Unreported Errors in the Intensive Care Unit

A Case Study of the Way We Work

Elizabeth A. Henneman, RN, PhD, CCNS

edical errors are common in intensive care units (ICUs).[1-4] Despite the proliferation of safety- and error-reporting systems, a gap in understanding persists between errors and the latent conditions that allow errors to develop.[5]

A significant challenge in identifying and analyzing errors is the customary way that they are reported. Errors have traditionally been categorized by using classification systems based on commonly performed tasks and the individuals involved, systems that inadvertently emphasize human error.[6] It is now widely recognized that advances in patient safety will require a much broader approach that includes the recognition and reporting of the system failures that result in both actual and potential adverse events.[5] In particular, the failure to acknowledge and report system problems,

such as communication failures, is a concern because this type of failure is thought to account for the overwhelming majority of errors that occur in hospitals and ICUs.[5,7-10]

The study of medical errors is challenging because of the complex and dynamic nature of the health-care environment,[11] particularly ICUs. Insight into medical errors requires diverse methodological approaches that "can take into account the social, subjective, and contextual underpinnings" of events.[11(p5)]

The purpose of this case study is to discuss the failure to report medical errors by an experienced nurse clinician who is also a nurse educator and patient safety researcher. The goal of this report is to lend insight into some of the social and contextual factors that influence both the occurrence and underreporting of medical errors. The following

* This article has been designated for CE credit. A closed-book, multiple-choice examination follows this article, which tests your knowledge of the following objectives:

1. Identify the challenges of reporting medical errors

2. Discuss strategies to improve error reporting

3. Incorporate system reporting strategies into own clinical practice

Author

Elizabeth A. Henneman is an assistant professor in the school of nursing at the University of Massachusetts, Amherst.

Corresponding author: Elizabeth A. Henneman, School of Nursing, 234 Arnold House, University of Massachusetts, Amherst, MA 01003 (e-mail: Bethann953@aol.com).

To purchase electronic or print reprints, contact The InnoVision Group, 101 Columbia, Aliso Viejo, CA 92656. Phone, (800) 809-2273 or (949) 362-2050 (ext 532); fax, (949) 362-2049; e-mail, reprints@aacn.org.

Table Errors identified in the case studies: traditional versus system classification

Error	Traditional classification	System classification
1. Vial of dolasetron mesylate delivered with heparin vials	Medication error	Dispensing problem
2. Heparin infusion not ordered	Medication error Human knowledge error	Communication failure (lack of clinical information system alert to provider of need for infusion as well as boluses)
3. Failure of resident physician to attend to nurse's concern about heparin infusion	Not applicable	Communication/collaboration failure
4. Failure of nurse to call attending physician about patient's deteriorating respiratory status	Not applicable	Communication/collaboration failure
5. Inaccurate information presented on rounds	Not applicable	Communication/collaboration failure
6. Resident unaware of patient's status (continued atrial fibrillation, lack of digoxin)	Medication error	Communication/collaboration failure (nurse-nurse, nurse-physician, physician-physician) Hand-off error Possible error in computerized order entry by provider
7. Failure of nurse during rounds to interrupt and report that patient was not given digoxin	Medication error	Communication/collaboration failure
8. Digoxin order missing in computer	Medication error	Communication failure Possible scheduling issue related to computerized order entry and medication administration record

scenarios involve 2 patients under the care of a single critical care nurse during a 12-hour shift. Only 1 of 8 errors (see Table) was reported on the hospital's safety-report form.

Patient 1 (Mr L) was a 45-year-old man admitted to the ICU after sustaining a traumatic head injury during a basketball game. He had an artificial mitral valve for which he had received warfarin for anticoagulant therapy before admission.

Once Mr L's head injury was considered stable and bleeding was no longer a concern, heparin therapy was initiated. The ICU uses a heparin protocol that calls for an initial bolus of heparin followed by a continuous infusion. The heparin to be administered as a bolus was sent by the pharmacy to the patient's room in single-dose vials of 5000 U/mL. A small ziplock bag was delivered by the pharmacy technician with 9 vials of identical size: 8 vials of heparin and 1 vial of dolasetron mesylate (Anzemet). The dolasetron mesylate,

which was apparently put in the bag by mistake (error 1), had not been ordered for that patient.

