Getting to the root of Medication

Read what nurses have to say about making and reporting medication errors and disclosing them to patients—and learn how you can reduce the risk for your patients and yourself.

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IN THE SEPTEMBER ISSUE of *Nursing2002*, we asked you to respond to a poll designed to investigate nurses' attitudes and experiences regarding medication administration and error reporting. The following analysis of poll results is based on 775 responses (see *A Typical Survey Respondent*). What you told us sheds light on why errors occur and how you deal with them in everyday practice.

In the following pages, we'll review each question or statement on the survey and show how respondents answered it. These figures are expressed as a percentage of all respondents who answered that question.* Then we'll discuss the implications of the responses and provide some "pearls" of wisdom you can apply to make the medication-use process safer in your facility.

1. Error reporting is a valuable tool to measure a nurse's medication competency.

True: 58% **False: 42%**

As responses to this question show, many nurses mistakenly believe that colleagues who've made several medication errors aren't very careful or competent. In fact, error reports are a poor indicator of a nurse's competence. By one estimate, only 5% or less of medication errors are reported at all. Nurses who report their own errors or errors they discover are probably conscientious and know that reporting errors helps identify and correct recurring problems. And nurses who are frequently reported by others for errors may not be "liked" by others in the unit for reasons that have little to do with competence.

Unfortunately, some health care facilities and even some state nursing boards reinforce the attitude that error reporting correlates with competence by imposing a "three strikes and you're out" rule or by using a point system based on error severity that can lead to a nurse's suspension or firing.

Pearl

Each error reported should be analyzed with an emphasis on how the system allowed the error to reach the patient, not on who made the error. In evaluating a nurse's competence, managers must evaluate her overall ability to deliver safe care to patients—not just the "task" of administering medications, but the ability to understand every step of the medication-use process, from prescribing a drug through assessing the patient's response to treatment.

2. Most medication errors occur when a nurse carelessly neglects to follow the "five rights" of medication administration.

True: 79% **False: 21%**

In nursing school, we all learned about the "five rights" of medication administration: right patient, right drug, right dose, right route, right time. In practice, nurses sometimes appear to be careless about following this dictum strictly. However, the reality is that external forces can create barriers throughout the

*Not all respondents answered all questions; percentages have been rounded.

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errors: survey results

process that may lead to an error, even when nurses apply the five rights conscientiously.

For instance, suppose a prescriber handwrites an order for *Cerebyx*. Sloppily written, it looks like *Celebrex* and is transcribed as such on the medication administration record (MAR). Later, the patient's nurse administers the "right" drug according to the MAR, but the wrong drug according to the prescriber's intention.

Pearl

Continue to use the "five rights" as a fundamental safeguard, but also institute other strategies and tools that have higher leverage in preventing errors. Examples include preprinted medication order forms, oral syringes that are incompatible with intravenous (I.V.) tubing, and technologic advances, such as "smart pumps" designed to improve safety. A robust computerized prescriber order entry system can eliminate errors associated with sloppy handwriting and other potential pitfalls, such as ambiguous orders, excessive dosages, and drug contraindications.

3. During my nursing career, I failed to report one or more medication errors because I thought reporting an error might be personally or professionally damaging.

True: 36% **False: 64%**

More than one-third of survey respondents say they failed to report one or more errors during their nursing career for fear of personal or professional repercussions. Although failing to report errors can't be condoned, it's a predictable result when nurses are afraid of disciplinary action by their employers or by organizations such as the state board of nursing.

The Institute of Medicine's report *To Err Is Human* and some organizations, such as the Institute for Safe Medication Practices (ISMP) and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), recognize that nurses need to be shielded from personal and professional threats to encourage error reporting.

Pearl

An environment that views errors as a human failure rather than a system failure promotes underreporting of medication errors. Work with facility management and outside organizations to foster an environment that promotes the value of reporting errors for the purpose of identifying elements in the system, including human and environmental factors, that contributed to them. Consistently report errors and participate in the cause analysis and the plan of action to prevent their recurrence.

