

American Dental Association  
**Technical Report No. 1065**

# Use Cases of the Orthodontic Electronic Health Record

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*A Technical Report prepared by the American Dental Association  
and registered with ANSI.*

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## ADA TECHNICAL REPORT NO. 1065 FOR USE CASES OF THE ORTHODONTIC ELECTRONIC HEALTH RECORD

The Council on Dental Practice of the American Dental Association has approved American Dental Association Technical Report No. 1065 for Use Cases of the Orthodontic Electronic Health Record. Working Groups of the ADA Standards Committee on Dental Informatics (SCDI) formulate this and other specifications and technical reports for the application of information technology and other electronic technologies to dentistry's clinical and administrative operations. The ADA SCDI has representation from appropriate interests in the United States in the standardization of information technology and other electronic technologies used in dental practice. The ADA Standards Committee on Dental Informatics confirmed approval of ADA Technical Report No. 1065 on January 17, 2013.

Publication of this technical report that has been registered with ANSI has been approved by the American Dental Association, 211 E. Chicago Ave., Chicago, IL 60611. This document is registered as a technical report according to the *Procedures for the Registration of Technical Reports with ANSI*. This document is not an American National Standard and the material contained herein is not normative in nature. Comments on this document should be sent to the American Dental Association, 211 E. Chicago Ave., Chicago, IL 60611.

This Technical Report was prepared by SCDI Working Group 11.6 on Integration of Orthodontic Standards. The ADA Standards Committee on Dental Informatics thanks the members of Working Group 11.6 and the organizations with which they were affiliated at the time the Technical Report was developed:

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### FOREWORD

(This Foreword does not form a part of ADA Technical Report No. 1065 for Use Cases of the Orthodontic Health Record).

In 1992, there was interest in the standardization of clinical information systems related to electronic technology in the dental environment. After evaluating current informatics activities, a Task Group of the ANSI Accredited Standards Committee MD156 (ASC MD156) was created by the ADA to initiate the development of technical reports, guidelines, and standards on electronic technologies used in dental practice. In 1999, the ADA established the ADA Standards Committee on Dental Informatics (SCDI). The ADA SCDI is currently the group that reviews and approves proposed American National Standards (ANSI approved) and technical reports developed by the standards committee's working groups. The ADA became an ANSI accredited standards organization in 2000.

The scope of the ADA SCDI is:

"The ADA SCDI shall develop informatics standards, specifications, technical reports and guidelines and interact with other entities involved in the development of health informatics standards aimed at implementation across the dental profession."

"The ADA SCDI is currently launching an effort to extend ANSI/ADA Specification No. 1000-Standard Clinical Data Architecture for the Structure and Content of an Electronic Health Record (and its other dental informatics standards) to cover the requirements of orthodontics. Increasingly, the health record format and content transcend national boundaries for patients, health professionals, and vendors. Consistency of content, terminology, and format are essential for general health care use. Thus, the ADA works both nationally and internationally to form standards for dental products and technologies.

"Orthodontic informatics was first described as a subdivision of dental informatics that deals with the storage, retrieval, sharing, and optimal use of orthodontic, orthognathic, and dentofacial orthopedic information of the craniofacial region for decision making (diagnosis) and problem solving (treatment planning).

"Another subdivision of health informatics is imaging informatics, which plays a significant role in orthodontics because, as clinicians and researchers, we use imaging every day in our practices. Imaging is the basis for representing anatomically true data and for evidence-based orthodontics.

"The objective of Working Group 11.6 "Integration of Orthodontic Standards" is to extend or modify the existing electronic health record architecture to include the structure, formats, and relationships of these additional information elements and the protocols for exchanging them among stakeholders. First is to define the breadth of the data by developing orthodontic use cases for sharing digital information, hence this technical report. The point of the use cases is to identify where existing data transmission standards should be modified to handle the specific needs of the orthodontic community."<sup>1</sup>

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<sup>1</sup>Harrell WE Jr, Stanford S, Bralower P. ADA initiates development of orthodontic informatics standards. Am J Orthod Dentofacial Orthop 128:153-6, 2005.

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### RATIONALE

Currently, there is no informatics communication standard for orthodontic electronic data. This Technical Report is designed to examine the specific needs of the orthodontic community for data communication. Based upon the use cases, the Working Group 11.6 will be in a position to ensure that the unique data requirements for orthodontics are adequately reflected in existing data transfer and storage standards, such as ANSI/ADA 1067, ANSI/ADA 1058 and ANSI/NIST-ITL. It is within the scope of SCDI Working Group 11.6 on Integration of Orthodontic Standards to define one. One of the first steps involved in defining an informatics communication standard is to define a list of use-cases in which the standard will actually be used. Such a list varies from specialist to specialist and keeps changing as technology offers new aids to orthodontic providers. We recognize this list will constantly grow and be revised.

This Technical Report will form the foundation for development of specific data interoperability requirements for *Proposed ADA Technical Report No. 1056 for Orthodontic Record Interoperability*. These specific requirements will provide input to modify and adapt existing dental and health record data storage and transfer standards. The Working Group decided to separate it from TR1056 for the following reasons:

- The process of collecting, analyzing, formulating and finally reviewing use cases is complex and will extend over a large period of time, through constant updates. As an independent technical report, it will be easier to revise.
- The collection of Electronic Orthodontic Record Use-Cases could find relevance beyond the creation of TR1056. As a separate document, it would be easier for other Working Groups to utilize its information. Use-cases are not necessarily associated with interoperability. It is a description of how the record will be utilized.

### What is the solution?

To create a list of approved use-cases that define the most common usage scenarios of the electronic health record within the scope of orthodontics.

### SCOPE

1. To create, initially a preliminary, eventually an approved list of common use-cases that define the utilization of the electronic health record within the scope of orthodontics.
2. To continuously update the list, by adding or modifying use-cases, as needed by the orthodontic community.
3. It is not within the scope of this Technical Report to suggest new or currently unused use-cases.
4. The intended audience includes: software developers, qualifying agencies, consumers and other parties interested in implementing the standard for interoperability and transferability of the orthodontic electronic health record.
5. To encourage efforts to harmonize data definitions and technical specifications with other relevant data transmission standards and data storage standards.

### APPLICABLE DOCUMENTS

ANSI/ADA Standard No. 1000: Standard Clinical Data Architecture for the Structure and Content of an Electric Health Record, 2010

ADA Technical Report No. 1048: Attachment of DICOM Datasets Using E-mail in Dentistry, 2011

ADA Technical Report No. 1059: Guidelines for the Application of the DICOM Standard to Radiographic Cephalometric Data, 2010

ADA Technical Report No. 1060: The Secure Exchange and Utilization of Digital Images in Dentistry, 2011