Evaluate Sig Codes and Mnemonics for Error Potential

Many pharmacies use sig codes and mnemonics to ease and accelerate the data entry process. Sig codes (abbreviations) are programmed into the pharmacy computer system and used to represent a specific set of directions. For example, a computer system could be programmed so that the sig code "1TBID" will produce "Take 1 tablet by mouth twice daily" on the pharmacy label. Mnemonics (memory aids) are programmed to represent a specific drug and dosage strength combination. For example, "LIP20" could be used to represent Lipitor 20 mg. While these codes can save time, they are not without risk. Below are cases that illustrate how processes involving sig codes can contribute to medication errors.

The Institute for Safe Medication Practices received an error report in which the original prescription written for the nonsteroidal anti-inflammatory drug diclofenac 75 mg with instructions to "Take 1 tablet twice daily with food for shoulder and elbow pain" was actually labeled "Take 1 tablet daily with food for shoulder and elbow pain." The error was discovered when dispensing the first refill. Luckily it was determined that the patient had been taking the prescription correctly despite the incorrect label. The reporter noted that distractions during the original verification phase contributed to the error. More significantly, the pharmacy identified that the sig code which was used did not produce the expected translation. Instead of producing "Take 1 tablet twice daily with food," the sig code placed "Take 1 tablet daily with food" on the label. When the sig code had been

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originally programmed into the pharmacy computer system, the wrong directions were associated with it.

In a similar report from a different pharmacy, the directions for the oral contraceptive TRI-SPRINTEC (ethinyl estradiol and norgestimate) were entered incorrectly. The directions should have been "Take 1 tablet daily for dysmenorrhea," but instead the prescription was labeled "Take 1 tablet daily for dyspepsia." Upon investigation, the pharmacy discovered that the sig code "dys" had been created as a short cut for dyspepsia. However, the technician believed it to represent dysmenorrhea. The technician entered "dys" during data entry and the translation to dyspepsia was not caught by the verification pharmacist nor was it caught during two subsequent refills.

To reduce the risk of medication errors resulting from vulnerable sig codes and mnemonics, consider the following strategies:

- Sig codes and mnemonics should only be added by administrative personnel using a standardized process. Once built, test the sig codes and mnemonics to verify they are functioning correctly.
- Prohibit staff from coining abbreviations for drug names or entering new sig codes or mnemonics into the pharmacy computer system. For chain pharmacies, addition of sig codes and mnemonics should not be allowed at the store level.
- Routinely run reports of system sig codes and mnemonics in use. Remove dangerous or outdated codes and mnemonics from the computer system.
- Avoid using dangerous mnemonics. For example, "novo7030"' should not be a mnemonic because it could represent NovoLIN 70/30 or NovoLOG Mix 70/30. Use the ISMP List of Confused Drug Names (www.ismp.org/tools/confuseddrugnames.pdf) for examples of drug product names that can lead to error and determine if codes for those drugs can be interchanged leading to the data entry of unintended products.
- During the dispensing process, drug names listed on prescriptions should be matched to computer labels and manufacturers' products. Also, match the instructions on prescriptions with those printed on the label to verify accuracy.
- At prescription drop-off and during patient education at the point of sale, verify the directions and purpose of the medication with the patient. ■

This article is from the Institute for Safe Medication Practices. Errors, near misses, or hazardous conditions may be reported on the ISMP (www.ismp.org) website. ISMP can be reached at 215-947-7797 or ismpinfo@ismp.org.