4. Incident reports of my medication errors are placed in my personnel file.

True: 51% **False: 49%**

Slightly over half of respondents say incident reports go in their personnel file, another practice that discourages error reporting. In most cases, incident reports offer little information about a nurse's performance beyond the fact that she made a mistake that she'll probably never repeat.

Unfortunately, few nurse-managers keep a file of all the errors that nurses *catch*.

Pearl

Mistakes are a sign that a safety problem exists, not that a nurse is doing a bad job. Unless she made an egregious error, was chemically impaired, or was criminally negligent, the mistake should be viewed as an opportunity to learn why the error occurred and how to prevent similar errors that others may make in the future.

Include all unit personnel in the learning experience and extend it to others in the health care facility when appropriate.

5. A good way to understand why errors occur is through a thorough analysis of information obtained from incident reports.

True: 91% **False: 10%**

Most respondents know that incident reporting is the primary means for identifying medication errors. Incident reports allow risk managers and quality improvement personnel to analyze the information and perform a root cause analysis of the errors. Incident reports can also be entered into a database so analysts can detect error trends and implement systemwide corrections. This can happen only when the focus of the incident report is on *what* happened, not *who* made a mistake.

Pearl

Generating an incident report after a medication error happens is a reactive approach to the error. Taking a proactive approach is an even better way to prevent errors. Report potential errors (an error waiting to happen) and near misses (errors that were caught before reaching the patient).

Potential errors should be documented in incident reports, but they can be communicated in less formal ways too—for example, during rounds—to help other members of the health care team avoid problems.

6. Bar coding and other medication technologies will reduce the number of nurses needed to administer medications.

True: 15% **False: 85%**

Some nurses believe that technology will reduce the number of practitioners needed to manage medication administration because it saves time. However, this isn't the case. Although technology has been shown to improve safety, it doesn't decrease the amount of time spent by nurses administering medication. In fact, many nurses say that certain technologic advances, such as bar coding, increase the time they spend administering medications. Others, however, report that the extra time needed for drug administration is offset by savings in documentation time and by more accurate charting.

The Food and Drug Administration feels so strongly about improving safety through bar coding that it's issued a proposal that would require the pharmaceutical industry to bar code all drugs during a 3-year phase-in period. (See "Ask the Expert," *Clinical Rounds*, in the June issue of *Nursing2003*.)

Pearl

Technology is no substitute for a nurse's watchful eye. Although new technologies may help you reduce errors, you're still a critical link in the medication-use process, which includes monitoring the patient's response to medication.

7. The introduction of technology (for example, computerized prescriber order entry, bar coding, and smart I.V. pumps) will decrease medication errors.

True: 62% **False: 38%**

Although not a panacea, technologic advances (such as computerized prescriber order entry, bar code scanning at the point of care, computerized MARs, and "smart" I.V. pumps) have been shown to reduce medication errors. Numerous organizations, such as the National Quality Forum, ISMP, JCAHO, and the National Institutes of Health, are pushing (and, in some cases, requiring) facilities to institute error-reducing technology.

Pearl

No technology system eliminates the risk of error. Use technology wisely, without becoming complacent about what it can and can't do to support safe practice. Don't forget: No computer has your ability to think critically; for example, to understand whether an ordered drug or dosage is appropriate for your patient's condition.

8. I initiate an incident report when I catch:

• another nurse's mistake.

Always: 37% **Sometimes: 54%** **Never: 9%**

• a pharmacist's mistake.

Always: 45% **Sometimes: 42%** **Never: 14%**

• a physician's mistake.

Always: 42% **Sometimes: 39%** **Never: 19%**

The best person to report an error is whoever discovered or witnessed it. Although many nurses feel uncomfortable reporting a colleague's error, it's legally and ethically the right thing to do for the patient's safety. Among survey respondents, however, almost 19% say they never report a physician's error, and 14% never report a pharmacist's error; only 9% never report another nurse's error.

When responses are broken down by years of experience and work setting, some interesting patterns emerge:

A typical survey respondent

- 42 years of age
- 11 years' experience
- RN with bachelor's degree
- Works in a hospital setting
- Works in a medical/surgical clinical area

• Nurses working in a hospital are least likely (34%) to initiate an incident report when discovering another nurse's error, compared with those in all other settings (39% to 67%).

