Revised ADA SCDI White Paper No. 1070

Electronic Prescription Standard for Dentistry
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1. INTRODUCTION

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 precisely track the generation, dispensing and delivery of pharmaceuticals to the patient.

Current prescribing practices are a weakness in the delivery of high quality medical care. Physicians write 4.5 billion new prescriptions annually and 1.5% to 4% of these contain errors. These errors cause 1 of every 131 deaths of ambulatory patients. Errors are caused primarily by communication of prescriptions: illegible handwriting, unclear abbreviations, dose errors, unclear oral orders, ambiguous orders and fax clarity. Electronic prescribing (e-prescribing) would require typed input, preferably from the physician, and would avoid most of these errors or allow them to be rectified online by the physician at the time of prescription writing.

The Medicare Prescription Drug Improvement and Modernization Act of 2003 (commonly called the “Medicare Modernization Act”) began the Medicare Part D drug program. That law directed that health plans sponsoring Part D drug programs begin supporting e-prescribing by May of 2009. The act also requires that physicians and pharmacies transmitting prescriptions electronically utilize standard transactions established under the act. While this is not a mandate to use e-prescribing throughout health care, by establishing a process, standards and timetable, many of the entities involved in prescribing are likely to adopt these practices, standards and the systems developed by vendors to support them.

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.

As part of the electronic prescribing procedure, the patient would receive a report before leaving the office and 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.

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.

2. RATIONALE
The capability of the transmission of pharmaceutical data/prescriptions in dental management information systems industry-wide has been almost non-existent. Currently, only handwritten or printed prescriptions are sent to the pharmacies. A standard now exists for recommended industry-wide development of this capability, allowing interoperability 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 the Department of Health and Human Services (HHS).

3. About NCPDP

NCPDP (National Council for Prescription Drug Programs) 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 health care 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 health care 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.

4. SCOPE

The scope of this paper is to present and establish the guidelines for 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.

5. PURPOSE

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 health care professionals by embracing appropriate end-user technologies.

• Electronic prescribing systems should support current and future information infrastructure and telecommunications capabilities within the health care 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, which 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 health care system as a whole.

6. NORMATIVE REFERENCES

The following documents contain provisions that, through reference in this text, constitute provisions of this document:
NCPDP Telecommunication Standard, Version D Release 0 (Currently it is NCPDP/SCRIPT Standard Version 10 Release 6. All 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)

7. 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 6 is the current version. This standard is the 'standard of choice' for the industry as most pharmacies involved in retail are SCRIPT 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. NCPDP/SCRIPT 10.6 allows physicians using electronic health record software to electronically access prescription information from pharmacies and health plans while also making use of electronic prescriptions.

8. ELECTRONIC PRESCRIBING

Electronic prescribing includes many of the following principles:

- The focus of all industry stakeholders, including dentists, practice management software vendors, 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-drug interactions, drug-allergy reactions, dosing errors, therapeutic duplications, and other error types.
- Increase the communication between the dentist and the 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.
- Electronic prescribing systems should be easy, 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.
- Potentially help decrease the cost due to automated processes being utilized.

9. ELEMENTS OF E-PRESCRIBING

The prescribing components of e-prescribing can be grouped into: - core prescription capabilities, health plan information and clinical alerts.

Core Prescription Capabilities

The core components of e-prescribing are:

1. Medication lists searchable based on:
   a. Trade and generic availability
   b. Alphabetic listing of medications
   c. Diagnoses
d. Therapeutic categories

e. Physician favorites (most commonly prescribed medications)

f. National Drug Code (aka NDC number)

2. Medication lists which include: - available dosage forms, strengths, route, frequency, duration (which together indicate quantity)

3. Directions to patients (SIG)

4. Prescriber’s signature

5. Number of authorized refills

6. DAW (dispense as written) or substitution permitted

7. Field for comments to pharmacist

8. PRN (as needed) field

9. DEA schedule for controlled substances

10. DEA number for prescriber when issuing a controlled substance prescription

11. Unique identifier for the prescriber, such as NPI or TIN number

12. Prescribers other than dentists/physicians: some states require a “prescriber” or “certificate” number that must be provided

13. Name and address of the patient

14. Name, title, address and phone of prescriber

15. Date of issuance for the prescription

An item that is NOT a requirement but can be useful: an indication or condition. The medical record or e-prescribing system itself should allow for keeping a problem list, both chronic and acute

Health plan information

These data elements, known to the member’s health plan, are necessary for prescribing and billing. Data elements include:

1. Member eligibility

2. Applicable formulary

3. Prior authorization requirements for certain medications (included in the formulary)

4. Medication history

All of these data may be provided through an e-prescribing network such as Sure Scripts, health plans or Pharmacy Beneficiary Manager (PBM) contract with that entity. Alternatively, the member’s health plan may provide these data to the vendor of e-prescribing software or make arrangements to provide them to the pharmacy network vendor.

