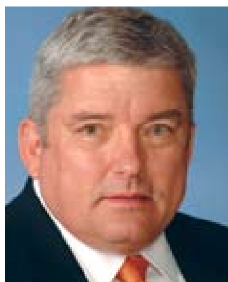
Working Out E-Prescribing's Kinks

By Bill G. Felkey



I HAVE BEEN SPEAKING A LOT lately about the benefits of digitization in health care in general and about the benefits of e-prescribing to pharmacists in particular. This method of two-way telecommunication between prescribers and pharmacies is one of the unavoidable, absolutely necessary technologies in every pharmacist's future. The status of the required infrastructure for this activity in our nation is basically in place, and the intake of electronic prescriptions is already a growing part of many pharmacists' prescription volume.

One adoption stimulus came in January of 2007 when the National e-Prescribing Patient Safety Initiative (NEPSI) was announced to allow every prescriber in the United States free access to a browser or PDA-based prescribing software. The Allscripts Co., in coalition with many well-known health care and technology corporations, invested more than $100 million to get the nation ready to meet a proposed 2010 deadline for the country's prescriptions to become 100 percent electronic. Since its successful launch, NEPSI has also teamed with both Microsoft and Google to allow the prescription data captured by NEPSI to eventually help populate patients' personal health records. Google and Microsoft are hoping to get a major toehold in health care technology by moving data generated by providers into patient specific records.

These and many other technology innovations are helping to create the e-prescribing dream, being pushed by so many factions. It is finally starting to look like we are reaching a tipping point that will allow this collaboration channel to finally become a reality. Imagine that, in this information age, you will never again have to see another illegibly scrawled little piece of paper being handed across your counter. Further, imagine that your intake technician will be replaced by a direct interface connecting your operations to all of your prescribers. In this channel a prescription is totally free of clinical complications and has already had all potential insurance issues worked out before your practice managements system queues the prescription for dispensing and verification.

BUMPS IN THE ROAD

Unfortunately, we still haven't reached the scenario of prescription panacea described previously. Remember, the adage, "Just because you read it in print, doesn't mean you can believe it." Well, just because it's an e-prescription doesn't mean it's a "good to go" prescription. I hear frequent reports from pharmacists that have started processing their first electronic prescriptions. They say they are catching wrong drug prescribing errors, encountering processing delays, formulary problems, and other processing issues as prescribers and prescribing applications come up to speed with the new order entry process.

Let's start with legibility and accuracy of the product selection (and other sig information issues). Yes, you can read the prescriptions because they are digital text, but some e-prescribing applications display a long list of drugs for selection by prescribers with a descending, alphabetically sorted name of the drug. Prescribers can misread and click on (or stylus tap in PDAs) the wrong drug in a list. Another error occurs when a prescriber is distracted and does what I call a "point and shoot error." This happens when they inadvertently enter and transmit a drug which is located a quarter of an inch above or below the one intended. Sigs may not make sense for similar reasons. For example, your prescription may read, "Take one tablet two times per day for 10 days and the quantity will be listed as #12." Which, if either of the fields, is correct?

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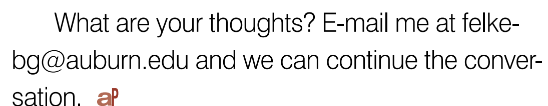
Product selection errors can be decreased (or at least make the consequences of a wrong drug less severe) when the prescribing application asks for the indication of the drug before displaying a drug list that only matches the indication. If a selection error occurs, then at least the wrong drug will be properly indicated for the problem the patient is experiencing. The only maddening thing in this solution is that the e-prescribing application will usually not pass along the indication of the drug being prescribed to the pharmacist in the prescription transmission. This is true even though the prescriber had to select the indication to generate the order. That's just wrong!

I have always told groups how great it will be when you are able to get a prescription into the pharmacy 45 minutes before the patient arrives. Pharmacists are telling me that when the clinic is across the street from the pharmacy, system processing delays can sometimes have the patient arrive before the prescription. Timing issues have also emerged in inpatient prescribing systems. One study reported that a physician wrote a prescription for a hospitalized patient and instructed that the drug be administered at 8 a.m. the next day, without knowing that it was 12:01 a.m. when the order was actually placed. The patient failed to receive the prescribed dose until 32 hours later.

INTEGRATION IS KEY TO ERROR REDUCTION

Don't get me wrong. We need to move to e-prescribing yesterday. Integration of health care into a true, digital systems and appropriately using clinical decision support systems (CDSS) is the key to overcoming the usual errors that will occur when implementing any new application into an already stressed workflow and workload.

What are your thoughts? E-mail me at felkebg@auburn.edu and we can continue the conversation.



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