The resident caring for Mr L had placed the order in the computer for a heparin bolus, along with orders to check the partial thromboplastin time every 6 hours and to adjust the heparin infusion per protocol. However, no order was placed for the dose of heparin that was to be administered by continuous infusion (error 2). Because the heparin protocol is a widely used, standardized, and evidence-based practice across a variety of settings, the nurse considered the failure to enter the infusion order simply an oversight, so she paged the resident to notify him of the omission.

When the resident arrived in the unit several minutes later, she informed him again of the omission of the infusion hourly dose. The resident responded that he had not intended to order a continuous infusion of heparin. The nurse asked

why, and the resident responded that he just did not want to use an infusion, only boluses. Thinking that maybe the resident had misunderstood, the nurse asked him if he had intended to use the heparin protocol and he said yes. She explained that the protocol dictated giving an initial bolus of heparin, initiating an infusion, checking the partial thromboplastin time every 6 hours, and adjusting the infusion on the basis of the results. The resident reiterated that he did not want a continuous infusion, only boluses (error 3). The nurse then explained that the half-life of heparin was about 50 minutes, so checking the partial thromboplastin time was unnecessary if the patient was given only a heparin bolus every 6 hours. The resident insisted that he did not want a continuous infusion. The nurse then advised him to discuss the issue with another, more experienced resident or the attending physician and get

back to her with the decision about the plan for heparin. After checking with a colleague, the resident returned to the unit, thanked the nurse for her help, and placed an order for a heparin infusion.

Later in the day, the same resident and the nurse discussed the heparin order incident. The nurse told him that her major concern was how persistent she had to be to convince him to check his plan about the heparin. The resident was

the morning from a very concerned and conscientious night nurse. During the night, the patient's condition had deteriorated significantly. His oxygenation was poor (PaO_2, 50 mm Hg) despite treatment with a 100% nonrebreather mask plus 3 L of oxygen. The $PaCO_2$ was within the normal range, but Mr C was working hard to breathe. He had been extremely agitated throughout the night and had received large dosages of sedatives, narcotics, and

and determined that urgent intubation and mechanical ventilation were required to stabilize Mr C's condition. In rounds later that morning, the resident reported that she had mistakenly understood that Mr C was receiving only 3 L of oxygen and had an acceptable PaO_2 (error 5).

In addition to his other medical problems, Mr C had new onset of rapid atrial fibrillation. He was being treated with multiple pharmacological agents, including intravenous diltiazem and amiodarone. Early in the morning, the cardiology fellow assessed Mr C and spoke with the nurse about discontinuing the amiodarone. The fellow planned to confer with Mr C's cardiologist and ICU team about Mr C's plan of care.

Later in the morning, during rounds and with the cardiac surgeon present, the ICU resident going off duty reported on Mr C. The cardiac surgeon asked if the patient had converted to sinus rhythm. The resident stated that the patient had converted to sinus rhythm after receiving digoxin. Mr C had neither converted to sinus rhythm nor received digoxin (error 6).

The nurse informed the team that the patient had not converted to sinus rhythm but that his heart rate was now controlled. She did not alert the team that the patient had not received digoxin, in part because she was not 100% confident she was correct and also because she wondered if she herself had missed the order to administer digoxin (error 7). She also considered the possibility that the cardiology fellow had told her to give the digoxin when he discontinued the amiodarone and she had missed the order or misunderstood the plan.

Acknowledging errors and system issues exposes both the provider's own vulnerability to making errors and the vulnerabilities of caring, well-intentioned clinician colleagues.

very attentive and agreed that the incident was a "lesson learned."

Patient 2 (Mr C) was a 50-year-old man who had a myocardial infarction that led to his involvement in a motor vehicle accident in which he sustained a right-sided hemopneumothorax. Mr C was at high risk of cardiac complications developing because of his preexisting coronary artery disease and previous myocardial infarction. He was awaiting coronary artery bypass graft surgery, but his condition was too unstable after the accident for him to undergo the bypass procedure.

Mr C had been in the ICU for several days and remained in critical condition. Serum markers of cardiac injury (eg, troponin) continued to increase, and adult respiratory distress syndrome appeared to be developing. The day critical care nurse received report on Mr C in

hypnotics to "calm him." His wife was upset and concerned; she had spent the night at his bedside and watched his condition deteriorate.

After receiving the report and assessing the patient, it was obvious to the day nurse that Mr C would require aggressive intervention for his respiratory failure. She asked the night nurse if the attending physician had been called and the night nurse did not know. The night nurse thought that the resident had been available and attentive throughout the night and had assumed that the resident would have called the attending if necessary (error 4).

