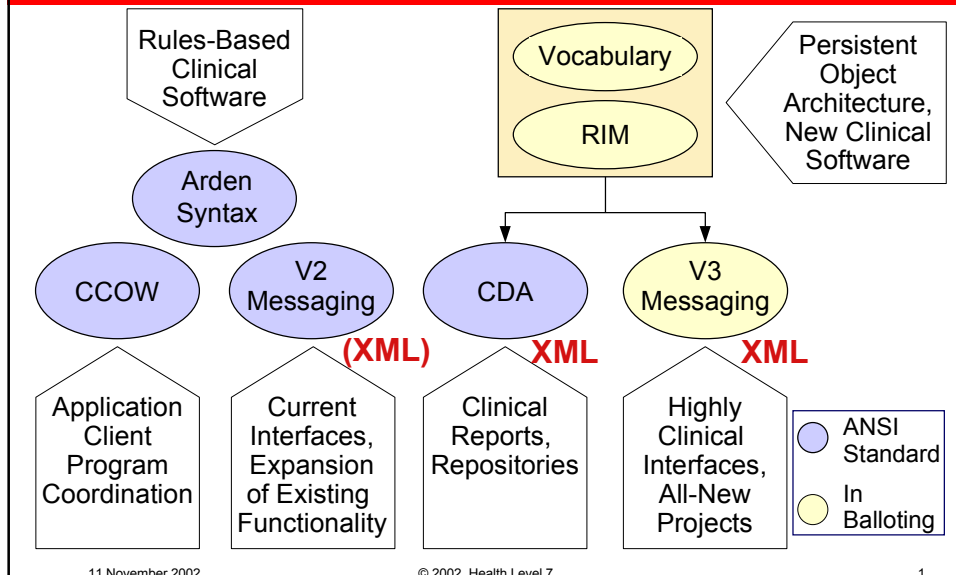


Clinical Standards

eHealth Summit
7 November 2002

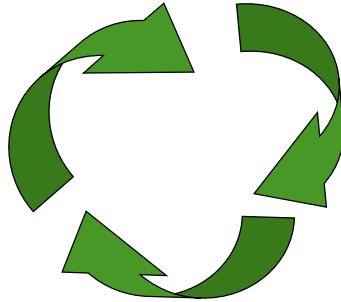
Wes Rishel
Chair HL7
Vice-President, Gartner

HL7 Standards and Their Uses



Lessons We Have Learned: Information Ecology

Web Services = Technological Privacy
Digital Dial Tone Infrastructure Infrastructure



