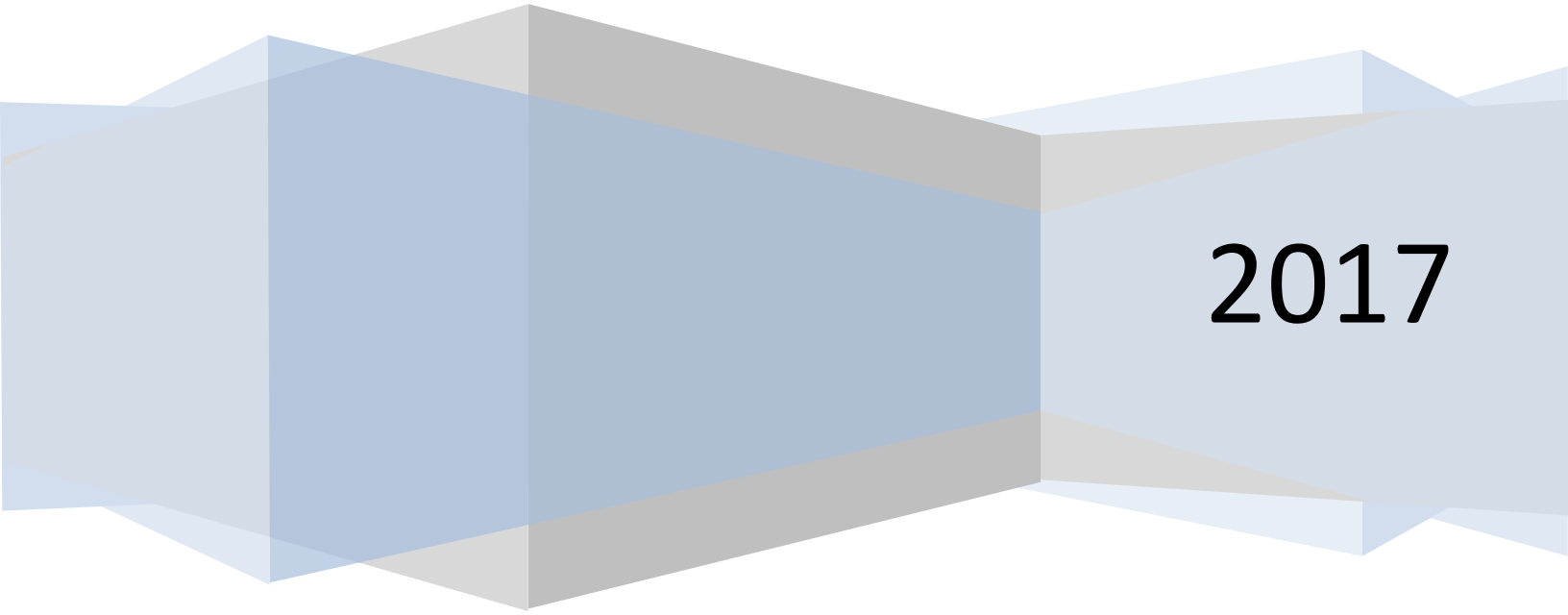
International Organization for Standardization (ISO)
Technical Committee, Health Informatics (TC 215)

ISO/TC 215 Health Informatics Standards Catalog

International Standards, Technical Specifications, Technical Reports



2017

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Executive Summary

This document contains the portfolio of standards developed by the **International Organization for Standardization, Technical Committee 215 Health Informatics** (ISO/TC 215, URL: https://www.iso.org/committee/54960.html), standard development organization (SDO).

ISO/TC 215 membership is comprised of 60 countries (31 participating and 29 observing) representing healthcare stakeholders worldwide. The **ISO/TC215 purpose** is standardization in the field of health informatics to facilitate the secure and coherent capture, interchange and use of health-related data, information and knowledge to support and enable all aspects of eHealth. ISO/TC 215 develops standards for information and communications technology (ICT) and health information management (HIM) practices in eHealth to support healthcare delivery and public health; ensure secure interoperability between ICT products and integrity of health information and data; and assure the patient safety when using ICT products in healthcare.

The **target audience** for ISO/TC 215 standards includes governmental agencies, healthcare organizations, clinical practitioners, health information managers and researchers, academia, developers, suppliers and integrators of ICT applications and services, and SDOs.

