
PREVENTION OF MEDICAL ERRORS

Course # 2011
2 Contact Hours

Authors: Denise Warren, RN, BSN
Shelda Hudson, RN, BSN, PHN

Material Valid Through April 2021



Enhanced Learning & Skills

**No Exams,
Just Learning!**

Testing Mandatory For Electrologists,
Florida & Ohio Only

Copyright © 2018

J.R. Ivanoff

All rights reserved

Published by the

National Center of Continuing Education, Inc.,

Lakeway, Texas.

Printed in the United States of America.

A NATIONAL EPIDEMIC

WE ALL KNOW . . .

. . . that U.S. Copyright Law grants to the copyright owner the exclusive right to duplicate copyrighted, printed and recorded materials. Piracy involves the illegal duplication of copyrighted materials.

YOU MAY NOT KNOW . . .

. . . that every time you use or make an illegal copy of any printed material in any form or by any method you may be liable for further litigation.
. . . that your institution's duplication or processing equipment may also be confiscated and destroyed if involved in illegal duplication.
. . . that the penalty for criminal violation is up to five years in prison and/or a \$250,000 fine under a tough new law. (Title 17, U.S. Code, Section 506, and Title 18, U.S. Code Section 2319).
. . . that civil or criminal litigation may be costly and embarrassing to any organization or individual. We request you contact us immediately regarding illegal duplication of these copyrighted, printed materials. The National Center of Continuing Education will pay a substantial reward for information leading to the conviction of any individual or institution making any unauthorized duplication of material copyrighted by J.L. Keefer or The National Center of Continuing Education.

Table of Contents

Material Valid Through April 2021	1
A NATIONAL EPIDEMIC	1
About the Authors	3
Purpose and Goals	3
Instructional Objectives	3
Introduction	3
Defining & Recognizing Medical Errors	3
Factors Contributing to Medical Errors	4
Problems and Possible Solutions	4
Special Populations	5
Patient Safety Goals and National Oversight.....	5
Patient Safety & Medical Liability Reform: Putting Patients First	5

The Patient Safety and Quality Improvement Act of 2005	5
2014 National Patient Safety Goals (JCAHO).....	5
Ambulatory Care/ Home Care	5
Long-Term Care	6
Reporting Responsibilities	6
The Role of the Healthcare Professional	6
Role of the Patient in Prevention of Medical Errors	7
Patient Education--Helping Patients Protect Themselves.....	7
Personal/Home Care	7
Ambulatory Care/Outpatient Clinic	7
Pharmacy	7
Hospital Inpatient Care	7
References.....	7

Extraordinary efforts have been made by the authors, the editor and the publisher of the National Center of Continuing Education, Inc. courses to ensure dosage recommendations and treatments are precise and agree with the highest standards of practice. However, as a result of accumulating clinical experience and continuing laboratory studies, dosage schedules and/or treatment recommendations are often altered or discontinued. In all cases the advice of a physician should be sought and followed concerning initiating or discontinuing all medications or treatments. The planner(s), author(s) and/or editor(s) of each course have attested to no conflict of interest nor bias on the subject. The National Center of Continuing Education, Inc. does not accept commercial support on any course nor do they endorse any products that may be mentioned in the course. Any off-label use for medications mentioned in a course is identified as such.

No part of this publication may be reproduced stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of the publisher.

About the Authors

Denise Warren, RN, BSN has been a nurse educator in a hospital setting. In this capacity, she has authored continuing education materials for nursing staff as well as training and competency manuals for various hospital units. She has worked closely and counseled hospital staff regarding how to reduce errors in a clinical setting. She continues to write health-related articles and continuing education courses.

Shelda Hudson, RN, BSN, PHN. Ms. Hudson is responsible for directing the activities of this department, selecting qualified, credentialed authors for the courses offered by the National Center as well as advising staff of required course design and criteria. Ms. Hudson has over 26 years of extensive experience.

Purpose and Goals

The goal of this course is to provide health care professionals with an overview of the problem of medical errors, factors contributing to the occurrence of these errors and steps that can be taken by institutions and individual care providers to reduce medical errors in key care settings.