The day nurse paged the resident, informed her of Mr C's status, and asked the resident to alert the attending physician immediately of the patient's condition. When the attending physician arrived in the unit shortly thereafter, he assessed Mr C

After rounds on Mr C were over, the nurse checked the medication administration record and orders but found no indication that digoxin had been ordered or administered. She then informed the resident that Mr C had not received any digoxin and that the cardiology fellow had told her to discontinue the amiodarone but that she did not remember any order for digoxin. The resident said that she had understood that the cardiology fellow had spoken to another resident about discontinuing the amiodarone and the need to order digoxin. The resident was confident that digoxin had been ordered, but neither she nor the nurse could find an order for digoxin in the computer. An attending physician later suggested to the nurse that a computer glitch might affect when a digoxin order shows up on medication orders, but the nurse could not find any evidence that the order had ever been entered into the computer system (error 8).

Discussion

The errors reported here involved only 2 patients, during a single shift, on a reasonably quiet day in an ICU with a well-deserved reputation for excellence. They represent only the errors that were detected by me, the day critical care nurse in the scenarios, and this singular perspective is a limitation.

These cases occurred in early August, and some resident physicians were new to the hospital and the ICU. My decision to write this case report was not motivated by the occurrence of more errors than usual or of serious errors with adverse events. I was simply struck (days later) by my decision to report only 1 error when, in fact, multiple serious system errors had occurred.

Other errors most likely occurred during this shift, probably committed by me, of which I am unaware. In the following paragraphs, I offer my insight into the errors of which I am aware and reflect on why I did or did not report them.

The Reported Error

The only error reported was a medication-dispensing error. A vial of dolasetron mesylate was included with identical-sized vials of heparin delivered in a small plastic bag to the patient's room. This type of error is typical of many reported errors. Such errors are easy to identify and straightforward to report on hospital safety-report forms.

The Unreported Errors

When the unreported errors occurred, I made no conscious decision to not report them. Not until later, as I reflected on the day and discussed the events with my colleagues, did I realize that I had chosen to report 1 error, but not the others. I began to question why.

After much reflection, I have concluded that the reason for not reporting these errors was not one of the typically suggested reasons (ie, lack of time, fear of blame, failure to recognize the error).[12,13] Rather, I did not think of the incidents as errors when they occurred. I considered them routine problems that normally occur in hectic, complex teaching environments. My failure to recognize these "problems" as system failures is quite significant, because of my interest in patient safety and my awareness of the role that latent errors play in patients'

outcomes. Nonetheless, this experience reinforced for me the complexity of recognizing and reporting errors, as well as the resulting difficulty in identifying system failures.

The unreported errors were all related in some way to system failures, the majority of which are related to organizational and cultural factors that influence how members of a healthcare team communicate and collaborate. Although many of the errors could have been categorized under the traditional heading of "medication related," this categorization would have been insufficient, misleading, and unhelpful for addressing and resolving the underlying problem (see Table). In fact, all of the nonreported errors were in some way related to the system and "the way we work."

Failure of Communication

Many communication failures occurred in these scenarios. They include problems with interactions between nurses and physicians, "hand-off" practices, and patient care rounds. An example of a serious communication failure was the night nurse's failure to contact the attending physician herself or insist that the resident do so to notify him of the patient's deteriorating condition. The night nurse seemed reassured by the resident's "presence" in this case, despite the nurse's concern about the patient's deteriorating condition and the patient's lack of response to the treatment plan. Given the nurse's serious concerns, she probably should have called the attending physician herself. That said, the nurse was probably trying to follow the "chain of command" and also not upset the resident by

showing a lack of confidence in the resident's judgment.

Issues related to communication, collaboration, and relationships in a culture as hierarchical yet interdependent as healthcare are complex. Communication failures that occur in such a culture can lead to serious medical errors and adverse events.[3] An important defense against error and adverse events in settings such as ICUs is the presence of clinical experts who are able to recognize the development of dangerous situations and stop the situation before harm occurs. A novice nurse's or resident's access to the support and expertise of senior clinicians can play an important role in patients' safety.[14]

The communication failures presented in case 2 suggest the lack of standardized, effective methods of hand-off practices, which are critical to providing safe care of patients.[15,16] Multiple providers verbally communicated updates on patients and the patients' plans of care to other team members in an uncoordinated fashion. Although I am an experienced nurse, I still took a verbal order from the cardiology fellow to discontinue a medication despite knowing the inherent safety dangers associated with this practice and the unit's policy of not accepting verbal orders except in an emergency. The fellow may also have given me a verbal order to administer digoxin. I recall that he said he would check with his attending and the ICU team about the plan. The hand-off issue was complicated in this case by the multiple providers managing the patient's care. No process was in place whereby a final plan was "verified" by the team responsible for the patient's care.

