Medication Errors and Their Consequences

In an era where payers are increasingly focused on obtaining value for pharmaceutical expenditures, pharmaceutical companies should be cognizant of steps they can take to reduce the likelihood of medication errors.

Mistakes in the use of a medication are one of the most common and best defined types of medical error.

This type of error can occur everywhere from hospitals to a patient's home, and almost in any situation—including basic administrative errors such as patients being given the wrong medication or wrong dosage.

Consequences can include severe adverse reactions and interactions with other medications; they could even result in the patient's death.

What is a medication error?

According to The National Coordinating Council for Medication Error Reporting and Prevention, a medication error is "any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the health care professional, patient, or consumer related to professional practice, health care products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use." Many things, it seems.

Which errors are most common?

According to the Food and Drug Administration, some specific situations can be classified as potential error opportunities. Errors may happen during the process of prescribing or using medication. For example, administration of an improper dose is the most common medication error, and it accounts for 41% of medication error fatalities. Other errors are the result of unintended or accidental exposure to a medication. Finally, intentional misuse of medication is an increasingly common form of medication error. Notably, prescription drugs are the second most commonly abused category of drugs, after marijuana and before cocaine, heroin, methamphetamine and other illicit drugs.

Consequences

A 2006 study by the Institute of Medicine (IOM) estimated that preventable adverse drug reactions (i.e., medication errors) happen at least 1.5 million times per year in the United States, a figure acknowledged as likely to be understated. One study found that errors occurring in an inpatient setting result in over $8,000 of increased hospital costs per incident. The IOM noted another study that examined medication errors in the over-65 Medicare population, finding that these errors cost nearly $900 million per year to treat. Again, this figure is also likely understated.

A recent Institute of Medicine report, *Preventing Medication Errors*, promulgated an agenda for reducing medication errors. It recommends that hospital and ambulatory care settings assess the safety of medication use through active monitoring, and use these data to guide the development of prevention strategies.

The FDA has also reacted to this issue, proposing the Safe Use Initiative, with the intention of improving how the healthcare system manages medication risks in the United States and the economic burden they pose. The initiative seeks to identify specific and preventable problems with how medications are used, with collaboration from players throughout the medical system.

It is important to remember that medication errors are just that – errors: they are not merely unintended but inevitable poor outcomes of pharmacotherapy. In an era where payers are increasingly focused on obtaining value for pharmaceutical expenditures, pharmaceutical companies should be cognizant of steps they can take to reduce the likelihood of medication errors. These steps can include everything from careful name selection, product labeling, and education of patients and physicians as to the proper use of each pharmaceutical product.

This monthly newsletter is written by Jill Van Den Bos to provide information on timely topics pertaining to the pharmaceutical market. Van Den Bos, who is part of Milliman's Denver Health practice, specializes in bringing an actuarial perspective to the field of pharmacoeconomics. Her interests and expertise include budget impact modeling, benefit design, and collaborative research with other disciplines.

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