Instructional Objectives

Upon completion of this course, the motivated student should be able to:

1. Delineate factors contributing to the occurrence of medical errors
2. Outline error prone situations and vulnerabilities among special populations
3. Identify processes for improvement of patient outcome
4. Recognize caregivers' responsibilities for reporting medical errors
5. Name methods to increase public awareness of medical errors and how to prevent them.

Introduction

Many of the threats to a patient's safety and well-being are preventable; however, medical errors remain a persistent challenge in medicine. Both, the patient and the health care professional can suffer irreversible consequences for oversights, personally and professionally.

Since medicine has been practiced, innovation has saved lives. With insight, we learn how to solve problems. The Institute of Medicine (IOM), dropped a bombshell on the health care community, and the general public alike, with its publication of **To Err is Human: Building a Safer Health System**, which gained wide-

spread media attention when it was released in 2000. The report captured the public's attention by revealing the magnitude of this pervasive problem and presenting it convincingly. The information presented in the report is not new. Many studies, some nearly fifty years old, have shown that patients were frequently injured by the same medical care that was intended to help them.

Despite some improvements following the study, not enough has been done to curb the epidemic of medical errors; studies show billions of dollars are wasted each year and thousands of lives are needlessly lost. In addition to the terrible human toll, medical errors and the problems they can cause -- including bed sores, post-op infections and hospital acquired infections (HAIs), and implant or device complications -- cost the U.S. economy \$17 billion to \$30 billion, according to a report by the American Medical Association published in 2013. A report published by the Journal of Patient Safety estimates the errors caused between 40,000 to 80,000 avoidable deaths annually. These errors include diagnostic errors, errors of omission, errors of context, and communication errors.

Many of these adverse events are associated with the use of pharmaceuticals. Each year, patients in the United States experience at least 1.5 million preventable injuries due to medication errors, according to the findings of an Institute of Medicine analysis. The National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP) has identified medication errors that include events related to improper prescribing, order communication, product labeling, packaging, compounding, dispensing, distribution, administration and monitoring of medications.

All too often these mistakes focus on blame, which tend to affect not just the morale of the facility, but impacts the professionals involved. Long-term psychological effects such as sadness, shame, self-doubt and isolation can result in more errors.

The perception of medical errors among health care providers and the public has been shaped over the years primarily by such anecdotal reports in the news, and the proposed remedies have generally focused on placing blame on individual providers, including health plans, hospitals, doctors, pharmacists, nurses, and other caregivers. However, the IOM report concludes that the majority of medical errors are the result of systemic problems rather than poor performance by individual providers, and thus has created a whole new approach to preventing medical mistakes and improving patient safety.

Defining & Recognizing Medical Errors

According to the Agency for Healthcare Research and Quality (AHRQ), an error is defined as the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim. Errors can include problems in practice, products, procedures, and systems. Errors are important because of their potential effect on patient safety. The enhancement of patient safety thus encompasses three related activities: preventing errors, making errors visible, and mitigating the effects of errors.

Not all bad outcomes for patients are due to medical errors. Patients may not be cured of their disease or disability despite the fact that they are provided optimal care. Likewise, not all adverse events that are the result of medical care are, in fact, errors. An **adverse event** is defined broadly as an injury that was caused by medical management and that resulted in measurable disability. Some adverse events result from a complication that cannot be prevented given the current state of knowledge. For example, many drugs, even when used appropriately, have a chance of side effects, such as nausea from administration of a chemotherapy agent. A case of severe nausea would be an adverse event, but it would not be considered a medical error to have given the chemotherapy medication if it was otherwise indicated for the patient's treatment. Medical errors are adverse events that are preventable with our current state of medical knowledge.

Consideration of errors is usually expanded beyond preventable adverse events that lead to actual patient harm to include near misses, also sometimes referred to as close calls. In other high-risk industries, such as commercial aviation and energy, mistakes make 24 hour news headlines, and investigations are tried in a very public forum. The business of health care can learn from the hard lessons other industries have utilized for best practices. For example, what can we learn from "close calls"? Should they be ignored, covered up after a sigh of relief? Examining what failed in the first place is essential to prevention. Often in health care, the intervention was as unplanned as the incident.

