John D. Halamka
Chair, HITSP

Agenda

- AHIC Priorities and the Standards Timeline
- Interoperability Specifications Version 2.0
  - Consumer Empowerment
  - Biosurveillance
  - Electronic Health Records Laboratory Results Reporting
- Secondary uses of data empowered by standards

AHIC Priorities and Use Case Roadmap

AHIC Priorities and Use Case Roadmap

2006

Consumer Empowerment Use Case
- Registration
- Medication History

EHR Use Case
- Laboratory Result Reporting

Biosurveillance Use Case
- Visit
- Utilization
- Clinical Data
- Lab and Radiology

2007 Use Cases

Consumer Access to Clinical Information
- Access to Clinical Data
- Provider Permissions
- PHR Transfer

Emergency Responder EHR
- On-Site Care
- Emergency Care
- Definitive Care
- Provider Authentication and Authorization

Medication Management
- Medication Reconciliation
- Ambulatory Prescriptions
- Contra-indications

Quality
- Hospital Measurement and Reporting
- Clinician Measurement and Reporting
- Feedback to Clinicians

2008 Possible Use Cases

Remote Monitoring
- Remote Monitoring of Vital Signs and Labs (Glucose)

Remote Consultation
- Structured email
- Reminders
- On-line Consultation

Referrals and Transfer of Care
- Referrals
- Problem Lists
- Transfer of Care

Personalized Healthcare
- to be developed

Public Health Case Reporting
- Case Reporting
- Bidirectional Communication
- Labs