Other hand-off errors became evident during rounds. The resident's report clearly did not include a complete, accurate, or updated account of the patient's condition. Although this incomplete account was related to the patient's rapidly changing condition, the resident did not get an update from the nurse before or during rounds.

Failure of Collaboration

Serious failures of collaboration occurred in these cases. It is somewhat difficult to conceive of a novice resident physician ignoring the repeated concerns of an experienced ICU nurse, yet this is what happened in case 1. One can only imagine the consequences to a patient assigned to a less experienced or less confident nurse who does not pursue a critical safety issue.

Collaboration between nurses and physicians remains a challenge in the current workplace. Although research supports the benefits of shared decision making,[17-19] the reality of the workplace continues to create challenges to collaborative practice. For example, collaboration requires antecedent variables of trust and respect.[20] Teaching hospitals present unique challenges to the development of trust and respect as a result of a constant influx of new learners. In these settings, unit leaders play a critical role in establishing cultural norms, including the expectation of respectful relationships between nurses and physicians.[20,21]

Some communication failures in the cases described here were exacerbated by a lack of collaboration in care planning. For example, if the cardiology fellow had discussed the care plan with the team, including

the nurse and the resident, many hand-off and other communication issues might not have occurred.

Strategies for Improved Error Reporting

This experience enlightened me about the need to consider and report all errors, especially those considered so commonplace in hospitals that healthcare providers may not recognize or even consider them as errors. For example, errors of omission or treatment delay may not be considered errors at all, because they are not typically reported, even in research studies.

Effective strategies for reporting system failures will most likely require more innovative approaches than traditional safety-reporting forms.[22] System issues may simply be too complex or difficult to describe on a piece of paper or a computerized form. Qualitative methods of inquiry, such as focus groups and interviews, may be more effective in identifying system issues.[11,23] Routine hand-off processes, such as morning rounds and nursing change-of-shift reports, offer unique opportunities to identify, interrupt, and correct medical errors in real time.[24,25]

Another strategy for detecting errors in the ICU may be to involve persons outside the specialty area and outside healthcare staff to help identify problem-prone areas. As was evident in these cases, long-term exposure to a way of working may impair a clinician's or an administrator's ability to recognize errors. Involving new employees in identifying error-prone situations is another strategy for recognizing potentially dangerous situations and ways of working.

The identification of system failures that affect patients' safety is not simple. Healthcare providers may hesitate to overreact to human or system errors, for many reasons. Acknowledging errors and system issues exposes both the provider's own vulnerability to making errors and the vulnerabilities of caring, well-intentioned clinician colleagues. Another concern is that exposure of system failures may be erroneously interpreted to suggest carelessness on the part of unit leaders and administrators.

In addition, the most experienced clinicians, administrators, and researchers may be the least able to identify system failures because they have become accustomed to the healthcare culture and its flawed processes. The result is a continued focus on less complex, more easily remedied human errors. The most glaring system issues may remain undetected and underreported and hence continue to endanger patients.

Conclusion

Many errors occur in ICUs. Despite marked efforts, experts suggest that patient safety has not substantially improved.[26] Efforts to improve safety have been hindered, in part, by the difficulty in recognizing and reporting events that routinely occur in complex and dynamic environments such as ICUs. Despite my expertise in critical care and patient safety, I failed to report serious errors. This failure was not due to the usually suspected reasons such as time pressures or fear of punishment. I realize now that I had become so accustomed to the system failures that I stopped recognizing them as such.

Significant improvements in patient safety demand that clinicians direct their attention away from traditional classification systems that emphasize human error and recognize the system failures that contribute to patients' morbidity and mortality. Critical care clinicians, particularly nurses, are well positioned to detect system failures and to help develop and test strategies to reduce medical error.[2,27,28] The time has come to acknowledge and report the system failures that nurses have learned to "work around." Because these failures are more challenging to identify, they will most certainly require more diverse and innovative reporting methods. Nonetheless, without a commitment to identifying, reporting, and correcting system failures, patients' safety will continue to be jeopardized.