As of June 2017, ISO/TC 215's portfolio includes more than **170 health informatics standards**[1] such as International Standards (IS), Technical Specifications (TS) and Technical Reports (TR). These standards are developed by the ISO/TC215 Work Groups (WG) and Joint Work Groups (JWG) as follows:

WG1 – Architecture, Frameworks and Models
WG2 – Systems and Device Interoperability
WG3 – Semantic Content
WG4 – Security, Safety and Privacy
WG6 – Pharmacy and Medicines Business
JWG1 – Traditional Chinese Medicine
JWG7 – Health Software, HIT Systems and Medical Devices (abbreviated name)

In this document ISO/TC215 standards are organized by the following standards categories[2]

Health IT Standards Categories
Semantic Interoperability (Content)
• Data Standards
• Information Content Standards
Technical Interoperability (Infrastructure)
• Information Exchange Standards
• Identifiers Standards
• Privacy and Security Standards
Functional Interoperability
• Functional Standards (interoperability use cases, HIM practice standards)
• Business Standards (business rules, guidelines, practice checklists)
• Health Information Technology (HIT) Safety Standards

[1] Number includes updated versions of original standards.
[2] US Health Information Technology Standards Panel (HITSP). 2006. URL: www.hitsp.org

AHIMA and ISO/TC215

The American Health Information Management Association (AHIMA) represents more than 103,000 health information professionals in the United States and around the world. AHIMA is committed to promoting and advocating for best practices and effective standards in health information and to actively contributing to the development and advancement of health information professionals worldwide. AHIMA is advancing informatics, data analytics, and information governance to achieve the goal of providing expertise to ensure trusted information for healthcare. **www.ahima.org**

Since 2011 AHIMA provides Secretariat to ISO/TC215 and serves as Administrator to the US delegation at ISO/TC215 - US Technical Advisory Group (ISO/TC215 USTAG).

ONLINE RESOURCES

ISO/TC215 Website at ISO: https://www.iso.org/committee/54960.html
ISO/TC215 Website at AHIMA: http://www.ahima.org/about/global?tabid=ISO

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Abbreviations

Amd – Amendment
Corr – Corrigendum
IEC - International Electrotechnical Commission
IEEE - Institute of Electrical and Electronics Engineers
ISO – International Organization for Standardization
TR – Technical Report
TS – Technical Specification
SR – Systematic Review

Functional Interoperability Standards

Business Standards	
ISO/TR 17119:2005	Health informatics profiling framework
ISO/TR 11478:2008	Clinical stakeholder participation in the work of ISO TC 215
ISO/TR 12773-1:2009	Business requirements for health summary records -- Part 1: Requirements
ISO/TR 12773-2:2009	Business requirements for health summary records -- Part 2: Environmental scan
ISO/TR 25257:2009	Business requirements for an international coding system for medicinal products
ISO 18308:2011	Requirements for an electronic health record architecture
ISO 21667:2010	Health indicators conceptual framework
ISO/TS 14265:2011	Classification of purposes for processing personal health information
ISO/TR 13054:2012	Knowledge management of health information standards
ISO/TR 14639-1:2012	Capacity-based eHealth architecture roadmap -- Part 1: Overview of national eHealth initiatives
ISO/TR 14639-2:2014	Capacity-based eHealth architecture roadmap -- Part 2: Architectural components and maturity model
ISO/TS 13131:2014	Telehealth services -- Quality planning guidelines
ISO/TR 19231:2014	Survey of mHealth projects in low and middle income countries (LMIC)
ISO/TR 17522:2015	Provisions for health applications on mobile/smart devices
Functional Standards	
ISO/TR 21089:2004	Trusted end-to-end information flows
ISO/TR 22221:2006	Good principles and practices for a clinical data warehouse
ISO/TS 29585:2010	Deployment of a clinical data warehouse
ISO 27789:2013	Audit trails for electronic health records
ISO 21091:2013	Directory services for healthcare providers, subjects of care and other entities
ISO/TS 17975:2015	Principles and data requirements for consent in the Collection, Use or Disclosure of personal health information
IEC 80001-1:2010	Application of risk management for IT-networks incorporating medical devices -- Part 1: Roles, responsibilities and activities
IEC/TR 80001-2-1:2012	Application of risk management for IT-networks incorporating medical devices -- Part 2-1: Step by Step Risk Management of Medical IT-Networks; Practical Applications and Examples
IEC/TR 80001-2-2:2012	Application of risk management for IT-networks incorporating medical devices -- Part 2-2: Guidance for the communication of medical device security needs, risks and controls

