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An Electronic Prescription for Health Care Efficiency

by Susan Pantely



Computers and other advanced technology have changed the way we live and do business. Most industries by now have adopted electronic transactions as the norm rather than the exception. Our daily lives consist of a myriad of these instantaneous dealings—banking, shopping, and dining. We can transfer money, check balances, order a new suit, and send a document with only a few clicks.

Businesses without such electronic capabilities could be considered dinosaurs. This has arguably been true of health care, but change appears to be on the way. One example is e-prescribing, a transaction in which a physician transmits a prescription directly to a pharmacy.

With the often bewildering welter of health plans, formularies and other considerations, managing prescriptions currently presents difficult problems. After a patient has left a doctor's office with prescription in hand, the potential to take advantage of maximum efficiencies—cost savings opportunities that deliver the best quality of results—diminishes considerably. Sometimes problems can be addressed at the point of sale, but that usually requires a call to the doctor from the pharmacy, and then a delay while waiting for a response. Meanwhile, somebody is at the pharmacy who wants their prescription now.

That's been the traditional way to manage prescriptions and many would agree that it has not been

entirely effective. Making appropriate determinations of the best drug fit for an individual patient is clearly more efficient right in the doctor's office when the physician is most focused on the patient. E-prescribing is uniquely poised to offer exactly that capability.

E-prescribing: Prove it

By most measures, e-prescribing is still in its infancy. But proponents see a bright future, arguing that e-prescribing offers a significantly effective strategy for both cost savings and improved health outcomes, particularly in combination with the use of an electronic health record (EHR).

Can the exciting potential for this technology be demonstrated in practice? It appears the answer to that question is yes. As e-prescribing evolves, a number of actuarial projections are easily transformed to help with forecasting claims under an e-prescribing system and to better understand its effects, even with the limited experience we now have. By comparison, vendor claims may be overstated or not reproducible in a different environment.

Actuaries typically look at utilization patterns—doctors that have more prescriptions obviously present the greatest opportunities for efficiencies. Another strategy for actuaries is to examine generic proportions; the lower the use of generics, the more potential there is for saving money.



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Getting Down to the Nuts and Bolts

Several actuarial issues and considerations should be taken into account when projecting and evaluating experience after implementation of e-prescribing. These include measures designed to cut costs as well as those likely to enhance drug treatment compliance and lead to better health outcomes.

Increase in Formulary Compliance

Currently physicians have no good way of knowing the formulary for any individual patient's prescription drug plan. If a physician sees 10 patients, that could mean dealing with 10 different health plans, each plan with its own formulary. The potential for higher costs for the patient with the choice of a non-formulary drug is clear. A physician can't keep all this information handy, and it can be a lot of work to track down for patients.

E-prescribing can put that information into a doctor's hands right in the doctor's office, via a simple hand-held device. That alone could serve significantly to increase formulary compliance. Not only does it help as an aggregate cost saving to the health plan, but it also helps patients minimize their copays. And the physician can remain focused on medical care rather than become distracted by details of health plans.

E-prescribing systems also have the benefit of being constantly updated with information about new drugs, new generics, changing formularies, shifting price points, and more. These are things that until now a physician couldn't possibly keep up with as they happen. Simple updates to the e-prescribing program would allow them to do that quickly and easily.

Increase in use of Generics

This is similar to the situation with formulary compliance. A lot of times a physician may not know that a generic is available. Also, many patients have questions about their various options, many related to the terms of their health plans. Currently, the pharmacy may be able to catch that a generic is available for a branded drug that's been prescribed, but confirming prescription changes with the physician can still require a round of phone calls and delays in actually dispensing the needed drug to the patient.

With e-prescribing, if a generic alternative is available physicians know on the spot, allowing them to change the prescription to generic if warranted. E-prescribing thus enables the adoption of generics to accelerate wherever it's appropriate, providing fast and easy cost comparisons on the fly. There has been a significant push in recent years toward the use of generics, in terms of setting copay levels and other efforts, and e-prescribing clearly offers the next wave of what can be done to influence and increase their use.

For actuaries quantifying the savings from e-prescribing related to increasing generic use, it is important to recognize that generic utilization is expected to increase over the next few years with more generic alternatives currently on the horizon than brand drugs.

Promoting Over-the-Counter Drugs When Possible

Similar to the indication of generic alternatives, an e-prescribing program can also identify and provide information about appropriate over-the-counter drugs that may be less costly, based on the diagnosis and preferred drugs entered. Right now, most health plans don't cover over-the-counter drugs but that could change. If it does, based on evidence-based medicine and proven outcomes, e-prescribing programs will be able to support that move efficiently. Most physicians currently don't even consider over-the-counter options. E-prescribing will help keep that option more top of mind.

