Coop-etition:
The pros and cons of collaboration with standard-setting organizations

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This presentation gives:

- A brief introduction of HL7,
- An overview of the use of standards and organizations in the health industry
- An example of what hasn’t work and a current effort to create cooperation
- An list of the significant challenges facing US Healthcare Information Interchange Standards today.
Health Care & Information Technology

- IT continues to under serve the Healthcare industry both in the US and in other countries.
  - Not because Healthcare isn’t big enough (in the US 16+% of the GDP and growing to a projected 50% by 2050!)
  - Not because enough effort and money hasn’t been spent on it...(but it is difficult to make money in HIT).

- Healthcare is not based on “capitalism”.
  - In the U.S. it is an odd mixture of capitalism, socialism and cost shifting.
  - Outside of the US it is largely supported through taxes even though each country has a different approach to healthcare financing.
The usual model of capitalism
HL7 - Health Level Seven

HL7 is an ANSI accredited standards organization (ASO) for clinical & operational EDI.

Members include: user (hospital, physicians practices, physician group practices, academic faculty practice plans, health maintenance organizations (HMO), preferred provider organizations (PPO), independent practice affiliations (IPA), utilization review (UR) companies, fiscal intermediaries, third-party administrators (TPA), peer review organizations (PRO), insurers and payers, manufacturers (pharmaceuticals, medical devices, etc.), professional associations and societies, industry consortia, regulators, and government agencies.

There are also now 31 countries that participate in HL7
HL7’s Mission

HL7 provides standards for interoperability that improve care delivery, optimize workflow, reduce ambiguity, and enhance knowledge transfer among all of our stakeholders, including healthcare providers, government agencies, the vendor community, fellow SDOs and patients. In all of our processes we exhibit timeliness, scientific rigor and technical expertise without compromising transparency, account-ability, practicality, or our willingness to put the needs of our stakeholders first.
32 HL7 Affiliates / Countries

And growing

Argentina

Australia

Austria

Brazil

Canada

China

Croatia

Czech Republic

Denmark

Finland

France

Germany

Japan

Mexico

United States

United Kingdom

Italy

Ireland

India

Greece

South Korea

Spain

Sweden

Switzerland

Taiwan

The Netherlands

Turkey

Uruguay

Vietnam

Columbia

Colombia

Vietnam

Singapore

Romania

New Zealand
HL7 Working Groups

- Architectural Review Board
- CCOW
- Clinical Decision Support
- Education
- Electronic Health Record
- Electronic Services
- Financial Management
- Implementation/Conformance
- Infrastructure and Messaging
- International Affiliates
- International Mentoring
- Marketing
- Modeling and Methodology
- Orders/Observations
- Organization Review Committee
- Outreach Committee for Clinical Research
- Patient Administration
- Patient Care
- Process Improvement
- Publishing
- Regulated Clinical Research Information Mgmt.
- Scheduling and Logistics
- Security
- Structured Documents
- Tooling Committee
- Vocabulary

- Anatomic Pathology
- Arden Syntax
- Attachments
- Cardiology
- Clinical Guidelines
- Clinical Genomics
- Clinical Interoperability Council
- Community Based Health Services
- Conformance
- Emergency Care
- Generation of Anesthesia Standards
- Government Project
- Health Care Devices
- Imaging Integration
- Implementation Technology Specification
- Java
- Laboratory
- Patient Safety
- Pediatric Data Standards
- Pharmacy
- Public Health and Emergency Response
- Services Oriented Architecture
- Templates

- Other:
  - Ballot Task Force
  - Clinical Statements
  - Common Message and Element Types
  - Dynamic Model
  - Harmonization
  - HL7Terminfo
  - Services BOF
  - Tooling Collaborative

Updated: 09/07
HL7 Products

- Electronic Data Exchange in Healthcare Environments
  - Version 2 & Version 3
- Clinical Document Architecture (CDA)
  - Clinical Context Document Implementation Guide (CCD)
- Electronic Health Record System (EHRS) Functional Model
- Personal Health Record System (PHRS) Functional Model
- Visual / Context Integration (CCOW)
- Arden Syntax
- GELLO
- Version 2.x XML (XML encoding of HL7 messages)
All countries have focused on data representation and messaging standards.

The lists are incomplete and variations do occur between countries.

Common standards across most countries include:

**Terminology**
- SNOMED
- ICD
- LOI NC

**Messaging**
- HL7
- DICOM
The National Council on Vital and Health Statistics has listed over 40 different coding standards to track. These are the largely “non-overlapping” list.

The major standards groups in the U.S. now under the guidance of DHHS’s Health Information Technology Standards Panel (HITSP) include:

- ASTM E31
- DICOM
- HL7
- NCPDP
- X12N
- CDI SC (note: CDI SC + HL7 = RCRIM)
- NUBC / NUCC
- OMG
- W3C
- WS-I
US Federal Healthcare ONCHIT Interoperability Initiatives

SDOs & Standards Content Providers, e.g.
- ASTM
- DICOM
- HL7
- SNOMED
- LOINC
- NCPDP
- X12N
- NUBC / NUCC
- OMG
- W3C
- WS-I

Standards Users, e.g.
- Integrated Delivery Systems
- Network Operators
- Independent Practitioners
- Regional Labs
- HIT Vendors
- Payers

Sec DHHS

AHIC Prioritization

HITSP Harmonization Detailed Coordination

CCHIT Certification

Use cases

Select Incorporate

Influence

Specifications

Certifies

Reports Certification

Courtesy of Wes Rishel, HL7 Presentation
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Needs for Integration

- HL7, X12N, NCPDP and others have repeatedly "talked" about "harmonization" and cooperation.
- Each organization servers a distinctly different industries (provider, payer and retail pharmacy/ PBM)
Government Oversight

- In countries outside of the US and the EU there is significant government oversight of Standards across all industries...especially healthcare.

- Until HITSP/ ONCHI T the US “co-opition” was largely voluntary and ineffective.
International Experience

- ISO TC 215 has recently created a new organizational structure called the “Joint Initiatives Council” (JIC) with a “Joint Working Group” (JWG) among ISO TC 215, CEN TC 251 and HL7. CDISC was recently added to the group.
International Experience

Key aspects are:

- Jointly staffed task groups that produce the ballots
- Simultaneous ballots in all organizations
- Identical content to all ballots
- Final document is owned by all participants
US Challenge

- Health Information Technology has been cited as a significant shortcoming in the US.
- The lack of HIT in the US is cited for patient safety problems resulting in hundreds of deaths per day.
- Nevertheless, adoption of HIT is slow and difficult, in spite of political desire.
Key New Requirements

- The payer industry in the US (including the Prescription Benefit Managers--PBMs) have historically avoided using complex structured clinical data.

- Structured, coded clinical data is now needed in all parts of the Healthcare Industry and in all countries.
Key Healthcare Cooperation Needs

- Data & Data Models
- Terminologies, Terminology Mappings and Maintenance
- Methodologies and tools to take information models, dynamic models, terminologies and encoding syntaxes to deterministic messages and services.