



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

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^{ε1} NOTE—Editorial corrections were made throughout the Annex and in Table 6 in February 2000.

1. Scope

1.1 This guide covers all types of healthcare services, including those given in acute care hospitals, nursing homes, skilled nursing facilities, home healthcare, and specialty care environments as well as ambulatory care. 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). At this time, the standard vocabulary reflects more traditional care. As the standard evolves in the next revisions, the vocabulary will more adequately encompass the entire continuum of care through all delivery models, health status measurement, preventive case, and health education content.

1.2 This guide has five purposes. The first is to identify the content and logical structure of a Electronic Health Record (EHR). The record carries all health related information about a patient over time. It includes such things as observations or descriptions of the patient (for example, the physician's or nurse practitioner's history and physical, laboratory tests, diagnostic imaging reports), provider's orders for observations and treatments, documentation about the actions carried out (for example, therapies or drugs administered), patient identifying information, legal permissions, and so on.

1.2.1 The second goal is to define the relationship of data coming from diverse source systems (for example, clinical laboratory information management systems, order entry systems, pharmacy information management systems, dictation systems), and the data stored in the Electronic Health Record. Recalling that the EHR is the primary repository for information from various sources, the structure of the EHR is receptive to the data that flow from other systems.

1.2.2 Third, in order to accelerate the adoption of EHRs, this guide provides a common vocabulary, perspective, and references for those developing, purchasing, and implementing EHR systems, but it does not deal either with implementation or procurement.

1.2.3 Fourth, this guide describes examples of a variety of

views by which the logical data structure might be accessed/ displayed in order to accomplish various functions.

1.2.4 Fifth, this guide relates the logical structure of the EHR to the essential documentation currently used in the healthcare delivery system within the United States in order to promote consistency and efficient data transfer. It maps to the clinical data currently in existing data systems and patient care records.

2. Referenced Documents

2.1 ASTM Standards:

E 792 Guide for Selection of a Clinical Laboratory Information Management System²

E 1238 Specification for Transferring Clinical Observations Between Independent Computer Systems²

E 1239 Guide for Description of Reservation/Registration- Admission, Discharge, Transfer (R-ADT) Systems for Automated Patient Care Information Systems²

E 1381 Specification for Low-Level Protocol to Transfer Messages Between Clinical Instruments and Computer Systems²

E 1394 Specification for Transferring Information Between Clinical Instruments and Computer Systems²

E 1460 Specification for Defining and Sharing Modular Health Knowledge Bases (Arden Syntax for Medical Logic Modules)²

E 1467 Specification for Transferring Digital Neurophysiological Data Between Independent Computer Systems²

E 1633 Specification for the Coded Values Used in the Computer-Based Patient Record²

E 1712 Specification for Representing Clinical Laboratory Test and Analyte Names²

E 1715 Practice for an Object-Oriented Model for Registration, Admitting, Discharge, and Transfer (RADT) Functions in Computer Based Patient Record Systems²

E 1769 Guide for Properties of Electronic Health Records and Record Systems²

2.2 ISO Standards:³

¹ This guide is under the jurisdiction of ASTM Committee E-31 on Healthcare Informatics and is the direct responsibility of Subcommittee E31.19 on Electronic Health Record Content and Structure.

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² *Annual Book of ASTM Standards*, Vol 14.01.

³ Available from ISO, 1 Rue de Varembe, Case Postale 56, CH 1211, Geneva, Switzerland.