IEC/TR 80001-2-3:2012	Application of risk management for IT-networks incorporating medical devices -- Part 2-3: Guidance for wireless networks
IEC/TR 80001-2-4:2012	Application of risk management for IT-networks incorporating medical devices -- Part 2-4: General implementation guidance for Healthcare Delivery Organizations
IEC/TR 80001-2-5:2014	Application of risk management for IT-networks incorporating medical devices -- Part 2-5: Application guidance -- Guidance for distributed alarm systems
ISO/TR 80001-2-6:2014	Application of risk management for IT-networks incorporating medical devices -- Part 2-6: Application guidance -- Guidance for responsibility agreements
ISO/TR 80001-2-7:2015	Application of risk management for IT-networks incorporating medical devices -- Application guidance -- Part 2-7: Guidance for healthcare delivery organizations (HDOs) on how to self-assess their conformance with IEC 80001-1
IEC/TR 80001-2-8:2016	Application of risk management for IT-networks incorporating medical devices -- Part 2-8: Application guidance -- Guidance on standards for establishing the security capabilities identified in IEC 80001-2-2
ISO/HL7 10781:2015	HL7 Electronic Health Records-System Functional Model, Release 2 (EHR FM)
ISO/HL7 16527:2016	HL7 Personal Health Record System Functional Model, Release 1 (PHRS FM)
HIT Safety Standards	
ISO/TS 25238:2007	Classification of safety risks from health software
ISO/TR 27809:2007	Measures for ensuring patient safety of health software
ISO/HL7 27953-1:2011	Individual case safety reports (ICSRs) in pharmacovigilance -- Part 1: Framework for adverse event reporting
ISO/HL7 27953-2:2011	Individual case safety reports (ICSRs) in pharmacovigilance -- Part 2: Human pharmaceutical reporting requirements for ICSR
ISO/TR 17791:2013	Guidance on standards for enabling safety in health software
IEC 82304-1:2016	Health software -- Part 1: General requirements for product safety

Semantic Interoperability Standards

Data Standards	
ISO/TS 17117:2002	Controlled health terminology -- Structure and high-level indicators
ISO 17115:2007	Vocabulary of compositional terminological systems
ISO 13606-3:2009	Electronic health record communication -- Part 3: Reference archetypes and term lists
ISO/HL7 27951:2009	Common terminology services, release 1
ISO/TR 12309:2009	Guidelines for terminology development organizations
ISO 21090:2011	Harmonized data types for information interchange
ISO/TS 22789:2010	Conceptual framework for patient findings and problems in terminologies
ISO 13119:2012	Clinical knowledge resources -- Metadata
ISO/TS 17439:2014	Development of terms and definitions for health informatics glossaries
ISO/TR 12300:2014	Principles of mapping between terminological systems
ISO/TR 12310:2015	Principles and guidelines for the measurement of conformance in the implementation of terminological systems
ISO 13120:2013	Syntax to represent the content of healthcare classification systems -- Classification Markup Language (ClaML)
ISO 25720:2009	Genomic Sequence Variation Markup Language (GSVML)
ISO/TS 20428:2017	Data elements and their metadata for describing structured clinical genomic sequence information in electronic health records
ISO 1828:2012	Categorial structure for terminological systems of surgical procedures
ISO 18104:2014	Categorial structures for representation of nursing diagnoses and nursing actions in terminological systems
ISO/TS 18062:2016	Categorial structure for representation of herbal medicaments in terminological systems
ISO 16278:2016	Categorial structure for terminological systems of human anatomy
ISO/TS 19256:2016	Requirements for medicinal product dictionary systems for health care
ISO/IEEE 11073-10101:2004	Point-of-care medical device communication -- Part 10101: Nomenclature
ISO/IEEE 11073-10102:2014	Point-of-care medical device communication -- Part 10102: Nomenclature -- Annotated ECG
ISO/IEEE 11073-10103:2014	Point-of-care medical device communication -- Part 10103: Nomenclature -- Implantable device, cardiac
Information Content Standards	
ISO/TR 20514:2005	Electronic health record -- Definition, scope and context
ISO/IEEE 11073-	Point-of-care medical device communication -- Part 10201: Domain

