



Department of Health & Human Services  
Office of the National Coordinator for  
Health Information Technology

U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES  
OFFICE OF THE NATIONAL COORDINATOR FOR  
HEALTH INFORMATION TECHNOLOGY

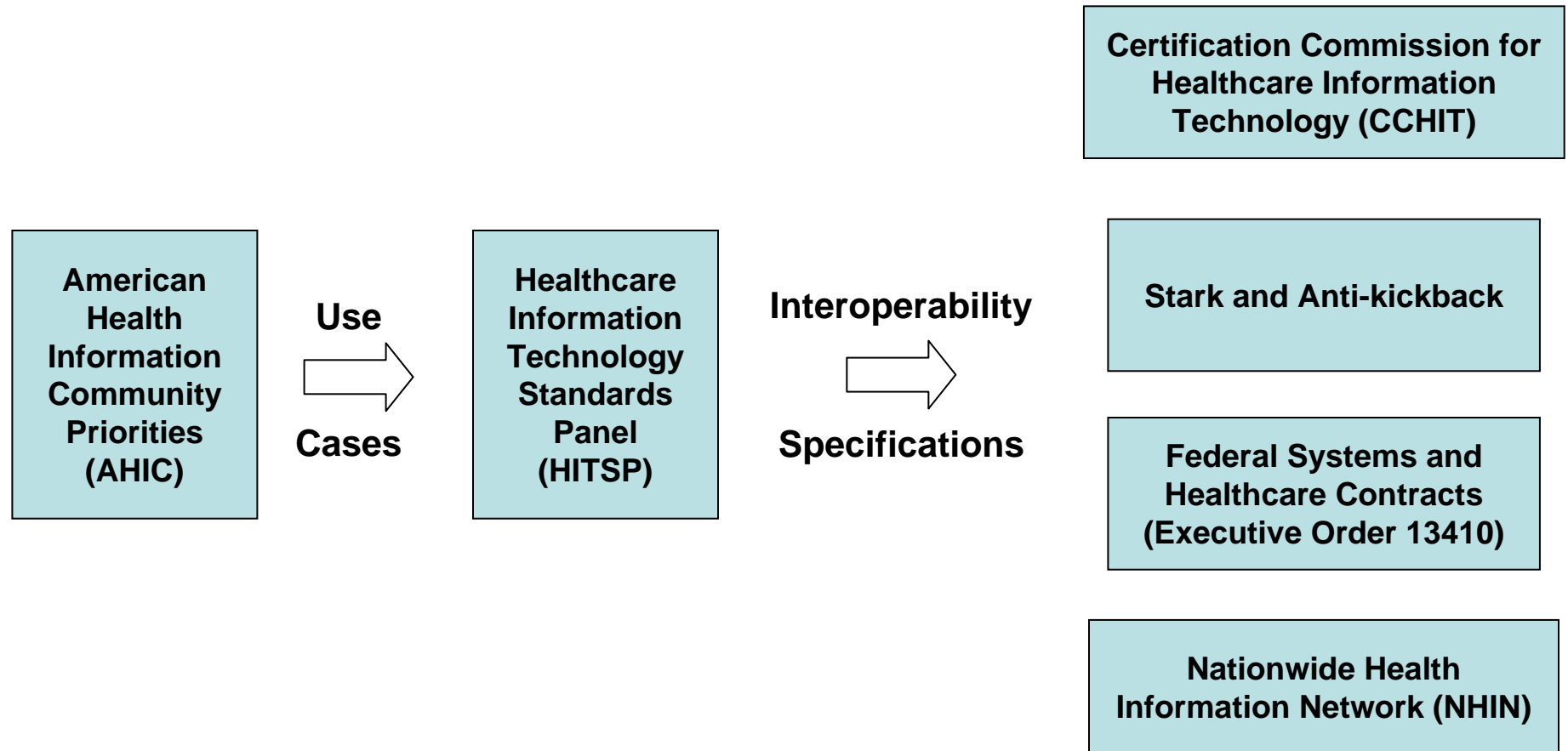
# ***ONC Update on Standards Harmonization and NHIN Trial Implementations***

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Information Technology***

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# Standards in the National HIT Agenda