• Among hospital nurses, those working in the intensive care unit and orthopedic settings are least likely to report another nurse's mistake (23% and 29%, respectively), compared with nurses in other clinical areas (32% to 53%).

• Nurses working in a health care provider's office are more likely (58%) to initiate an incident report after discovering a pharmacist's or physician's mistake than those working in other settings (33% to 54%).

• Nurses working in a home health care setting are least likely (33%) to report a physician's mistake, compared with those working in other settings (40% to 58%).

• Students (67%) are more likely to initiate an incident report for a nurse's mistake than LPNs and RNs

(35% to 50%).

• Nurses with less than 1 year's (54%) or more than 15 years' experience (50%) are more likely to report a pharmacist's or physician's mistake than nurses with 1 to 15 years' experience (21% to 45%).

Pearl

The value of incident reporting is that it lets us look at the systems that failed and allowed the error to reach the patient. But if you work in a setting where nurses and other professionals work together closely, such as the operating room, you may feel that reporting a colleague's error is disloyal and undermines teamwork. This is a misperception you can correct by eliminating the focus on the "who." Remember: You're not reporting a peer for an error; you're reporting the error itself. Only by openly examining errors can we rectify the underlying causes and make the medication-use process safer for patients.

What nurses say

Survey participants had a lot to say about what causes or increases the risk of medication errors. These were the top five reasons we heard:

1. distractions and interruptions during medication administration
2. inadequate staffing and high nurse/patient ratios
3. illegible written medication orders
4. incorrect dosage calculations
5. similar drug names and packaging.

9. When I make a mistake, I fully disclose the error to the patient or a family member.

Always: 18% **Sometimes: 52%** **Never: 31%**

Overall, 31% of survey respondents say they never fully disclose a mistake to the patient or a family member, and years of experience made no significant difference in this behavior. However, education level was significant, with more LPN/LVNs (43%) saying they never fully disclose a mistake, compared with RNs at all education levels (28% to 32%) except the doctorate level. (Note: Only four RNs with doctorates responded to this question.) And significantly more nurses working in hospitals (33%) and long-term-care facilities (32%) say they never fully disclose a mistake, compared with those working in a health care provider's office (8%).

Error disclosure is a thorny issue that raises various questions. For example, should a nurse inform a patient that he received the wrong drug if he wasn't harmed by it? If she does, will the patient lose confidence in the nurses and the facility? How should the nurse respond if the patient realizes a mistake has occurred (for example, he questions a nurse who's about to administer a tablet instead of his usual half of a tablet)?

Pearl

Many patients and families are savvy about health care and expect respectful and honest responses to an error. Most people will more easily forgive an error than a calculated cover-up. Lawsuits result when trust between patients and health care providers breaks down.

Facilities with full disclosure policies have learned that patients are more likely to forgive and less likely to sue if they're treated honestly. The Veterans Affairs (VA) Medical Center in Lexington, Ky., has a policy of fully disclosing errors to patients and their families and offering equitable compensation for the injury. Although the policy has led to many legal settlements, it hasn't opened the floodgate to lawsuits. Compared with other VA hospitals, the Lexington facility ranks in the top quartile for number of claims filed, but the bottom quartile for payments.

Know and follow your facility's policy regarding disclosure (see the discussion below). When disclosing an error, avoid expressing guilt ("This was all my fault.") or making excuses ("We were very shorthanded today."). Provide details as sensitively as possible and emphasize the regret of the facility and of individuals involved.

10. My facility has a policy for disclosing errors to patients and their families.

Yes: 28% **No: 18%** **Don't know: 54%**

More than 70% of respondents say their facility has no disclosure policy or they don't know if it does. However, the JCAHO and other organizations, such as the American Society for Healthcare Risk Management, recommend that facilities have a policy in place guiding full disclosure of an error to patients and family members. A disclosure policy should specify:

• who's responsible for informing the patient or family members
• what information should be shared
• who else should be informed about the error
• how the error and disclosure should be documented.

Nurses and other members of the health care team need to know their facility's policy so they can comply with it when a medication error occurs.