Response Management
- Resource Identification
- Vaccine
- EHR Data

2009 and Beyond

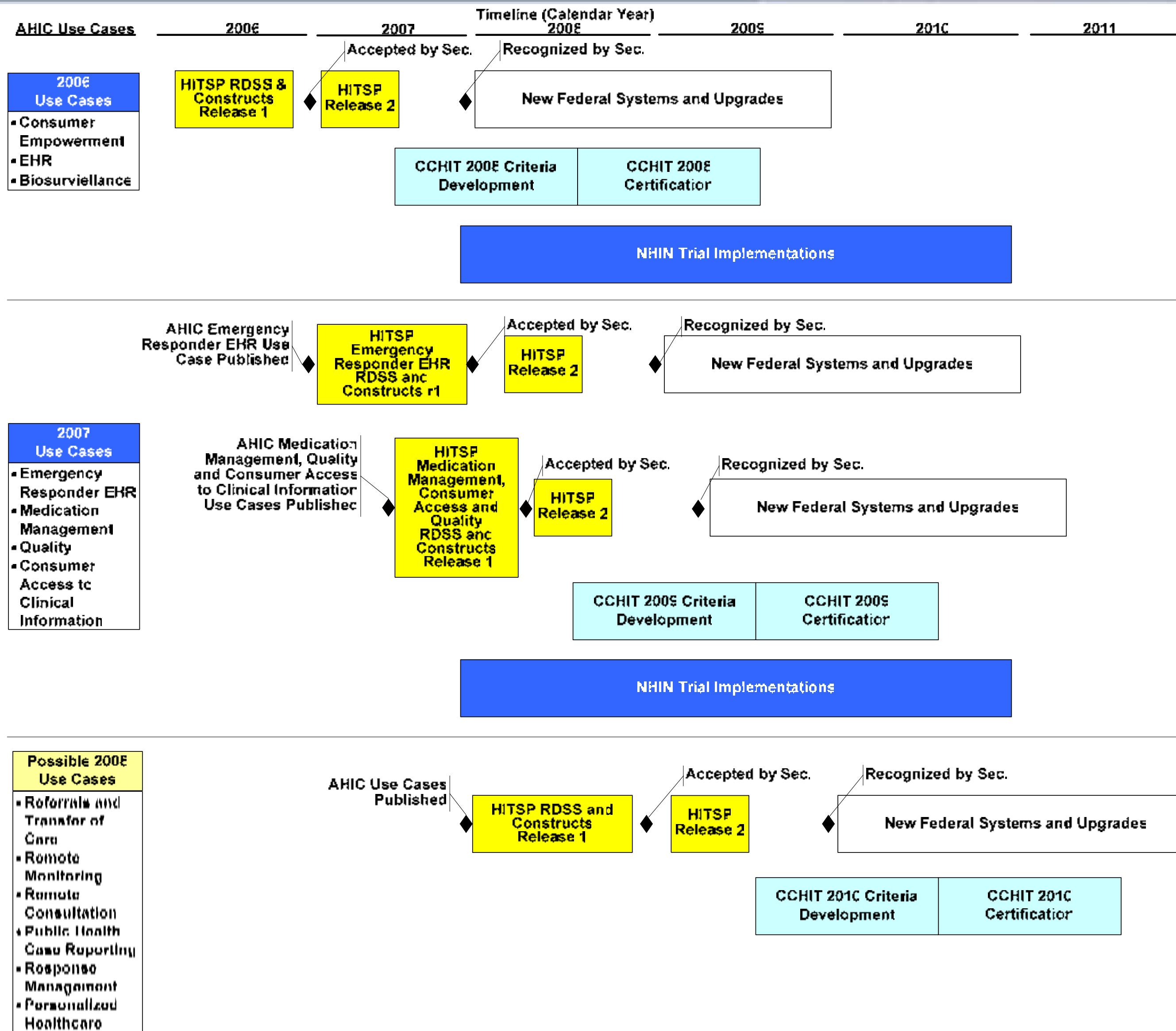
CE 3.0 Administrative features
CE 3.1 Appointment scheduling
CE 3.2 Demographic profile
CE 3.3 Editing account profile
CE 3.4 Insurance eligibility & claims
CE 3.5 Financial recordkeeping & management
CE 4.0 Reminders (examples)
CE 4.1 Annual check-ups
CE 4.2 Cancer screening—mammograms
CE 4.3 Cancer screening—colonoscopies
CE 4.4 Immunizations
CE 6.0 Summaries of healthcare encounters
CE 6.1 Dates of services
CE 6.2 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
CE 8.2 Communications preferences
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 Spirometery
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
BIC 1.2 Clinical symptomology
BIC 1.3 Integration with EHRs
BIC 1.4 Health alerting (HA)/email alerts
BIC 2.1 Collaborative discussions
BIC 2.2 Web pages
BIC 3.2 Chemoprophylaxis
BIC 3.3 Treatment
BIC 3.4 Isolation/quarantine
BIC 3.6.2 Disease registry
BIC 4.0 Adverse event reporting
BIC 4.1 Devices, drugs, biologic
BIC 5.0 Nosocomial infections
BIC 5.1 Medication errors
BIC 5.1.1 Ordering, prescribing, dispensing
BIC 5.1.2 Drug-drug, drug-allergy interaction decision support
BIC 5.1.3 Linkage to FDA structured product labeling database results
BIC 10.0 Public health information network (PHIN) can be leveraged
BIC 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 Vitals signs
AHIC 12.0 Population health conditions
AHIC 13.0 Minimum data set
AHIC 14.0 Confidentiality, privacy & security of patient data