## Standards Activities in National Agenda

- Data and technical standards for tangible interoperability
  - Driven by specific healthcare purposes (“business driven”)
  - Demonstrate reduced integration costs and increased ease of information exchange
- Standards for security and confidentiality controls
- Standards to support EHR and other application functionality are also important, but necessarily less direct
- Testable implementation specifications are necessary to establish interoperability
  - Inspection testing of standards and specifications
  - Implementation testing of standards and specifications
  - Application and implementation testing for developers
  - Certification of systems

# Dependencies

- **Testable interoperability**
  - Identified data and technical standards
  - Detailed specifications
  - Testing infrastructure
- **Identified standards and specifications**
  - Valid process for identifying “named” standards
  - Well maintained, implementation level guidance
- **Valid process for identifying standards**
  - Context for standards use
  - Multi-stakeholder process
- **Context for standards use**
  - Business priorities
  - Alignment with broader agenda



# Coordinated Timeline

Timeline (Calendar Year 2008)

AHIC Use Cases

Two Years

Recognized by Sec

- Consumer Empowerment
- EHR
- Biosurveillance

SPSS & Reports Release 1

HITSP Release 2

New Federal Sy

CCHIT 2008 Criteria Development

↑  
AHIC Emergency Response under EHR Use Case Published

HITSP Emergency Response RDC and Constructs r1

Accepted by Sec.

We are here

AHIC Medication Management, Quality and Consumer Access

HITSP Medication Management

Accepted by

• Emergency

## Refining the “cycle”

- AHIC use cases to be delivered earlier – reducing dependency on availability of priorities
- HITSP funded to have staff try to alleviate demands on volunteers
- HITSP working on processes to facilitate engagement by full spectrum of participant organizations
- HITSP – CCHIT joint working group working on coordination between organizations
- CCHIT and HITSP priorities in AHIC process to help ensure that process priorities are part of AHIC consideration
- HITSP / CCHIT / NHIN “Roadmap Standards” process to provide intermediate guidance for pressing needs

# AHIC Priorities and Use Case Roadmap

AHIC Priorities and Use Case Roadmap

2006	2007 Use Cases	2008 Use Cases	2009 and Beyond
<p><b>Consumer Empowerment Use Case</b></p> <p>Registration Medication History</p>	<p><b>Consumer Access to Clinical Information</b></p> <p>Access to Clinical Data Provider Permissions PHR Transfer</p>	<p><b>Remote Monitoring</b></p> <p>Remote Monitoring of Vital Signs and Labs (Glucose)</p>	<p><b>Remote Consultation</b></p> <p>Structured email Reminders On-line Consultation</p>
<p><b>EHR Use Case</b></p> <p>Laboratory Result Reporting</p>	<p><b>Emergency Responder EHR</b></p> <p>On-Site Care Emergency Care Definitive Care Provider Authentication and Authorization</p>	<p><b>Medication Management</b></p> <p>Medication Reconciliation Ambulatory Prescriptions Contra-indications</p>	<p><b>Consultation &amp; Transfers of Care</b></p> <p>Referrals Problem Lists Transfer of Care</p>
<p><b>Quality</b></p> <p>Hospital Measurement and Reporting Clinician Measurement and Reporting Feedback to Clinicians</p>	<p><b>Public Health Case Reporting</b></p> <p>Case Reporting Bidirectional Communication Labs Adverse Events</p>	<p><b>Personalized Healthcare</b></p> <p>Laboratory Genetic / Genomic Data Family Medical History</p>	<p><b>Immunizations &amp; Response Management</b></p> <p>Resource Identification Vaccine EHR Data</p>
<p><b>Biosurveillance Use Case</b></p> <p>Visit Utilization Clinical Data Lab and Radiology</p>	<p><b>Public Health Case Reporting</b></p> <p>Case Reporting Bidirectional Communication Labs Adverse Events</p>	<p><b>Public Health Case Reporting</b></p> <p>Case Reporting Bidirectional Communication Labs Adverse Events</p>	<p><b>Public Health Case Reporting</b></p> <p>Case Reporting Bidirectional Communication Labs Adverse Events</p>

