

Slide 1

**Networking and Health  
Information Exchange**

Unit 3a  
National and International Standards  
Developing Organizations

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Slide 2

**Unit 3 Objectives - 1**

- Explain why standards related to networking and health information exchange are important
- Standards development
  - How standards are developed
  - Who develops them
  - How standards are accredited
  - How standards are selected

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Slide 3

**Unit 3 Objectives - 2**

- Define the different categories of standards
- Demonstrate how to find, obtain, and use standards that are needed to facilitate networking and health information exchange

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Slide 4

### Why standards?

- Necessary part of everyday life
- Enables working together
- Avoid chaos
- Ubiquitous use

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### Everyday standards

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**Why standards need to be global**

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**Standards in health care**

- Aggregation of data among different sites of care
- Health surveillance
- Interoperability



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**Interoperability requires ...**

- Connectivity infrastructure
  - Land lines
  - Cable
  - Wireless
  - Satellites
  - Other

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**Interoperability requires ...**

- Governance infrastructure
  - Decisions made and enforced
    - Standards
    - Knowledge
    - Process
  - Ideally proper decisions made by experts and mandated by governments. Interoperability is difficult without government involvement, but should be a partnership between public and private.

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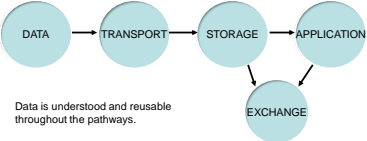
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**Interoperability**



Data is understood and reusable throughout the pathways.

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**Comments about standards**

- “What I like most about standards are that there are so many to choose from.”
- “There are no standards.”
- “We need standards, so let’s make some.”

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Slide 13

**Government and standards**

- Much of the activity for Health Information Technology for Economic and Clinical Health (HITECH) and the American Recovery and Reinvestment Act (ARRA) involve standards.

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**Who is doing the thinking about standards?**

- The Office of the National Coordinator (ONC), supported by two committees – the Healthcare Information Technology Standards Committee (HITSC) and the Healthcare Information Technology Policy Council (HITPC) are engaged in identifying standards for HIT.

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**How are standards made?**

- Government
- De Facto standards (Proprietary) created by a vendor
- Ad hoc standards create by industry groups
- Consensus standards created by open groups of interested stake holders.

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**Authority for standards**

- Government – mandate
- Single vendor – market share
- Ad hoc – vendor agreement
- Consensus – balanced voting process among categories of participants. Requires over-whelming agreement. Vote by members or countries.

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**Who creates standards?**

- Unfortunately, there are many groups that create standards. The result is competing, conflicting and overlapping standards. The result is inconsistency in what standards are chosen, defeating the purpose of standards.
- We refer to a group that creates standards as a Standards Developing Organization (SDO). Some SDOs are international, others are U.S. only.

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**International SDOs (1/2)**

- International Standards Organization (ISO)  
– ISO TC 215 – Healthcare Informatics
- European Committee for Standardization (CEN)
- Health Level 7 (HL7) International
- Digital Imaging and Communications in Medicine (DICOM)
- Institute of Electrical and Electronic Engineers (IEEE)
- Clinical Data Interchange Standards Consortium (CDSIC)

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**International SDOs (2/2)**

- GS1
- International Healthcare Terminology SDO (IHTSDO)
- Joint Initiative Council (JIC)

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**Related organizations**

- World Health Organization (WHO)
- Object Management Group (OMG)
- Integrating the Healthcare Enterprise (IHE)
- openEHR
- World Wide Web Consortium (W3C)
- Organization for the Advancement of Structured Information Standards (OASIS)
- Internet Engineering Task Force (IETF)

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**U.S. HIT SDOs**

- ASTM
- ASC X12N
- National Council for Prescription Drug Programs (NCPDP)
- MedBiquitous
- American Dental Association
- International/U.S.
  - CDISC, DICOM, HL7, IEEE

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### Related U.S. groups

- American National Standards Institute (ANSI)
- US Tag to ISO TC 215
- National Institute of Standards (NIST)
- SDO Charter Organization (SCO)
- National Quality Forum (NQF)
- Office of the National Coordinator (ONC)
  - HIT Standards Committee (HITSC)
  - HIT Policy Council (HITPC)
- National Library of Medicine

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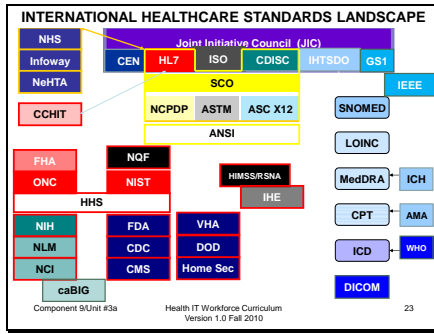
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Slide 24

### What have you learned?

- Importance of standards
- How standards are made
- Who makes standards

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