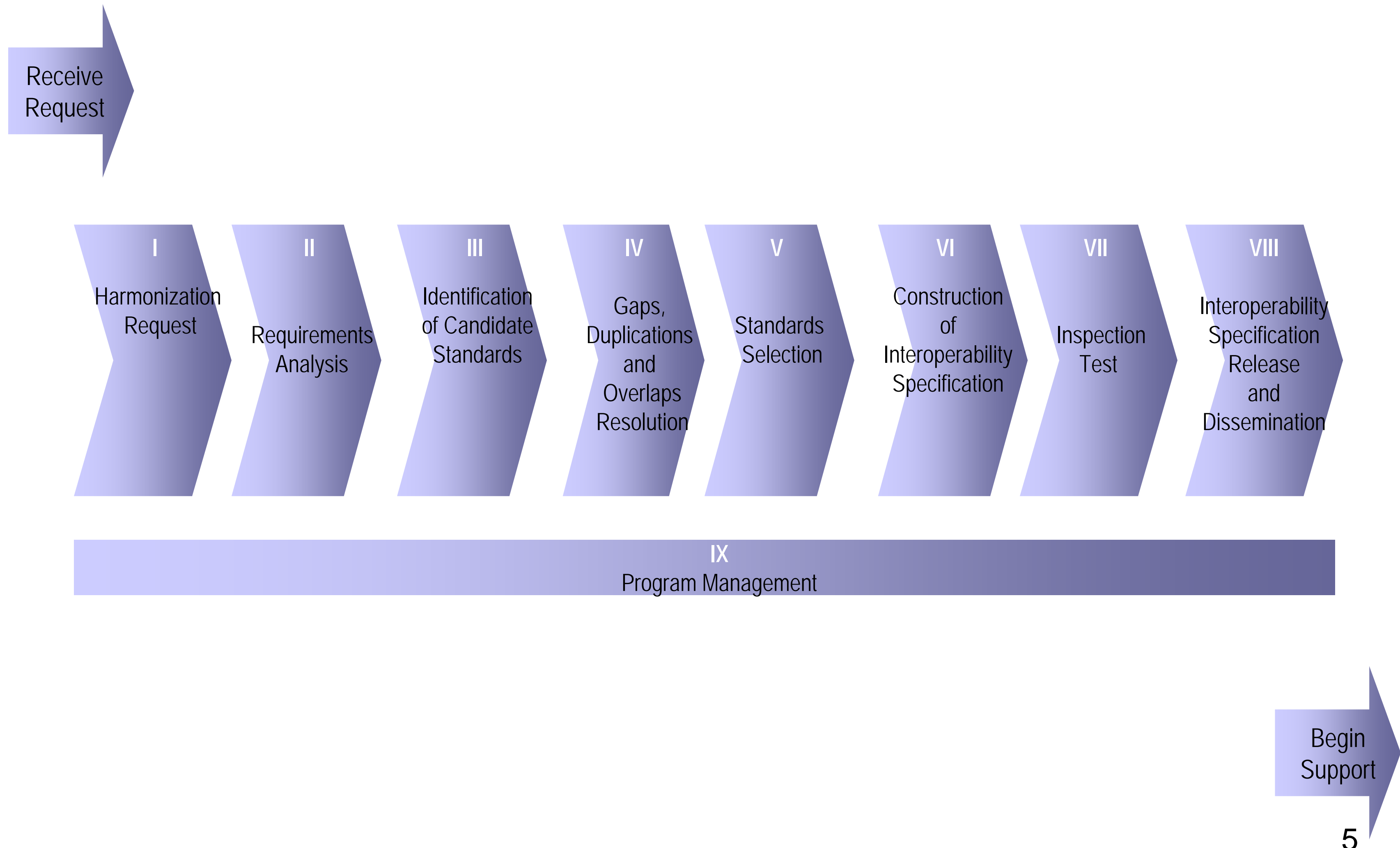
AHIC 15.0 Data access/data control
AHIC 16.0 Data aggregation
AHIC 17.0 Infrastructure areas missing
AHIC 17.1 Security, network repositories
AHIC 18.0 Vital measurements
AHIC 19.0 Text documents
AHIC 21.0 Health literacy (multilingual support)
AHIC 23.0 Advance directive/living wills
AHIC 24.0 Social/family 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 Dental
AHIC 44.0 Workflow integration
AHIC 45.0 Int'l public health collaboration
AHIC 46.0 Legal liability & regulatory barriers
AHIC 47.0 Consumer consent
CCHIT
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
HITSP 1.2.1 X12 Claims attachment

