Conservative Prescribing—An Approach to Reduce Medication Errors

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Up to 10 percent of physician liability claims revolve around medication errors relating to indications, dosing, contraindications, drug-drug interactions, and the failure to monitor significant adverse effects. The percentage of hospital liability claims related to medication errors is much higher. More than 60 percent of people 65 years or younger receive a prescription medication each year.

For many of us, it is difficult to imagine a patient encounter that does not end with a prescription. Gordon D. Schiff, MD, et al, wrote a 2011 article in the Archives of Internal Medicine titled “Principles of Conservative Prescribing.”1 The article outlined some of the following principles for safe, evidence-based prescribing:

1. Seek non-drug alternatives first—Consider weight loss as a first line for mild hypertension or hyperlipidemia, and an exercise program for low back pain rather than nonsteroidal anti-inflammatory drugs.

2. Consider a treatable cause for a problem rather than just treating with a drug—Does the patient with a cholesterol of 230 have mild hypothyroidism? Does the repetitive motion patient need work redesign as a first option? Does the new hypertensive patient seem like a heavy drinker? Cutting back or stopping alcohol may be the true first treatment step.

3. Look for opportunities for prevention rather than drug treatment—in seeing a patient with prediabetes, Metformin might prevent the development of higher sugars, but lifestyle interventions may, in the long-run, be more effective.
4. Use only a few drugs and learn to use them well—In learning the details of a limited number of drugs, you can become the master of side effects, dosing, etc. How many of the 30 odd NSAIDs do any of us really need to know?

5. Avoid frequent switching—You need to have good reason to switch drugs. Are you treating bronchitis with one antibiotic and it’s not working? Maybe switching is not the way to go. Perhaps you should consider more workup.

6. Start treatment with only one drug at a time when possible—When you add a BP drug, a pain medication and a UTI treatment at the same time you won’t know what to stop when a rash occurs.

7. Suspect adverse drug effects—When you see a new fibromyalgia patient consider a statin myopathy. This implies you need to be very familiar with side effects of the drugs you see and prescribe.

8. Educate about potential side effects before giving a drug—Informed consent is not just for surgeons. Every new drug we give should be accompanied by a description of potential side effects so they might be recognized early.

9. Beware of withdrawal symptoms—We are all familiar with alcohol withdrawal. How about rebound headaches when you stop NSAIDs? If you suddenly stop SSRIs, symptoms can markedly worsen and it may really be drug withdrawal.

10. Do not rush to use newly marketed drugs—Often new drugs seem safer or more effective but their true safety profile is not known. The authors suggest a seven-year wait on new drugs.

11. Be vigilant about indication creep—Which patients should be given a tryptan for a headache? When should these drugs be started? Gabapentin is indicated for post herpetic neuralgia. Is it really a good medicine for migraines?

12. Avoid additional drugs for a problem when the real issue is nonadherence—If someone has hard-to-control two or three drug hypertension this should be the first thing that comes to mind.

13. Look for opportunities to improve prescribing systems—A well-designed computerized prescribing system avoids simple mistakes and improves drug treatment.

Although none of these principles are new, they do reinforce a conservative, “fewer is better” approach to prescribing, which will improve patient safety and decrease medication errors. In addition, COPIC recommends the following:

- **Readbacks**—Mandatory readbacks, initiated by either the sender or the receiver of the order, can reduce communication errors. They need to be done consistently and without fail.
- **Look alike/sound alike medications**—As there continues to be more brand names that look alike or sound alike, there is added potential for a medication error. When delegating to staff to do e-prescribing or renewals, that risk is also large when the person(s) transmitting the prescription might not even be aware that there are new or similar sounding medications. Simple risk management solutions for the prescriber are to consider using generic terms that are less ambiguous or consider listing the indications for the medication.
- **Doses/decimals**—While much work has been done on avoiding trailing zeros after a decimal point and using leading zeros before a decimal point when indicated, mistakes still occur, particularly in pediatrics. E-prescribing lists which are often listed from highest dose to lowest dose can inadvertently cause an incorrect click to result in an overdose by a factor of 10 in a pediatric patient.
- **Using one pharmacy**—Another entity might be able to recognize an allergy or interaction. In addition, having one pharmacy (or its electronic equivalent) can allow the availability of all information necessary to avoid allergies and interactions.
- **Putting allergy information in one place and describing what the reaction was**—Describing the actual reaction can help subsequent prescribers determine whether this was a common side effect or reaction, or was a dangerous allergic reaction that could cross over within and between classes of medications.
- **Standardized solutions with distinct labeling**—Avoid multiple dosage vials in which dose calculations must be repetitively made in a customized fashion; sequester high-risk/narrow therapeutic range medications away from high traffic use areas.
- **Educating patients and involving them in their own care**—Emphasize the importance of monitoring in those
medications for which it is indicated.

1 Archives of Internal Medicine (2011:171(16):1433-1440

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