Nationwide Health Information Network
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**Office of the National Coordinator
for Health Information Technology**

Current Landscape - Practices

- Most practices do not have EHRs

- Where EHRs exist:
  - Do not usually exchange data electronically with each other, with hospitals, with labs, or with pharmacies
  - Most EHR data must be input manually - impedes adoption by consumers and clinicians

- Primary transfer of clinical information: paper mail, phone and fax
  - Not infrequently all approaches have to be supported by the clinician

- Missed opportunities for positive impact of technology
  - Reducing errors, improving monitoring, advancing quality of care can not be fully realized
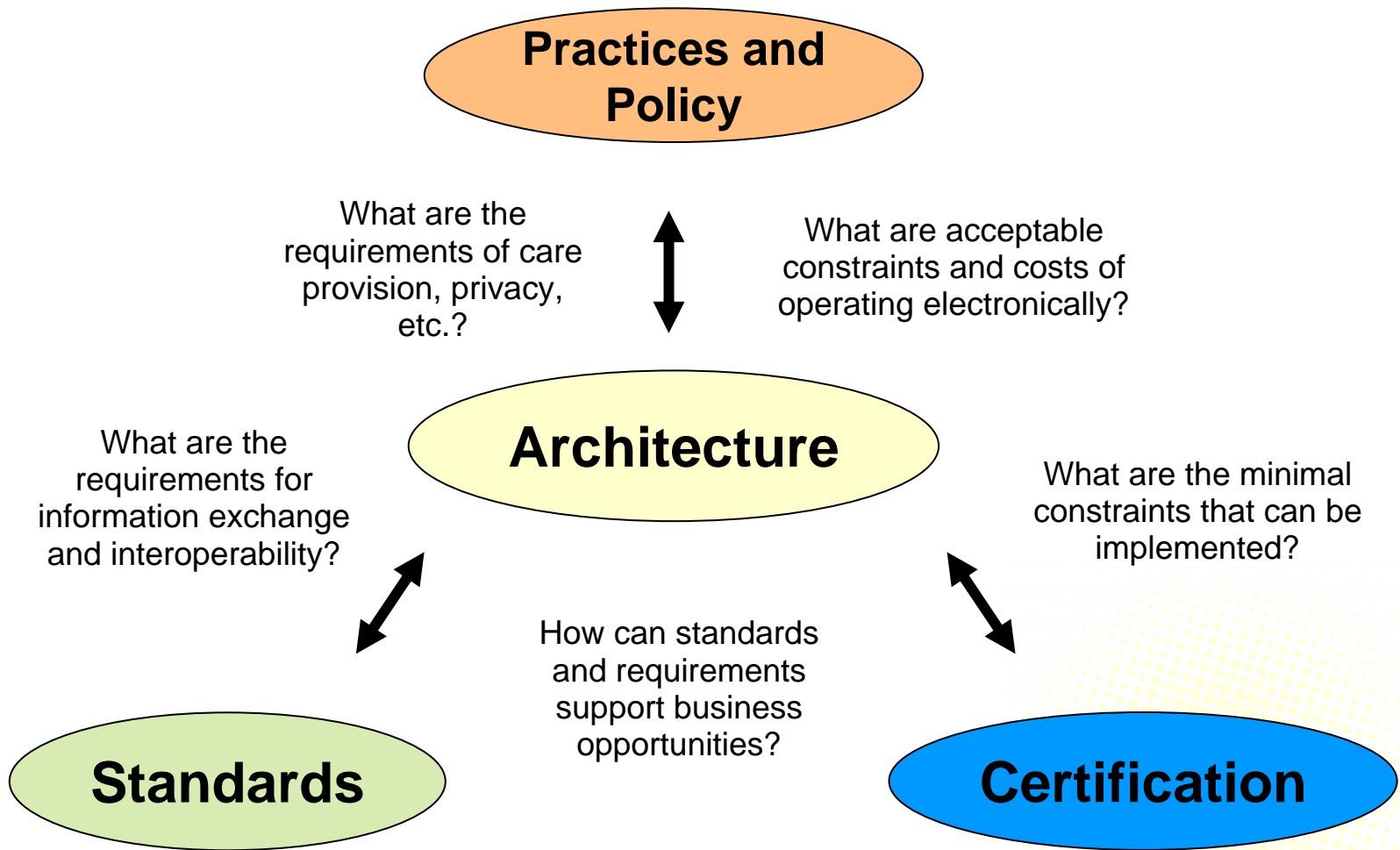 - Clinicians lack the systems and the collaborative data

Current Landscape - Regional Networks

- Many efforts to improve regional cooperation
  - Most have not yet achieved significant data sharing

- Are a few successes built on trust and regional business goals

- Many must build their own regional network because there is no alternative
  - Unique regional solutions impede commercial market for technology and services
  - Non-regional health care stakeholders must develop individual approaches to work with each region
  - Limited ability to address interoperation between regional networks

Need for a Safe Market for Networking Investment

- Regional Risk Factors
  - Unique technology approaches bring the risk, cost and delay of being a pioneer
  - Each network becomes a self-developed or custom-developed project
  - Requirement for collaboration beyond the region can force change after initial development

- Creating a Stable Market Reduces Risk
  - Networking organizations select products based among competing offerings
  - Vendor experience in one region transfers to other clients

- Standards-based competition

"Architecture" is a Part of the Solution

Practices and Policy

What are the requirements of care provision, privacy, etc.?

