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Informing you on health information technology

E-prescribing prevents errors

ABILITY OFFERS VITAL COMMUNICATION LINK FOR PHYSICIANS, PHARMACISTS, AND PATIENTS

By **MICHAEL McBRIDE**, Technology Editor

Electronic prescribing (e-prescribing) increases patient safety, experts say. This tool not only eliminates interpretation errors from handwritten prescriptions, it creates a communications bridge between the physician, pharmacist, and patient.

And its use has been steadily increasing since its adoption, according to a National Progress Report issued annually by Surescripts. In 2011, it was estimated that close to 60% of physicians in office-based practices were e-prescribing. According to the 2012 *Medical Economics* Continuing Study, that number has jumped to 67%.

The Health Information Technology for Economic and Clinical Health Act, which was enacted in 2009 as part of the American Recovery and Reinvestment Act, installed e-prescribing as a core menu item for attesting to meaningful use. In addition, the Medicare Electronic Prescribing Incentive program requires eligible professionals (including physicians) to report e-prescribing activities at least 10 times each year for 2011 and 2012 or find their payments reduced in 2013-2014. So as you can see, the government is serious about e-prescribing as well.

So, if you're not already e-prescribing, you probably will be soon.

POWER POINTS

- According to the 2012 *Medical Economics* Continuing Study, 67% of physicians are e-prescribing.
- E-prescribing is a core meaningful use requirement, so if you're not already sending prescriptions electronically, you probably will be soon.

PREVENTING DRUG ERRORS

Erika Bliss, MD, president and chief executive officer of Qliance, a Seattle, Washington-based network of "direct practice" clinics (aka, direct primary care medical homes) that don't accept insurance and that currently charge patients less than \$100 per month for unlimited primary care, says she "can't imagine not having it at this point."

Qliance has been "electronic" from the beginning. The network never has used paper charts. All five clinics are connected through a Web-based electronic health record (EHR) system. And according to Bliss, e-prescribing was extremely important from the start.

"It was a 'must-have,'" she says, "so we chose an EHR system that had it built in."

Bliss advises primary care physicians who aren't already e-prescribing to begin immediately. At minimum, she says, if you're not ready to implement a full EHR with built-in e-prescribing capabilities, at least install one of the free stand-alone e-prescribing systems.

"From a patient safety perspective, I don't think there's any excuse not to e-prescribe, especially when there are free products out there," Bliss says. "We're well past the point now where you can justify written prescriptions for so many reasons. First of all, they're totally unsafe, because most people don't write that clearly. They're also very easy to misinterpret."

To make matters worse, Bliss says, when written prescriptions are faxed to pharmacies, a pharmacy technician must manually enter them into the pharmacy's electronic systems, inviting even more errors.

"Anytime you have any sort of transcription happening in a chain of information transfer, you're at a very high risk of making mistakes, and, unfortunately, they happen all the time," she says.

The most common errors, Bliss adds, involve incorrect refill information being input into the pharmacy systems, even though the prescription itself is properly transcribed. That mistake can seem pretty harmless, she says, but it wastes the time of practices, patients, and the pharmacy.

CHECK THE DATABASE

When you're searching for e-prescribing software, whether it's a stand-alone product or one that's integrated into an EHR, Bliss says it's important to

investigate the database from which the program is pulling information.

“There are different databases out there,” she says, “and some of them are better maintained than others. They’re more reliable.”

Bliss says that various “bells and whistles” associated with the different e-prescribing systems drives their cost. She notes, however, that certain “must-have” capabilities are critical for the databases to be truly useful in care settings. For example, she says, any database connected to an e-prescribing system must be capable of drug-drug, drug-allergy, and drug-disease interactions checking.

“Whatever the e-prescribing system is,” Bliss says, “it has to be based on a database that’s relational in such a way that it can pick [International Classification of Diseases, Ninth Revision]



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codes out of a patient’s chart, compare them with its database, identify any interactions, and then present that information to you.”

STAND-ALONE VERSUS INTEGRATED SYSTEMS

Once a system is installed in your practice, patient information must be input into the e-prescribing system. Input information generally includes patient demographics and allergy and problem lists.

“You can start to see the argument for installing a complete EHR rather than a stand-alone e-prescribing

system,” Bliss says, “because if you’re going to input all that patient data, you might as well be putting it into a full EHR.”

Because she personally experienced what can happen when an e-prescribing system doesn’t present a potential medication interaction danger, Bliss now recommends that physicians not only consider e-prescribing systems that are fully integrated, but that they also look for systems that feature all three types of interaction-checking.

Bliss recounts an incident where she was preparing to administer

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Unlocking real-world value built into e-prescribing standards

Electronic prescribing (e-prescribing) establishes an important connection between physicians, other prescribers, and pharmacists, and it can support interoperability across the community of care providers.

E-prescribing carries critical patient safety benefits. It is estimated that approximately 10% of hospital admissions are due to medication allergies, interactions, or medication errors.

