Similar Drug Names a Growing Cause of Errors

U.S. Pharmacopeia seeks to add 'indication for use' on prescriptions, citing over 3,000 similar drug pairs.

BY BRUCE K. DIXON
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The soaring numbers of commonly used drugs with soundalike and look-alike names have prompted U.S. Pharmacopeia to ask physicians and pharmacists to include an "indication for use" on prescriptions.

This and other recommendations are contained in U.S. Pharmacopeia's 8th annual MEDMARX report, which is based on a review of more than 26,000 records submitted to the MEDMARX database from 2003 to 2006.

The records implicate nearly 1,500 drugs in medication errors because of brand or generic names that could be confused. From these data, U.S. Pharmacopeia (USP) compiled a list of more than 3,000 drug pairs that look or sound alike, a figure that is nearly double the number of pairs identified in USP's 2004 report, said Diane Cousins, R.Ph.

"We were surprised to see that much of an increase in such a short time, and the concern is that this increase in products in the marketplace further raises the opportunity for error," said Ms. Cousins, USP's vice president of health care quality and information.

USP also operates, in conjunction with the Institute for Safe Medication Practices, the Medication Errors Reporting Program (MER), which allows health care professionals to confidentially report potential and actual medication errors directly to USP.

USP reviewed both MEDMARX and MER to summarize the variables associated with more than 26,000 look-alike and/or soundalike (LASA) errors, of which 1.4% (384) resulted in harm or death. More than 670 health care facilities contributed 26,000 records, according to the 400-page report.

"We looked at lists of the top 200 drugs prescribed and used in hospitals, and virtually every time, all of the top 10 appeared within the USP similar names list," Ms. Cousins said in an interview.

An important finding of this year's report is the role of pharmacy staff in LASA-related errors, she said. "Although pharmacy personnel, who are generally technicians, made the majority of errors, pharmacists as a group identified, prevented, and reported more than any other staff."

The report also identifies an emerging trend of look-alike drug names in computerized direct order entry systems as a source of confusion. "This trend will likely continue as these systems become a standard of practice," she said, adding that the LASA-related error problem is further compounded by the indiscriminate use of suffixes, as well as look-alike packaging and labeling.

Over the 3-year period, the drug most commonly confused with others was Cefazolin, a first-generation cephalosporin antibiotic. "We found it to be confused with 15 other drugs, primarily antimicrobials, which might be explained by the fact that this is the most frequently used class of medications," said Ms. Cousins.

Among other major paired LASAs were cardiovascular medications, such as lisinopril and enalapril, and central nervous system agents, such as trazodone and chlorpromazine.

Drug mix-ups led to seven reported fatalities, including two deaths attributed to confusion over the Alzheimer's drug Reminyl (galantamine) and the antidiabetes drug Amaryl (glimepiride).

In 2005, recognizing the high risk of confusion and subsequent fatal hypoglycemia, Ortho-McNeil Neurologics Inc. announced that the name Reminyl had been changed to Razadyne to avoid confusion with Amaryl.

In another case, an autistic pediatric patient was given the wrong product when disodium EDTA (a hypercalcemia treatment) was administered instead of the chelation therapy calcium disodium EDTA, which is approved by the Food and Drug Administration for the treatment of lead poisoning and was prescribed in an attempt to help treat the patient's autism.

In another case, an emergency department physician was preparing to intubate a patient and calculated the dose for rocuronium (Zemuron), a preintubation agent used to assist with the procedure. The physician gave orders for the nurse to obtain the medication and indicated the volume to administer to the patient. The nurse obtained and administered the neuromuscular blocking agent vecuronium (Norcuron) instead, which led to a fatal heart arrhythmia.

The remaining three reported deaths involved mix-ups between the anticonvulsant primidone and prednisone; the antiepileptic drug phenytoin sodium and the barbiturate phenobarbital; and Norcuron and the heart failure treatment Natrecor (nesiritide recombinant).

Errors occur with over-the-counter medications, too. Ms. Cousins described the aural confusion when an order for Ferro-Sequel 500 mg—an iron replacement—was transcribed as Serrosequel 500 mg and the order was misread as Seroquel 500 mg—an antipsychotic.

The rate of mix-ups involving brand name versus generic drugs was about evenly split, 57% and 43%, respectively, Ms. Cousins said, adding that while most errors were made in pharmacies, many, such as the primidone–prednisone incident, are due to confusion over the prescribing physician's handwriting, which lead the pharmacist to issue the wrong drug.