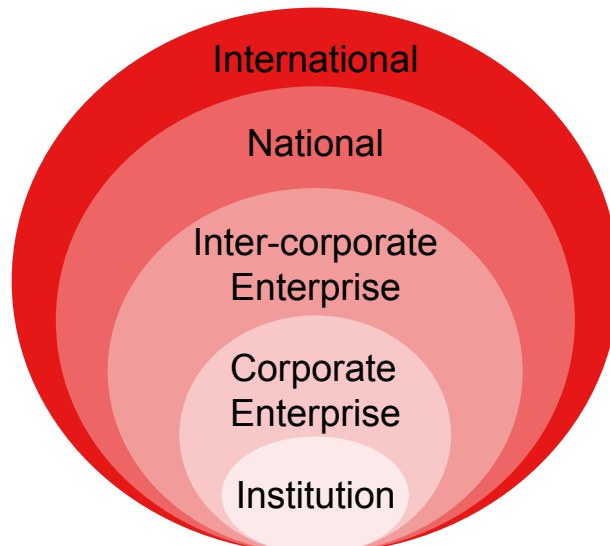
Semantic Standards

Data Sources Systems

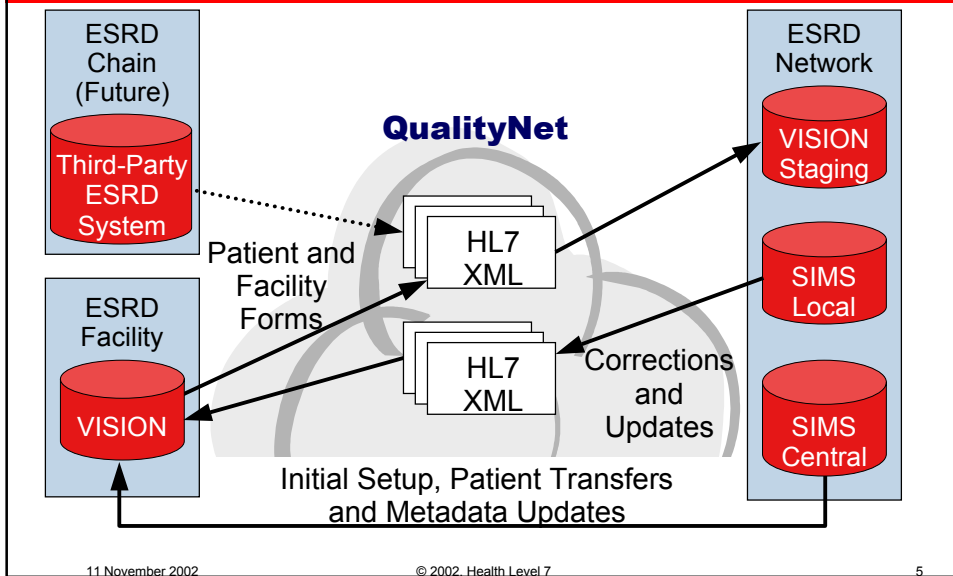
Coordinated Codes and Structures

**Available?
Capture Suitable Data?**

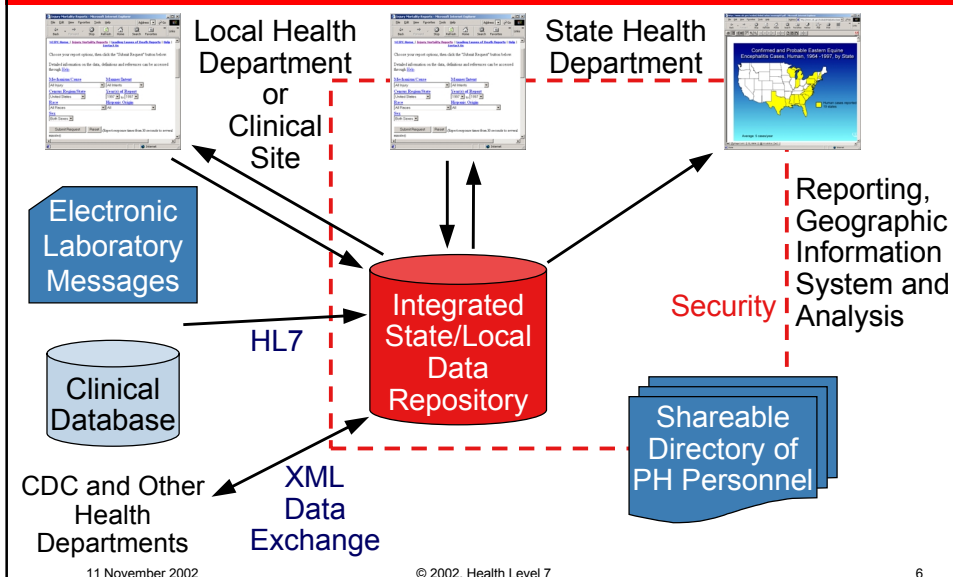
Clinical Standards Moving in Ever-Increasing Circles



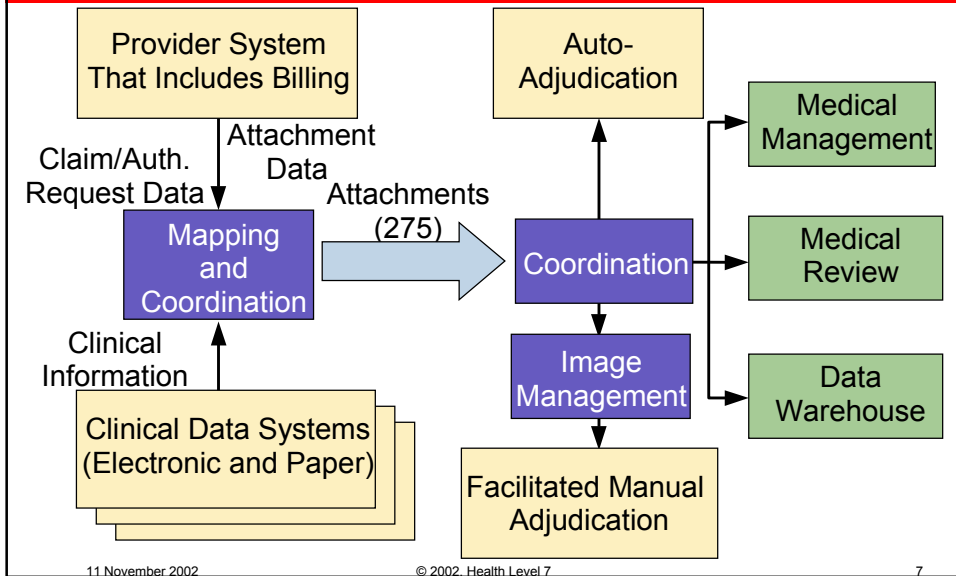
Vital Information System to Improve Outcomes in Nephrology