The process by which medical errors are identified and addressed varies by institution. However, many facilities utilize an approach called Root Cause Analysis RCA is defined by the American Society for Quality as "a factor that caused a nonconformance and should be permanently eliminated through process improvement." This tool is part of an overall process for identifying prevention strategies by focusing on changes that need to be made to health care delivery systems. RCA involves

those who are most familiar with the problem situation and encourages them to dig deeper into the problem by asking “why” at each stage of cause and effect. Human factors as well as the impact of related processes and systems are taken into account. The immediate goal of the RCA is to generate specific prevention strategies, but it also is designed to foster a culture of safety in the organization that uses it. The technique is used in the Veterans Health Administration hospitals and clinics around the country. It has also been recommended for use in conjunction with the evaluation of sentinel events to be reported to the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), an independent, not-for-profit organization, nationally recognized as a symbol of quality and performance standards. The Joint Commission accredits and certifies nearly 21,000 health care organizations and programs in the United States.

Factors Contributing to Medical Errors

Intensive or Critical Care units are excellent examples of a high risk and challenging professional environment, with charge nurses managing approximately 230 immediate decisions in 24 hours. Reliance on the interaction of monitoring, treatment, and support systems is essential to patient safety

The decentralized and fragmented nature of the American health care industry also contributes to the problem of errors, as can be illustrated by the process of prescription and delivery of medications. The medication process requires the successful completion of at least five interdependent steps:

1. Ordering
2. Transcribing
3. Dispensing
4. Delivering
5. Administering.

Poor system design can create numerous opportunities for error in any one of these steps.

Organizational factors may also contribute significantly to the occurrence of medical errors. Within many hospitals, departments are only loosely linked, and communications between primary care doctors and medical specialists are notoriously poor. As a result, information on problems, as well as improved practices to reduce errors and enhance safety, in one department or one facility do not migrate quickly to others. The variety of settings in which health care is provided (including hospitals, nursing homes, clinics, ambulatory surgery centers, private offices, and patients’ homes) and the transitions of patients and providers among them provide additional challenges.

Errors may be especially difficult to recognize in health care because variations in an individual’s responses to treatment are expected. Medical professionals may not recognize that a particular product or procedure contributed to or caused the problem because the patient is already ill, the product is not expected to work perfectly at all times, or the event appears unrelated to the product or procedure. Lack of recognition of a service’s role in adverse events reduces reporting of the association and the opportunity to learn from previous experiences with the product. Because medical errors usually affect only a single patient at a time, they are treated as isolated incidents, and little public attention is drawn to these problems when compared with aviation or nuclear power accidents. Health care errors are also under reported due to liability and confidentiality concerns.

Perhaps the greatest barrier to the improvement of patient safety through reduction of medical error has been due to the professional culture within the health care community. Adverse medical events have existed since the beginning of organized medical practice, but may not have been recognized at the time of their occurrence. When errors were recognized, they were invariably attributed to mistakes by individual practitioners; and the “naming, blaming, and shaming” approach to dealing with errors limited effective problem resolution.

The IOM report makes it clear that the majority of medical errors today are not produced by provider negligence, lack of education, or lack of training. Rather, errors occur in our health care systems due to poor systems design and organizational factors, much as in any other industry. For example, health care workers are often expected to work twelve hours a day, or double shifts (16 hours) to ensure patients are cared for and have some continuity of care, although it is known that overwork and fatigue lead to decreased mental concentration and alertness. They are expected to rely on their memories and deliver safe care without substantial investments in information technology or even the simple application of checklists. They often deliver care through a set of complex processes, although industry has shown that the probability of performing a task perfectly decreases as the number of steps in the process increases.

Problems and Possible Solutions

Medication use in the U.S. is prevalent. The National Health and Nutrition Examination Survey finds that prescriptions are on the rise, especially as the population ages, with an estimated 59% of Americans on one or more

drugs (polypharmacy). OTC drugs, vitamins, minerals and herbal supplements should also be taken into account when considering what affects they have on your patient.