Vendors that develop e-prescribing or electronic health record (EHR) systems often incorporate an overall medication management process through drug utilization review programs that perform checks against the patient’s current medications and alert the provider when and

if interactions are found. They include:

- drug-drug and drug-allergy interactions,
- diagnoses,
- body weight,
- age,
- drug appropriateness,
- correct dosing,
- contraindications,
- adverse reactions, and
- duplicate therapy alerts.

MEDICATION HISTORY

E-prescribing applications support the ability to obtain medication history. Recent statistics show that use of electronically sourced medication history information captured 95% of current patient medications as compared with

just 70% when relying on a patient interview alone. Studies estimate that it would take an average of 19 additional minutes of staff time to achieve the 95% threshold using standard phone and fax-based follow-ups.

Having comprehensive patient health information, including medication histories, readily available at the point of care is vital to delivering high-quality patient care, particularly in acute care settings where time is of the essence.

With the pressure to use e-prescribing to meet meaningful use, some of the core features of e-prescribing standards are broadly overlooked, those most notably being:

- cancellations,

- compliance notification, and
- the sharing of medication history information.

FORMULARY INFORMATION

Another, lesser-known benefit to using e-prescribing that is overlooked is the use of formulary and benefit (F & B) information at the point of care (or the point of prescribing), which helps identify possible coverage issues before the prescription reaches the pharmacy. Obtaining F & B information at the point of care can improve patient compliance, reducing the likelihood that patients will abandon prescriptions at the pharmacy when they learn their medication is not covered due to formulary restrictions.

In the quest to improve the quality and cost of healthcare, e-prescribing offers providers and patients, pharmacies, and payers the opportunity to realize

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an injectable nonsteroidal anti-inflammatory drug (NSAID) to a patient who had come to see her in her office, not recalling that the patient was allergic to NSAIDs and could experience a severe drug-allergy interaction.

Because Bliss was administering the injection in the office, it was considered a procedure, and Bliss had ordered the drug using Current Procedural Terminology (CPT) codes.

"I was just about to give it to her when my assistant read her allergy list and alerted me to the interaction," Bliss says.

An investigation into why her e-prescribing system had failed to alert her to the drug-allergy interaction revealed that the system had been built without the ability to match CPT

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codes to the medication database. "The vendor had not connected the CPT codes to the interaction engine," Bliss says. "Therefore, the system couldn't tell me I was about to administer a drug that my patient was allergic to." Since then, the EHR vendor has made the necessary connections so the proper interaction alerts are triggered, she said.

"The whole point of having

electronic systems is not to save you time," Bliss contends. "It's about having better data, better access to data, and having safety checks to prevent people from making avoidable mistakes."

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immediate benefits, and it helps lay the foundation for continuity of care across the community.

CORE REQUIREMENTS

Meaningful use requirements for e-prescribing mandate the use of the National Council for Prescription Drug Programs (NCPDP) Script standard. The standard facilitates e-prescribing new prescriptions, changes to prescriptions, refills and renewals, cancellations, compliance notification, and the sharing of medication history information.

To meet the meaningful use requirements for e-prescribing, an entity must be able to test using the National Institute of Standards and Technology test procedures. The entity testing also must be able to generate and transmit a new prescription.

COMMUNICATION LIFELINE

The Office of the National Coordinator for Health Information Technology's final

rule on meaningful use includes requirements for e-prescribing as a core measure, lending critical support for the tool that delivers benefits to patients and providers alike.

Pharmacists and vendors have touted the benefits of e-prescribing for years, describing it as a tool for sharing information that can support continuity of care across the community and help build a complete view of the patient in an EHR. In addition to building a footprint of a patient's medication history, e-prescribing provides physicians with other tools:

- the aforementioned F & B information, and
- warnings and alerts at the point of care.

The first version of the Script standard for e-prescribing was published by the NCPDP in 1997, and incentives for e-prescribing adoption date back to 2003 under the Medicare Modernization Act.

Although adoption of the

standard has steadily increased over the years, its biggest boost has been fueled by the American Recovery and Reinvestment Act of 2009 and Medicare Improvements for Patients and Providers Act incentives.

Some of the benefits of e-prescribing:

- It eliminates issues associated with illegible handwriting.
- It promotes access to more complete prescription history at points of care.
- It decreases costs and increases formulary adherence.
- It decreases the risk of adverse drug events by an estimated 30% to 50%, providing drug-drug and drug-allergy interaction alerts.
- It increases access to clinical guidance, including drug safety alerts, adherence reminders, and alerts for possible gaps in care of chronic disease.
- It reduces the time and expense related to administrative processes,

such as pharmacy callbacks and renewals, which can total approximately \$15,700 annually for each full time prescriber, according to a study by Medical Group Management Association's Group Practice Research Network.

- It increases opportunities for patient medication adherence.

E-prescribing establishes a critical communication and collaboration point for physicians, pharmacists, and patients as well as an opportunity to have a profoundly positive effect on patient care, safety, and health outcomes.

—John Klimek, RPh
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