10201:2004	information model
ISO 20301:2014	Health cards -- General characteristics
ISO 21549-1:2013	Patient healthcard data -- Part 1: General structure
ISO 21549-2:2014	Patient healthcard data -- Part 2: Common objects
ISO 21549-3:2014	Patient healthcard data -- Part 3: Limited clinical data
ISO 21549-4:2014	Patient healthcard data -- Part 4: Extended clinical data
ISO 21549-5:2015	Patient healthcard data -- Part 5: Identification data
ISO 21549-6:2008	Patient healthcard data -- Part 6: Administrative data[3]
ISO 21549-7:2016	Patient healthcard data -- Part 7: Medication data
ISO 21549-8:2010	Patient healthcard data -- Part 8: Links
ISO 21549-8:2010	Patient healthcard data -- Part 8: Links
ISO/TR 14292:2012	Personal health records -- Definition, scope and context
ISO/HL7 27931:2009	Data Exchange Standards -- Health Level Seven Version 2.5 -- An application protocol for electronic data exchange in healthcare environments
ISO/HL7 27932:2009	Data Exchange Standards -- HL7 Clinical Document Architecture, Release 2
ISO/HL7 21731:2014	HL7 version 3 -- Reference information model -- Release 4
ISO/TS 27790:2009	Document registry framework
ISO/TR 13128:2012	Clinical document registry federation
ISO/TS 13972:2015	Detailed clinical models, characteristics and processes
ISO 14199:2015	Information models -- Biomedical Research Integrated Domain Group (BRIDG) Model
ISO 13940:2015	System of concepts to support continuity of care
ISO 22077-1:2015	Medical waveform format -- Part 1: Encoding rules
ISO/TS 22077-2:2015	Medical waveform format -- Part 2: Electrocardiography
ISO/TS 22077-3:2015	Medical waveform format -- Part 3: Long term electrocardiography
ISO 17523:2016	Requirements for electronic prescriptions
ISO/TS 17251:2016	Business requirements for a syntax to exchange structured dose information for medicinal products

[3] Parts 1-5 and 7 have been withdrawn.

In addition, the following are traditional medicine standards focused on quality and safety of natural materials and devices used in traditional medicine and informatics.

Traditional Medicine Standards	
ISO/TS 17948:2014	Traditional Chinese medicine literature metadata
ISO/TS 17938:2014	Semantic network framework of traditional Chinese medicine language system
ISO/TS 18790-1:2015	Profiling framework and classification for Traditional Medicine informatics standards development -- Part 1: Traditional Chinese Medicine
ISO/TS 16277-1:2015	Categorial structures of clinical findings in traditional medicine -- Part 1: Traditional Chinese, Japanese and Korean medicine
ISO/TS 16843-2:2015	Categorial structures for representation of acupuncture -- Part 2:[4] Needling
ISO/TS 16843-1:2016	Categorial structures for representation of acupuncture -- Part 1: Acupuncture points

[4] Part 2 is published before Part 1.

