PHC4 fyi

Issue No. 25 • May 2004

Prescription Drug Safety

Errors Are Costly

Patient safety and medication errors have become prominent issues on the national health care agenda. It is estimated that each year approximately 7,000 people die in and out of hospitals due to medication errors – about 16 percent more deaths than the number attributable to work-related injuries, according to the National Patient Safety Foundation. Estimated hospital costs of medication errors are around $2 billion annually, not including malpractice costs or costs of injuries to patients (Lassetter & Warnick, 2003).

Beyond the financial costs associated with medication errors are the consequences often endured by the patient. Medication errors represent real losses to employers and employees – in time, money and quality of life. Medication errors can occur in the process of naming, prescribing, transcribing, dispensing, and administering of medications. Patients themselves can also cause errors by failing to comply with instructions.

According to the Food and Drug Administration (FDA), which regulates prescription and over-the-counter drugs, pharmacists filled 3.1 billion prescriptions in 2003 – 60 percent more than 10 years ago. A study in the *Journal of the American Pharmaceutical Association* revealed that a typical pharmacy filling 250 prescriptions a day makes an average of four mistakes, which amounts to an estimated 51.5 million errors annually (Flynn, Barker, & Carnahan, 2003). Of the more than 3 billion prescriptions written each year, as many as 30 percent have to be rechecked through calls to doctors' offices for handwriting or other clarifications (Freudenheim, 2001). It is estimated that more than half of patients do not comply with prescription instructions and almost 20 percent of prescriptions are never filled (Institute for Safe Medication Practices, 2000).

Is More Technology the Answer?

The health care industry has been slow to adopt some tools that hold promise for reduced medication errors, lowered costs, and higher quality care. Prescription writing, a key source of prescription errors, is still done primarily by hand. Only 5-10 percent of physicians in the U.S. currently use electronic prescribing tools (Institute for Safe Medication Practices).

One patient safety strategy promoted in recent years is computerized physician order entry (CPOE). CPOE allows physicians to enter orders directly into a computer rather than hand writing them. CPOE could help resolve several problematic issues such as illegible handwriting, formulary management, and medication interaction warnings. According to The Leapfrog Group, CPOE potentially could avoid 552,000 serious medication errors annually. However, only 5 percent of American hospitals use CPOE. Cost estimates of CPOE systems vary, depending on the size of the institution, but range in the millions. The road to establishing CPOE in most hospital systems may be long and require significant financial investments (Kuperman & Gibson, 2003).

Another technological advance making its way into the health care system is the personal digital assistant or PDA. This is a handheld device with the ability to store a great amount of information. Some PDAs can be used for writing prescriptions or accessing drug information databases. PDAs offer features that a printed document could not – the ability to check for drug information and stored patient information at the touch of a button. PDA sales are growing exponentially, and the amount of information available is becoming more and more sophisticated.

Over please

The FDA has made several attempts to encourage medication safety. In February of 2004, the FDA advised pharmaceutical manufacturers to present advertisement warnings in laymen's terms, use bigger type, and list the most common or deadly risks first (Neergaard, 2004). In addition, the FDA now requires bar codes on prescription drugs and blood products. The new regulation requires drug makers to put bar codes on products, but does not require hospitals to use the technology to read the bar codes. The FDA estimates that hospitals could save $4 to $7 billion in record-keeping and reporting expenses if all hospitals used the bar codes. The bar codes are estimated to prevent 500,000 drug and blood transfusion errors and save $92 billion over the next twenty years.

How does this work? Patients wear ID bracelets with bar codes that track the doses the patient has received and to assure that the correct medications are going to the right patients. The change in medication administration takes place at the patient's bedside, where most (40 percent) medication errors occur (Goldfarb, 2004). The bar-code rule was intended to support and encourage widespread adoption of "advanced information systems" that, in some hospitals, have reduced medication error rates by as much as 85 percent (HHS, 2004). Hospitals have been reluctant to spend the money needed to set up computerized facility-wide scanning systems; each scanner costs about $2,000 (Goldfarb, 2004). Only 2-3 percent of U.S. hospitals utilize this approach.

A Simple, Low-Cost Suggestion

Physicians and health systems will likely face challenges integrating hardware and software that fills all their needs. In addition, the financial investments necessary to implement these initiatives are often a significant barrier. Along with these initiatives, there are other less technical solutions to bring about real improvements in prescription safety.

A simple, cost-effective and immediate solution to some prescription errors is to encourage legibility of handwritten prescriptions. In addition, encouraging pharmacists to confirm all illegible prescriptions with prescribing physicians would help eliminate discrepancies in handwriting interpretation. On July 1, 2003 a new law went into effect in Florida requiring physicians to: write prescriptions legibly printed or typed; include the date with the month written out in textual letters; include the name of the prescribing practitioner, the name and strength of the drug, the quantity of the drug both in text and numerical formats, and directions for use of the drug; and, to sign the prescription on the day it was issued. The only other state with a legibility law is Washington, which passed in 2000. Critics claim the Washington law has had little effect on bad handwriting due to enforcement and tracking problems.

Purchasers Can Help Promote Safer Prescription Drug Usage

Safety is a primary cornerstone to effective health care. Consumers of health care should have safe, high quality care no matter how resources are aligned and what goals are set. Prescription drug safety is an important aspect of overall patient safety and purchasers can help advance safer prescription drug usage. Purchasers can:

- Ask health plans and pharmacy benefit managers to provide information to employers and enrollees about their prescription safety programs and patient safety education.
- Work with health care providers to determine incentives that help eliminate the possibility of errors. Work together to establish better handwriting requirements.
- Encourage employees to be educated decision-makers in their health care. Suggest employees keep a list of all their medications, supplements, allergies, and previous adverse drug reactions.
- Reward safe practices, while developing a workplace culture that emphasizes reductions in prescription errors, including strategies and practices to encourage those working on patient safety initiatives to turn ideas into actions.
- Stress the importance of a safe health care environment and support efforts to set standards for patient safety, to measure and report results, and to use these standards in their purchasing decisions.

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