



January,
2004

USP Patient Safety CAPSLink™

PROVIDED BY THE USP CENTER FOR THE ADVANCEMENT OF PATIENT SAFETY

Copyright © 2004 The United States Pharmacopeial Convention, Inc.

In this Issue

USP Patient Safety CAPSLink™

This message has been sent to you as a service of the U.S. Pharmacopeia, Center for the Advancement of Patient Safety (CAPS). USP is a not-for-profit, non-governmental organization that promotes the public health by establishing state-of-the-art standards to ensure the quality of medicines and other health care technologies. CAPS is a component of USP's Patient Safety public health program. The USP Center for the Advancement of Patient Safety was created to encourage medication error reporting, conduct data analysis and research, develop educational programs, and propose standards, recommendations, and guidelines that ultimately improve the safety and quality of patient care.

Section I: *USP Medication Error Analysis*

- Improving Patient Identification

Section II: *In the News...*

1. Use of 'Volume' as a Measure of Quality is Questioned
2. FDA and CDC Monitor Vaccine Safety
3. Boston Hospital Launches Initiative on Errors
4. Boston Opens Patient Safety Center
5. Ortho-McNeil Issues Product Warning
6. States Move to Address Counterfeit Drugs
7. New AHRQ WebM&M



Improving Patient Identification

The first Joint Commission 2004 National Patient Safety Goal requires accredited facilities to improve the accuracy of patient identification using two patient identifiers when administering blood and medications. Facilities attempting to assess improvement in this area should establish some indicator(s) to track within their medication error-reporting program that will serve as a proxy when errors related to patient identification occur.

Data collected through USP's two national medication error-reporting programs support the need for improvement in patient identification. From January 2000 through November 2003, one hundred and five *Wrong patient* errors were reported to the Medication Errors Reporting (MER) program. Fortunately, the vast majority of these

errors (101 or 96.2%) were not harmful with 4 (3.8%) causing patient harm.

In calendar year 2002, the MEDMARXSM program collected 8,196 *Wrong patient* medication errors making it the 7th most frequent **Type of Error** (accounting for approximately 5% of all reports) in this database.¹ Analysis of the MEDMARX data also revealed that most of the reported *Wrong patient* errors (7,284 or 89%) did not result in harm and a small percentage (1.4%) were harmful. Approximately 10% (800) were categorized as potential errors. However, a considerable number still managed to slip past safety checks with more than half (4,226 or 52%) of these errors reaching the patient. These data signal that more needs to be done to improve the interception of these errors, to improve safety nets, and to improve processes around patient identification.

Tracking and examining error data by the phase (i.e., node) in the medication use process (MUP) where the error originated can assist with root-cause analysis and lead to more effective interventions. In the MEDMARX data, *Wrong patient* errors were seen in each phase of the MUP (see Table 1).

Table 1. *Wrong patient* errors by Node*

MUP Node	n	%
Prescribing	574	7.8%
Documenting	2,167	29.3%
Dispensing	1,739	23.5%
Administering	2,888	39%
Monitoring	27	0.4%

*Node is not applicable for Category A (i.e., potential error) records.
2002 MEDMARX Data Summary Report

Although the *Administering* phase had the highest reported percentage, there were numerous times when documenting/transcribing (29.3%) and dispensing (23.5%) were the source of *Wrong patient* errors. Therefore, it is prudent to look beyond just the *Administering* phase when targeting *Wrong patient* error events. Examples of *Wrong patient* errors across the MUP are shown in Table 2.

Table 2. Cases of *Wrong patient* errors across the MUP

Node	Error Description	Product(s)	Error Category
Prescribing	Physician wrote an order for regular insulin on wrong chart. Medication was given as ordered resulting in wrong patient error.	Insulin	D*

Documenting	Three medications were given to wrong patient for 4 days. Order was stamped with wrong imprint. Correct name was written in, but not seen. Patient had decreased blood pressure and reduced renal function, requiring renal consult and testing.	Benazepril Levothyroxine Metoprolol	F**
Dispensing	Prescriptions for a husband and wife were switched. Technician filled husband's prescription with medroxyprogesterone acetate instead of digoxin and digoxin was given to wife instead of medroxyprogesterone acetate. They took the wrong medications for 40 days. Errors discovered upon subsequent refill request.	Digoxin Medroxyprogesterone	D*
Administering	Medications were prepared for patient "A" according to the MAR, but staff neglected to appropriately identify the patient when administering the medications and gave them in error to patient "B".	Prednisone Ursodiol Ramipril Aspirin Glyburide Clopidogrel	D*
Monitoring	Staff received verbal report of patient's blood sugars and wrote down wrong room number. Patient was given sliding scale insulin coverage based on the result. Error discovered as staff went to write on diabetic flow sheet.	Insulin	D*

*D is defined as: An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and/or required intervention to preclude harm.