Technical Interoperability Standards

Identifier Standards	
ISO 18232:2006	Messages and communication -- Format of length limited globally unique string identifiers
ISO/TS 27527:2010	Provider identification
ISO 20302:2014	Health cards -- Numbering system and registration procedure for issuer identifiers
ISO/TS 18530:2014	Automatic identification and data capture marking and labelling -- Subject of care and individual provider identification
ISO/TS 16791:2014	Requirements for international machine-readable coding of medicinal product package identifiers
ISO 11239:2012	Identification of medicinal products -- Data elements and structures for the unique identification and exchange of regulated information on pharmaceutical dose forms, units of presentation, routes of administration and packaging
ISO 11238:2012	Identification of medicinal products -- Data elements and structures for the unique identification and exchange of regulated information on substances
ISO 11615:2012	Identification of medicinal products -- Data elements and structures for the unique identification and exchange of regulated medicinal product information
ISO 11616:2012	Identification of medicinal products -- Data elements and structures for the unique identification and exchange of regulated pharmaceutical product information
ISO 11240:2012	Identification of medicinal products -- Data elements and structures for the unique identification and exchange of units of measurement
ISO/TS 20440:2016	Identification of medicinal products -- Implementation guide for ISO 11239 data elements and structures for the unique identification and exchange of regulated information on pharmaceutical dose forms, units of presentation, routes of administration and packaging
ISO/TS 19844:2016	Identification of medicinal products -- Implementation guidelines for data elements and structures for the unique identification and exchange of regulated information on substances
Information Exchange Standards	
ISO/TR 18307:2001	Interoperability and compatibility in messaging and communication standards -- Key characteristics
ISO/TR 16056-1:2004	Interoperability of telehealth systems and networks -- Part 1: Introduction and definitions
ISO/TR 16056-2:2004	Interoperability of telehealth systems and networks -- Part 2: Real-time systems
ISO/TS 16058:2004	Interoperability of telelearning systems
ISO 18812:2003	Clinical analyser interfaces to laboratory information systems -- Use profiles
ISO 12052:2006	Digital imaging and communication in medicine (DICOM) including workflow and data management
ISO 13606-1:2008	Electronic health record communication -- Part 1: Reference model

ISO 13606-2:2008	Electronic health record communication -- Part 2: Archetype interchange specification
ISO 13606-5:2010	Electronic health record communication -- Part 5: Interface specification
ISO 17432:2004	Messages and communication -- Web access to DICOM persistent objects
ISO 10159:2011	Messages and communication -- Web access reference manifest
ISO/TR 28380-1:2014	IHE global standards adoption -- Part 1: Process
ISO/TR 28380-2:2014	IHE global standards adoption -- Part 2: Integration and content profiles
ISO/TR 28380-3:2014	IHE global standards adoption -- Part 3: Deployment
ISO/IEEE 11073-00103:2015	Personal health device communication -- Part 00103: Overview
ISO/IEEE 11073-10404:2010	Personal health device communication -- Part 10404: Device specialization -- Pulse oximeter
ISO/IEEE 11073-10406:2012	Personal health device communication -- Part 10406: Device specialization -- Basic electrocardiograph (ECG) (1- to 3-lead ECG)
ISO/IEEE 11073-10407:2010	Personal health device communication -- Part 10407: Device specialization -- Blood pressure monitor
ISO/IEEE 11073-10408:2010	Personal health device communication -- Part 10408: Device specialization -- Thermometer
ISO/IEEE 11073-10415:2010	Personal health device communication -- Part 10415: Device specialization -- Weighing scale
ISO/IEEE 11073-10417:2017	Personal health device communication -- Part 10417: Device specialization -- Glucose meter
ISO/IEEE 11073-10418:2014/Cor 1:2016	Personal health device communication -- Part 10418: Device specialization -- International Normalized Ratio (INR) monitor -- Technical Corrigendum (Cor) 1
ISO/IEEE 11073-10419:2016	Personal health device communication -- Part 10419: Device specialization -- Insulin pump
ISO/IEEE 11073-10420:2012	Personal health device communication -- Part 10420: Device specialization -- Body composition analyzer
ISO/IEEE 11073-10421:2012	Personal health device communication -- Part 10421: Device specialization -- Peak expiratory flow monitor (peak flow)
ISO/IEEE 11073-10424:2016	Personal health device communication -- Part 10424: Device specialization -- Sleep apnoea breathing therapy equipment (SABTE)
ISO/IEEE 11073-10425:2016	Personal health device communication -- Part 10425: Device specialization -- Continuous glucose monitor (CGM)
ISO/IEEE 11073-10441:2015	Personal health device communication -- Part 10441: Device specialization -- Cardiovascular fitness and activity monitor
ISO/IEEE 11073-10442:2015	Personal health device communication -- Part 10442: Device specialization -- Strength fitness equipment
ISO/IEEE 11073-10471:2010	Personal health device communication -- Part 10471: Device specialization - Independent living activity hub
ISO/IEEE 11073-10472:2012	Personal health device communication -- Part 10472: Device specialization -- Medication monitor

