

Risk Management: Patient Safety and Patient-Centered Care

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📁 Nursing

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Objectives

1. Describe the different levels of medical errors that can occur.
2. Define ways in which the number of medical errors can be reduced.
3. Discuss how errors should be handled with respect to the patient and family members.
4. Explain how patient-centered care can improve the overall healthcare system and reduce costs.

Article

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Author: Colleen Symanski-Sanders, RN, Forensic Nurse Specialist

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Introduction

Imagine a society where medical errors cause more deaths annually than breast cancer, AIDS, or motor vehicle accidents. In this society, medication errors accounted for 1 out of 131 outpatient deaths and 1 out of 854 inpatient deaths costing hospitals nearly \$2 billion annually. Chemotherapeutic agents, immunosuppressants, anticoagulants, and digitalis compounds were the most frequent causes of adverse drug events. Additionally, 41 million uninsured people had worse clinical outcomes than the insured. This society was identified as the United States in 1999 by the Institute of Medicine (IOM) when they released their report, *To Err is Human*, citing that preventable health care errors is a serious concern and that a reduction in medical errors must be a priority in the United States.

This article encapsulated current opinion on initiatives and best practice patterns to follow in order to reduce risk of injury to patients and create a patient-centered healthcare environment. These best practice patterns were developed by healthcare professionals from Harvard teaching hospitals, the School of Public Health, and the Risk Management Foundation, and then was shared in 2005 with working groups in an effort to develop a national consensus. In March of 2006, "*When Things Go Wrong: Responding to Adverse Events, A Consensus Statement of the Harvard Hospitals*" was released and was to be shared on a national level by healthcare professionals and clinicians. Two principal approaches were identified, which were: medical care must be safe and it must be patient-centered.

Case Scenarios

Two case scenarios are presented below for review. After reading both of them, answer the following questions before you continue reading this article. The answers with explanations will be discussed at the end of this article.

1. What type of error occurred, if any:
 - A. serious error,
 - B. minor error,
 - C. near miss,

- D. preventable adverse event, or
- E. no error

2. Negligence (if present) could be based on which of the following reasons:

- A. Failure to observe and communicate changes in the patient's condition.
- B. Failure to provide for patient safety.
- C. Failure to properly assess the patient.
- D. Failure to question orders.
- E. Failure to perform a procedure according to proper standards of care.
- F. Failure to properly administer medication.

Case Scenario 1

Mr. Jones, 79 years of age, was admitted to a rehabilitation hospital from an acute care hospital after sustaining a head injury. The admitting nurse conducted a fall risk assessment and documented the need for a bed alarm. The nurse left the patient's room before securing the bed alarm in order to give report to the on-coming shift. Mr. Jones, wanting to go to the bathroom, got out of bed unattended, fell, and was subsequently transferred to the ER for evaluation. The patient required sutures for a head laceration and returned to the rehabilitation hospital

Case Scenario 2

Mrs. Anderson, 31 years of age, was scheduled for surgery in the afternoon. She denied having any allergies to medications. She received an A.M. dose of a cephalosporin antibiotic as prescribed, just as a hospital technician arrived to take the patient for a test. Mrs. Anderson told the nurse and the technician that she was feeling weird, hot, and had itching. No response from the nurse or technician occurred. She repeated that she was not feeling good and was now having trouble breathing. The nurse and the technician quibbled over what to do with Mrs. Anderson, who was now in the hallway en route for the test. Mrs. Anderson then became verbally unresponsive. Fortunately, the patient's physician was on the ward and she was quickly treated and then transferred to the intensive care unit.

Types of Medical Errors

As clinicians, we have all experienced days that are or become extremely hectic. The unscheduled admission, a patient goes "bad" and a code is called, an IV line blows, laboratory testing or procedures become unexpectedly delayed, a physician is on the line wanting to know where the lab results are for a patient, a patient's family is at the nursing station demanding to see the case manager, etc., but the shift eventually ends and all seems to have gone well, until your supervisor calls you into the office a week later because of a medical error.