**F is defined as: An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization. 2002 MEDMARX Data Summary Report

The top five leading **Causes** of *Wrong patient* errors are outlined in Table 3. *Performance deficit* was the leading reported **Cause** of error (listed in over 50% of the records). Examination of records listing *Performance deficit* as the cause showed *Distractions* were often listed as a **Contributing factor**.

Table 3. Leading Causes of Error involving *Wrong patients*

Cause of Error	n	%
Performance deficit	4,148	53.5
Procedure/protocol not followed	2,364	30.5
Computer entry (Incorrect or incomplete)	1,143*	14.7
Documentation	948	12.2
Transcription inaccurate/omitted	636	8.2

*Computer entry defined as "Incorrect or incomplete information was entered into a computer system associated with the medication use process." 2002 MEDMARX Data Summary Report

Computer entry was the third most frequently cited **Cause of Error** for *Wrong patient* events indicating that technology has the potential both to reduce and to create new medication errors. Examples of *computer entry* errors in various MUP phases are as follows:

- **PRESCRIBING:** A physician selected the patient's father from the computer screen when the order was actually intended for the son. Both patients had the same first and last name. Fortunately, the error was noticed by the parent at the outpatient pharmacy and a correct prescription was obtained.
- **DOCUMENTING:** Nursing staff entered orders for one patient into the computer system under another patient's profile. The patient profile was found to have the same last four digits in the account number and the first letter of both patients' last name was the same. The error was discovered on day three of a hospital stay.
- **DISPENSING:** Metformin (500mg twice a day) was ordered for a patient in room 205-1 but entered in the pharmacy computer system under room 204-2. The wrong patient was given two doses.
- **ADMINISTERING:** A nurse accessed the computerized medication administration record (MAR) not realizing it related to a different patient and subsequently mistakenly administered methocarbamol to the wrong patient. The physician was notified and the patient did not experience any adverse sequelae.

Suggestions to Minimize *Wrong patient* Errors

1. Conduct a review of the processes used in the admission of the patient into the facility. What patient-specific identifiers are collected and placed on the patient's wrist band, addressograph card, or computer record? Are there select identifiers that nurses, pharmacists, and physicians find easier to use (e.g., date of birth, Social Security number or hospital admission number)? Such a review could be performed by a sub-committee of a larger patient or medication-safety committee or even the Pharmacy & Therapeutics Committee.
2. Physically identify admitted patients (e.g., using an identification (ID) wrist band) at the time of registration or admission or, if circumstances cause a delay, as soon as feasible thereafter. Establish a list of medical conditions that may constitute an exception. Under certain circumstances, attaching an ID band to a patient's limb may be

medically contra-indicated.*

3. Examine the admission/discharge/transfer (ADT) information system. What precautions or safeguards are in place to prevent patient mix-ups (e.g., patient's with the same last name residing in the same room or within the same patient care unit)? How quickly is ADT information updated? **When the hospital's ADT system is not operational, are there policies and procedures in place to ensure that patient identification bands are properly prepared?**
4. All employees who assume any level of responsibility for patient care (e.g., transportation) or who administer care (non-invasive, or invasive care including transfusions and medication administration) to a patient should first verify that an ID band is attached to that patient and to verify that information on the ID band matches in every respect documented orders and/or labeled materials (e.g., medications or blood products) intended for use with that patient. Documentation may be the medical chart or medical chart surrogate.*
5. Write out (i.e., print) the complete name of the patient – Last name, First name, and Middle Initial - on all manual records or charts. Information system records should incorporate Human Factors research into the design of how patient names appear on the computer screen (e.g., alternate shading of lines to differentiate a list of names) and to help identify the types of alerts that should appear (e.g., when two patients with the same last name are located on the same patient care unit).
6. At a minimum, label all medication dose containers (e.g., zip-lock bags containing unit dose items, IV bags, syringes, oral liquid bottles, ointment tubes, droppers, or inhalers) with the patient's complete name (First, MI., and Last), most current room number **and** another unique patient identifier (e.g., date of birth). Using some type of unique patient ID other than name and room number is strongly encouraged on all bulk medication and IV product labels and unit-dose cassette bins. Consider using machine-readable coding (e.g. bar coding) as a means to uniquely identify the patient on all medication dose containers dispensed by pharmacy (including patient medication cart cassettes).
7. Do not use a patient's room number as a patient identifier in the administration of medications. This is also stated under Joint Commission's National Patient Safety Goals.
8. Establish at least two different patient identifiers that will be used prior to medication administration. Some identifiers that could be used include the individual's name, an assigned hospital ID number, Social Security number, date of birth, or telephone number. JCAHO requires that the two patient-specific identifiers must be directly associated with the individual and the same two identifiers must be directly associated with the medication (e.g., on an attached label to a medication container). The two identifiers may be in the same location (e.g. the patient's wrist band).
9. Review processes and procedures for returning medications from patient care units back to the pharmacy to avoid the misadministration of these products to another patient. How are these medications labeled for return?
10. Review pharmacy procedures for re-issuing medications that were previously labeled for another patient (particularly IV bags).
11. Encourage patients to state their name (when possible) before taking any medications and to always offer their wrist/ID bracelet for proper identification. Also encourage patients to ask the health care practitioner to identify each medication by name (including IV infusions or piggybacks) before it is administered. In situations where the patient is unable to state his/her name or ask questions about administered medications, encourage family members or caregiver to assume this role.
12. Consider using photo identification as another means of confirming the identity of

