American Dental Association
Standards Committee on Dental Informatics

White Paper No. 1070

Implementation of the Electronic Prescription Standard for Dentistry
The Council on Dental Practice of the American Dental Association has approved American Dental Association Standards Committee on Dental Informatics White Paper No. 1070 for Implementation of the Electronic Prescription Standard for Dentistry. Working Groups of the ADA Standards Committee on Dental Informatics (SCDI) formulated this report and also develops 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 SCDI approved this white paper on January 13, 2011.

This technical report was prepared by SCDI Working Group 10.13 on Electronic Prescription Standard. At the time the white paper was developed, the SCDI Working Group 10.13 Chairman was Jackie Tadsen, Emdeon Business Services, Lawrenceville, GA. SCDI Working Group 10.13 prepared this report at the request of SCDI Subcommittee for Information Exchange (Greg Zeller, Chairman).
INTRODUCTION

In 2002, more than 9000 pharmacies had the capability to receive prescriptions as transactions electronically. This accounts for 3 to 4 million individual prescriptions. It was projected by the National Council for Prescription Drug Programs (NCPDP) that at least half of the nation’s 55,000 pharmacies would have this capability by the end of 2003. Despite the benefits of electronic prescribing, adoption is still modest. Current surveys estimate that between 5% and 18% of physicians, dentists and other clinicians are using electronic prescribing. Use of electronic pharmaceutical prescriptions by pharmacies is on the rise, but is attractive to dental health providers as well, due to their inherent quality assurance mechanisms. The utilization of this technology has the advantage of developing a structured method by which the provider can effectively track the generation, dispensing and delivery of pharmaceuticals to the patient.

Growth in electronic prescription capabilities is related to the development of electronic data standards, which provide pharmacies and health care entities with an accepted common format for data interchange. This standard will be a ‘continuous maintenance standard’, meaning that as the standard version changes, the current, approved version of the standard will be the SCDI recommended one. The Drug Enforcement Administration (DEA) issued an Interim Final Rule (IFR) with Request for Comment to provide practitioners with the option of writing prescriptions for controlled substances electronically and permit pharmacies to receive, dispense and archive these electronic prescriptions. The published IFR was posted in the Federal Register Wednesday, March 31, 2010 and included a 60-day comment period.

About NCPDP

NCPDP is a not-for-profit, ANSI-accredited, Standards Development Organization with over 1500 members representing virtually every sector of the pharmacy services industry. The diverse membership provides leadership and healthcare business solutions through education and standards, created using the consensus building process. NCPDP creates and promotes the transfer of data related to medications, supplies, and services within the healthcare system through the development of standards and industry guidance. The organization provides a forum and support wherein the membership can efficiently and effectively develop and maintain these standards and guidance through a consensus building process in collaboration with other industry organizations.

This document may provide information regarding legal implications of the security and privacy regulations. This document does not provide legal advice, and covered entities must work with their legal staff to address appropriate requirements. This document may serve as a tool to expedite an understanding of the necessary legal actions needed to address requirements, as well as federal and state legislation, as security and privacy has an impact on many aspects of dentistry.

1 RATIONALE

The capability of the transmission of pharmaceutical data/prescriptions in dental management information systems industry-wide has been non-existent. Currently, only (written) prescription information is stored. A standard now exists for recommended industry-wide development of this capability, allowing inter-operability with the practice management systems used in the dental practice. Our recommendation is that dental practices should use the same, accepted, NCPDP standard for use by software systems that has been adopted by HHS.

2 SCOPE

The scope of this white paper is to present and establish the guidelines for standard electronic prescriptions in
dentistry. The NCPDP/SCRIPT standard addresses prescription transactions between provider/office practice and retail pharmacy and currently has the broadest acceptance in the ambulatory setting.

3 NORMATIVE REFERENCES
The following documents contain provisions that, through reference in this text, constitute provisions of this document:

NCPDP/SCRIPT Standard, Version 10 Release 4

NCPDP Telecommunication Standard, Version D Release 0

(NCPDP standards are available from the National Council for Prescription Drug Programs, 9240 East Raintree Drive Scottsdale, AZ 85260-7518 or http://ncpdp.org/standards.aspx)

4 The NCPDP/SCRIPT standard
The NCPDP/SCRIPT standard establishes a great quality assurance mechanism through utilization of the business transactions included that support two main business functions: new prescriptions and refills, in addition to other operational features. NCPDP/SCRIPT Standard Version 10 Release 4 is the current version. This standard is the 'standard of choice' for the industry as most pharmacies involved in retail are SCRIPTS conversant. It was confirmed and accepted as such by HHS. The Centers for Medicare and Medicaid Services (CMS) published to the Federal Register July 1, 2010 an Interim Final Rule (IFR) entitled, "Identification of Backward Compatible Version of Adopted Standard for E-Prescribing and the Medicare Prescription Drug Program (NCPDP SCRIPT 10.6)." The regulation names NCPDP SCRIPT 10.6 effective for use July 1, 2010 and continues to support NCPDP SCRIPT 8.1.

