

# Medication Safety Issue Brief

## *Look-alike, Sound-alike Drugs*

5

of 6 in a series

*Series III*

Successful approaches to reduce errors involving look-alike, sound-alike drugs is part five in a six-part series that highlights underlying causes of and solutions to medication errors. This series is a joint effort of the American Hospital Association, the American Society of Health-System Pharmacists and *Hospitals & Health Networks*, with generous support from McKesson. You may tear this card out for future reference. Additional copies are available in PDF format, along with those from two previous series, on the ASHP and *H&HN* Web sites ([www.ashp.org](http://www.ashp.org) and [www.hhnmag.com](http://www.hhnmag.com)).

### • SUMMARY

Confusing drugs with similar names accounts for about 10 percent of all medication errors, according to the Food and Drug Administration. Last year, the American Pharmacists Association reported that there are more than 33,000 trademarked medication names in the United States and more than 9,000 generic names. The large number of medications—added to clinicians' heavy workloads, job stress, unfamiliarity with drug names and confusing, unclear orders, among other things—creates ample opportunity for confusion. A Joint Commission on Accreditation of Healthcare Organizations' National Patient Safety Goal requires that hospitals identify and annually review a list of look-alike and sound-alike drugs, at minimum, and take action to prevent errors involving the interchange of these drugs.

### • ISSUE BRIEF

When clinicians confuse drug names, patients can suffer significant harm. Accounts submitted to the U.S. Pharmacopoeia-Institute for Safe Medication Practices Medication Errors Reporting Program cite a host of injuries, including scarring and death, as well as prolonged hospital stays. One patient died, for example, after receiving 750 mg of chlorpropamide (used to treat type II diabetes) instead of 75 mg of chlorpromazine daily (used to treat psychotic disorders) as intended. MERP reports that more than 100 incidents have been reported involving Celebrex, resulting from confusion with Cerebyx and Celexa.

Confusion over drug names occurs throughout the medication process, from ordering to administration. "The issue of look-alike, sound-alike drugs is complex," says Diane Cousins, vice president of the Center for the Advancement of Patient Safety at the USP. "Errors may occur because of poor handwriting, different accents and other factors. That makes it difficult to thoroughly address the issue."

The rates at which new drugs are introduced adds to the problem. "As more drugs come into the market, it's getting harder to find new drug names," says Susan Proulx, president of Medical Errors Recognition and Revision Strategies, a subsidiary of the ISMP. Nevertheless, she adds, "There are lots of things that can be done." Alerts should be placed in pharmacy information systems and computerized physician order entry systems. And, organizations should stay up to date on name-pair confusions reported in the safety literature. "Leadership is sometimes not aware that these types of errors happen as often as they do," Cousins says. "Education needs to be a priority." (See *Action Agenda for additional recommendations*).



American Hospital  
Association



American Society of  
Health-System Pharmacists\*



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### ACTION Agenda

Here is a list of items that can help reduce errors resulting from look-alike, sound-alike drugs:

1. Evaluate formulary to identify medications that are prone to drug name confusion.
2. Track errors involving look-alike, sound-alike drugs and educate staff on their potential.
3. Use generic and brand names on drug orders to prevent confusion.
4. Separate items with similar names on pharmacy shelves and in dispensing cabinets.
5. Ask for drug-name spelling on verbal orders.
6. Include the intended use of the drug with the order.
7. Advise patients to check medication labels before taking them.
8. Conduct a Failure Modes Effects Analysis for all new drugs considered by the pharmacy and therapeutics committee for inclusion on the formulary.

#### ADDITIONAL RESOURCES:

- American Society of Health-system Pharmacists, [www.ashp.org](http://www.ashp.org)
- Food and Drug Administration, [www.fda.gov](http://www.fda.gov)
- Institute for Safe Medication Practices, [www.ismp.org](http://www.ismp.org)
- Joint Commission on Accreditation of Healthcare Organizations, [www.jcaho.org](http://www.jcaho.org)
- U.S. Pharmacopeia, [www.usp.org](http://www.usp.org)

#### ● CASE STUDY

**Alamance Regional Medical Center, Burlington, N.C.:** The Joint Commission's patient safety goals spurred Alamance to examine errors triggered by confusion over drug names. "It was not any area that was much of a problem, it was a mandate," says Sandra Faucette, director of pharmacy. Alerts have been placed in the CPOE system and the system was customized to provide for so-called "tall man lettering" to differentiate drugs with similar spellings. Tall man lettering is the capitalization of letters in words that are different from words with similar spellings (primaCOR versus. primaXIN). Also important is educating staff on potential problems with look-alike, sound-alike drugs, says Faucette, including problems identified within the organization and by outside resources.

**Evanston Northwestern Healthcare, Chicago:** Implementation of an electronic health record last year helped Evanston Northwestern "put its arms around medication safety," says Lynn Boecler, director of pharmacy. For example, the EHR and the computerized physician order entry system are customized to provide a list of likely prescribed drugs for each physician. "It doesn't pull up every drug in our formulary for every physician," says Karen Grogan, medication safety officer. "By using technology, we are able to eliminate the source of errors." When similar names do appear on physicians' medication lists, they are distinguished by tall man lettering. "We've had few problems with look-alike, sound-alike drugs since the EHR implementation," Grogan says. "Previously, most of the problems occurred during the ordering process." When problems occur, the organization alerts USP and the ISMP of the problem. "We have a professional responsibility to get information to the manufacturers that their drug name or label may cause problems," Boecler says. Adds Grogan: "We're not trying to reinvent the wheel. We've borrowed from other institutions and safety literature. We're taking a preventive approach."

**OhioHealth, Columbus:** To address problems with look-alike and sound-alike drugs, organizations must identify which drugs cause the most problems. OhioHealth did that using the Institute for Healthcare Improvement's Trigger Tool for Measuring ADEs. In 2002, OhioHealth recognized that voluntary reporting did not provide accurate measures of adverse drug events and adopted the trigger process to help pinpoint and measure errors. The process helps organizations identify problems and work backward to detect the sources. Each of the seven hospitals in the OhioHealth system began by focusing on one of three drug classifications: narcotics, insulin and anticoagulants. In the first year, each organization achieved a 50 percent decrease in ADEs in the category it chose to investigate. "Although we didn't specifically focus on look-alike, sound-alike drugs, this process helped identify common problems," says Kathy Crea, OhioHealth's medication safety coordinator. "We then followed proven recommendations, such as storing often-confused medications in different areas, to address the issue." ●