Most of the time these medications are beneficial, or at least they cause no harm, but on occasion they do injure the person taking them. Some of these adverse drug events (ADEs) are inevitable—the more powerful the drug, the more likely it is to have harmful side effects.

Another major area of medical error is the improper administration of medications. When all types of errors are taken into account, a hospital patient can expect on average to be subjected to more than one medication error each day. However, substantial variations in error rates are found across facilities.

One study estimated 380,000 preventable ADEs in hospitals each year, another estimated 450,000, and the committee believes that both are likely to be underestimates. The numbers are equally disturbing in other settings. One study calculates, for example, that 800,000 preventable ADEs occur each year in long-term care facilities. Another study, published in 2014 by the *Journal of Pharmacy Practice*, evaluated medication discrepancies in transition of care between patients discharged in hospitals and primary care follow-up. The researchers in this study concluded that the most common medication errors that occurred after patients were discharged from hospitals were nonadherence and under use of prescribed medications. The study ultimately concluded that failure to implement a medication monitoring program and the absence of complete instruction at the time of discharge was the primary barrier to effective medication management.

In some instances, the errors originate with the order itself: it may be illegible, incomplete (e.g., 650 mg Tylenol - no route, no frequency indicated), or blatantly incorrect (5 mg Lanoxin po, qd, when in reality only 0.5 mg was meant). This is an excellent argument for doctors entering prescriptions on the computer versus pen and pad. It’s estimated that making this a standard procedure will lower medication errors by 60%.

Name confusion is another common cause of drug related errors. For example, the anti-epileptic drug Lamictal has often been confused for the antifungal drug Lamisil. The volume of errors involving the two drugs was so large that Glaxo Wellcome, Lamictal’s manufacturer, launched a campaign to warn pharmacists of possible errors. There have also been countless reports of confusion among the arthritis drug Celebrex, the anticonvulsant Cerebyx, and the antidepressant Celexa.

Under the FDA’s authority to regulate drug labeling, the agency evaluates medicine brand

names and works with the drug company to change the product's name if necessary to avoid confusion. FDA is also developing new standards to prevent name confusion, and to reduce similar-appearing drug packaging.

Most medical centers use computer programs and other systems support to double-check care decisions by doctors and nurses. Even simple computer systems that replace handwritten prescriptions with electronic ones have resulted in substantial error reductions. Bar coding systems have been developed in which the patient, nurse, and medication have ID strips which can be scanned to verify that the drug is being given correctly and will not cause drug interactions. Also, storage of concentrated potassium chloride, large containers of insulin, and other potentially hazardous medications is now recommended well away from patient care areas. Still, the vigilance of the health care provider is often key to the medication process. One of the many ways a nurse is expected to safeguard a patient is to know all about the medications to be administered. This knowledge includes the medication name, action, use, dose, route, elimination, side effects, contraindications, and nursing considerations. If the nurse is unsure about any of these points, the answer should be obtained before the medication is administered.

Other nursing considerations include teaching the patient about the medications he is receiving, administering only those medications which you have personally prepared, taking a thorough drug history to include allergies, and being aware of potential drug-drug and drug-food interactions. Medication errors and idiosyncratic reactions should be noted on an incident report and in the nurse's notes, and the physician and the supervisor should be informed.

Special Populations

Children have been shown to be particularly vulnerable to medication errors. Such errors have been shown to be common in pediatric hospital settings, with the rate for potential adverse drug events three times higher for children than for adults. Doses of children's medications are determined by weight, and the extra calculations involved leave room for possible error. Also, few drugs have been specifically tested for pediatric use, so physicians often must estimate dosages in order to treat children. It may be difficult to get children to cooperate adequately with various aspects of care. Lack of familiarity among health care providers with standards of care for rare pediatric illnesses may also lead to medical error.