the patient, particularly in settings (e.g., long term care) where the length of stay is extended.

* Items # 2 and #4 are based, in part, on Texas Childrens Hospital (Houston) **draft** policy on patient identification.

References

1. Hicks, R.W., Cousins, D.D., and Williams, R.L. Summary of Information Submitted to MEDMARXSM in the Year 2002. The Quest for Quality. Rockville, MD: USP Center for the Advancement of Patient Safety, 2003. (This report is available for purchase at www.usp.org)



1. Use of 'Volume' as a Measure of Quality is Questioned

Two recent studies published in the *Journal of the American Medical Association* have challenged the assumption that patient volume is a reliable measure of quality. Hospitals that perform the highest number of a particular procedure (e.g., cardiac surgery) may not necessarily be the best at that procedure. [Click here to read more.](#)

2. FDA and CDC Monitor Vaccine Safety

FDA and CDC monitor the safety of vaccines using a registry known as Vaccine Adverse Event Reporting System, or VAERS. The VAERS registry contains reports of adverse events from patients, parents and health care providers, and it can help to identify important new vaccine safety concerns. [Click here to read more.](#)

3. Boston Hospital Launches Initiative on Errors

Children's Hospital in Boston has launched an initiative against errors and is particularly targeting inadequate communications among health care professionals. [Click here to read more.](#)

4. Boston Opens Patient Safety Center

The state of Massachusetts is preparing to open a new center designed to coordinate patient safety efforts by state and private health agencies and to educate healthcare providers about the best ways to prevent errors. [Click here to read more.](#)

5. Ortho-McNeil Issues Product Warning

Healthcare professionals were recently notified by Ortho-McNeil that topiramate (Topamax ®) causes hyperchloremic, non-anion gap metabolic acidosis or decreased serum bicarbonate. Measurement of baseline and periodic serum bicarbonate during topiramate treatment is now recommended. To read the 2003 Medwatch safety summary, including links to the "Dear Healthcare Professional" letter [click here.](#)

6. States Move to Address Counterfeit Drugs

State regulators are working with the FDA to propose rules that will eliminate counterfeit drugs from the health care delivery system. The proposed guidelines will particularly effect pharmaceutical wholesalers. [Click here to read more.](#)

7. New AHRQ WebM&M

This month's AHRQ Web M&M cases include a patient who encountered a potentially life-threatening medication error. <http://webmm.ahrq.gov/>

You are currently subscribed to USP Patient Safety CAPSLink™. To refer colleagues or friends to subscribe to this newsletter click [here](#). To unsubscribe click on [this link](#).

USP operates two complementary error reporting programs; the Medication Errors Reporting Program presented in cooperation with the Institute for Safe Medication Practices and MEDMARX. MEDMARXSM is an Internet-accessible, anonymous medication error reporting program and quality improvement tool used to track and trend medication errors.

For more information, visit www.usp.org

USP does not sell or distribute e-mail addresses. Questions about USP CAPSLink™ should be sent to caps@usp.org.

Copyright 2004, U.S. Pharmacopeia. All rights reserved.

12601 • Twinbrook Parkway • Rockville • Maryland • 20852