Research indicates that between 35% and 40% of unexpected hospital deaths occur on medical/surgical units. Regarding care at the bedside, registered nurses play a key role in ensuring the quality of hospital care. The Institute of Medicine (IOM) documented this role in its 2004 report, *Keeping Patients Safe: Transforming the Work Environment for Nurses*. In the report, the IOM links nurses' skill at monitoring patients' health and symptoms to improved clinical outcomes, and suggests that nurse's vigilance is a reliable defense against medical errors. Unfortunately, nurse turnover is believed to be the highest on medical/surgical units and this can compromise the quality of care and increase costs.

The course of action for the medical error depends on its type. A medical error is "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim". An error can result in harm, lead to a future complication, or may have no untoward effect. Errors that are not innocuous are further broken down into the following classification as defined in *A Consensus Statement of the Harvard Hospitals*:

- **Serious Error:** An error that has the potential to cause permanent injury or is transient but potentially life threatening.
- **Minor Error:** An error that does not cause harm or have the potential to do so.
- **Near Miss:** An error that could have caused harm but did not reach the patient because it was intercepted.
- **Preventable adverse event:** An injury (or complication) that results from an error or system failure. Even if one agrees that individual errors are often the end result of system failures, they are still perceived by patients and caregivers as very personal events. It is useful to distinguish three categories:

Type 1: Error by the attending physician.

- *Example: technical error during performance of a procedure*

Type 2: Error by anyone else in the healthcare team

- *Examples: a nurse gives the wrong dosage of a medication; a resident orders the wrong test; a radiologist misses a lesion.*

Type 3: System failure with no individual error.

- *Examples: IV pump failure that causes a drug overdose; failure of the "system" to communicate abnormal lab results to the ordering physician.*
- **Medication error:** The National Coordinating Council for Medication Error Reporting and Prevention defines a medication error as: "any preventable event that may cause or lead to inappropriate medication use or patient harm, while the medication is in the control of the healthcare professional, patient, or consumer. Such events may be related to professional practice, healthcare products, procedures, and systems; including prescribing, order communication, product labeling, packaging, nomenclature, compounding, dispensing, distribution, administration, education, monitoring, and use."

MEDMARX® and the USP Medication Errors Reporting (MER) Program conducted a study to identify characteristics of medication errors that occur in home care. In 2004 they reported that 11% of medication errors in the home, resulted in harm to the patient. The types of errors identified were an extra dose (12%), communication (21%), and knowledge deficit (19%). A lack of access to patient information was a contributing factor.

The USP MEDMARX® medication error-reporting program keeps a close watch on drug products that are linked to medication errors. Below is a list of the top 45 most frequently reported drug products, in descending order, which were associated with errors from July 2002 to June 2003.

1. Insulin 16. Hydrocodone 31. Prednisone
2. Albuterol 17. Oxycodone 32. Metoclopramide
3. Morphine sulfate 18. Meperidine 33. Ketorolac
4. Potassium chloride 19. Levothyroxine 34. Piperacillin & Tazobactam
5. Heparin 20. Aspirin 35. Ibuprofen
6. Cefazolin 21. Famotidine 36. Ampicillin & Sulbactam
7. Warfarin 22. Fentanyl 37. Lisinopril
8. Furosemide 23. Ceftriaxone 38. Total Parental Nutrition
9. Levofloxacin 24. Nitroglycerin 39. Ciprofloxacin
10. Vancomycin 25. Gentamicin 40. Ampicillin
11. Metoprolol 26. Hydromorphone 41. Dexamethasone
12. Enoxaparin 27. Metronidazole 42. Pantoprazole
13. Lorazepam 28. Digoxin 43. Phenytoin
14. Acetaminophen 29. Iltiazem 44. Azithromycin
15. Ipratropium 30. Promethazine 45. Clonidine

Source: <http://www.usp.org/patientSafety/resources/top50DrugErrors.html>

Principle One: Care must be Safe

The mission of medical care is to either improve patient health, maintain what the patient has left, or at the very least, prevent avoidable patient harm. Creating a safe environment for care requires defining the action from the "top down". Senior management must identify the organization's safety goals and develop the action plan.