References
1. Rothschild JM, Landrigan CP, Cronin JW, et al. The Critical Care Safety Study: the incidence and nature of adverse events and serious medical errors in intensive care. Crit Care Med. 2005;33(8):1694-1700.
2. Rothschild JM, Hurley AC, Landrigan CP, et al. Recovery from medical errors: the critical care nursing safety net. Jt Comm J Qual Patient Saf. 2006;32(2):63-72.
3. Donchin Y, Gopher D, Olin M, et al. A look into the nature and causes of human errors in the intensive care unit. Crit Care Med. 1995;23:294-300.
4. Bracco D, Favre JB, Bissonnette B, et al. Human errors in a multidisciplinary intensive care unit: a one-year study. Intensive Care Med. 2001;27:137-145.
5. Aspden P, Corrigan JM, Wolcott J, Erickson SM, eds. Patient Safety: Achieving a New Standard for Care. Washington, DC: National Academies Press; 2004.
6. Henneman EA, Blank FSJ, Gattasso S, Williamson K, Henneman PL. Testing a classification model for emergency department errors. J Adv Nurs. 2006;55:90-99.
7. Kohn LT, Corrigan JM, Donaldson MD, eds. To Err Is Human: Building a Safer Health System. Washington, DC: National Academies Press; 2000.
8. Leape LL, Bates DW, Cullen DJ, et al. System analysis of adverse drug events. ADE Prevention Study Group. JAMA. 1995;274(1):35-43.
9. Committee on Quality of Healthcare in America, Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press; 2001.
10. Joint Commission. National patient safety goals. http://www.jointcommission.org/PatientSafety/NationalPatientSafetyGoals. Accessed May 17, 2007.
11. Hoff TJ, Sutcliffe KM. Studying patient safety in organizations: accentuate the qualitative. Jt Comm J Qual Patient Saf. 2006;32:5-15.
12. Leape LL. Reporting of adverse events. N Engl J Med. 2002;347:1633-1638.
13. Cullen DJ, Bates DW, Small SD, Cooper JB, Nemeskal AR, Leape LL. The incident reporting system does not detect adverse drug events: a problem for quality improvement. Jt Comm J Qual Improv. 1995;21:541-548.
14. Henneman EA. Commentary: on the other hand. Agency for Healthcare Research and Quality. Morbidity and Mortality Rounds on the Web. http://www.webmm.ahrq.gov/case.aspx?caseID=151. Accessed July 13, 2007.
15. Solet DS, Norvell JM, Rutan GH, Frankel RM. Lost in translation: challenges and opportunities in physician-to-physician communication during patient handoffs. Acad Med. 2005;80(12):1094-1099.
16. Patterson ES, Roth EM, Woods DD, Chow R, Gomes JO. Handoff strategies in settings with high consequences for failure: lessons for health care operations. Int J Qual Health Care. 2004;16(2):125-132.
17. Knaus WA, Draper EA, Wagner DP, Zimmerman JE. An evaluation of outcome from intensive care in major medical centers. Ann Intern Med. 1986;104(3):410-418.
18. Baggs JG, Schmitt MH, Mushlin AI, et al. Association between nurse-physician collaboration and patient outcomes in three intensive care units. Crit Care Med. 1999;27:1991-1998.
19. Baggs JG, Ryan SA, Phelps CE, Richeson JF, Johnson JE. The association between interdisciplinary collaboration and patient outcomes in medical intensive care. Heart Lung. 1992;21:18-24.
20. Henneman EA, Lee JL, Cohen JI. Collaboration: a concept analysis. J Adv Nurs. 1995;21:103-109.
21. Sexon JB, Thomas EJ, Pronovost P. The context of care and the patient care team: the Safety Attitudes Questionnaire. In: Reid PP, Compton WD, Grossman JH, Fanjiang G, eds. Building a Better Delivery System: A New Engineering/Health Care Partnership. Washington, DC: National Academies Press; 2005:119-123.
22. Harris CB, Krauss MJ, Coopersmith CM, et al. Patient safety event reporting in critical care: a study of three intensive care units. Crit Care Med. 2007;35:1068-1076.
23. Shendell-Falik N, Feinson M, Mohr BJ. Enhancing patient safety: improving the patient handoff process through appreciative inquiry. J Nurs Adm. 2007;37(2):95-104.
24. Ursprung R, Gray JE, Edwards WH, et al. Real time patient safety audits: improving safety every day. Qual Saf Health Care.

