PROBLEM: Many medication errors are hard to detect, but some that occur during the prescribing phase can be especially elusive and can lead to controversy as to whether they are truly errors or acceptable differences in professional judgement. For example, when a nurse fails to administer a drug as prescribed or a pharmacist fails to dispense a prescription, those medical errors are clearly viewed as pharmacy or nursing omission errors.

Other omission errors, however, are less obvious. The question of who is at fault can be debatable, particularly if the prescriber fails to order medications for which there are evidence-based studies documenting a significant reduction in morbidity or mortality. Nevertheless, in the March, 2001 Institute of Medicine report, *Crossing the Quality Chasm: A New Health System for the 21st Century*, the “chasm” clearly refers to the health industry’s ineffective application of an ever-expanding base of scientific, technical, and medical knowledge.

In a recent study in Utah, 22% of Medicare patients with congestive heart failure were not prescribed an ACE-inhibitor upon discharge from the hospital, with an estimated impact of one unnecessary death every 10 days. Other gaps in performance included a 34% omission rate for beta blockers and a 10% omission rate for aspirin prescribed upon discharge to patients with myocardial infarction. Even more astonishing, 44% of patients with atrial fibrillation were not discharged on warfarin, which could translate into one unnecessary stroke every two weeks.

Another recent study, cited in the *Journal of the American Medical Association* (JAMA), showed that widespread warnings about medications proved ineffective in changing prescribing practices. In the U.S. and Italy, improper cisapride (Propulsid, Janssen) prescriptions did not decline in the year following an extensive 1998 warning to restrict its use in cardiac and pulmonary patients and to avoid potentially dangerous combinations with other drugs. Likewise, improperly monitoring the effects of drugs, such as troglitazone (Rezulin, Parke-Davis), has resulted in voluntary withdrawal from the market of otherwise valuable medications.

SAFE PRACTICE RECOMMENDATIONS: Pharmacists can play a pivotal role in the application of evidence-based knowledge by actively reviewing applicable research, disseminating the information to the medical staff, and establishing clinical monitoring functions for selected outcomes. For example, recent research shows that prescribing aspirin to diabetic patients will dramatically decrease cardiovascular incidents. Daily pharmacists’ interactions with prescribers should be face-to-face in order to assist in the selection of appropriate drug therapies, including those prescribed at discharge.

Pharmacists should document interventions and share aggregate results with prescribers to generate ideas for improvement (e.g., establish prescribing/dosing guidelines, drug protocols, and preprinted orders). As new evidence dictates, algorithms or protocols should be established to guide prescribing during hospitalization and upon discharge.

Pharmacists also need to focus on applying evidence-based approaches to treating chronic conditions, not just presenting conditions. In the U.S., a limited number of chronic conditions (e.g., diabetes, asthma, and hypertension) account for the majority of illness, disability, and death. Chronic drug therapy monitoring could require direct interaction with primary-care physicians who might not be following the patients in the hospital.

Finally, computerized prescriber order entry (CPOE) can be a powerful vehicle to drive the application of evidence-based knowledge. But physicians and pharmacists must ensure that the CPOE systems incorporate the necessary rules to assist with evidence-based prescribing—there needs to be an automatic query about warfarin in patients with atrial fibrillation, for example.

References