What are acceptable constraints and costs of operating electronically?

Architecture

What are the requirements for information exchange and interoperability?

What are the minimal constraints that can be implemented?

How can standards and requirements support business opportunities?

Standards

Certification

Nationwide Health Information Network

- A widely available, easy to use, and inexpensive service to securely exchange health information
  - Information exchange and interoperability necessary to realize the President's vision for health care IT
  - Interconnect electronic health records
  - Transport electronic medical information to inform clinicians and follow the consumer

- Provide a platform for quality initiatives

- Integrate public health and bioterrorism monitoring with care

NHIN Sequencing

	NHIN Accomplishment
Phase I	• Potential architectures • Prototypes that demonstrate viability • Business model
Future	• Shared architecture with best elements • Operational implementations • Environment for sustainability

Nationwide Health Information Network – Phase I

- Phase I is currently underway
  - Four contracts awarded by HHS
  - Contribute to the development of an NHIN architecture
  - Develop working prototypes to establish the viability of proposed architectural approaches

- Consortia led by Accenture, CSC, IBM, and Northrop Grumman
  - Health information technology organizations
  - Three health care markets in each consortium
  - Provide perpetual licenses for government use of technology required to replicate

- Public convening of consortia and all other interested parties to ensure public input into NHIN structure

Accenture

- Accenture has more than 4,000 professionals serving providers, payers and pharmaceutical organizations across North America

- Accenture is developing electronic health records across the globe, including in the UK, Australia, Singapore, Spain, and France

- Accenture is a global management consulting, technology services and outsourcing company with 2005 revenues of $15.55 billion and more than 123,000 people in 48 countries

The Health Care Markets

  - CareSpark
  - Eastern Kentucky Regional Health Information Organization
  - West Virginia eHealth Initiative

Other Partners

  - Apelon, Cisco, CGI-AMS, Creative Computing Solutions, eTech Security Pro, Intellithought, Lucent Glow, Oakland Consulting Group, Oracle, and Quovadx

Computer Sciences Corporation

- CSC is working in partnership with the Connecting for Health Collaborative and building on the CFH prototype which
  - Is agnostic to platform, underlying hardware and software
  - Adheres to CFH Common Framework tenets for interoperability

- The Health Care Markets
  - Mendocino HRE
  - Indiana Health Information Exchange
  - MA-SHARE

- Other Partners
  - Browsersoft, Business Networks International, Center for Information Technology Leadership, Connecting for Health, DB Consulting Group, eHealth Initiative, Electronic Health Record Vendors Association, Microsoft, Regenstrief Institute, SiloSmashers, and Sun Microsystems

IBM

- IBM is committed to making health care more effective through its business and clinical innovations, bringing together IBM resources, including information technology, industry insights, and research expertise

- IBM helps the health care industry develop and deliver safer, more affordable and more effective diagnostics, drugs, and medical care

- The Health Care Markets
  - Taconic Health Information Network and Community
  - North Carolina Healthcare Information and Communications Alliance (Research Triangle Park)
  - North Carolina Healthcare Information and Communications Alliance (Rockingham County)

- Other Partners
  - Argosy Omnimedia, Business Innovation, Cisco, HMS Technologies, IDL Solutions, Ingenium, and VICCS

Northrop Grumman

- A large-scale health IT systems integrator
- The developer of global enterprise EHRs and nationwide healthcare information exchanges for the DoD and VHA
- Experienced in disease surveillance and response solutions supporting the CDC, HHS, and state & local governments

- **The Health Care Markets**

  - Santa Cruz RHIO, Santa Cruz County, CA

  - Greater Cincinnati HealthBridge, Cincinnati, OH

  - Greater Cleveland, OH health market including, University Hospitals Health System, Cleveland Clinic Health System, and MetroHealth System

- **Other Partners**

  - Air Commander, Axolotl, Client/Server Software Solutions, Emdeon (WebMD), First Consulting Group, Oracle, SphereCom Enterprises, and Sun (SeeBeyond Technologies)

Nationwide Health Information Network - Timeline

Tomorrow

- Breakthrough implementation possibilities documented by consortia

Spring 2006

- Detailed technical design and architectures
- Recommended data and technical standards and security policies

Summer 2006

- Deployment plans
- Operational plans
- Revenue and cost models

Fall 2006

- Finish development and evaluate functional prototypes
- Live demonstrations

Early Opportunities

- ## Breakthrough implementations
  - Better understanding of requirements
  - Architecture and standards to support them
  - Critical data exchange for labs, drugs, demographics and biosurveillance

- ## Common foundational capabilities to support breakthroughs and NHIN
  - Patient record locators to help identify all patient data: paper and electronic
  - Identification and application of appropriate general Internet standards
  - Approaches for user authentication and access controls
  - Other privacy protections and solutions

Q & A