- CE 3.0 Administrative features
- CE 3.1 Appointment scheduling
- CE 3.2 Demographic profile
- CE 3.3 Editing account profile
- CE 3.4 Insurance eligibility & claims
- CE 3.5 Financial recordkeeping & management
- CE 4.0 Reminders (examples)
- CE 4.1 Annual check-ups
- CE 4.2 Cancer screening—mammograms
- CE 4.3 Cancer screening—colonoscopies
- CE 4.4 Immunizations
- CE 6.0 Summaries of healthcare encounters
- CE 6.1 Dates of services
- CE 6.3 Procedure codes
- CE 7.0 Educational information
- CE 7.1 Evidence based health information
- CE 8.0 Decision support
- CE 8.1 Shared decision making preferences
- CE 8.2 Communications
- CE 9.0 Patient health outcomes
- CE 9.1 Adverse events
- CE 9.2 Medical errors
- CE 9.3 Patient reported health outcomes
- CC 3.0 Glucose monitoring
- CC 4.0 Spirometry
- CC 5.0 Anticoagulation
- CC 7.0 Fall/motion monitoring
- CC 11.0 Lesion assessment
- CC 12.0 Remote monitoring for chronic conditions
- CC 13.0 HIT use in specific populations
- CC 15.0 Product and services certification
- CC 16.1 State licensure constraints
- CC 18.0 Patient identification for authorization and authentication
- EHR 5.0 Clinical/encounter notes
- EHR 6.0 Anatomic pathology results
- EHR 8.0 Radiology reports
- EHR 12.0 Machine readable and interoperable
- EHR 12.1 Encounter notes
- EHR 12.2 Radiology reports
- EHR 12.3 Lab results
- Q 3.1 Clinical decision support
- Q 5.0 Clinical decision support
- Q 6.0 Expanded inpatient quality measures
- Q 7.0 Expanded ambulatory quality measures
- BIO 1.2 Clinical symptomology
- BIO 1.3 Integration with EHRs
- BIO 1.4 Health alerting (HA)/email alerts
- BIO 2.1 Collaborative discussions
- BIO 2.2 Web pages
- BIO 3.2 Chemoprophylaxis
- BIO 3.3 Treatment
- BIO 3.4 Isolation/quarantine
- BIO 3.6.2 Disease registry
- BIO 4.0 Adverse event reporting
- BIO 4.1 Devices, drugs, biologic
- BIO 5.0 Nosocomial infections
- BIO 5.1 Medication errors
- BIO 5.1.1 Ordering/ prescribing/ dispensing
- BIO 5.1.2 Drug-drug, drug-allergy interaction decision support
- BIO 5.1.3 Linkage to FDA structured product labeling database results
- BIO 10.0 Public health information network (PHIN) can be leveraged
- BIO 14.0 National notifiable disease conditions have been identified
- AHIC 1.0 Labs, medications, allergies, immunizations
- AHIC 2.0 Secure messaging/online consultation
- AHIC 3.0 Bi-directional communications
- AHIC 4.0 Adverse event reporting
- AHIC 5.0 Case reporting
- AHIC 6.0 Clinical decision support systems
- AHIC 7.0 Identification/ authentication
- AHIC 8.0 Problem lists
- AHIC 9.0 Clinical encounter notes
- AHIC 10.0 Family history/social factors
- AHIC 11.0 Vital signs
- AHIC 12.0 Population health/ conditions
- AHIC 13.0 Minimum data set
- AHIC 14.0 Confidentiality, privacy, & security of patient data
- AHIC 15.0 Data access/data control
- AHIC 16.0 Data aggregation
- AHIC 17.0 Infrastructure areas missing
- AHIC 17.1 Security, network, repositories
- AHIC 18.0 Vital measurements
- AHIC 19.0 Text documents
- AHIC 21.0 Health literacy (multilingual support)
- AHIC 23.0 Advance directive/living wills
- AHIC 24.0 Social/family history
- AHIC 26.0 Medication history
- AHIC 27.0 E-prescribing
- AHIC 28.0 Standardization of device interfaces
- AHIC 29.0 Care plans/clinical flowsheets
- AHIC 30.0 Provider list
- AHIC 31.0 Adverse events
- AHIC 32.0 Nosocomial infections
- AHIC 33.0 Clinical data storage for surveillance
- AHIC 34.0 Case reporting
- AHIC 35.0 Bi-directional communications
- AHIC 36.0 Lab results
- AHIC 37.0 Anatomic pathology results
- AHIC 38.0 Radiology reports
- AHIC 39.0 Social history
- AHIC 40.0 Procedure reports
- AHIC 41.0 Medications
- AHIC 43.0 Denial
- AHIC 44.0 Workflow integration
- AHIC 45.0 In/T public health collaboration
- AHIC 46.0 Legal liability & regulatory barriers
- AHIC 47.0 Consumer consent
- CCHIT 1.0 Patient safety
- CCHIT 2.0 Transfer of care
- HITSP 1.1.4 Text reports
- HITSP 1.1.5 Numeric results
- HITSP 1.1.7 Images
- HITSP 1.2 HIPAA covered entities attachment
- HITSP 1.2.1 X12 Claims
- HITSP 2.0 Secondary uses of data
- HITSP 2.1 Clinical research
- HITSP 2.2 Clinical trials
- HITSP 2.3 Population health
- HITSP 3.0 Quality/control measurements
- HITSP 3.1 Consistency across uses
- HITSP 4.0 Clinical device data
- HITSP 4.1 Glucometers
- HITSP 4.2 Monitors
- HITSP 4.2 Smart pump
- HITSP 5.0 Cross use case work on security (standards)
- HITSP 5.3 Authentication models to support chain of trust data exchanges