Pearl
Depending on the nature of the error, you should expect the patient or family member to be upset or angry when you disclose an error. Anticipate this response and remain calm.

Be prepared for an angry response by role-playing this scenario ahead of time. This gives you the chance to try approaches that can help you defuse volatile emotions.

11. When I receive an oral or telephone order, I write it directly on the patient's chart and then read back the name of the drug, dose, and route to the prescriber.

Always: 66% **Sometimes: 29%** **Never: 6%**

Orders given orally, either in person or over the telephone, are errors waiting to happen. A prescriber's accent, unclear cellular phone reception, and environmental noise are some of the pitfalls leading to misinterpretation of a spoken medication order.

In its 2003 National Patient Safety Goals, the JCAHO recommends that facilities implement a process for taking telephone and other oral orders that requires the person receiving the order to verify it by writing it on the patient's medical record and reading back what she wrote.

Pearl
Avoid taking spoken orders except under very limited circumstances: in an emergency when the prescriber isn't present or can't write the order, and under sterile conditions. If you must take an oral order, first write it on the patient's medical record. You can then confirm the patient's name as well as the medication order during your "read back." State numbers individually; for example, say "one-five" instead of 15, or "five-zero" instead of 50. Ask the prescriber to spell any drug name that's unfamiliar or that sounds like another drug name.

12. When transcribing the word "units," I use the abbreviation "U."

Always: 21% **Sometimes: 35%** **Never: 44%**

The only right answer here is "never," yet over half of respondents say they use the abbreviation "U" for units always or sometimes. Errors occur when "U" is read as a zero or as a four. If 4U is misinterpreted as "40" or "44," a patient could receive a tenfold or greater overdose. The U abbreviation can also be mistaken for "cc." Many medication errors involving insulin, heparin, and penicillin have been attributed to this dangerous abbreviation.

For almost 3 decades, the ISMP has campaigned to abandon the use of dangerous abbreviations because of frequent and persistent errors caused by misinterpretation of dangerous dose expressions and abbreviations. And the ISMP isn't alone. In 1996, the first recommendations issued from the National Coordinating Council for Medication Errors Reporting and Prevention recommended avoiding a short list of dangerous abbreviations and dose expressions, including "U."

Under the JCAHO's 2003 National Patient Safety Goals, health care organizations must develop a list of unacceptable abbreviations and symbols that all prescribers must follow. For a table of abbreviations and dose expressions most often associated with misinterpretation and patient harm (as reported to the USP [United States Pharmacopeia]-ISMP Medication Errors Reporting Program), go to the ISMP Web site, **http://www.ismp.org/msaarticles/specialissuetable.html**.

Pearl
Always spell out the word *unit*; it has no acceptable abbreviation. If clinicians use the abbreviation at your facility, work with an interdisciplinary team to remove it (and all other dangerous abbreviations and dose expressions) from *all* communication formats, including computer-generated labels, MARs, labels for drug storage bins or shelves, preprinted orders and protocols, and pharmacy and prescriber computer order entry screens. Also participate in staff-development initiatives to educate staff about dangerous abbreviations. Posters placed in areas where medication orders are written can be an effective reminder for everyone. Without consistency by all clinicians across all forms of communication, the risk of misinterpretation will persist.

13. When administering "high-alert" drugs (for example, opiates, concentrated electrolytes, anticoagulants, heparin, or insulin), I have another practitioner independently double-check my calculations.

Always: 58% **Sometimes: 37%** **Never: 5%**

An independent check of another's work is a system redundancy that can reduce errors. Two people working independently are less likely to make the same mistake. Although taking this step with every drug is impractical, routine double-checking is important for high-risk drugs, such as chemotherapy agents.

To conduct an independent double check, you and a colleague should separately calculate the dose and then compare your answers. Don't perform the calculation together or share your answer with your col-

league before she's completed her calculation. People can be swayed by the opinions of others, especially if one person has more authority or experience.

Pearl
Ask for an independent double check of doses and pump settings for high-alert drugs before you give them. Always implement an independent double check for:
- I.V. infusions of insulin, heparin, and opioids
- I.V. infusions for infants and children
- epidural and spinal infusions
- thrombolytics
- chemotherapy
- blood products
- concentrated electrolytes.

