Medication Reconciliation Meets Patient Safety: Irreconcilable Differences?
Nancy Greengold, MD, MBA

We need to reduce costs and medical errors with better information technology. [Applause]
— George W. Bush, State of the Union speech, January 2007

One didn’t have to watch this year’s presidential address to know that this motherhood-and-apple-pie line probably drew enthusiastic applause from both sides of the aisle. Who doesn’t want to reduce costs and medical errors? Who doesn’t want better information technology? Who wouldn’t ardently support a nonbinding resolution to improve the quality of health care, casting political caution to the wind?

But while we wait for the popular rhetoric to translate into reality—for the dream of technological “interoperability” to come to fruition; for computers in one system to communicate with computers in another; for medical records from the outpatient setting to be quickly transferred to the inpatient environment, and vice versa; and for health plans, health care providers, and vendors to cross their own virtual aisle and have a big group hug—many in the health care community are vigorously pursuing new error-reduction initiatives. New policies are rapidly being implemented, whether or not all of the fine details, complexities, and practicalities of the actions have been considered.

The latest well-intentioned initiative, which just happens to be a Joint Commission National Patient Safety goal, is the Medication Reconciliation Project. Piggybacking on the quasi-spiritual Institute for Healthcare Improvement movement, the Joint Commission, in 2005, issued a new commandment that went into effect last year:

Thou shalt reconcile medications. [Applause]

In case the term medication reconciliation leaves you feeling bewildered, allow me to try to reconcile you to this jargon with the following definition:

Medication reconciliation is the process of comparing a patient’s medication orders to all of the medications that the patient has been taking. This reconciliation is done to avoid medication errors such as omissions, duplications, dosing errors, or drug interactions. It should be done at every transition of care in which new medications are ordered or existing orders are rewritten.¹

This makes perfect sense to me. What madman would oppose such a feel-good concept?

I see patients part-time in an urgent-care internal medicine practice setting, so I know first-hand the challenge of trying to “take care” of people whom I’ve never met before—when often no medical chart is available and frequently the best medication information patients offer me has to do with the color of the pills they pop and the certainty that the drug name begins with an “A” or a “D.” Having no knowledge of which medications a patient is taking or was prescribed can greatly hamper our ability to assess and treat, to pinpoint possible drug interactions and duplications, and to consider possible side effects.

To address this concern, and as a critical step toward making “medication reconciliation” meaningful, many groups advocate developing a simple template for the patient to fill out. In the absence of an electronic medical record (EMR), if patients would just carry around a “universal medication form”—like an insurance card or driver’s license—listing all of their drugs and doses (including over-the-counter and herbal products) and the name of each prescriber, as well as their history of allergies and reactions to drugs, we would be in a much better position to serve those patients. Right?

Many Cooks in the Kitchen

I hate to be a spoiler, especially amidst all the deafening applause, but I must ask: Just how reasonable is it to expect that most, or even many, patients (or their friends and family) will produce an updated and accurate medication form (much less schlep it around with them)?

The health care field is becoming increasingly fragmented (I mean, specialized), and it is now commonplace to interact with numerous “prescribers.” There is a doctor for the lung and a doctor for the kidney and a doctor for the chi, and probably even a doctor for navel lint.

There are outpatient “primary” doctors, many of whom no longer “do” hospitals and thus do not follow their patients into the acute-care setting. If you become really sick and require institutionalization, there are so-called hospitalists (practitioners you’ve probably never seen before) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home. And for those less emergent situations when you really need to be seen but the primary doctor can’t squeeze in another appointment or when the sun goes down, the weekend arrives, a vacation calls, or the Fourth of July Beckons, there are occasional-care docs (like yours truly) who meet and greet you at the hospital and manage the intimate details of your care until it’s time to go home.

So there are a lot of faces and scripts swirling about the modern patient. It hurts my feelings to consider how few people still remember my name, amidst the madding crowd of “providers,” even a month after I’ve seen them for postnasal drip or a throbbing hemorrhoid. And what do they recall about the medications

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that I might have prescribed?

Let’s assume that most patients could be taught to carry around paper or computer files containing their medications (maybe even inserted under the skin by a microchip); how many do you reckon would keep these lists up to date?

Consider how many of us—even those of us with compulsive tendencies—are current with balancing our checkbooks, cleaning the rain gutters on our roofs, changing the oil in our cars, cutting our hair and toenails, dusting, submitting our expense reports, reading our professional trade magazines.

Remaining up-to-date is a tough proposition, even for the most “anal” of us. Add to this the fact that people who take multiple drugs (the truly at-risk population for medication-related problems) often have more than one chronic ailment and might not be feeling well or thinking clearly all the time. Does it really make sense to try to make patients the central nervous system for communicating important medical or drug information?