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# ***Nationwide Health Information Network Trial Implementations***





# The Nationwide Health Information Network

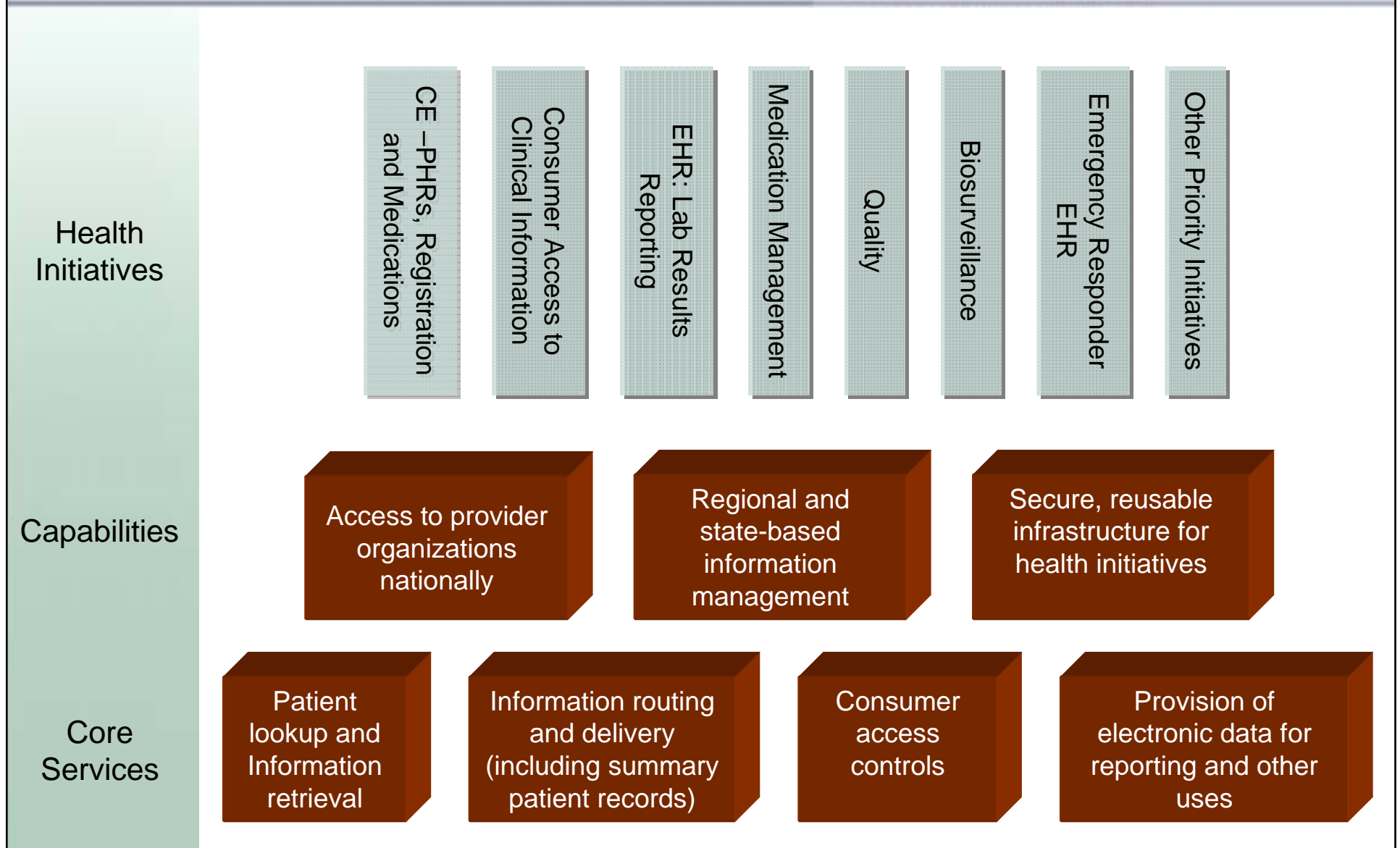
## **NHIN Working Assumptions**

- a 'network of networks'
- securely connects consumers, providers and others who have, or use, health-related data