Avoiding Adverse Drug Events

Particularly when used in combination with an EHR, e-prescribing has the capability of identifying adverse reactions that may result from complex drug interactions. Again, this is a matter of streamlining the process for the physician, whose patient charts may not be organized specifically to flag drug conflicts and interactions. The potential is apparent. If the patient's information is in the e-prescribing program via an EHR and the physician prescribes a drug that interacts with another that the patient is already on, an e-prescribing program can quickly identify

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Targeting physicians who have the most potential for shifting members to lower cost alternatives will produce savings much faster than implementing physicians on a random or voluntary basis.

that and the physician can make a decision based on that. This might be a decision not to prescribe the drug at all, or to warn the patient to watch for specific symptoms that would warrant discontinuation of the drug, or simply to instruct the patient on a different way to take the drug, perhaps at different times of the day. Drugs can be very complicated in the way they interact, and an e-prescribing program can help physicians make better and more informed decision for their patients.

For actuaries, this aspect of e-prescribing is harder to quantify and model. There's not yet enough information out there. But it remains one of the obvious potential benefits of e-prescribing and one that people will be looking for. This also underlines the necessity, or at least the utility, of building an EHR system. The more information that can be included in it—not just the drugs that patients are taking, but their various diagnoses and conditions—the greater the potential for improved outcomes.

Dose Optimization

The dose of medication that is prescribed can affect two separate issues—both how that drug will interact with other drugs a patient is taking, and also its price points. It's often possible to identify an optimal level to prescribe. In the first case, that's based on the other drugs being taken, body weight, diagnosis, and other factors; in the second case, price points, it's based on health plan formularies. Many times, currently, physicians are already aware of dose ranges but not necessarily the specifics within them and so, for the sake of time, rather than prescribing the optimal dose they prescribe what they know will be a safe dose. E-prescribing enables them to calculate and prescribe the more highly effective optimal doses quickly and efficiently.

Fill Notification

E-prescribing comes with the capability to notify physicians when prescriptions or refills are not picked up by a patient. The physician is then able to follow up with the patient, possibly increasing compliance. This is potentially one of the most significant benefits that e-prescribing can offer. As is well known, today compliance with drug treatments probably stands at 50 percent or less. Patients just don't take their drugs the way they're supposed to,

for whatever reason: they forget, they don't have time to pick them up from the pharmacy, they're having side effects, or for other reasons. In many cases, particularly for people with chronic conditions, it's critical to successful treatment that they maintain appropriate compliance.

E-prescribing enables a physician to know, practically in real time, when a patient appears to fall out of compliance. If a prescription is written for three months and the patient doesn't pick up the refill a month later, the physician is notified and his staff can follow up to find out what's going on and emphasize the importance of compliance to the patient. If there's an issue with side effects, for example, it can be addressed promptly and effectively—by switching drugs, changing the dosage, or in some other way—rather than waiting months for the next office visit.

This feature not only provides information that would be cost-prohibitive to gather otherwise, but it can also potentially work very well with such new industry trends as value-based insurance design, the medical home, or pay-for-performance programs. It's one of the strongest benefits of e-prescribing. It can also be highly useful for elderly populations, who are often on multiple prescriptions that are that much more difficult to manage.

What's Next?

It may be happening slowly, but the move toward e-prescribing appears to be on its way. Already the Centers for Medicare & Medicaid Services (CMS) has produced standards for health plans adopting e-prescribing. CMS has also implemented pilot projects to study the cost savings and outcome improvement possibly achieved by e-prescribing.

The list above addresses the most obvious potential savings areas that e-prescribing may help to realize. These savings are dependent on several other factors that contribute to the success (or failure) of the e-prescribing program, many of them related to physician behavior.

When implementing an e-prescribing program, the acceptance and participation of physicians will influence savings. Initial physician experiences

with the program are crucial. User-friendly interfaces combined with complete patient information have shown strong correlations to physician acceptance. Computer glitches, errors or difficulties in process are likely to discourage physician participation.

Targeted physician recruitment will also be important to realize potential savings. It is important to target not only physicians who write the most prescriptions but those who have low generic or formulary utilization. Targeting physicians who have the most potential for shifting members to lower cost alternatives will produce savings much faster than implementing physicians on a random or voluntary basis.

Physician investment in this technology is another consideration when projecting participation. E-prescribing vendors vary widely in their licensing charges but most charge a monthly fee. Physicians

may be initially reluctant to invest in this technology without tangible evidence of benefits to their practice such as time savings or improved outcomes. Physicians may not have to bear the cost of the entire licensing agreement under some arrangements. For example, a managed-care organization may subsidize the licensing fee if it believes its prescription cost savings will exceed the cost of the licenses. However, a physician's commitment to using e-prescribing is likely increased when they are responsible for the licensing fee.

Moving forward, widespread adoption of e-prescribing will likely be dependent on more detailed and accurate projections regarding the potential savings and improved outcomes of the early pioneers—information that actuaries are especially qualified to provide. ■

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