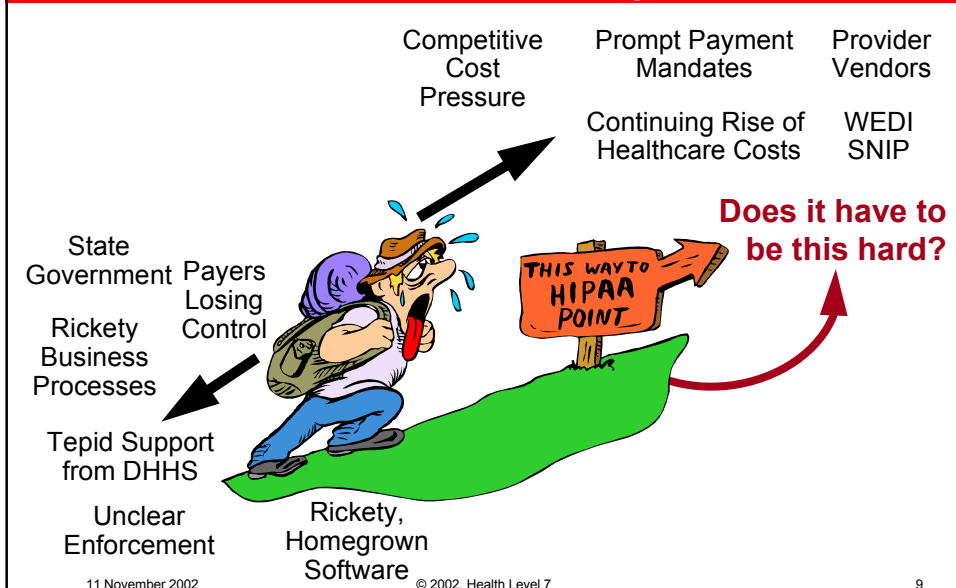
National Electronic Disease Surveillance System



HIPAA Attachments: Claims and Pre-certification



Guess What? HIPAA Administrative Transactions Are Going to Work!



Kinds of Standards

- Data Content Standards: “send me the most recent A1C value for Medicare diabetics”
- Data Messaging/Document Format Standards: “send the data in an HL7 message” or a specific bar-code standard
- Data Coding Standards: use a LOINC code to identify the A1C test result
- Information Model: “use the HL7 Reference Information Model as the basis for our shared understanding of the data”
- Infrastructure standards: use secure HTTP over the Internet, using two-way PKI for authentication
- Implementation Guide: Do use these fields, don’t use those fields in the message, perhaps conditionally use a field.

Data Content Standards: What Data Should be Sent

- Driven by a “channel master”
- Examples:
 - HIPAA Transactions
 - Medicare QIO, OASIS
 - ORYX
 - NCQA quality measures
 - Public Health Surveillance data
 - Adverse Drug Event Reporting
- Often drives data collection, with impact on system databases, screens, and workflows
- Needs to be very specific

Messaging: NCVHS on Patient Medical Record Information

- National Committee on Vital and Health Statistics
 - Empowered by HIPAA
 - Advises DHHS on healthcare standards
 - Including PMRI
 - Message format
 - Vocabulary
- Core Messaging Format
 - Draft recommendation January 2002
 - Current: HL7 v.2.x
 - Emerging: HL7 v.3
- Market Segment Message Formats
 - DICOM
 - NCPDP “Script”
- Recommends guidance and incentives rather than mandates