A safety design must do more than just meet regulatory requirements. Individual clinicians are always responsible for "doing no harm". However, in order for a safe patient care initiative to be mobilized, management must be the catalyst for the staff in the areas outlined below. It is important to note that safe patient care must be viewed primarily as a result of the system (not the

sole responsibility of the individual clinicians) in the following areas:

A: Safety and error reduction must be viewed as a shared value.

Despite professional ethics and duties, research studies indicate that people are harmed each day in the healthcare system. Safety reports point out that the majority of errors, between 70% and 90%, occur as a result of system failures, not staff incompetence. Primary safety and error reduction approaches include, but are not limited to, the following:

1. Management personnel training staff on performance improvement.
2. Decisions based on complete knowledge of the safety impact on work processes, and the impact on each department's operations and functions.
3. Interdisciplinary team meetings, if not already created, are organized for continuous and reliable care and meet frequently. The best time for all department disciplines needs to be considered. The make-up of these teams varies from hospital to hospital, but typically consists of all or most of the following disciplines involved in the care of the patient: physicians, case managers, discharge planners, therapists, psychologists, and nurses. Other disciplines that could be considered as part of the team are pharmacists, social workers, nutritionists, and pastoral clergy.
4. Teams addressing the potential issues around a patient's hospitalization should be developed. Discussing a patient's predicted hospital course helps ensure that all departments are planning together around the anticipated discharge date and time. Interdisciplinary team meetings can decrease length of stay and improve compliance with core measures and improve staff and patient satisfaction. Set and discuss goals with the patient. Post the goals in the room as a reminder to patients, family members, and healthcare providers. However, when posting goals do not include information that identifies the patient by name or diagnosis.

B: High-risk procedures, processes, and patient populations

The majority of clinicians do not have practice skills and/or knowledge in all areas of health care. In addition, high-risk procedures that do occur within the organization need to address the training needs of new graduates or seasoned clinicians that are new to the organization or who come from a different clinical setting. Approaches include, but are not limited to, the following:

1. High-risk procedures, processes, and patient populations are identified.
2. Appropriate interventions for all high-risk procedures, processes, and patient populations are developed and updated to maintain current relevancy. Provide "on floor" instruction to care givers as needed.
3. Special procedures for high-risk drugs using a multi-disciplinary approach, such as written guidelines, checklists, pre-printed orders, double-checks, special packaging, special labeling, and education are developed and implemented.

C: Staff competence and knowledge

Staff competence and knowledge to perform the assigned tasks is a continuous process that needs to be incorporated into staff development and training. It needs to include immediate teaching, mentoring and evaluation. A flexible staff education program should be considered when there are multiple shifts in the healthcare environment. Approaches include, but are not limited to, the following:

1. Learning from other sources that are found within and outside of the organization is advisable and provides input from multiple experts.
2. Allow time for the adapting of such knowledge prior to performance measures.
3. Employ evidence based medicine, "best practice" research, clinical expertise, and patient values for optimum patient care.
4. There are numerous national, state, and regional learning activities to participate in; become involved in at least one.

D: Safety support systems

Historically, as well as currently, in many healthcare settings, there is a lack of sufficient communication and collaboration between departments and sometimes there is even conflict. Departments can suffer from semi-autonomous functioning. It is vital that people recognize and state the need for collaboration among departments. These functions can be accomplished by some of the following approaches:

1. Management needs to provide the support, recognition, and the resources necessary for collaborative work. Departments that behave as single units will not advance.
2. Improvements should strive to go beyond basic compliance with regulations and standards.
3. Collaborative relationships with regulators, suppliers, customers, and contractors provide safety support resources, which often do not involve additional costs.
4. Consider the use of bar coding in the medication administration process.

E: Problems Anticipated

Errors and near misses will occur, and it is prudent to prepare ahead of time on how to manage these, instead of reacting to them once there is an occurrence. This approach anticipates the problems and deals with their causes before they occur.