"Errors also are due to physicians using short codes for medications, such as 'clon,' for clonazepam or clonapine," she said, adding that electronically written prescriptions using a computer or label machine would eliminate many errors. "Anything that takes handwriting out of the equation is a help."

It would also be helpful if the FDA were given more authority to force name changes during the drug review process, as has been suggested by the Institute of Medicine. It's much more difficult to correct a name confusion issue once the products are on the market.

The drug with the most mix-ups, cefazolin, was confused with 15 other drugs, primarily antimicrobials.

MS. COUSINS

The recommendation that physicians include indications for use in prescriptions is not an attempt by USP to impose on privacy, she emphasized: "All that is needed are simple inclusions, such as 'for sinus,' 'for heart,' or, 'for cough.' "

USP also recommends that "tall man lettering" be implemented in pharmacy software, labeling, and order writing to say, for example, "acetaZOLamide" (glaucoma) and "acetoHEXamide" (diabetes).

Where risk exists, take action to reduce the chance for error. USP recommends the following:

- ► Consider the potential for mix-ups before adding a drug to your formulary.
- ► Physically separate or differentiate products with similar names while they are being stored on the shelf.
- ► Disseminate information about products that have been confused at your facility, to build awareness among staff.
- ► Prohibit verbal orders for soundalikes that have been mixed up at your facility.

"Physicians' offices should always require a read-back from pharmacists, making sure that they both say and spell the drug name, especially for these often confusing drug pairs," Ms. Cousins said. ■

Congress Eyes Medicare Advantage Pay for Fee Fix—Again

BY ALICIA AULT
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WASHINGTON — With Congress scrambling to come up with the money to avert a physician fee cut scheduled for July, it appears once again that Medicare Advantage is being eyed as funding source by Democrats but as sacrosanct by Republicans.

It also may portend a repeat of last year's battle, one that ended with President Bush refusing to sign a legislative package that restored physician reimbursement but slashed Medicare Advantage payments.

The debate was front and center at a March hearing of the House Ways and Means Committee's Subcommittee on Health where recommendations from the Medicare Payment Advisory Commission's (MedPAC) spring report to Congress were discussed, including the recommendation that Congress increase physician fees by 1.5% in 2008 and 2009.

MedPAC said in its report that it supported Medicare Advantage (MA) plans—which let beneficiaries receive coverage from private plans such as HMOs and PPOs, and from private fee-for-service insurers. The commission also made the case that, for the third year in a row, the MA plans are overpaid relative to traditional fee-for-service (FFS) Medicare.

MedPAC Chairman Glenn Hackbarth told the subcommittee that the commission estimates that Medicare has paid the plans $10 billion more than it would have under traditional FFS for each of the last 3 years. Overall, MA plans on average will be paid 13% more than conventional Medicare providers in 2008, a 1% uptick from 2007.

The profit potential in those plans has stimulated a rush into the market and huge enrollment growth—a 101% increase from 2006 to 2007, according to MedPAC. Coordinated care plans, such as HMOs and PPOs, saw only an 8% increase in enrollment during that period, although those plans still account for the largest number of beneficiaries enrolled in an MA. Currently, about 20% of Medicare enrollees are in an MA plan.

Because MA plans are increasingly attractive to beneficiaries—they often offer additional benefits—MedPAC is concerned about the growth of the high-cost private FFS plans, Mr. Hackbarth said.

The plans are being rewarded for their costs and there is no penalty for poor quality, he said. "Payment policy is a powerful signal of what we value," Mr. Hackbarth said, adding, "The benchmarks we use are a signal of what Medicare wants to buy." The commission "supports financial neutrality between payment rates for the FFS program and the MA program," he said, adding that about half of overpayments to MA plans now are going to insurers' bottom lines.

That fact has not been lost on the subcommittee chairman, Rep. Pete Stark (D-Calif.), who has held multiple hearings questioning the value and integrity of the MA plans. Republicans defended the MA program. Ranking minority member Rep. Dave Camp (R-Mich.) intensely questioned Mr. Hackbarth, eliciting the admission that MA plans had been successful in rural areas. Rep. Sam Johnson (R-Tenn.) at one point accused the MedPAC chairman of saying that the government is a more efficient insurer than the private sector.

Mr. Hackbarth disagreed and clarified his position. "The problem with this payment system is we are rewarding inefficient private plans," he said. ■