Connecting for Health Messaging Standards

- HL7 v2.x (active versions are 2.2, 2.3; current ANSI approved version is V2.4; V2.5 in ballot)
- DICOM – imaging standard
- ASC X12N – transaction standards
- IEEE/CEN/ISO – 1073 series of medical device communication standards
- NCPDP - SCRIPT
- HL7 Clinical Document Architecture for XML medical record documents
- HL7 CCOW for context management

Data Coding Standards: Codes for Concepts

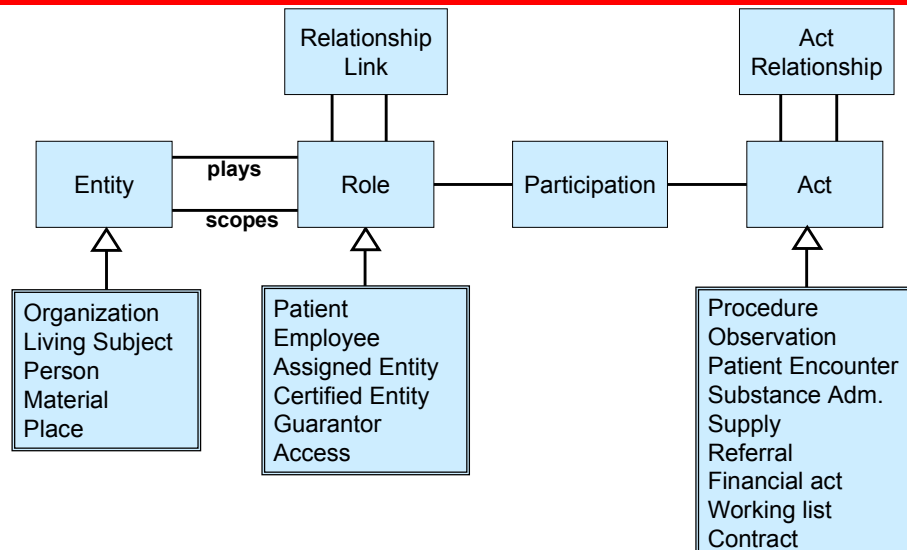
Connecting for Health

- RXNORM/Daily for medications
- LOINC for identifying observations / findings

Still Some Controversy

- SNOMED or alternative for describing findings
- ICD-9-CM vs ICD-10-CM for diagnoses
- CPT-4 versus ICD-10 for procedures

Connecting for Health: HL7 Reference Information Model



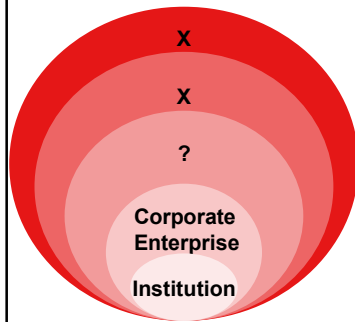
Infrastructure Standards: The Plumbing

- Necessary to get the data over a medium reliably meeting CAIN requirements: Confidentiality, Authentication, Integrity, and Non-Repudiation
- Ought not to be specific to healthcare
- Current best bets: ebXML and EDIINT
- “Web Services” will ultimately be a contender and expand the concepts beyond simple messaging

Implementation Guide: Putting it All Together

- For a well-defined business case
- Implies data content
- Business rules
- Coding
- Makes a “flexible standard” concrete
- May cite infrastructure standards and options
- Not effective unless promulgated by a channel master

What to Look For in a Vendor?



“Flexible” standards compliance

Support of Automated Conformance

Service-Oriented Integration
Architecture (SOIA)

- Define a set of object interfaces based on Web Services infrastructure
- Robust interfaces that the vendor uses for internal development
- Expose all services available in the UI
- Extensive tooling for client AD
- (not HL7)

Some vendors are getting there: Cerner and IDX are leading, Eclipsys and McKesson are sounding good.

Ten Steps to Clinical Interoperability

- 1) Data content, business rules, incentives and scope
- 2) Is the data currently automated?
- 3) Systems and processes have to change. Who will pay?
- 4) Engage a broad set of stakeholders during definition
- 5) Create an implementation guide (IG)
- 6) Adopt “automated” conformance technology
- 7) If the scope is large, establish a certification forum
- 8) If the system changes were substantial, stage the implementation and plan to clarify the IG
- 9) Set aggressive deadlines so you fall behind sooner
- 10) Maintain on a reasonable life cycle