5 Electronic prescribing
Electronic prescribing includes many of the following principles:

- The focus of all industry stakeholders, including dentist, practice management software vendors and insurance companies and those in the public and private sectors, working together to encourage the rapid adoption of electronic prescribing.

- Electronic prescribing should encourage the appropriate sharing of prescription information across the continuum of care.

- Electronic prescribing should enhance the delivery of quality care, by preserving and enhancing informed patient choice of treatment options.

- Insure the elimination of illegible prescriptions.

- Use clinical decision support to reduce preventable errors such as drug to drug interactions, drug-allergy reactions, dosing errors, therapeutic duplication, and other error types.

- Increase the communication between dentist and patient thus increasing access to important reference and patient information, preserving the patient-dentist relationship in the delivery of health care.

- Improve communication throughout all parts of the prescribing chain.

- Provide dentists with cost information that may be advantageous to the patient choice.

- Electronic prescribing systems should be easy and convenient to implement, learn, and use effectively by dentists in a variety of practice settings. Integration into the practice management software systems should support and enhance the typical daily workflow of the dental practice.
Electronic prescribing standards will set guidelines for interoperability. Open standards are important factors for successful adoption and use of electronic prescribing. Dentists will not be bound into a single system by closed standards.

Electronic prescribing should maximize appropriate access for prescribing dental healthcare professionals by embracing appropriate end-user technologies.

Electronic prescribing systems should support current and future information infrastructure and telecommunications capabilities within the healthcare industry.

Electronic prescribing standard implementation occurs at several levels, with incremental development and incremental benefits, progressing through basic prescribing systems for the dentist’s use, systems with increasing clinical decision support, provision of reference material for dentists and patients use, and systems with automatic communication to the pharmacy. Systems at each level may be acceptable for dentists in different stages of readiness, who may then progress to more advanced levels.

Dentists and patients should have the ability to route prescriptions to a licensed pharmacy of the patient’s choice.

Electronic prescribing should include the option for the prescribing dentist to send information to the patient that provides education about proper use of the medication, encourages adherence to the medication plan, and helps the patient recognize errors and potential adverse events before they cause harm.

Overall, we should see improvement in the quality of care, reduced dental/medical errors, improved efficiency, and cost-effectiveness for the healthcare system as a whole.

**Use Case Example for Electronic Prescribing**

Electronic prescription transmissions from dentists to a pharmacy or PBM (pharmacy benefits manager) currently do not exist. The following is an example of the possible way an electronic prescription may work in a practice.

Patient is seen in the practice and there is a need for a prescribed medication to address a specific issue.

Chair side, if the practice is computerized in the treatment rooms or as the patient is checked out at the front desk, the assistant/doctor has the patient record displayed using the practice management software, showing all medical alerts related to this patient. The assistant is able to display the electronic prescription. This could be an alphabetical drop down box, allowing the assistant/doctor to choose a listing sorted by generic and/or brand names for the drugs and the available and appropriate dosage by drug. When the medication is chosen, the system may then display information from a particular drug reference, i.e. PDR, showing the drug’s contraindications, side effects, drug to drug interactions, drug-allergy reactions, normal dosage, etc.

It is mandatory that the doctor enter a code allowing the medication to be prescribed. This would be set by the practice settings within the practice management system and could include or possible exclude any drug. Whether or not an ‘internal’ or ‘doctor’ authorization (within the practice management system parameters set by each practice) is necessary to send/transmit the prescription to the patient’s pharmacy of choice, the electronic prescription would be sent immediately or added to an eprescription queue to be sent by a simple button click in daily batches.

This ‘transmission’ is recorded within the patient record, in the prescription history section of the patient record and noted on the patient ledger to be seen anytime the patient account history is displayed by anyone. Ideally, the practice management system software practice set up would allow the practice to make choices like where the prescription displays in the patient record, reports that can be filtered on a particular pharmacy or drug prescribed, etc.
The electronic prescription/s may be batched to be sent two or three times a day or be sent immediately to the pharmacy.

At the end of the day or at any time during the day, a report would be available showing the medication, dosage, instructions, drug information, pharmacy, time of day, etc. that was prescribed that day. This report would be an option for printing on the end of month report or at will through the practice management system reporting feature.

As part of the electronic prescribing procedure, the patient would receive a report before leaving the office and/or including the option for the prescribing dentist to send information to the patient via email that provides education about proper use of the medication, encourages adherence to the medication plan, and helps the patient recognize errors and potential adverse events before they cause harm.

The patient would then sign an acknowledgement stating he/she has received this information from the practice and has no questions for the practice about taking the drug.

Having an electronic prescription standard would allow the transfer of this information to a new dentist, should the patient change dentists, to a colleague treating mutual patients or to another practice management software system of the dentist’s choice. It would allow for full interoperability across platforms.

Currently, not all of the more than 140 practice management software companies integrate the voluntary standards developed by health care standards organizations, or they may use different versions of the standards. There is a concern that the cost of upgrading technology in a dental practice and/or fees for software upgrades needed to use electronic prescribing may be an obstacle for some dental practices. However, the benefit of a single standard providing inter-operability within all dental practice management software would add to cost efficiency of the practice.