When we think about wrong drug errors, we might envision a nurse or pharmacist who selected the wrong drug from its storage location because it looked like another drug, or a pharmacist or prescriber who selected the wrong drug from a computer screen because its name looked similar to the intended drug. Yet, wrong drug errors often arise when medications are prescribed inappropriately or are overused, sometimes leading to significant harm. These errors suggest that an important facet of medication safety is making sure the right drug is prescribed only when indicated.

In the September 2011 issue of the Archives of Internal Medicine, Schiff and colleagues offered a set of principles to guide more conservative prescribing of medications intended to help ensure that patients receive the right drug only when indicated. These principles represent a paradigm shift to help counterbalance the pressure physicians often feel as a result of the pharmaceutical industry touting its “latest and greatest” drugs and patients’ uninformed requests for what they see or hear advertised. Indeed, it is nearly impossible for patients to imagine leaving a doctor’s office without a prescription, and physicians may feel they need to use the latest drugs when treating their patients. To instill more thoughtful prescribing attitudes and behaviors, the authors identified the following principles for safer, evidence-based prescribing.

Think Beyond Drugs

Prescribers are encouraged to consider non-drug therapy for conditions that respond well to other modalities, such as exercise, physical therapy, diet changes, and smoking cessation. Literature supports initial non-drug therapy for numerous conditions, such as hypertension, diabetes, insomnia, back pain, arthritis, and headaches. The authors suggest a focus on disease prevention and consideration of underlying causes of conditions before prescribing a medication. For example, while metformin can delay or prevent type-2 diabetes, lifestyle changes are often more effective. Prescribers should think beyond drugs and use restraint when dealing with undiagnosed symptoms and potentially self-limiting conditions.

Practice More Strategic Prescribing

Citing studies that affirm higher-quality prescribing, Schiff et al. advise prescribers to use a limited personal formulary of drugs with which they are familiar so they can master dosing, become familiar with adverse effects and interactions, and even know what the tablets look like, placing them in a better position to prevent errors and anticipate problems. Deferring non-urgent treatment to allow self-limiting conditions to resolve on their own, starting treatment with only one new drug at a time so the patient’s response can be identified, and not switching to a new drug without compelling evidence-based reasons are also essential to conservative prescribing. Prescribers need not only a good reason to prescribe a medication, but also a good reason to change therapy.

The authors also warn that, although it may seem to go against patient-centered care, “individualized” drug therapy is often the mantra of prescribers who engage in ad hoc “trial and error” medicine. Individualization is desirable when used to address specific concerns, such as making dose adjustments for renal-impaired patients, or in response to the patient’s reaction to the medication, but not when it is used for unscientific experimentation.

Maintain Heightened Vigilance Regarding Adverse Effects

Schiff and colleagues advocate a construct called “forecaring”—the practice of anticipating potential adverse drug effects, including withdrawal symptoms, even when cause–effect relationships are not fully evidence-based. Prescribers should be experts on the adverse reactions associated with the drugs they prescribe and should monitor patients for both common and rare but important reactions. For example, is the patient’s worsening heart failure caused by a medication? Is what appears to be symptom relapse really a withdrawal symptom after stopping a medication? Maintaining a high index of suspicion that a new symptom might be drug-related has also led to identifying previously unknown reactions. Prescribers should also educate patients about side effects; the authors note that concerns regarding enhanced susceptibility to side effects among patients after education have been exaggerated and are outweighed by the benefits of an informed patient.

Exercise Caution and Skepticism Regarding New Drugs

Schiff and colleagues recommend avoiding the rush to use newly marketed drugs, including new designer drugs with sophisticated molecular structures. The authors warn prescribers not to succumb to theoretical promises alone but to await evidence of actual beneficial clinical outcomes. For example, while torcetrapib was initially shown to increase high-density lipoprotein levels, two subsequent clinical trials showed that the drug did not slow atherosclerosis and actually increased mortality, forcing abandonment of the drug.