14. I use a parenteral syringe (without a needle) to administer oral liquid medications.

Always: 10% **Sometimes: 67%** **Never: 23%**

Only 23% of respondents said they never use a parenteral syringe to give oral medications; 10% of respondents say they always do so. Drawing an oral medication into a parenteral syringe is a dangerous practice. The ISMP has received reports of many errors, some fatal, caused when someone drew up an oral liquid medication into a parenteral syringe and then gave the medication through an I.V. line.

Oral syringes are specially designed to be incompatible with I.V. ports and needles to prevent this kind of mistake, but many nurses are unaware of this.

Pearl
Use only oral syringes—*never* parenteral syringes—to administer oral liquid medications. If your facility doesn't stock oral syringes, ask the pharmacy or materials manager to obtain them.

Remove and properly dispose of an oral syringe's plastic cap before giving the medication; syringe caps can be inadvertently injected into the airway, obstructing it.

15. If a dose of a patient's medication is missing from his bin when needed, I "borrow" the drug from another patient's bin or automated dispensing machine or get the drug from another location.

Always: 10% **Sometimes: 61%** **Never: 29%**

Seventy-one percent of respondents say they sometimes or always "borrow" medications or otherwise obtain them outside the control of pharmacy. When a nurse takes this shortcut, she bypasses the double-check system afforded by having a pharmacist and nurse each review the order and what was dispensed. A medication may be "missing" for a good reason; for example, because the pharmacist needs to clarify the dosage with the prescriber, because an automatic stop order has taken effect, or because another nurse already gave it but failed to document it on the MAR.

Pearl
If a medication is "missing," contact the pharmacist to find out why. This is another system redundancy that can prevent a medication error from reaching the patient.

16. Before I administer any new medication, I check for allergies by asking the patient and checking his chart, ID bracelet, or MAR.

Always: 70% **Sometimes: 28%** **Never: 2%**

Clinicians can't give drugs safely without checking essential patient information, including the patient's allergy history, at every stage of the medication-use process: prescribing, dispensing, and administering.

Checking a patient's allergy history must be part of your routine. This becomes particularly important in settings such as the emergency department, where medications may be administered without the benefit of pharmacy oversight. Your review of a patient's allergy history may be all that saves him from receiving a drug that's dangerous for him.

Pearl
Verify a patient's allergy information before administering any new drug—no exceptions. Don't assume that the prescriber has already checked. Remember: System redundancies like this help catch errors before they reach the patient.

17. Before administering any medication, I confirm my patient's identity by checking the ID bracelet.

Always: 57% **Sometimes: 40%** **Never: 3%**

Forty-three percent of respondents say they don't always check the ID bracelet before giving a medication. Nurses who come to know their patients well during a shift may feel they can safely take this shortcut, but this is a risky attitude. Distractions and interruptions cause many errors in patient identification, and the risk of misidentification is greater if you're caring for two patients in the same room.

Grading survey responses

The 775 participants responding to the survey earned an overall average mean score of 12, which is 48% of questions answered "correctly." (Not all participants responded to every question.) For purposes of this survey, 70% was considered a passing score. Not a single respondent to this survey received a passing score. Here's how the scores break down according to years of experience, education, work setting, and clinical area.

Respondent characteristics	Mean score	Percentage correct
Years of experience N=766		
< 1 year (7%)	12	48%
1-5 years (15%)	10	40%
6-10 years (32%)	11	44%
16+ years (45%)	13	52%
Education N=772		
Student (3%)	13	52%
LPN/LVN (15%)	11	44%
RN Diploma (10%)	12	48%
AD (26%)	11	44%
BSN/BS (33%)	12	48%
MSN/MS (10%)	13	52%
PhD/doctorate (1%)	11	44%
Work setting N=748		
Hospital (74%)	12	48%
Home health (2%)	12	48%
Long-term care (9%)	12	48%
Outpatient (8%)	13	52%
Office (2%)	13	52%
Clinical area N=709		
Medical/surgical (28%)	11	44%
Emergency (8%)	12	48%
ICU/CCU (16%)	11	44%
Postoperative (6%)	12	48%
Oncology (2%)	13	52%
Orthopedics (1%)	12	48%
Geriatrics (9%)	12	48%
Pediatrics (4%)	12	48%
Rehabilitation (4%)	13	52%

Note: *Others* not included. Percentages were based on 25 answers to 21 questions. (Some questions required more than one response.) Mean scores were rounded up or down to the next whole number.