- no national data store or centralized systems at the national level
- no national patient identifier
- shared architecture (standards, services, and requirements), processes and procedures

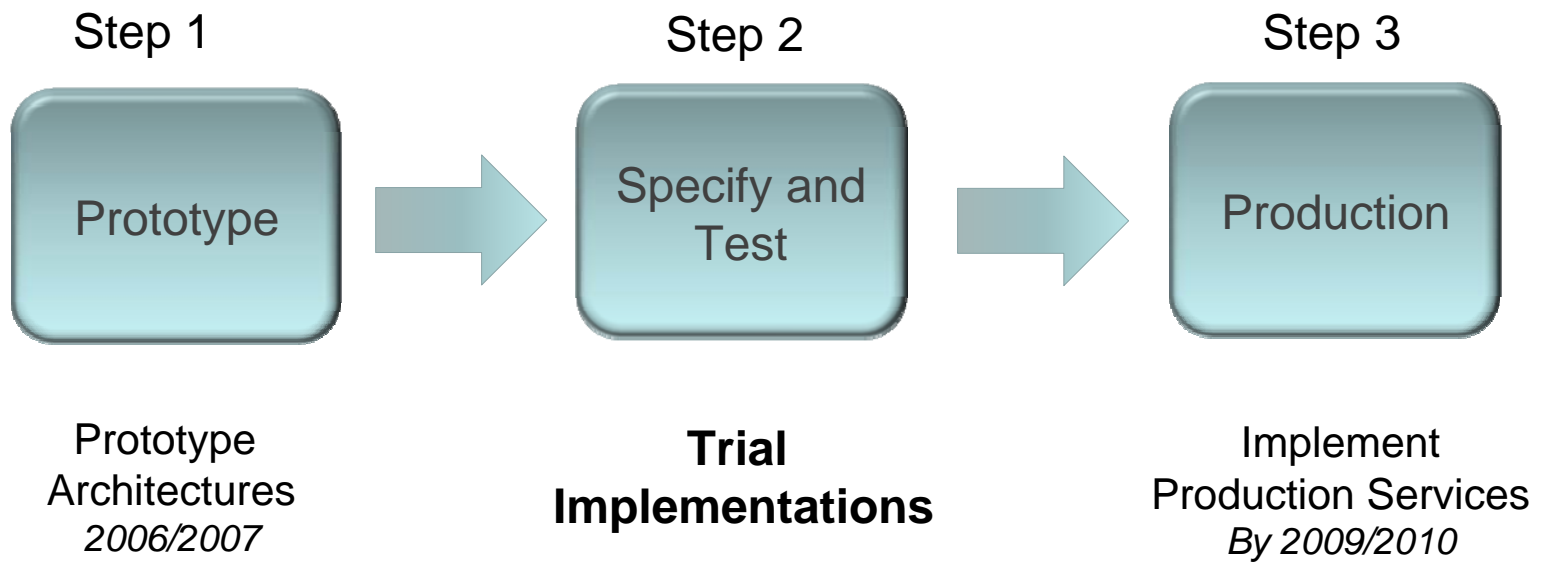
# The Nationwide Health Information Network

