



Standard Specification for the Representation of Human Characteristics Data in Healthcare Information Systems¹

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INTRODUCTION

This document presents a standardized representation for the content and structure of human characteristics data for use in electronic health records and healthcare information systems generally. Many of the data available to clinicians, health researchers and educators, and healthcare planners cannot be easily compared due to the variety in representing human characteristics. This document standardizes the representation of these characteristics at the data tier of health information systems.

1. Scope

1.1 This document presents a standardized representation for the content and structure of human characteristics data for use in healthcare information systems.

1.2 This specification may be extended to apply to characteristics of non-human living things, such as in data systems supporting veterinary medicine.

1.3 The following provisions are within the scope of this specification:

1.3.1 Logical representation of human characteristics data for individuals and populations.

1.3.2 Physical representation of human characteristics at the data tier of healthcare information systems.

1.4 The following provisions are outside the scope of this specification:

1.4.1 The standardization of policy or regulation concerning the employment of human characteristics data described in this specification.

1.4.2 The establishment or standardization of legal constraints over the use of human characteristics in conjunction with healthcare clinical or business processes.

1.4.3 Addressing or standardizing personal privacy, medicolegal, and system security provisions associated with documenting human characteristics or storing human characteristics data.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

2. Referenced Documents

2.1 ASTM Standards:²

E1384 [Practice for Content and Structure of the Electronic Health Record \(EHR\)](#)

E1633 [Specification for Coded Values Used in the Electronic Health Record](#)

E2145 [Practice for Information Modeling](#)

2.2 ANSI Standards

ANSI 260.3-1993 [Mathematical Signs and Symbols for Use in Physical Sciences and Technology](#) (revision and redesignation of ANSI/ASME Y10.20-1990).

ANSI 1320.2-1998 [IEEE Standard for Conceptual Modeling Language - Syntax and Semantics for IDEF1X97 \(IDEFObject\)](#)

ANSI/ADA 1000 [Standard Data Architecture for the Structure and Content of the Electronic Health Record, February 2001.](#)

2.3 ISO Standards

ISO 639 [Codes for the representation of names of languages](#)

ISO 2955 [Representation of SI Units](#)

ISO 5218 [Representation of the Human Sexes](#)

ISO 8601 [Representation of Dates](#)

2.4 Other Standards and Documents

[American Heritage Dictionary](#)

[ANSI/ADA Specification 1000 Implementation Guide](#)

[HL7 2.x reference values.](#)

¹ This specification 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.