Utilizing at least two patient identifiers (such as the patient's name, birth date, assigned ID number, social security number, or address) is a simple way of ensuring that the right drug is administered to the right patient.

Usually, several pieces of distinct patient identification are printed on the ID bracelet. Some facilities have technology that lets nurses scan the medication, patient ID bracelet, and nurse ID badge to verify that the medication is correct and appropriate for her. But even with this safeguard, you should ask the patient to identify herself if she's alert and able to respond to questions.

Pearl

Always identify the patient using at least two unique patient identifiers (for example, the patient's name and her assigned ID number) before administering medications.

Improving the accuracy of patient identification is one of the JCAHO's 2003 National Patient Safety Goals, and health care organizations seeking accreditation must demonstrate compliance with the "two patient identifiers" rule.

18. I take the MAR into the patient's room when I administer medications.

Always: 27% **Sometimes: 31%** **Never: 41%**

As we'll discuss shortly (see question 20), the best time to document medication administration is during the process or immediately after. Taking the MAR into the patient's room during medication administration lets you do this (as does bedside bar code scanning). Having the MAR in hand also lets you double-check the medication and order at the point of care.

Pearl

Besides giving you a handy reference to the patient's medication and allergy history, taking the MAR into the patient's room supports timely documentation and adds an extra layer of safety.

19. I remove the medication from its unit-dose package before I enter the patient's room.

Always: 28% **Sometimes: 43%** **Never: 30%**

Once a medication has been removed from its packaging, it's hard to identify and can be easily confused with another one. In a bar code system, the unwrapped drug can't be scanned.

The risk of a mix-up increases if you're interrupted

during the administration process. Having lost its identity, the unpackaged drug can't be returned to the pharmacy if the drug order changes or if the medication isn't given for some reason.

Pearl
Take the medication to the patient's bedside in its original packaging and open the packaging immediately before giving the dose.

20. I document the administration of medications on the MAR:

• before administration.

Always: 11% **Sometimes: 34%** **Never: 55%**

• during administration.

Always: 6% **Sometimes: 37%** **Never: 57%**

• following administration.

Always: 62% **Sometimes: 34%** **Never: 5%**

Record drug administration on the MAR during or immediately after giving the dose—never before. Some 45% of respondents say they document medication administration *before* giving the dose some of the time or always. This faulty practice invites errors. Suppose, for example, you document a dose you're about to give, then are called away before giving it. The nurse covering your patient would naturally assume that you'd given the medication, and the patient would miss an ordered dose.

The best practice is to document *during* drug administration, but only 6% of respondents say they always do this. Most (62%) say they "always" document following medication administration. Although this is preferable to documenting beforehand, documenting later can lead to a double-dosing error. If you give a medication and are called away before you document it, the nurse covering your patient will assume the dose wasn't given (not documented, not done!) and may give the patient a repeat dose.

Pearl
Take the MAR into the patient's room and document medication administration *immediately* after giving the dose.

21. Concentrated electrolyte solutions (for example, potassium, magnesium, or sodium chloride above 0.9%) are stored in my nursing unit.

True: 33% **False: 67%**

Concentrated electrolyte solutions, such as 23.4% sodium chloride and potassium chloride concentrated injection, are among drugs identified as high-alert medications because they have a higher risk of causing injury when incorrectly administered. Although errors aren't necessarily more common with these medications, making a mistake with them may be fatal. Storing them with unit stock increases the risk of a life-threatening mix-up.

Pearl
Removing concentrated electrolyte solutions from clinical areas reduces the risk of injuries associated with inadvertent I.V. administration of these high-alert drugs. This is also one of the JCAHO's 2003 National Patient Safety Goals.