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 4.3 Smart pump
HITSP 5.0 Cross use case work on security (standards)
HITSP 5.3 Authentication models to support chain of trust data exchanges

AHIC Standards Timeline



Standards Harmonization Process



Consumer Empowerment – Registration and Medication History v2.0

- **Scope**
  - Deploy to targeted populations a pre-populated, consumer-directed and secure electronic registration summary. Deploy a widely available pre-populated medication history linked to the registration summary

- **Accomplishments**
  - Addresses core consumer empowerment enabling "connected PHRs"
  - Successful collaborative between HITSP and member organizations including: ASTM, CAQH, CDC, FMT, HL7, IHE, NCPDP, X12, SNOMED
  - Harmonization to the CCD medical summary record

Harmonization of the Summary Record

ASTM working on the Continuity of Care Record (CCR)

- Driven by clear business need
- Direct input from clinical care users
- Specifies the “buckets” for data, but not the specifics of the content

HL7 working on the Clinical Document Architecture (CDA)

- Has overarching considerations for many kinds of clinical documents
- Leverages standards to fill data in critical “buckets” to ensure they can be processed and used
- Needs to be scoped down to a practically implemental summary

HITSP membership, without objection, agreed to support the best of both worlds – the Continuity of Care Document (CCD)

- Developed by ASTM, HL7 and other participating organizations
- Scoped by the CCR data needs
- Benefiting from the coordination of HL7 terminologies

Biosurveillance v2.0

- **Scope**
  - Transmit essential ambulatory care and emergency department visit, utilization, and lab result data from electronically enabled health care delivery and public health systems in a standardized and anonymized format to authorized public health agencies with less than one day lag time
- **Accomplishments**
  - Maximizes data sources and provides stringent data management to ensure proper routing, security, privacy, and timely reporting
  - Provides support for different architectural environments
  - Addressing gaps with referrals to SDOs through the Foundations Committee
  - Aligning with other public health initiatives
  - Using the same result message as is used for clinical reporting should improve number of public health cases reported

Electronic Health Record (EHR) - Laboratory Results Reporting

- **Scope**
  - Deploy standardized, widely available, secure solutions for accessing laboratory results and interpretations in a patient-centric manner for clinical care by authorized parties
- **Accomplishments**
  - Addresses lack of harmonization among data interoperability standards including vocabulary and laboratory and other messaging standards
  - Accommodates both laboratory message transaction and document sharing paradigms
  - HL7 and HITSP Lab WG are coordinating activities to complete a lab message implementation guide to meet the AHIC use case requirements

Details of Lab Message which enable reuse

- Use of strong entity identifiers, e.g. ISO OIDs required for assigning authorities
- PV1 and PV2 data, e.g. Employment illness indicator, clinic name, Admission type, discharge disposition, time/date of services, and other physicians (admitting/referring/consulting)
- Terminology standardization across use cases, e.g. Lab and PH/Biosurveillance agreement on LOINCs, SNOMED and UCUM

Details of PV1 and PV2

- PV2-3 Reason for Admit (Chief Complaint)
- PV2-15: Employment Illness Related Indicator
- PV2-23: Clinic Organization name (
- PV2-40: Admission level of care (Acuity)

- PV1-2: Patient Class
- PV1-3: Assigned Patient Location
- PV1-4: Admission Type
- PV1-10: Hospital Service
- PV1-36: Discharge Disposition
- PV1-44: Admit Date/Time
- PV1-45: Discharge Date/time

Next Steps

- AHIC to review and consider HITSP Work
- Finalized HL7 Implementation Guide and HAVE standards to be incorporated into HITSP Interoperability Specifications
- CCHIT continues to incorporate HITSP work into its functional criteria via the joint CCHIT/HITSP JWG
- HITSP moves to next priorities:
  - Security and Privacy for existing v2.0 ISs
  - Emergency Responder Electronic Health Record
  - 3 new Use Cases -- Consumer Access to Clinical Information, Quality, and Medication Management