Similar Drug Names a Growing Cause of Errors

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

BY BRUCE K. DIXON
Chicago Bureau

The soaring numbers of commonly used drugs with soundalike and look-alike names have prompted the 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 due to 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.

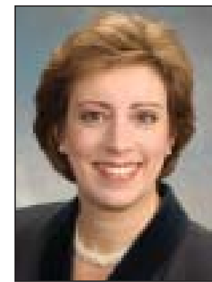
Among other major paired LASAs were cardiovascular medications, such as lisinopril and enalapril, and central nervous system agents, such as trazodone and chlorpromazine.

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. The patient received a large amount of the wrong agent, which led to a fatal heart arrhythmia.



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MS. COUSINS

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 Fero-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 recommendation that physicians include indications for use in their prescriptions is not an attempt by USP to impose on privacy, Ms. Cousins emphasized. "All that is needed are simple inclusions, such as 'for sinus,' 'for heart,' or, 'for cough,' " she said, explaining that this also would help patients avoid confusion if they forget which vial is for which condition.

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 "they both say and spell the drug name, especially for these often confusing drug pairs," Ms. Cousins concluded. ■

Financial Assistance Available for High-Cost Cancer Therapies

BY MIRIAM E. TUCKER
Senior Writer

WASHINGTON — Financial assistance is available to patients struggling with costs of the new—and extremely expensive—targeted therapies for renal cell carcinoma as well as other advanced cancers, Mr. James Goetz said at the annual Community Oncology Conference.

As far as the patient is concerned, the approved agents sunitinib (Sutent), sorafenib (Nexavar), and temsirolimus (Torisel) are all in the same cost ballpark, with each resulting in a bill of about $135,000 for a 6-month regimen at St. Luke's Hospital and Health Network in Bethlehem, Pa., where Mr. Goetz is the network administrator of the Oncology Service Line.

"We're seeing more and more patients on Medicare without secondary insurance, those who are underinsured, and who have no insurance. … The onus of these expensive drugs is on the patient," he said.

But there are places to turn for help, according to Mr. Goetz. First, all the manufacturers offer patient assistance programs, accessible on their Web sites (www.sutent.com, www.nexavar.com, www.torisel.com). Patients fill out a form and submit it to see if they qualify for financial assistance. "Sometimes it's successful, sometimes it isn't," he said.

Nonprofit organizations can help fill in the gaps. A highly recommended resource is the Patient Advocate Foundation (PAF; www.patientadvocate.org or 800-532-5274), whose mission is "to safeguard patients through effective mediation assuring access to care, maintenance of employment, and preservation of their financial stability relative to their diagnosis of life-threatening or debilitating diseases."

The foundation employs professional case managers and attorneys to assist patients with a wide range of access-to-care issues, including pre-authorization, insurance appeals, and assistance with expedited applications for Social Security disability, Medicare, Medicaid, SCHIPs, and other programs. It also provides assistance with job retention, debt crisis, housing, transportation to medical treatment, and child care. In addition, it offers a "Co-Pay Relief" program for those who are already insured, and an assistance program geared specifically to patients with colorectal cancer. "The PAF is a great resource that we give to many of our patients," Mr. Goetz said.

Other potentially helpful nonprofit patient assistance organizations listed by Mr. Goetz include the following:

► **Patient Access Network Foundation** (www.patientaccessnetwork.org or 866-316-7263) assists with medical expenses including medications, co-payments, insurance, and certain other out-of-pocket health-related expenses.
► **Healthwell Foundation** (www.healthwellfoundation.org or 800-875-8416) also assists with medical expenses, including medications, co-pays, insurance, and some other out-of-pocket expenses.
► **Cancer Care** (www.cancercare.org or 800-813-4673) assists with transportation, chemotherapy, pain medications, home care, and some child care issues.

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