Passing out the grades

This was a survey, not a test. But each question or statement has a best-practice answer that can be considered "correct." If we consider a passing score to be selecting 70% of the best-practice answers, these are the results.

- No participant achieved a passing score.
- The overall average score was 12 correct answers out of a possible 25, for a score of 48%.
- Students and those with an MSN/MS scored the highest across educational groups (52%).
- In terms of experience, those with more experience achieved the highest score (52%).
- In terms of work settings, the highest score, 52%, was achieved by those working in outpatient/clinic and office settings.
- Oncology and rehabilitation participants had the highest score among the clinical areas (52%).

For more on how respondents scored, see *Grading Survey Responses.*

Keeping things in perspective

Limitations to the survey may have affected the participants' responses. First, the number responding is small and participants were self-selected, rather than being randomly chosen to participate. In addition, nurses work under widely varying conditions, which affects how they practice. Factors affecting practice include facility regulatory controls, work setting policies and procedures, and the chain of command (for example, who's responsible for initiating an incident report or for speaking with the patient about an error). Certain health care professionals who are

influential in one setting may be absent in others; for example, pharmacists and physicians are generally less involved with home health care patients than with hospitalized patients. These factors influenced responses to many questions, especially those involving incident reports.

Finally, the survey didn't identify respondents' professional practice role, such as staff nurse, nurse-manager, educator, or advanced practitioner. Did those working in education or management roles respond according to what they *would do* today if they were to resume administering medication, or were they reporting what they *did do* when they worked in a staff position?

Safety first

Reducing medication errors requires the commitment of everyone with a stake in keeping patients safe. Use information in this survey to assess risks at your facility and take an active role in correcting flaws in the process that contribute to medication errors. N

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This article and more details about survey findings are available on the Web at **http://www.nursing2003.com** (click "Resources and Surveys").

SELECTED WEB SITES

Institute for Safe Medication Practices
http://www.ismp.org

National Patient Safety Foundation
http://www.npsf.org

Last accessed on August 4, 2003.

CE Test

Getting to the root of medication errors: Survey results

Instructions:

- Read the article beginning on page 36.
- Take the test, recording your answers in the test answers section (Section B) of the CE enrollment form. Each question has only one correct answer.
- Complete registration information (Section A) and course evaluation (Section C).
- Mail completed test with registration fee to: Lippincott Williams & Wilkins, CE Dept., 16th Floor, 345 Hudson St., New York, NY 10014.
- Within 3 to 4 weeks after your CE enrollment form is received, you will be notified of your test results.
- If you pass, you will receive a certificate of earned contact hours and an answer key. If you fail, you have the option of taking the test again at no additional cost.
- A passing score for this test is 12 correct answers.
- Need CE STAT? Visit **http://www.nursingcenter.com** for immediate results, other CE activities, and your personalized CE planner tool.
- No Internet access? Call 1-800-933-6525, ext. 331 or ext. 332, for other rush service options.
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Registration Deadline: September 30, 2005

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CE 2.0 ANCC/AACN CONTACT HOURS

RX 2.0 ANCC PHARM. CONTACT HOURS

Getting to the root of medication errors: Survey results

GENERAL PURPOSE To provide a learning opportunity that enhances a participant's understanding of the causes of medication errors. **LEARNING OBJECTIVES** After reading the preceding article and taking this test, you should be able to: **1.** Identify ways to prevent medication errors. **2.** Indicate nursing responsibilities associated with addressing medication errors. **3.** Identify technical advancements that can help deter medication errors.

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1. About what percent of medication errors are reported?
a. 75%
b. 25%
c. 5%
d. 1%

2. Error analysis should focus on
a. the task of administering medication.
b. disciplinary action.
c. who made the error.
d. how the system allowed the error to reach the patient.

3. Which statement about the "five rights" of medication administration is correct?
a. Use of the five rights is limited to the acute care setting.
b. Applying the five rights virtually eliminates all medication errors.
c. External forces can create barriers that result in errors even when the five rights are applied.
d. The five rights are no longer considered a fundamental safeguard against medication errors.