The elderly also seem to be particularly vulnerable to medical error; this has been attributed to the increased complexity of their

care rather than to any systemic discrimination against provision of safe care to this age group. As with most patient populations, a major source of adverse events in the elderly is medication error. Cardiovascular drugs are the leading class of drugs that produce adverse drug reactions in the elderly, followed by central nervous system active agents, nonsteroidal anti-inflammatory drugs (NSAIDs), endocrine agents, anti-infectives, gastrointestinal agents, respiratory agents, and blood formation and coagulation agents. Polypharmacy is a significant concern in the care of elderly patients and can lead to hospitalizations for gastrointestinal bleeds, falls resulting in fracture, low blood sugars, and dehydration.

Patient Safety Goals and National Oversight

In 2016, Health and Human Services reported that the Affordable Care Act of 2010 had an impact on patient safety. It's estimated that 125,000 patients' lives were saved, from 2010 to 2015, and approximately \$28 million saved in health care costs.

The Partnership for Patients initiative was launched by Health and Human Services as a public-private partnership through the Center for Medicare & Medicaid Innovation to improve the quality, safety and affordability of health care and to reduce the most common hospital-acquired conditions such as pressure ulcers and post-surgical infections. A frequently used tool to achieve more effective patient safety by hospitals is AHRQ's Comprehensive Unit-based Safety Program (CUSP), an evidence-based practice to promote a culture of safety, where communication and teamwork are emphasized.

Patient Safety & Medical Liability Reform: Putting Patients First

For More than three decades, a great deal of attention has been paid to our nation's system for handling medical error claims. The experience of health care organizations since publication of the IOM report has led to some consensus on the necessary components of effective error prevention systems. In an effort to help eliminate or reduce these risks the AHRQ allocated large sums of grant money to implement and evaluate patient safety approaches and liability reforms. Grants test models that:

- Put patient safety first and work to reduce preventable injuries.
- Foster better communication between doctors and their patients.
- Ensure that patients are compensated

in a fair and timely manner for medical injuries, while also reducing the incidence of frivolous lawsuits.

- Reduce liability premiums.

The foundation for such systems needs to rest on thoughtfully developed programs within local health care organizations, managed and directed by local personnel. These programs should be complemented by coordinated, external support and guidance from federal, state, and non-governmental agencies and organizations.

The Patient Safety and Quality Improvement Act of 2005

The PSQIA was created in response to growing concern about patient safety in the United States. It created Patient Safety Organizations (PSOs) to collect, aggregate, and analyze confidential information reported by health care providers.

Prior to this act, patient safety improvement efforts were often hampered by the fear of discovery of peer deliberations, resulting in under-reporting of events and an inability to combine sufficient patient safety event data for analysis. By analyzing patient safety event information, PSOs have been able to identify patterns of failures and propose measures to eliminate patient safety risks and hazards. It encourages voluntary reporting of errors without fear of retribution.

Data, stripped of identifiers, is maintained by public or private entities. The analysis of the information collected has been used to improve medical systems and practice. This is a common-sense law that gives legal protections to health professionals who report their practices to patient safety organizations. By providing critical information about medical procedures, health care professionals can help others learn from their experiences.

2014 National Patient Safety Goals (JCAHO)

National Patient Safety Goals are a series of specific actions that accredited organizations are required to take in order to prevent medical errors such as miscommunication among caregivers, unsafe use of infusion pumps, and medication mix-ups. A panel of national safety experts has determined that taking these simple, proven steps will reduce the frequency of devastating medical errors. The purpose of the National Patient Safety Goals is to improve patient safety. The following goals focus on problems in health care safety and how to solve them.

Ambulatory Care/ Home Care

The US department of Health and Human Services offers the following as a guideline for patient care:

1. Identify patients correctly

Use at least two ways to identify patients. For example, use the patient's name and date of birth. This is done to make sure that each patient gets the correct medicine and treatment.

Make sure that the correct patient gets the correct blood when they get a blood transfusion. Label containers used for blood and other specimens in the presence of the patient.

2. Use medicines safely

Before a procedure, label medicines that are not labeled, such as medicines in syringes, cups and basins. Do this in the area where medicine and supplies are set up.

Take extra care with patients who take blood thinners.

Record and pass along correct information about a patient's medicines. Find out what medicines the patient is taking. Compare those medicines to new medicines given to the patient. Make sure the patient knows which medicines to take when they are at home. Tell the patient it is important to bring their up-to-date list of medicines every time they visit a doctor.

