International Perspectives

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Section A

Overview of International Health IT Standards
Presentation Agenda: International Perspectives

- Why participate in international standards activities?

- Brief overview of international standards organizations and activities
  - ISO, HL-7, IHE

- International Classification and Terminology standards

- Challenges
Overview: International Perspectives

- Health data standards can be traced back several centuries
  - London Bills of Mortality: seventeenth century
  - Florence Nightingale: mid nineteenth century
  - Bertillon classification: late nineteenth century
  - International Organization for Standardization (ISO): mid twentieth century
  - World Health Organization (WHO): mid twentieth century
What Is International Standardization?

- When the large majority of products or services in a particular business or industry sector conform to international standards, a state of industry-wide standardization exists.

- The economic stakeholders concerned agree on specifications and criteria to be applied consistently in:
  - The classification of materials
  - The manufacture and supply of products
  - Testing and analysis
  - Terminology
  - Provision of services

- International standards provide a reference framework—or a common technical language—between suppliers and their customers.

Source: ISO.
Why Participate in International Standards Setting?

- Create a global market for products
- Facilitate trade and make it fairer
- Share technological advances and good management practices
- Disseminate innovation
- Achieve solutions to common problems
  - When standards are absent, we soon notice
Why Participate in International Standards Setting?

- Foster comparable data and statistics in developed and developing countries
  - A major priority for international aid organizations

- Enable international surveillance
  - Bio-surveillance
  - Drug safety
  - Patient safety
  - Mortality and morbidity data

- Learn from other countries

- Improve population health
Main International Standards Organizations

- International Electrotechnical Commission (IEC)
- International Organization for Standardization (ISO)
- International Telecommunication Union (ITU)
- United Nations
- World Health Organization
International Players in Health Care Standards

- ISO TC 215: health informatics
- CEN: European standard development
- DICOM: imaging standard
- UN/EDIFACT: EDI standards
- HL7: clinical messaging standards
- IEEE: medical device standards
- WHO and IHTSDO: vocabulary standards
The US and International Standards Organizations

- American National Standards Institute (ANSI) is the US-voting representative on IEC, ISO, and ITU

- ANSI delegates responsibilities to US Technical Advisory Groups (TAGs), which develop and transmit US positions on activities and ballots
International Organization for Standardization (ISO)

- Founded in 1947
- A network of the national standards institutes of 163 countries
- One member per country
- Non-governmental organization
- Acts as bridge between governments and private sector
- Sets standards that often become law
ISO Hallmarks

- Equal footing
- Voluntary
- Market-driven
- Consensus
  - Openness, balance, due process, appeal
- Worldwide: 163 countries
- Over 200 ISO Technical Committees (TCs)
ISO TCs Relevant to Health Data Standards

- Information technology (JTC1)
- Terminology (TC 37)
- Devices for administration of medicinal products (TC 84)
- Dentistry (TC106)
- Surgical instruments (TC 170)
- Assistive products for persons with disabilities (TC 173)
- Sterilization of health care products (TC 198)
- Quality management for medical devices (TC 210)
- Clinical Laboratory testing (TC 212)
- Health informatics (TC 215)
- Traditional Chinese medicine (TC 249)
ISO TC 215

- Founded in 1998
- Scope is standardization in the field of information for health
- Goal is to achieve compatibility and interoperability between independent systems
- Also strives to ensure compatibility of data for comparative statistical purposes and to reduce duplication of effort
ISO TC 215 Work Groups

- WG1: data structure
- WG2: data interchange
- WG3: semantic content
- WG4: security
- WG6: pharmacy and medicine
- WG7: devices
- WG8: business requirements for electronic health records
- WG9: SDO harmonization
Examples of US Adoption of ISO Standards

- Healthcare Information Technology Standards Panel approved nine security and privacy constructs, which include a number of ISO standards
  - For example, ISO 10164-7
  - Information Technology—Open Systems Interconnection—Systems Management

- National Uniform Billing Committee adopted ISO 639-2 language codes for collecting preferred language spoken
Health Level Seven

- Refers to seventh level of ISO communications model
- ANSI accredited
- Not-for-profit voluntary organization
- Produces standards for electronic interchange of clinical and administrative data
- Messaging standard is most widely used
- International affiliates (33 countries have affiliates)
## Health Level Seven Active Work Groups

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Health Level Seven eVitals Project

- NCHS informatics staff are working at HL-7 to develop Vital Records Domain Analysis Model
  - To identify birth and death registration work flow processes and stakeholders in the United States
  - To guide future design and implementation efforts for standardizing electronic data exchanges between VR and EHR systems

- Also developing VR Functional Profile
  - To facilitate EHR systems capturing selected vitals-related data at point of contact

- Strong interest by international affiliates
Integrating the Healthcare Enterprise International

- A global initiative that creates the framework for seamless sharing of health information

- Does not create new standards but promotes the coordinated use of established standards (e.g., HL-7, DICOM) and drives their adoption

- National and regional deployment committees in Asia-Oceana, Europe, and North America

- Annual Connectathon for vendor organizations to demonstrate interoperability