4. The technologic advancement that best assists in error prevention is
a. standard, preprinted order forms.
b. oral syringes compatible with I.V. tubing.
c. "smart pumps."
d. active engineering controls that eliminate the need for needles.

5. Errors may be underreported unless they're viewed as
a. an issue of competency.
b. a human failure.
c. a system failure.
d. an ethical dilemma.

6. When a nurse makes an error, it's a sign that
a. a safety problem exists.
b. she's doing a bad job.
c. she's chemically impaired.
d. her competence level should be evaluated.

7. Technologic advancements may improve safety and
a. decrease the amount of time spent by nurses administering medications.
b. increase the amount of time spent by nurses administering medications.
c. decrease the number of nurses needed to provide care.
d. increase the time spent to document appropriate information.

8. Which organization has issued a proposal that would require the pharmaceutical industry to bar code all drugs?
a. Food and Drug Administration
b. American Nurses Association
c. American Medical Association
d. JCAHO

9. Which group was most likely to report an error made by a physician or pharmacist?
a. nurses working in acute care
b. student nurses
c. nurses with 1 to 5 years' experience
d. nurses working in a practitioner's office

10. The best person to report an error is
a. the person who discovered or witnessed it.
b. the nurse-manager.
c. the pharmacist.
d. the attending physician.

11. According to this survey, nurses were least likely to report a medication error made by a
a. pharmacist.
b. nurse.
c. respiratory therapist.
d. physician.

12. The value of reporting medication errors is to view it as
a. a peer evaluation system.
b. an opportunity to rectify the system.
c. a JCAHO requirement.
d. a reflection of professional competency.

13. Which of the following is the best way to transcribe an order for insulin?
a. 24 U NPH insulin
b. 24 units NPH insulin
c. 24 "U" NPH insulin
d. NPH insulin 24 u

14. When medications are missing at the time for administration, you should immediately
a. call the pharmacy to find out why.
b. borrow from another patient's unit-dose cassette.
c. borrow from floor stock.
d. write up an incident report.

15. Components of a disclosure policy include all of the following except
a. who's responsible for informing the patient or family members.
b. what information should be shared.
c. who else should be informed about the error.
d. when to communicate the error to the insurance carrier.

16. According to survey participants, one of the top five reasons for medication errors is
a. similar drug names and packaging.
b. technologic advances.
c. increased complexity of patients.
d. unclear policies and procedures.

17. In which area did most survey participants work?
a. medical/surgical units
b. intensive care units
c. long-term-care facilities
d. home health care agencies

ENROLLMENT FORM *Nursing2003,* September, Getting to the root of medication errors: Survey results

A. Registration Information:

Last name _____ First name _____ MI ___

Address _____

City _____ State _____ ZIP _____

Telephone _____ Fax _____ E-mail _____

Registration Deadline: September 30, 2005
Contact hours: 2.0 Pharmacology hours: 2.0 Fee: $13.95

❑ LPN ❑ RN ❑ CNS ❑ NP ❑ CRNA ❑ CNM ❑ other _____

Job title _____ Specialty _____

Type of facility _____ Are you certified? ❑ Yes ❑ No

Certified by _____

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	a	b	c	d
1.	❍	❍	❍	❍
2.	❍	❍	❍	❍
3.	❍	❍	❍	❍
4.	❍	❍	❍	❍
5.	❍	❍	❍	❍
6.	❍	❍	❍	❍
7.	❍	❍	❍	❍
8.	❍	❍	❍	❍
9.	❍	❍	❍	❍
10.	❍	❍	❍	❍
11.	❍	❍	❍	❍
12.	❍	❍	❍	❍
13.	❍	❍	❍	❍
14.	❍	❍	❍	❍
15.	❍	❍	❍	❍
16.	❍	❍	❍	❍
17.	❍	❍	❍	❍

C. Course Evaluation*

1. Did this CE activity's learning objectives relate to its general purpose? ❑ Yes ❑ No
2. Was the journal home study format an effective way to present the material? ❑ Yes ❑ No
3. Was the content relevant to your nursing practice? ❑ Yes ❑ No
4. How long did it take you to complete this CE activity?___ hours___minutes
5. Suggestion for future topics _____

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