The authors also raise an important distinction between improving patient-centered outcomes and treating surrogate disease markers. Studies may show improvement in disease markers based on laboratory and radiological evidence, for example, but these improvements may not result in meaningful outcomes related to quality of life and mortality. An example offered by Schiff and colleagues is the ACCORD (Action to Control Cardiovascular Risk in Diabetes) trial, which led to more intensive lowering of hemoglobin A1c levels but worsened the outcomes for patients with type-2 diabetes. Information used to inform prescribing decisions must be complete and unbiased.

Prescribers should not be overly con-
fident about prescribing a new medication even if good outcomes have been reported with clinical trials. Selective drug trial reporting, in which only the positive results are promoted and published, is commonplace. Furthermore, not enough time has elapsed or too few patients were enrolled in the trial to accurately predict long-term safety; the authors cite studies that suggest it takes five to 10 years to identify significant adverse effects.

Also, patients in a drug trial are not necessarily like a typical patient treated with the drug who has multiple medical problems, does not reliably comply with drug therapy, has pre-existing renal, liver, or cardiovascular disease, and is taking other medications. Prescribers need to understand the specific niche for each drug; a presumption that all patients are similar to those who participated in the drug trial is not evidence-based prescribing. Stretching the indications of a drug (gabapentin works for post-herpetic neuralgia; thus, it is worth trying for migraines) also cannot be considered evidence-based prescribing.

Health care providers are under great pressure from patients to prescribe advertised drugs. They don’t want to antagonize patients, and they often lack the time to fully discuss the benefits and risks of the requested drug. But Schiff and colleagues discourage prescribers from automatically agreeing to drug requests and ask them to consider the effects of writing a prescription for a questionable drug. On the other hand, while some patients seem to demand the latest drugs, others are reluctant to take medications for various reasons, some valid.

The authors ask prescribers to understand the basis for patients’ skepticism, engage in honest dialogue about the benefits and risks of medications, and be cautious about prescribing. When a conservative approach to drug therapy is taken, patients will more readily accept treatment with essential medications. Prescribers also need to consider patient nonadherence, the extent of which is often underestimated, before increasing doses or adding new drugs to a regimen when patients’ conditions do not improve. Attention must also be paid to avoid prescribing a drug that has previously failed or caused an adverse reaction, and to discontinue medications when they are ineffective or no longer needed.

Consider Long-Term, Broader Effects

The final principle proposed by Schiff and colleagues involves thinking beyond the short-term benefits of medications and considering the long-term benefits and risks. Unfortunately, we often learn about serious adverse effects several years after a new drug enters the market. The authors give numerous examples, including antipsychotic medications that are allegedly safer than older products such as haloperidol but are causing serious weight gain and increased risks for diabetes with long-term use. Medications must be prescribed conservatively given the risk of as-yet-unknown adverse effects. The authors further note, “Implementing well-designed computerized prescriber order entry or improved patient or laboratory monitoring has been shown to improve drug treatment, often more than the marginal impact of many new ‘breakthrough’ drugs.”

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Conclusion

Schiff and colleagues aptly note that, individually, each principle described above is neither novel nor controversial. But taken together, they represent “a shift from ‘newer and more is better’ to ‘fewer and more time-tested is best.’ ” No prescriber wants to experience the anguish of realizing that a drug he or she prescribed has harmed a patient. As confirmed in every one of ISMP’s QuarterWatch™ reports (www.ismp.org/quarterwatch), the constant deluge of unexpected adverse drug effects makes it clear that we need to take a more conservative approach to prescribing medications.

Like Schiff and his co-authors, ISMP encourages leaders at academic programs, medical professional organizations, and hospitals to share and discuss these guiding principles with prescribers. Such dialogue and curriculum content are needed to influence prescribing habits—ideally, early in the prescribers’ careers when habits are formed. In hospitals, the P&T committee is a great starting point for discussions and action planning.

REFERENCE