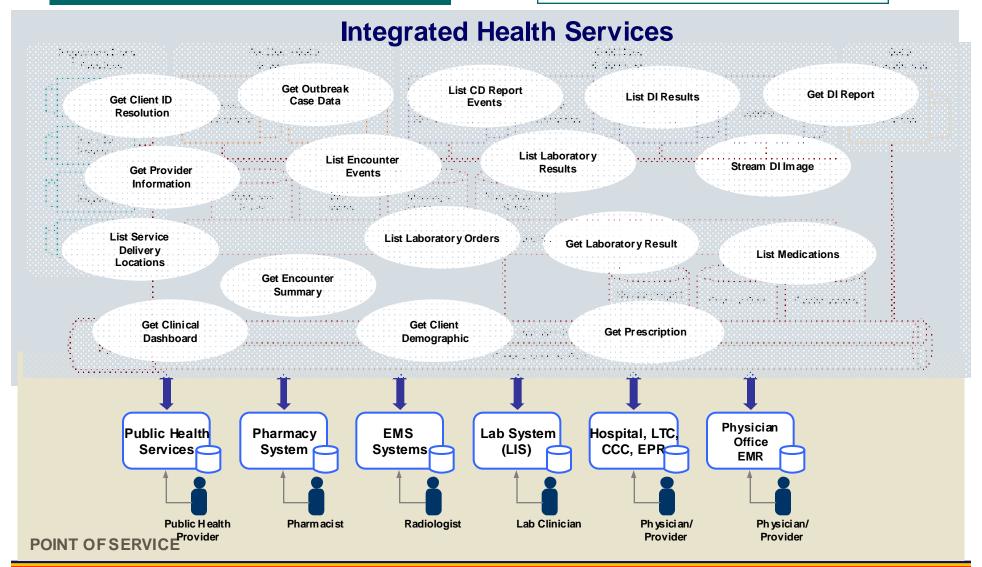
How do you reduce effort to code Web

Services?



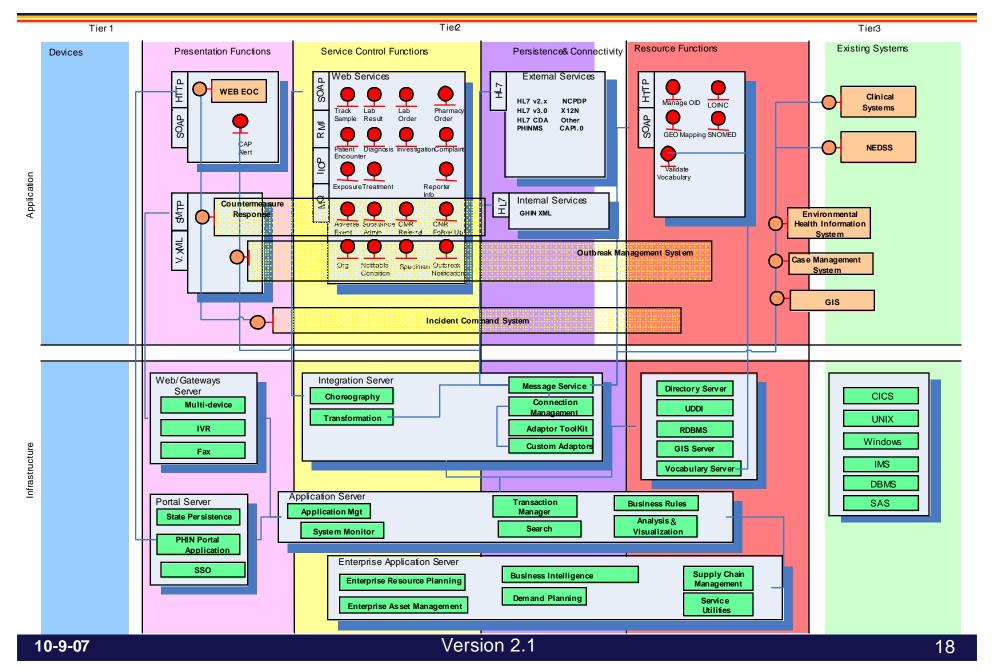
Connect the Information Systems

Integrated Health Framework





PHIN Functional Architecture





- Integrated services improve data exchange and, ultimately, service delivery
- Provides an integrated view across the continuum of health situations
- Creates an integrated process framework that connects health and all medical services to improve quality of care and health outcomes
- Builds common, reusable services





- Without an Enterprise Services and Information Roadmap for Public Health, today's public health services will remain siloed
- An Enterprise Services and Information Roadmap is essential to moving toward achieving Interoperability
- Make data exchange real by tackling crossenterprise processes
- Service oriented modeling is essential to effective architecture design to achieve interoperability



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