- **Health Information Exchange (HIE)** - An entity that enables the movement of health related data among entities within a state, a region or a non-jurisdictional participant group
  - “Classic” RHIOs at regional and state levels
  - Integrated delivery systems
  - Health data banks that support health information exchange
- **NHIN Health Information Exchange (NHIE)** – An HIE that implements the NHIN architecture, processes and procedures and participates in the NHIN Cooperative
- **Health Information Service Provider (HSP)** – A company or other organization that supports one or more Health Information Exchanges by providing them with operational and technical health exchange services

# NHIN Core Services - Building Blocks for Priority Initiatives



# Steps to the NHIN



Input from other national agenda processes

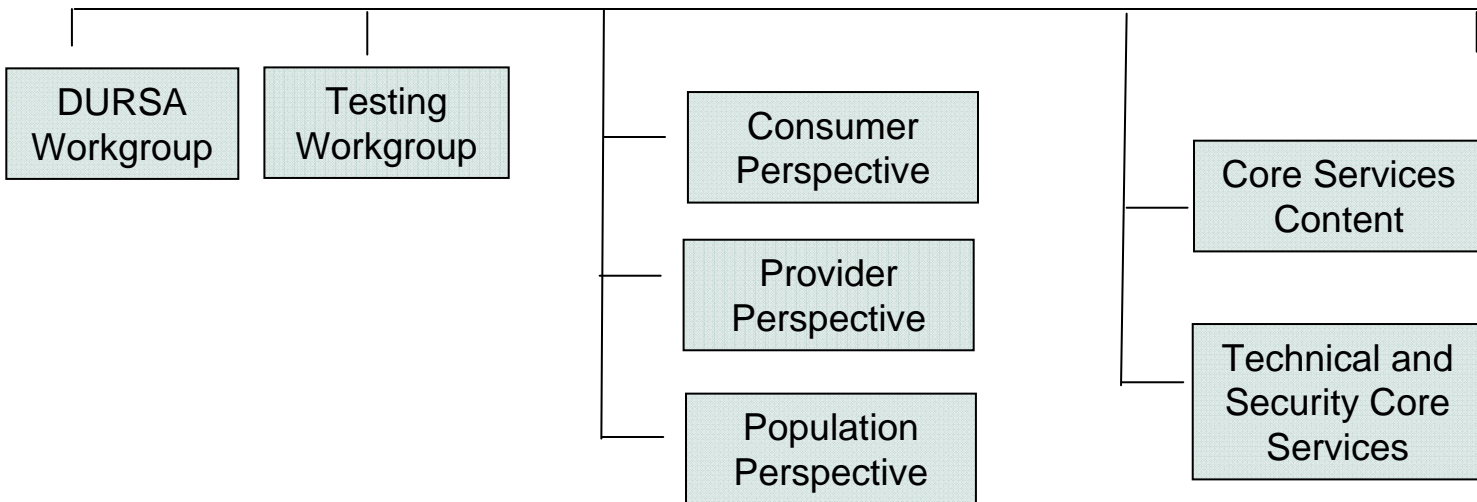
Issues and obstacles help set agenda for other national agenda processes

# NHIN Trial Implementations Year One

- Demonstrate *in-situ*, interoperable and secure health information exchange based on common specifications.
- Build a foundation for production level services and initiatives to come.
- Core Services Demonstrations
  - Deliver data across HIEs
    - Including summary record, look-up and use case data
  - Look-up and retrieve data across HIEs
    - From locations in EHRs and PHRs / Health Data Banks
  - Exchange consumer access permissions
    - Decision to not participate in electronic exchange of their data
    - Workable permissions for who can access what
  - Support the delivery of data for population uses
- Use Case Demonstrations
  - Individually identified

# NHIN Cooperative

Leadership and  
Communications  
Workgroup



*Use Case Perspective  
Workgroups*

*Core Services Workgroups*