F8 ANSI/ADA Specification No. 1058: The Forensic Dental Data Set –What Does It Mean to the Forensic Dentist?

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The goal of this presentation is to familiarize the attendee with proposed American National Standards Institute/American Dental Association Specification No. 1058 Forensic Dental Data Set.

This presentation will impact the forensic science community by demonstrating the importance of consistent means of communicating dental information, not least in electronic format. The use of partnership working between forensic and regulatory/professional groups is also described.

The United States government has set a target date of 2015 to complete the National Health Information Infrastructure Initiative which would mandate the use of Electronic Health Care records in both medicine and dentistry. To prepare for this initiative the American Dental Association in June 2007 appointed the Electronic Health Record Workgroup and the SNODENT (Systemized Nomenclature of Dentistry) Editorial Panel to help formulate the dental component of this standard. A working group of the ADA Standards Committee on Dental Informatics (SCDI) was set up to develop the standard. Its mandate was to create the framework necessary for dentists to communicate information in electronic patient records to all health care providers. This standard became known as the American National Standards Institute/ADA Specification No. 1000 Standard Clinical Data Architecture for the Structure and Content of an Electronic Health Record.

As part of this initiative, a Joint Working Group was establish to address the needs of the forensics odontology community. This group

became known as Joint Working Group 10.12 Forensic Odontology Informatics Subcommittee and was given a mandate to “create a technical standard concerning the collection and electronic transference of dental forensic information.” Its role was to ensure that that forensic dental data would be included in the standard.

It is vital that forensic odontologists are familiar with the proposed standard whose final draft was approved by the ADA Council on Dental Practice in June 2010 and was sent for balloting by to the SCDI for final approval. This presentation will impact the forensic science community by furthering the forensic odontologist’s understanding of how the standard will impact the field as the United States moves toward the 2015 implementation of the Electronic Health Record.

In 2005, the ADA established the NHII Task Force to establish the role of the ADA in developing access, content, standards, and code vocabularies for dentistry in the electronic health record. As part of this initiative the ADA House of Delegates, in 2006, mandated the reviewing and updating of the Systematized Nomenclature of Dentistry (SNODENT), the vocabulary of electronic health and dental records.

The ADA SNODENT Editorial Panel mandate was to update the clinical terminology of SNODENT and to be certain that it is inter- operable with the rest of the electronic health record. Numerous code sets were identified as being an essential part of an electronic dental record. Because the establishment of a positive identification requires submission of supporting documentation from both the antemortem treating dentist as well as the forensic odontologist, it was decided by the ADA to include a forensic odontology data set as part of the standard. It was anticipated, that at some point in the future, this information (e.g., radiographs, charts, and progress notes) would be electronically submitted directly or through a clearinghouse. The goal was to create a standardized electronic format to transfer this information. Not only would the application of information technology standards and electronic transactions reduce the time required for data transfer and the costs associated with it, but it would also reduce errors and confusion regarding what data needed to be transferred.

Current forensic odontology comparison software is based on the concept of computer comparison and ranking with final determination made by the forensic odontologist. Utilizing numerous dental descriptors, comparison and/or elimination queries, and advance sorting algorithms creates a ranking of possible matches. A final identification is based on the evaluation of similarities and differences of the individual based on these descriptors. Supporting biometric and familial radiographs, and visual information, support the likelihood of a match. Standardizing the descriptors used to code this information increases the likelihood of identifying human remains, as well as, reducing errors that come with ambiguous descriptions of conditions.

The SCDI Joint Working Group 10.12 on Forensic Odontology Informatics was formed in October, 2006, and first met in San Francisco in October, 2007. Representatives from all major Forensic Odontology organizations and numerous government and private agencies were represented. Six working groups were created with the ultimate goal of creating a uniform nomenclature for the description of forensic dental data and to define a standardized set of terms to convey this information. In addition, the standard created the ground work for the standardized electronic transmission of this information to all compatible software. From the onset, the goal of the Standard was not to define the extent of information collected, but to be certain that that

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there is no ambiguity in the meaning of common terms used to aid in human identification. This presentation will cover the ADA standard and familiarize the attendees as to how it will be implemented.

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