ISO/IEEE 11073-20601:2016/Cor 1:2016	Personal health device communication -- Part 20601: Application profile -- Optimized exchange protocol -- Technical Corrigendum 1
ISO/IEEE 11073-20101:2004	Point-of-care medical device communication -- Part 20101: Application profiles -- Base standard
ISO/IEEE 11073-30200:2004	Point-of-care medical device communication -- Part 30200: Transport profile -- Cable connected
ISO/IEEE 11073-30200:2004/Amd 1:2015	Point-of-care medical device communication -- Part 30200: Transport profile -- Cable connected – Amendment (Amd) 1
ISO/IEEE 11073-30300:2004	Point-of-care medical device communication -- Part 30300: Transport profile -- Infrared wireless
ISO/IEEE 11073-30400:2012	Point-of-care medical device communication -- Part 30400: Interface profile -- Cabled Ethernet
ISO 11073-90101:2008	Point-of-care medical device communication -- Part 90101: Analytical instruments -- Point-of-care test
ISO 11073-91064:2009	Standard communication protocol -- Part 91064: Computer-assisted electrocardiography
ISO/TR 21730:2007	Use of mobile wireless communication and computing technology in healthcare facilities -- Recommendations for electromagnetic compatibility (management of unintentional electromagnetic interference) with medical devices
ISO 12967-1:2009	Service architecture -- Part 1: Enterprise viewpoint
ISO 12967-2:2009	Service architecture -- Part 2: Information viewpoint
ISO 12967-3:2009	Service architecture -- Part 3: Computational viewpoint
Privacy and Security Standards	
ISO/TS 13606-4:2009	Electronic health record communication -- Part 4: Security
ISO/TR 11636:2009	Dynamic on-demand virtual private network for health information infrastructure
ISO 22857:2013	Guidelines on data protection to facilitate trans-border flows of personal health data
ISO/TS 21547:2010	Security requirements for archiving of electronic health records -- Principles
ISO/TR 21548:2010	Security requirements for archiving of electronic health records -- Guidelines
ISO/TS 14441:2013	Security and privacy requirements of EHR systems for use in conformity assessment
ISO/TR 11633-1:2009	Information security management for remote maintenance of medical devices and medical information systems -- Part 1: Requirements and risk analysis
ISO/TR 11633-2:2009	Information security management for remote maintenance of medical devices and medical information systems -- Part 2: Implementation of an information security management system (ISMS)
ISO 17090-1:2013	Public key infrastructure -- Part 1: Overview of digital certificate services

ISO 17090-2:2015	Public key infrastructure -- Part 2: Certificate profile
ISO 17090-3:2008	Public key infrastructure -- Part 3: Policy management of certification authority
ISO 17090-4:2014	Public key infrastructure -- Part 4: Digital Signatures for healthcare documents[5]
ISO 22600-1:2014	Privilege management and access control -- Part 1: Overview and policy management
ISO 22600-2:2014	Privilege management and access control -- Part 2: Formal models
ISO 22600-3:2014	Privilege management and access control -- Part 3: Implementations
ISO 27799:2016	Information security management in health using ISO/IEC 27002
ISO 25237:2017	Pseudonymization
ISO/TR 18638:2017	Guidance on health information privacy education in healthcare organizations

[5] Parts 1-3 have been withdrawn.

Appendix: Glossary of Terms

GENERAL TERMS

Standard is a definition, set of rules or guidelines, format, or document that establishes uniform engineering or technical specifications, criteria, methods, processes, or practices that have been approved by a recognized standard development organization (SDO), or have been accepted by the industry as de facto standards, or de jure standards, i.e., formal legal requirements. De facto standards have become standards because a large number of companies have agreed to use them. They have not been formally approved as standards, but they are standards nonetheless.

Standards are technical documents: specifications, integration profiles, content profiles, implementation guides, technical reports and other.

Standardization is the process of agreeing on standards, which represent the common language that allows the exchange of data between disparate data systems. The goals of standardization are to achieve comparability, compatibility, and interoperability between independent systems, to ensure compatibility of data for comparative statistical purposes, and to reduce duplication of effort and redundancies.