Quality improvement/performance improvement clinicians can implement safety design principles, create standardizations and simplifications, and can measure quality patient care in terms of structure, process, and outcomes. Approaches include, but are not limited to, the following:

1. Recognition of insufficiency, inefficiency, or errors within systems and policies, versus blaming staff for noncompliance, is more effective when using an anticipated problem approach.
2. Analyze current safety practices that have been in place for a long time and modify them as appropriate.
3. Understand work processes and the effect of variability in how staff might perform them.
4. Have the pharmacy place additives in IV solutions prior to distribution to the floor/nurse. This can simplify the medication administration process and reduce the opportunity for calculation and mixing errors.

F: Design of the environment

Design of the environment for efficiency, effectiveness, and safety plays an essential role in the delivery of care. When feasible, adopt design revisions of the environment that promotes time efficiency and patient safety. Many nurses already know the excessive time spent walking between patient rooms, the nursing station, and to supply rooms.

1. Place charts and computers near patient rooms for an effective and efficient redesign.
2. Implement treatment carts.
3. Keep alcohol based hand-rubs next to the patient's bed. This is even believed to be more effective than adding an additional sink to promote hand washing.
4. Consider single-bed rooms, which provide enhanced infection control, privacy, and reduction in stress.

Research indicates that nurses currently spend less than half of their time delivering direct patient care. Time and motion studies conducted by Hendrich, et al., show that the majority of nurses' time is spent walking between patient rooms, the nursing station, storerooms, and within the nursing station itself. In *Keeping Patients Safe*, the IOM states that estimates from work-studies and surveys of nurses within hospitals demonstrate that the amount of time spent in actual hands-on patient care ranges from 13% to 28%.

Principle Two: Care Must Be Patient-Centered

The Institute of Medicine defines patient-centered care as "Providing care that is respectful of and responsive to individual patient preferences and needs and ensuring that patient values guide all clinical decisions." Patient-centered care is not technology or disease centered.

What is most challenging in changing from a system-focused care environment to a patient-centered one is the inclusion of ethics and morals, which also includes how we deal with patients after there has been an error. Patients are vulnerable, especially when a near miss has occurred. There is a moral obligation to support patients and their family members in a timely manner, openly, and honestly. Some clinicians may argue against the practice of full disclosure when an error occurs; however, our "practice acts" say otherwise. Examples taken from current nursing, occupational, and physical therapy practice acts are stated below:

- "Occupational therapy personnel shall take reasonable precautions to avoid imposing or inflicting harm upon the recipient

of services or to his or her property. Occupational therapy practitioners shall accept the responsibility for their professional actions, which reduce the public's trust in occupational therapy services and those that perform those services."

- "The nurse acts to safeguard the client and the public when healthcare and safety are affected by the incompetent, unethical, or illegal practice of any person. The nurse assumes responsibility and accountability for individual nursing judgments and actions."
- "A physical therapist shall protect the public and the profession from unethical, incompetent, and illegal acts. A physical therapist shall act in a trustworthy manner towards patients/clients, and in all other aspects of physical therapy practice."

A patient-centered care environment needs to include, at a minimum, the following qualities:

A: Dignity

Dignity at a minimum is respecting the patient, providing privacy, control, and choice, and maintaining confidentiality.

1. Let the patient educate you about their personal values, goals, and preferences.
2. Listen to and honor patient and family perspectives and choices.
3. Learn to integrate patient and family knowledge, values, beliefs and cultural backgrounds into the planning and delivery of care. Often times, clinicians of the same beliefs or cultural backgrounds are available and should be consulted.

B: Patient Communication/ Information Sharing

Patient communication, especially if a medical error has occurred is of paramount importance. In the consensus statement, "*When Things Go Wrong: Responding to Adverse Events*", four steps for effective communication were identified for communicating with patients and family members in the event of an error occurrence. The steps are applicable even to errors that are void of patient harm. The patient is to be made aware of errors that resulted in harm to him or her, as well as, errors that cause no harm. The recommended steps for communication/disclosure are:

1. Tell the patient and family what happened.
2. Take responsibility.
3. Apologize.
4. Explain what will be done to prevent future events.