Clinical alerts

A member’s demographics and medical history may indicate that a pharmaceutical will interact with the patient in an undesirable way. Some such situations include:

1. Drug-drug interactions
2. Drug-allergy or sensitivity
3. Drug contraindicated due to a patient condition
4. Age-specific warnings for pediatric and geriatric patients, for example
5. Dose adjustment needed for patient weight
6. Abuse potential
7. Clinical conditions/factors such as pregnancy, diabetes, hypertension, lactation, etc.

Lab information
If the flow of information to the prescriber includes lab information:
1. Drug-lab interactions
2. Lab values to monitor with medication(s)
3. Adjustments based on patient’s lab results

An e-prescribing system may include drug reference materials and potential access to other guidance, possibly through the employment of a tool such as an “info button”. If an e-prescribing system is part of or interfaced to an EHR, the system may have access to full member medical histories.

When a clinical or other prescribing alert occurs, the prescriber should be able to determine the rationale for the alert (observed drug interaction, report of patient, non-formulary drug, etc.) and clinical alerts should be prioritized based on potential severity and likelihood of the problem.

Prescribers should be able to overrule an alert based on experience with the patient.

10. MAKING THE DECISION

Is E-Prescribing Right for Me?
So what are the pros and cons of e-prescribing for a clinic, a provider or a practice at this time? There are a number of factors to consider:

Pros. There are a number of favorable factors:
- Regulation. The Medicare Modernization Act supports it and this means that more and more providers will try and eventually adopt e-prescribing.
- Office efficiency. Over time, the ability to prescribe in a clear and unambiguous way, considering the member’s formulary and other medications, speeding processing of refill requests, and reducing callbacks will generate efficiency and reduce costs.
- Patient safety. Clarity and consideration of other patient conditions, allergies, medications, etc., will eventually reduce malpractice premiums, the embarrassment and the legal exposure of prescribing errors. An e-prescribing system will provide the prescriber with data on use of prescriptions (refills) so that they can assess patient progress knowledgably.
- Patient satisfaction. Faster transmission of prescriptions to the pharmacy and third party approval because the person prescribing will have new information available at the time of prescribing. There will be fewer barriers due to prescribing of medications not on the patient’s formulary.
• Cost. They will decrease due to the increased office efficiency, less exposure to malpractice claims, and, with some health plans, a share of the savings from prescribing more generics and less non-formulary drugs.

Cons. There are some negatives to be considered as well: Practice patterns and adoption. Adoption of this new technology and the learning curve can be challenging.

• Most dental software cannot support this

• Developmental networks. Although greater than 95% of all pharmacies have the ability, a prescriber may sometimes find a local or an independent pharmacy that is not connected.

• Dependency on a system. The downside of depending on systems is that systems do go down and one needs to have a workaround or revert to manual systems when this occurs.

• Privacy concerns. There is a possibility that one or many records can be inadvertently or purposely compromised. Sound privacy safeguards are crucial.

There are strong forces driving medicine toward electronic processes. Given the low cost of entry, e-prescribing, unlike adopting an EHR, can be instituted easily. It saves paper and decreases the potential for drug abuse, overdose and drug-drug interactions; by ensuring accuracy of the prescription, it results in better health care outcomes without additional resources being spent.

11. 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 condition.

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, showing the drug’s contraindications, side effects, drug-drug interactions, drug-allergy reactions, normal dosage, etc.

It is mandatory that the prescriber be authenticated before allowing the medication to be prescribed. This would be set by the practice settings within the practice management system and could include or possibly 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 could be sent immediately by a simple button click.

This ‘transmission’ is recorded within the patient record, in the prescription history section of the patient record and noted in the progress notes. 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 clinic can verify that the prescription was filled and can also send the patient and cautions or educational material electronically.

The electronic prescription/s may be sent immediately to the pharmacy.
At any point during the day, a report could 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.

REFERENCES

- Hale, op. cit., p. 3.
- Forrester Research, 2002.
- Medco Health study reported by ePharmaceuticals, January 29, 2003.
- Stand-Alone E-Prescribing: Ready or Not? by Lyman Dennis