**Short-Sighted Approach**

Don’t get me wrong. I am a patient-safety patriot to the core. I get misty at the mere thought of improving the doctor–patient relationship, making the health care system more transparent for the “customer,” and encouraging greater patient participation and shared decision-making (violins, please).

I also love the idea of forcing physicians to consider, with each patient encounter, which drugs patients are taking and whether they should still be taking each one of these. Moreover, as medications may be stopped or started during hospitalization, it is completely logical to have each new caregiver, or the same practitioner for that matter, assess whether the patient should continue to receive each medication, as well as the proper dose, route, strength, and frequency of each one, every time the patient is moved from one venue to another (e.g., from the intensive-care unit to the medical ward).

Finally, it is crucial to make sure that the medications that patients are instructed to take upon discharge from the hospital are the proper ones.

But if doctors write some of their initial orders based partly on less than reliable information from the outset, we may simply be reconciling garbage collected from admission with garbage transcribed on discharge, beautifully compliant with the latest regulations but woefully inadequate in achieving the true goal of improving patient safety. And if we simply rely on patients to take the discharge list to the outpatient “provider,” without making sure ourselves that the details of the hospitalization and medication discharge list are delivered to other practitioners, we may in fact be making a mockery of the concept of “continuity” of care.

Furthermore, by focusing on “processes of care” such as documentation, which are relatively easy to measure, we may be missing opportunities to improve patient safety, such as (1) educating patients about the reasons for prescribing each medication on a list and the possible side effects (good and bad) for each one and (2) understanding what drives patients to take or not take different drugs.

Both of these opportunities require time—something, alas, that is in short supply these days. Admittedly, both prospects have more qualitative than quantitative aspects to them, making them less desirable for measurement purposes and less titillating as commandments. Yet if we ignore the power of education and the power of listening, we might be doing our patients a royal disservice and might be merely fooling ourselves into believing that our surrogate measures of patient safety are meaningful.

If we subscribe to the concept that better “compliance” leads to better outcomes, we had better understand the factors that lead to compliance and noncompliance.

**Do Patients Follow Our Instructions?**

Few would dispute the fact that many patients do not fill their prescriptions and many do not take medications as prescribed. Indeed, I have always suspected that most patients, when asked about their current medications, remember the drugs they actually take, or at least what problem those drugs are intended to treat, but generally do not remember the drugs that they don’t take.

Pardon the tautology, but patients are people too. Oh sure, there are some folks who would take the kitchen sink if we prescribed it; even if they don’t recall the exact name of each drug, they clearly know how many times per day they swallow pills and which pills must go down an-hour-and-not-a-moment-sooner before eating; which ones go along with food; which ones cannot be taken with grapefruit juice; and which ones need to be taken while standing on one foot. And then there are those rare, treasured patients who know the names of all of their drugs and all the dosing information to boot.

Yet we need to recognize there are usually very good reasons why patients do not take certain drugs, and these usually have nothing to do with “dissing” us as practitioners. It would also behoove us to let go of the notion that we “put patients on medications.” Patients take medications only if they decide to do so. We can only be influencers in the process.

Some medications do carry nasty side effects, which doctors may shrug at or gloss over, but patients usually take notice of these and respond accordingly. Other medications, while without obvious adverse effects, do not seem to do anything discernible, such as blood pressure agents, so patients may be less inclined to pop them regularly.

Drugs that are directly associated with relieving a symptom, such as heartburn or itch, may be favored, and drugs that produce a pleasant sensation are often the first ones patients remember when asked about medication lists. I have noticed that most patients have no trouble remembering Ativan (lorazepam) and understanding what it does, followed closely by Vicodin (hydrocodone/acetaminophen) and Viagra (sildenafil). I didn’t train in the era of Ambien (zolpidem) and Lunesta (eszopiclone), so don’t ask me to explain their mechanisms of action; however, I know a good nap when I see one—and I have observed that most patients, spying the noisy nursing station on admission to the hospital, are diligent about recalling these brands when medication-list inquiries are made.

So, to try to improve compliance with respect to all necessary medications, can we do a better job of explaining such unsexy topics as afterload reduction, anticoagulation, and asthma-attack prevention to patients who may already be overwhelmed with symptoms and not understand why they are taking an agent that may actually make them feel worse?

Isn’t the burden on us to do so?
Might this not have more to do with improving patient safety than just making sure that our lists on admission are “reconciled” with our lists on transfer of care to other settings?

