Medication Safety Issue Brief

Eliminating Dangerous Abbreviations, Acronyms and Symbols

1 of 6 in a series

Series III

Eliminating the use of dangerous abbreviations, acronyms and symbols is the focus of part one 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 Corp. 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 and www.hhnmag.com). ASHP members can also call ASHP's fax-on-demand service.

• SUMMARY

The use of abbreviations, acronyms and symbols in prescribing and transcribing medication orders too often results in the misinterpretation of the order's intent. Busy health care practitioners often use these shortcuts to indicate drug names, dosages, the patient's condition and route of administration. The result can be omission errors, extra or improper doses, administering the wrong drug, or giving a drug in the wrong manner. Stopping the use of unapproved abbreviations, acronyms and symbols can go a long way toward preventing these errors, but that's proven difficult to accomplish. This briefing examines ways that hospitals can put an end to the practice.

• ISSUE BRIEF

Using unapproved abbreviations, acronyms and symbols can result in tragic, unintended consequences. For example, the Joint Commission on Accreditation of Healthcare Organizations lists the use of a so-called "trailing zero" in dosage orders as a dangerous abbreviation; an incident reported to the United States Pharmacopeia, a nonprofit standards-setting organization in Rockville, Md., dramatically illustrates why. A physician treating an elderly patient ordered 1 mg twice a day of risperidone oral solution. The order was transcribed 1.0, which the nurse administering the medication mistook as 10. The patient received several incorrect doses—10 times the initial order—developed hypoxia (oxygen deficiency), suffered a stroke and was paralyzed on his right side, losing the use of his right-side extremities.

"Abbreviations are very pervasive," says Diane Cousins, vice president of USP's Center for the Advancement of Patient Safety. "Not only can they result in harm to the patient, they can also increase the cost of care." Medication errors resulting from misinterpreted abbreviations can result in an increase in the length of stay, more diagnostic tests and changes in drug treatment, among other things.

Organizations such as ASHP, the Joint Commission, USP and the Institute for Safe Medication Practices have long touted the dangers of using abbreviations in writing and transcribing prescriptions. In 2004, JCAHO listed the elimination of dangerous abbreviations as a safety goal (see Action Agenda on flip side of this brief). Accomplishing that goal, however, is a challenge mainly because it's difficult for health care practitioners to break long-standing practices. One of the first steps that hospitals should take is to correct preprinted and electronic forms that

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ACTION *Agenda*

JCAHO provides a minimal list of dangerous abbreviations, acronyms and symbols as part of its patient safety goals. Hospitals are required to standardize them throughout the organization, including a list of what not to use. The following items must be included on hospitals' "do not use" list. Organizations must add an additional three items of their choosing. For more, visit www.jcaho.org.

ABBREVIATION: U (for unit)
PROBLEM: Mistaken for zero, 4 or cc
PREFERRED: Spell out the word "unit."

ABBREVIATION: IU (for international unit)
PROBLEM: Mistaken for IV or 10
PREFERRED: Spell out the words "international unit."

ABBREVIATION: Q.D., Q.O.D. (Latin abbreviation for once daily and every other day)
PROBLEM: The two often are mistaken for each other.
PREFERRED: Spell out the words "daily" and "every other day."

ABBREVIATION: Trailing zero (X.0 mg)
PROBLEM: Decimal point is often missed.
PREFERRED: Never write a zero by itself after a decimal point (X mg), and always use a zero before a decimal point (0.X mg).

ABBREVIATION: MS, MSO4, MgSO4
PROBLEM: Often confused for one another.
PREFERRED: Spell out the words "morphine sulfate" or "magnesium sulfate."

ADDITIONAL RESOURCES

- The Institute for Safe Medication Practices and USP publish more extensive lists of dangerous abbreviations. The lists are available at www.ismp.org or www.usp.org.

include the unapproved abbreviations. The case studies in this briefing feature organizations that have proactive programs to eliminate the use of dangerous abbreviations.

• CASE STUDIES

Blount Memorial Hospital, Maryville, Tenn.: In 1998, the Medication Process Improvement Team at Blount Memorial identified use of dangerous abbreviations, acronyms and symbols as a potential source for medication errors. The organization developed safe order writing guidelines that included a list of abbreviations that should be avoided. Employees were notified of the guidelines mainly through posters, newsletters and memos. Problem orders were photocopied and sent to the prescriber with a memo signed by the chairs of the pharmacy & therapeutics and patient care practices committees. Compliance improved, but problem orders continued to appear. "When it became a prohibited practice, people really started to take the effort seriously," says Jeanne Ezell, director of pharmacy, commenting on the 2004 JCAHO Patient Safety Goal. Orders with unapproved abbreviations are no longer processed. Education plays a big role in breaking bad ordering habits, but Ezell credits individual follow-up as the most effective tool.

Cincinnati Health Alliance: The Health Alliance, a six-hospital system, got a jump start on implementing a list of prohibited abbreviations after learning of forthcoming safety goals at a JCAHO-sponsored meeting in 2002. The pharmacy, assisted by two physicians, reviewed industry and hospital reports to develop a customized list. The organization developed a 14-point strategy to ensure compliance with the policy. Among the tactics: distribute pocket-sized cards with the list; attach laminated instructions in patient charts; and make non-compliance a part of the clinician's credentialing file. Health Alliance updated its electronic medication administration record, which had character constraints, forcing use of abbreviations. Compliance is consistently above 75 percent, attributable to the multiple reminders that practitioners receive. "We don't want to place blame," says Michelle Dusing, director, clinical pharmacy programs. "It's the system we want to correct, not the individual."

University Hospital, Syracuse, N.Y.: Physicians often object to lists of prohibited abbreviations because they have different lists for the different hospitals in which they work. That's not the case in Syracuse; the city's four hospitals have a single list of abbreviations, acronyms and symbols that should be avoided. The initiative began in 2003, when a local Blue Cross representative read about an effort under way at University Hospital and brought together representatives from the four hospitals to develop a unified list. Pharmacists at University Hospital have a zero-tolerance policy for orders that contain prohibited abbreviations. Nurses are instructed to review all medication orders and make the appropriate changes and inform the physician of the error. If an order does get through to the pharmacist, the prescriber is called directly and asked to make the change. "Teamwork between the pharmacists and nurses is central to obtaining compliance," says Roy Guharoy, director of pharmacy services. ●