



Standard Practice for Content and Structure of the Electronic Health Record (EHR)¹

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1. Scope*

1.1 This practice covers all types of healthcare services, including those given in ambulatory care, hospitals, nursing homes, skilled nursing facilities, home healthcare, and specialty care environments. They apply both to short term contacts (for example, emergency rooms and emergency medical service units) and long term contacts (primary care physicians with long term patients). The vocabulary aims to encompass the continuum of care through all delivery models. This practice defines the persistent data needed to support Electronic Health Record system functionality.

1.2 This practice has four purposes:

1.2.1 Identify the content and logical data structure and organization of an Electronic Health Record (EHR) consistent with currently acknowledged patient record content. The record carries all health related information about a person over time. It may include history and physical, laboratory tests, diagnostic reports, orders and treatments documentation, patient identifying information, legal permissions, and so on. The content is presented and described as data elements or as clinical documents. This standard is consistent with eXtensible Markup Language (XML). See Document Type Definition (DTD) 2.1 and W3CXML Schema 1.0

1.2.2 Explain the relationship of data coming from diverse sources (for example, clinical laboratory information management systems, order entry systems, pharmacy information management systems, dictation systems), and other data in the Electronic Health Record as the primary repository for information from various sources.

1.2.3 Provide a common vocabulary for those developing, purchasing, and implementing EHR systems.

1.2.4 Provide sufficient content from which data extracts can be compiled to create unique setting “views.”

1.2.5 Map the content to selected relevant biomedical and health informatics standards.

2. Referenced Documents

2.1 *ASTM Standards:*²

E1238 Specification for Transferring Clinical Observations Between Independent Computer Systems (Withdrawn 2002)³

E1239 Practice for Description of Reservation/Registration-Admission, Discharge, Transfer (R-ADT) Systems for Electronic Health Record (EHR) Systems

E1633 Specification for Coded Values Used in the Electronic Health Record

E1639 Guide for Functional Requirements of Clinical Laboratory Information Management Systems (Withdrawn 2002)³

E1714 Guide for Properties of a Universal Healthcare Identifier (UHID)

E1715 Practice for An Object-Oriented Model for Registration, Admitting, Discharge, and Transfer (RADT) Functions in Computer-Based Patient Record Systems

E1769 Guide for Properties of Electronic Health Records and Record Systems

E2118 Guide for Coordination of Clinical Laboratory Services within the Electronic Health Record Environment and Networked Architectures (Withdrawn 2002)³

E2369 Specification for Continuity of Care Record (CCR)

E2473 Practice for the Occupational/Environmental Health View of the Electronic Health Record

E2538 Practice for Defining and Implementing Pharmacotherapy Information Services within the Electronic Health Record (EHR) Environment and Networked Architectures

HL7

2.2 *Other Health Informatics Standards:*

HL7 Health Level Seven (HL7) Version 2.2 1994⁴ (Version 2.4 and 2.5)

NCPDP National Council for Prescription Drug Programs

¹ This practice is under the jurisdiction of ASTM Committee E31 on Healthcare Informatics and is the direct responsibility of Subcommittee E31.25 on Healthcare Data Management, Security, Confidentiality, and Privacy.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ The last approved version of this historical standard is referenced on www.astm.org.

⁴ Available from HL7, Mark McDougall, Executive Director, 900 Victors Way, Suite 122, Ann Arbor, MI 48108.