A critical skill in patient communication is the ability to know when and how to involve the patient and family. Share unbiased information in ways that are affirming and useful. The consensus statement advises organizations to address the "who, what, and when" of initial patient communication, as well as, follow-up communication with the patient and or family. Appendix C and D of "*When Things Go Wrong: Responding to Adverse Events*" offers multiple suggestions. See reference 2.

C: Participation/Involvement

Patient participation should be determined by the patient at a level of involvement that he/she chooses. Some patients will want minimal participation, while others want to be very involved in their care. For some patients, participation in care results in a greater sense of self-control in environments in which they may have minimal control. Patients actively involved in care decisions are engaged in behaviors that can improve their health. A good place to start is with the following recommendations:

1. Provide information about treatment options and outcomes relevant to the patient, such as interactive videos, audiotapes, or printed materials.
2. Provide delineation of the roles and responsibilities for patients, caretakers, and clinicians.
3. Supply reminders for routine preventive care or when special follow-up is necessary.
4. Ensure informed consent is provided that is free of medical jargon and offers sufficient time for patient comprehension.

D: Collaboration

Collaboration means that patients and families are included on an institution-wide basis in policy and program development, implementation, and evaluation of standards of care, facility design, and professional education. Approaches in design include

some of the following:

1. Minimize the separation of patients from their families.
2. Enhance patient and family access to information and support.
3. Design a healing environment that fosters patient and family choices and one that is inviting and comforting for the diversity of patients.
4. Create a website and or develop radio and TV public service announcements.

Conclusion

Patient safety and patient-centered care initiatives have harvested more attention and momentum in the last seven years and appears firmly planted in the foundation of healthcare's future. A recent example occurred in June of 2006, when a Washington State law went into effect requiring prescriptions be hand printed, typewritten, or electronically generated in an effort to reduce medication errors. Pharmacists are required to send all prescriptions written in cursive or any illegible form back to the prescribing physician for clarification.

In addition, data collection has improved, which has provided information on the prevalence of errors and harm caused to patients. Patient safety improvement and risk reduction of harm requires solutions derived in part from ideas about causes of errors and prevention measures. To accomplish this, there must be a willingness of clinicians to report errors, which requires a culture, free of blame and censure. This is a dynamic and continuous process for all organizations and should be shared with clinicians.

Clinicians try to practice patient-centered care and do so with varying degrees of success as perceived by the patient and family. Patients and families expect to be given relevant information that is clear, and advice that is understandable. They also have the right to expect this from healthcare professionals. Patient safety is a moral and ethical obligation. Providing safe patient care is a shared responsibility between healthcare clinicians, patients, and the public. Patients can contribute to errors, but can also assist in identifying or avoiding them as well. The ultimate indignity and injustice for a patient is to not be the center of the care they receive, experience an error, and be harmed unnecessarily.

Answer to Case Scenario 1:

A preventable adverse event occurred. While the nurse properly assessed the patient she did not implement appropriate intervention, such as a bed alarm prior to giving report. Negligence could be based on the nurse's failure to properly ensure for the patient's safety. Risk assessment constitutes a nurse's best effort to predict the probability of harm in a given situation. Having predicted risk, the nurse then should have taken action to minimize it.

Answer to Case Scenario 2:

The anaphylactic reaction to the cephalosporin antibiotic was an unforeseen event and thus; there was no medication error. However, the nurse's and technician's judgment in not evaluating the change in the patient's status could be a point of negligence in a court of law and at the very least, be presented as an unacceptable standard of practice.

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Colleen Symanski-Sanders, RN, Forensic Nurse Specialist, has been a Registered Nurse for over 18 years. She has extended her education into forensic nursing, criminal profiling, and psychopathy receiving a Certificate as a Forensic Nurse Specialist. She has over 16 years experience in public health and home care nursing.

Colleen has been an author of educational material for St. Petersburg College, St. Petersburg, Florida. She has also lectured on a variety of topics at numerous nursing symposiums and conferences across the country. She is on the Editorial Board for "Home Health Aide Digest" and "Private Duty Homecare" publications.