Standards Development Organizations (SDOs) are organization that develop and maintain standards. In the US, SDOs are accredited by the American National Standards Institute (ANSI).

Interoperability means the ability to <capture, manage*>, communicate and exchange data accurately, effectively, securely, and consistently with different information technology systems, software applications, and networks in various settings, and exchange data such that clinical or operational purpose and meaning of the data are preserved and unaltered. [6]

Interoperability is based on the following three interoperability components:

1. **Semantic** interoperability—shared content
2. **Technical** interoperability—shared information exchange infrastructure
3. **Functional** interoperability (legal and organizational)—shared rules of information exchanges, i.e., business rules and information governance ("*the rules of the road"*).

Interoperability Standards are special products of standards harmonization activities — a meta-standard (standard about standards), an assembly of standards, an interoperability specification, a reference standards portfolio, etc. — that define how individual standards have to work together to enable interoperability between information systems for a specific healthcare domain (care coordination, radiology, laboratory, pharmacy, data reporting, population health, etc.). Interoperability standards are harmonized and intergrated individual standards constrained to meet healthcare and business needs for sharing information among organizations and systems.[7]

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[6] HL7. Coming to Terms: Scoping Interoperability for Healthcare. White Paper. 2007.
URL: https://www.hln.com/assets/pdf/Coming-to-Terms-February-2007.pdf
*Added by AHIMA to the HL7 definition

[7] The term, **interoperability standards**, was introduced in 2005 by the Health Information Technology Standards Panel (HITSP, http://www.hitsp.org). During 2005-2010 HITSP developed various interoperability specifications for the US National Use Cases created by the American Health Information Community (AHIC).

STANDARDS CATEGORIES

Functional Interoperability

Business Standards specify organization's business activities that are elicited via the business process analysis (BPA) used by software engineers to help organizations define their strategic goals and a process to achieve these goals via the means of information technology through internal changes to organizational capabilities including changes to policies and practices.

Functional Standards specify, in an organized format of the functional requirement analysis document (FRAD), the purpose, the participants (actors: business actors – people; and technical actors –information systems), functions (actions), workflow and data flow, non-functional (security, usability, etc.) and technical requirements needed in an information systems and/or software application as defined by a qualified group of users (subject matter experts /stakeholders).

HIT Safety Standards specify foundational principles, concepts, and guidance for health software and health IT system safety across the full IT lifecycle, from requirements gathering to disposal, taking into account the people, technology (hardware/software), organizational policies and practices, and external environment (e.g., legal). These standards collectively address all IT lifecycle stages, the context of HIT use, and focus areas necessary to ensure the safety, effectiveness, and both data and system integrity, security and privacy of health software and health IT systems.

Semantic Interoperability

Data Standards are documented agreements on representations, formats, and definitions of common data. Data standards provide a method to codify in valid, meaningful, comprehensive, and actionable ways, information captured in the course of doing business. **Vocabularies, terminologies, classifications** are data standards.

Information Content Standards specify the content of information exchanges. First level information content standards define the structure and organization of the electronic information content. Second level information content standards define a "package" in which information and data objects are represented, such as in a string, in message-based standards, templates and structured documents in a document-based standards, unstructured text or image.

Technical Interoperability

Identifiers Standards provide a universal method to identify entities [including an individual (consumer), a healthcare provider, a healthcare organization, a payer, or others (clearinghouses, vendors, products, etc.)] and objects [data, information (records, test orders/test results, medication prescription/dispensation), knowledge (rules, clinical pathways, etc.)]

Information Exchanges Standards specify the means of the electronic communication and are referred to as the standard ways of sending and receiving information.

Privacy and Security Standards ensure information security, privacy and confidentiality. *Security* refers to physical, technological, or administrative safeguards or tools used to protect identifiable health information from unauthorized access, use, disclosure, disruption, modification or destruction. Security is the set of actions an organization takes to protect that information. *Security* is an individual's right to control the acquisition, uses, or disclosures of his or her identifiable health data. *Confidentiality* refers to the obligations of those who receive information to respect the privacy interests of those to whom the information relate. It is an organization's responsibility to protect identifiable health information obtained in providing, or as a result of, a service.[8]

[8] Institute of Medicine (IOM). Disposition of the Air Force Health Study. 2006