The Changing Formulary Winds

I’ve spent a lot of time addressing the accuracy of the initial medication list in the context of what patients (or their family or friends) remember. I certainly cannot argue about the importance of ensuring that medication orders, written anew for each setting of the hospital, are scrupulously checked to verify that a medication has not been lost to follow-up. But I want to make one final point regarding reconciliation of the patient’s discharge list of medications with the in-hospital list.

As P&T committee members, we know that hardly a committee meeting goes by that we are not asked to approve the automatic substitution of one or many drugs for our formulary. A patient who was taking Lipitor (atorvastatin) in the “free world” is now given Pravachol (pravastatin) in the hospital because our group purchasing organization or other buying entity now gives us the best price on the latter drug. Of course, the patient’s health plan or pharmacy benefits manager may get better rebates from the manufacturer of atorvastatin (to stick with our example). Thus, patients who might be coming to the hospital for a three-day stay and who are forbidden from bringing their own stash of medications used at home must be switched from the home drug to the hospital-sanctioned drug; the discharging clinician needs to remember to change the drug back or—in the case of new medications begun in the hospital—to choose the proper, covered item on the health plan formulary. In effect, then, we are reconciling not only medication changes, made from admission to discharge, but also formularies.

So what began as such a Disney moment (the launching of the medication reconciliation project) turns out to be an experience that can be confusing, complex, and time-consuming—for the hapless clinician and the hospital.

Case Study

Of course, let’s not forget about the hapless patient. Maybe it will help if we move from mere discourse to a bit of visual imagery:

... It’s midnight, and 80-year-old, 200-pound Edith Edematous wakes up gasping with an exacerbation of congestive heart failure. She is barely able to dial 9-1-1, which brings flashing sirens and a group of paramedics, who rapidly ferry her to the local emergency room in her pajamas.

Leaning forward on her gurney, using all her accessory neck muscles, with the desperate goal of trying to pull air into her lungs, she finds herself surrounded by members of the health care team, all of whom have goals of their own. The intake nurse is pepper ing her with questions about what drugs she is taking (or not, as the case may be), even as the administrative clerk jerges for her Medicare card, while the admitting resident tries to ascertain whether she has signed a Do Not Resuscitate order.

Intake nurse: “Eoney, we’ll get you a bed, but first you need to tell us what medications you’re on. ... OK, Edith, we know you’re on a water pill, but what else and how much and when? Something else for the heart, perhaps? What about your lipids, Edith? You look as if your lipids could be out of whack. No, I didn’t say ‘back,’ although I’m sure yours hurts. I said . . . oh, forget it. I’m yelling as loud as I can . . .”

Do you think we should stop and ask instead: What are we doing? What are we collecting? What are we reconciling? What is this all about?

Yet it seems I’m a little tardy with my questions and castigations—lo, the regulations have already gone into effect! And regulations definitely drive behavior. Between sending out notices about the latest physician emeritus to shuffle off this mortal coil, medical directors and chiefs of staff are trumpeting word that we all need our shoes polished and our hair combed start! Hurry, hurry ... the Joint Commission (JCAHO) inspectors are coming, the inspectors are coming, and we’re not in compliance with this important quality/safety measure. And if we’re not in compliance, we fail, and you know what that means . . .

In response, front-line physicians who formerly couldn’t type are suddenly dispatching e-mails like nobody’s business—and you can actually read their notes. Maybe the pharmacists should be responsible for the reconciliation, some propose, creating a discharge list from a combination of the admitting list and the medication administration record (MAR). Maybe clinicians should use a single form that shows a column for admitting medications (collected by the nurse), followed by a column for verifications and corrections (provided by the physician), followed by a column for changes made during hospitalization, followed by the final discharge drugs that the physician wants the patient to take.

A few audacious souls have suggested in writing that it might be wiser not to list the discharge medications in the discharge summary at all. Instead, they recommend stating “Discharge medications reviewed with patient,” because they say that the current regulation requires only that a list be given to the patient if the discharge medications are listed or dictated for the chart.

How’s that for gaming the game?

Conclusion

Sadly, this should not be a game, and it certainly was never intended to be. But even good intentions can go before a fall, and it would be a shame to see patients and clinicians suffer further because the “whole patient” and “whole system” perspectives are not being considered. We must get beyond the treatment of an isolated eyeball, the treatment of an elevated white blood cell count in a tube of blood absent assessment of the patient, or the treatment of a health care industry that has systemic idiosyncrasies and challenges that need to be considered in their totality.

It would be nice if information technology could help us communicate better one day, but technology alone is not likely to solve all of our problems. We must fully comprehend our current systems in order to appreciate the potential impact of new policies. We must try to understand our patients, perhaps by first understanding ourselves (and ultimately human behavior); then our well-intentioned solutions may stand a chance of working.

Reference