

Similar Drug Names a Growing Cause of Errors

BY BRUCE K. DIXON

Chicago Bureau

The soaring numbers of commonly used drugs with sound-alike 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 sound-alike (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 identifies an emerging trend of look-alike drug names in computerized systems as a source of confusion. "This trend will likely continue as these systems become a standard of practice," she said, adding the LASA-related error problem is compounded by the indiscriminate use of suffixes and 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," Ms. Cousins said.

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

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 leads the pharmacist to issue the wrong drug.

"Errors also are due to physicians using short codes for medications, such as 'clon,' for clonazepam or clonidine," 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 becomes much more difficult to correct a name confusion issue once the products are on the market.

USP has compiled a list of more than 3,000 drug pairs that look or sound alike, double the number of pairs identified in 2004.

MS. COUSINS



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 sound-alikes 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 concluded. ■

Treat E-Mail Carefully to Safeguard Patient Confidentiality

BY SHERRY BOSCHERT

San Francisco Bureau

SAN FRANCISCO — Give e-mail correspondence with patients the same care and attention you'd give to paper records, faxes, or phone calls to minimize medico-legal liability, Dr. Jeffrey L. Brown said.

Physicians should be reasonably certain that the person requesting information by e-mail is authorized to receive it, just as would be done with phone calls, he said at the annual meeting of the American Academy of Pediatrics.

Your e-mail system should include an automated response to any e-mails received from patients, acknowledging that an e-mail message has been received and saying that you will respond within a set period of time, such as 24 or 48 hours, said Dr. Brown, of Cornell University, New York, and in private practice in Rye Brook, N.Y. He has no association with companies that market e-mail systems or services.

The automated response should alert pa-

tients that confidentiality cannot always be assured in e-mail correspondence, and that you cannot respond to urgent questions posed by e-mail. Patients should contact your office by phone for urgent matters.

The response also should inform patients that if they do not get your reply to any e-mail message within a reasonable period of time—"usually 48 hours," Dr. Brown said—the patient should call your office because you may not have received the e-mail. If you are away from the office when patients e-mail, the automated response should give the date of your return.

In the other direction, e-mails sent by physicians must be compliant with the Health Insurance Portability and Accountability Act (HIPAA). As with faxes, conventional e-mails must protect the confidentiality of sensitive information such as Social Security numbers, medical identification numbers, laboratory results, diagnoses, medications, and more.

To ensure confidentiality in e-mails, use an encrypted message system, Dr. Brown

advised. Solo practitioners or small practices may want to do an Internet search for the term "encrypting e-mail systems" to find a list of encryption providers, he said. Typically, an outgoing e-mail would be sent to the provider, encrypted, and returned to the physician's system before going out to a patient.

Confidential e-mail from physicians should contain a warning disclaimer similar to those used on fax transmissions. A typical disclaimer says the following: "This e-mail contains confidential and privileged information. It is intended only for the individual or entity to whom it is addressed. If you are not the intended recipient, or if you have received this transmission in error, you are hereby instructed to notify the sender and to erase its content and all attachments immediately. Copying, disseminating, or otherwise utilizing any of its content is unlawful and strictly prohibited."

Treat e-mail messages like other patient correspondence, and file them appropriately, he added. Before erasing e-mail, save

the patient's original e-mail and your response as hard copies in the patient's chart or electronically if you use electronic charts. Take precautions to protect confidential information on laptop computers and hard drives, as you would for other records. Use encryption software or change passwords frequently to prevent unauthorized access. Erase all confidential information from hard drives before disposing of them.

Other suggestions include not using your personal e-mail address to answer patient e-mails, not answering a new patient's e-mailed medical questions without first establishing a formal relationship, and not using an indiscreet topic in the heading of your response. "Don't write, 'Your pregnancy test is positive' in the subject line," he said. "Say, 'I have your lab work,' or something like that."

"Even if you do all the right things, there is still a possibility that you will be subject to suits," Dr. Brown said. "In the end, the best defense against legal action is practicing good medicine." ■