E-Prescribing Efforts: Pilot Project Studies E-Prescribing Standards in Long-Term Care

by Ruth Carol

E-prescribing has long been a dream for many healthcare organizations. However, a pilot study on e-prescribing's effects on long-term care shows that it can easily become a reality for the industry.

A pilot project to study the effects of e-prescribing on cost, quality, and patient safety in long-term care (LTC) facilities is moving the electronic transmission of prescription data closer to reality in this healthcare market, which has been slow to embrace information technology.

The LTC pilot project began in January 2006 as one of a series of projects to test e-prescribing standards in the healthcare industry and was funded by the Department of Health and Human Services. The projects are linked to the Centers for Medicare and Medicaid Services' (CMS) call to adopt e-prescribing standards under the Medicare Prescription Drug Improvement and Modernization Act of 2003.

"In the end, the government will have a more robust payer system for managing medication benefits as part of the Medicare Modernization Act," says coinvestigator Michael Bordelon, former vice president of research and development for Achieve Healthcare Technologies of Eden Prairie, MN, the primary contractor providing the e-prescribing software system and services for the project. The goal is to bring the LTC industry one step closer to having standards to support the electronic transmission of prescription data among prescribers, pharmacies, and payers.

The e-prescribing standards being tested at two Minneapolis-based LTC facilities are the current foundation and initial standards developed by the National Council for Prescription Drug Programs (NCPDP), the Accredited Standards Committee X12, and Health Level Seven. The standards, which are applicable to all of healthcare, are intended to facilitate communication of prescription information, such as new prescriptions, prescription changes, refills, fill status, and discontinue requests.

The goal of the pilot project is to test the e-prescribing standards to be certain they support LTC transactions. The questions to be answered are:

- Do all of the standards work in the LTC setting?
- Do the standards yield cost benefits? These costs are associated with processing and refilling prescriptions, data entry, nonformulary prescribing, and prior authorization processing.
- Do the standards improve quality of care? Improvement means reducing transcription errors, right-drug right-time errors, and contraindication overrides.
- Do the standards improve patient safety? Safety relates to identifying, tracking, and reducing drug allergies, adverse drug events, drug-drug interactions, and therapeutic duplications.

Workflow Process Issues

To test these standards in the LTC community, some of them had to be adapted to accommodate different workflow processes. "We had to build some tools into the prescribing software to help facilitate that workflow," says Bordelon, now executive vice president of LTC products at Talyst Inc., in Bellevue, WA. Using an automated system without a human to translate the information requires more sophisticated technology.

As an example, the existing NCPDP SCRIPT standard requires an end date and a quantity for each prescription order. But in the LTC setting, there are no end dates or quantities because prescriptions are constantly being renewed for the nursing home residents, some of whom live there for years. Those fields had to be eliminated in the standard. On the other hand, a field indicating the patient unit, room number, and bed number had to be added because the pharmacist must indicate exactly where the prescription must be delivered at the nursing home.

In the LTC arena, the process for ordering prescription refills-known as "renewals"-involves the nurse requesting a renewal from the pharmacy as opposed to the pharmacist requesting a renewal from the physician in a retail transaction. "The standard message transaction for a refill process initiated by the nurse to the pharmacist didn't exist before we started this project," says Bordelon. To that end, a proprietary bar-code scanner was used to demonstrate automating this process. Because 80 percent of prescription orders are renewal requests in the LTC setting, automating the process will make it much more efficient.

Payment Issues

The existing standard also did not support a payer change message without a corresponding prescription. That means the pharmacy could be billing the wrong payer until it receives a prescription renewal indicating that the payer has changed, explains Shelly Spiro, RPh, president of R. Spiro Consulting based in Alexandria, VA. The pharmacy would then have to delete the initial charges and rebill them to the appropriate payer retroactively. "In the LTC pilot, we built the formulary and benefits piece into the portion of the standards that the prescriber at the facility sees," she says. That way, the prescriber knows up front which medications are on the formulary and will be paid for, thus eliminating a great deal of rework.

Addressing formulary and benefits was critical because they have become more complex with Part D under the Medicare Modernization Act, notes Shelley Grace, coinvestigator and vice president of pharmacy technology at Achieve.

The prior authorization component was a huge challenge because the existing standards were used for billing medical procedures and were not designed to handle prescriptions, says Teri Byrne, an independent consultant and former vice president of standards and product management at RxHub, St. Paul, MN, which is providing the transaction routing services for the project. Electronic prior authorization will help streamline the process for requesting and receiving approval from the health plan to dispense a medication that requires preauthorization.

The pilot project partners received an additional $250,000 in funding from the American Society of Consultant Pharmacists Foundation to study the electronic submission of the prior authorization process. That enabled the partners to design a full-fledged working capability, not just a prototype, says Bordelon. This electronic prior authorization function can be used in any nursing home setting once a critical mass of payer support has been established, he says. Currently there are few LTC payers capable of receiving such prior authorization messages, but he is confident that those numbers will grow once the standard is made final.