CE Test Test ID C075: Unreported Errors in the Intensive Care Unit: A Case Study of the Way We Work

Learning objectives: 1. Identify the challenges toof reporting medical errors 2. Discuss strategies to improve error reporting 3. Integrate system reporting strategies into own clinical practice

1. What type of system issue is thought to account for the majority of errors in intensive care units (ICUs)?
a. Near miss events
b. Adverse drug reactions
c. Communication failures
d. Transcription errors

2. Which of the following can be contributing factors to errors?
a. New resident physicians unfamiliar with the hospital and/or ICU
b. Mixing same size vials of different medication in same container
c. Lack of standardized, effective hand-off methods
d. All of the above

3. Which of the following are considered typical reasons for not reporting medical errors?
a. Lack of time
b. Fear of blame
c. Failure to recognize the error
d. All of the above

4. Which of the following is an important defense against error and adverse events?
a. Presence of clinical experts
b. Senior clinicians who support novice nurses and resident physicians
c. A policy of not accepting verbal orders except under emergency situations
d. All of the above

5. How can hand-off communication processes be made less complicated?
a. Team members responsible for the patient should verify the plan of care
b. Team members responsible for the patient should give a written report at change of shift
c. Team members responsible for the patient should give a taped report at change of shift
d. Multiple providers should manage the patient and verbally communicate updates on the patient and plan of care

6. Which of the following are challenges to developing trust and resp in the ICU?
a. Cultural norms
b. Turnover rate of staff and residents
c. Respectful relationships between members of the healthcare team
d. Discussion of the plan of care in rounds

7. Why would experienced clinicians have difficulty identifying syst failures or errors?
a. They consider themselves expert caregivers
b. They do not have the time to pay attention to potential system failures
c. They have become accustomed to the system failures
d. They feel that there are no system failures in their ICU or organization

8. Improvements in patient safety will require which of the following
a. An increased focus on identifying and reporting human error
b. Recognizing the system failures that contribute to poor patient outcomes
c. Learning to "work around" system failures
d. All of the above

9. Which of the following may cause healthcare providers to hesitate t overreact to errors?
a. Provider vulnerability
b. Lack of trust among nurses and other providers
c. Effective hand-off reporting
d. Adequate scheduling and staffing

10. A vial of dolasetron mesylate delivered with heparin vials is an example of what system classification error?
a. Communication failure
b. Collaboration failure
c. Dispensing problems
d. Hand-off communication failure

11. A resident unaware of the patient's deteriorating system is an example of what system classification error?
a. Error in computerized order entry
b. Communication/collaboration failure
c. Schedule issues
d. Deviation from cultural norms

Test answers: Mark only one box for your answer to each question. You may photocopy this form.

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
☐a	☐a	☐a	☐a	☐a	☐a	☐a	☐a	☐a	☐a	☐a
☐b	☐b	☐b	☐b	☐b	☐b	☐b	☐b	☐b	☐b	☐b
☐c	☐c	☐c	☐c	☐c	☐c	☐c	☐c	☐c	☐c	☐c
☐d	☐d	☐d	☐d	☐d	☐d	☐d	☐d	☐d	☐d	☐d

AMERICAN ASSOCIATION of CRITICAL-CARE NURSES

Mail this entire page to:
AACN
101 Columbia
Aliso Viejo, CA 92656
(800) 899-2226

Program evaluation

	Yes	No
Objective 1 was met	☐	☐
Objective 2 was met	☐	☐
Objective 3 was met	☐	☐
Content was relevant to my nursing practice	☐	☐
My expectations were met	☐	☐
This method of CE is effective for this content	☐	☐

The level of difficulty of this test was:
☐ easy ☐ medium ☐ difficult
To complete this program, it took me _____ hours/minutes.

Name _____ Member # _____
Address _____
City _____ State ____ ZIP _____
Country _____ Phone _____
E-mail _____
RN Lic. 1/St _____ RN Lic. 2/St _____
Payment by: ☐ Visa ☐ M/C ☐ AMEX ☐ Discover ☐ Check
Card # _____ Expiration Date ____
Signature _____