"What we're doing in LTC is as advanced as anything going on in healthcare now. This is the absolute cutting edge of e-prescribing," says Bordelon.

Also, existing standards did not address the fact that the primary payer and the responsible party are not necessarily the same person in the LTC setting. Ultimately, the responsible party could be the resident's family or even the nursing home itself. That option had to be included in the standards.

LTC Work Group

Some of the tweaking of these standards was already under way before the pilot project started. In March 2005, the NCPDP formed a work group to determine whether the standards supported the LTC community. Consequently, some of the same partners on the pilot project were already collaborating and making recommendations to NCPDP about how to modify the standards. These efforts not only dovetailed nicely with the pilot project but also shortened the time it took to modify the standards and implement them in such a tight time frame, says Bordelon, who spearheads the NCPDP's LTC e-prescribing task group. The software was being worked on in a conceptual way, he elaborates. The blueprints were laid out, but nothing was put into code yet. None of this technology existed for the LTC facility, pharmacy, or prescriber before January 2006. "We got all of this code up and running by June," says Bordelon.

It also helped that the LTC community was actually exempted from having to use the existing foundation standards once CMS realized how many different nuances there were in LTC transactions, says Spiro. “We would not have been able to work this way with the standards in the pilot if CMS didn’t come back and exclude LTC from following the standards as they were set up,” she explains. Consequently, the work group had some leeway in being able to develop short-term solutions to modify the standards for use during the pilot.

The Next Step

The pilot project’s data-gathering phase is expected to be completed by year-end. At that time, the partners, who hold weekly status meetings, plan to submit the last round of recommended standards changes to NCPDP for approval. As a standards development organization, NCPDP must follow a strict process governed by the American National Standards Institute to make any modifications to the foundation standards. “By the end of the year, draft versions of all the standards should be able to support LTC transactions, as well as the ambulatory and acute care transactions they already support,” says Bordelon. The partners plan to submit a report on the pilot project results to CMS in January 2007. They are confident that NCPDP will approve the recommended changes and CMS will endorse the new version of the standards, which will eventually be passed by Congress to become the foundation standards moving forward.

With the technology in place, the next step will be for LTC pharmacies to connect through e-prescribing networks like most of their retail counterparts. The pharmacies will take the lead because in many cases one pharmacy can service more than 20 LTC facilities, says Bordelon. In turn, nursing home chains will begin connecting to e-prescribing pharmacies. “Both will push each other as this evolves. It’s the same thing that happened in the ambulatory arena,” he adds. “The prescriber adoption went up proportionally to the pharmacy adoption. It gains momentum once you start gaining critical mass.” He also envisions an increase in the number of major pharmacy benefit managers who handle the pharmacy claims for payers getting connected.

The final step will entail getting physicians and nurses to see the value of the technology and to adopt it, says Byrne. If feedback from staff at the LTC facilities is any indication, the final step will be the easiest of all. The e-prescribing standards are working so well that staff do not want to revert to manual processes once the project is over.

In the meantime, Byrne views the best outcome of the e-prescribing pilot to be the government-fostered collaboration that has occurred within the LTC industry. “The standards development organizations, pharmacies, physicians, and routing vendors have all been forced to work together to create a common set of information, specifically a common set of messaging standards, that will make e-prescribing work in this arena,” Byrne concludes.

LTC Facilities Reap the Benefits of E-Prescribing

Potential benefits of e-prescribing for LTC facilities include time and cost savings, as well as improvement in quality of care and patient safety. Automating this process is expected to significantly reduce the time spent on order management by all involved parties. The pharmacy will probably benefit most, because the pharmacist spends the most time going back and forth between the prescriber or the nurse who is acting as an agent for the prescriber, says Grace. The facility benefits because the nurse spends less time with the pharmacist and physician, who will also require less time for ordering prescriptions. Staff will not be eliminated, she says, but they will have more time to provide direct patient care.

In addition, time-consuming workflow processes will be streamlined through automation. The need to fax orders, for example, will be eliminated.

The formulary and benefits component is expected to reduce billing rejections at the pharmacy, as well as delays related to drug utilization review and payment issues.

Payers and the government are expected to save money because e-prescribing allows for more strict control of drug costs. “The whole reason we’re doing formulary management is to get nationwide Medicare drug costs under control,” says Bordelon. “The biggest thing you can do there is control the formulary for each of the plans.”

Quality of care is expected to improve as legibility errors are eliminated. In addition, the Web-based system being tested in the pilot incorporates an electronic health record that includes such patient information as diagnosis, detailed assessments and progress notes, and allergies and drug-drug interactions. “The physician is much more empowered to make the best

decision about the course of care for that patient than he or she ever would be on a phone call with a nurse," says Bordelon. Having access to this type of information in real time can improve patient safety.

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Article citation:
Carol, Ruth. "E-Prescribing Efforts: Pilot Project Studies E-Prescribing Standards in Long-Term Care" *Journal of AHIMA* 78, no.1 (January 2007): 36-38.