3. Prevent Infection

Practicing consistent and thorough hand hygiene is a relatively simple but crucial step in inhibiting the spread of disease causing microorganisms such as *Clostridium difficile*, which hand sanitizer does not remove from skin, nor does it kill. Guidelines from the Centers for Disease Control and Prevention can be found here: <https://www.cdc.gov/handhygiene/index.html>.

Use proven guidelines to prevent infection after surgery.

4. Prevent Mistakes in Surgery

Make sure that the correct surgery is done on the correct patient and at the correct place on the patient's body.

Mark the correct place on the patient's body where the surgery is to be done. Pause before the surgery to make sure that a mistake is not being made.

5. Prevent Patient Safety Risks

Assess the patient's risk for falls and educate staff regarding interventional techniques to help reduce falls. For example, is the patient taking any medicines that might make them weak, dizzy or sleepy? Take action to prevent falls for these patients.

Find out if there are any risks for patients

who are getting oxygen. For example, fires in the patient's home.

Find out which patients are most likely to try to commit suicide.

6. Office-Based Surgery Care

The same goals are appropriate as in Ambulatory Care/ Home Care, but in addition:

1. Reduce the risk of post-surgery infections:
 - Educate patients and their families about surgical site infection preparation.
 - Measure surgical site infection rates for the first 30 to 90 days following surgical procedures based on the National Healthcare Safety Network procedural codes.
2. Comply with protocol to prevent wrong site and wrong procedure: Gather information and verify the correct site prior to the start of any surgical procedure. Address any missing information or discrepancies prior to initiating the procedure.

Long-Term Care

The same goals are appropriate as in Ambulatory Care/ Home Care, but in addition:

1. Prevent decubitus ulcers

Find out which residents are most likely to have decubitus ulcers. Take action to prevent wound development in these patients. From time to time, re-check residents for bed sores.

Note: Details and the exact language of the goals can be found at www.jointcommission.org

Reporting Responsibilities

Currently, several databases exist that collect information on specific types of errors, such as the Center for Disease Control and Prevention's hospital acquired infections reporting systems, the Food and Drug Administration's adverse drug and device event reporting systems, and JCAHO's sentinel event system. Individual institutions or health care systems may have their own internal data collection system, such as that at the Veterans Health Administration. Many states have also implemented systems for facilities within their boundaries. Unfortunately, all of these systems have been limited by underreporting of adverse events, and the problem is especially severe for systems designed to hold organizations or individuals accountable for bad outcomes. In order for any system for reduction of medical errors to be effective, it is essential that errors be reported and evaluated. Effective programs need to incorporate protection from legal discovery and liability, which cause errors to

be concealed.

Basic tenets of a successful reporting system are that those who report must feel safe in doing so and that their confidentiality must be protected. Reporting systems in which these factors are missing are generally unsuccessful in obtaining data, inaccurate, and incomplete. The question "who did it?" is not important. However, it is critical to find out what happened, why it happened, and how it can be prevented in the future.

The IOM recommends a two-tier error reporting system: a nationwide, state-based system that includes mandatory reporting of mistakes that result in death or serious injury, and a voluntary reporting system for other medical mistakes, including those so-called close calls or near misses. Considerable support exists for federal and state legislation that protects provider and patient confidentiality, while safeguarding the legal remedies of those whose health has been harmed.

The Role of the Healthcare Professional

Nurses are known to protect patients from harm. Several studies on medical errors found that there would have been more medical errors reaching the patient had not potential errors been caught earlier by nurses.

The frequency and types of medical errors are well documented, but less is known about potential errors that were intercepted by nurses. What about the type, frequency, and potential harm of recovered medical errors reported by registered nurses?

A study completed by Nursing Informatics and Research, Partners HealthCare System, in 2010 used The Recovered Medical Error Inventory, a 25-item empirically derived and internally consistent ($\alpha = .90$) list of medical errors, was posted on the Internet. Participants were recruited via e-mail and healthcare-related listservs using a nonprobability snowball sampling technique. Investigators e-mailed contacts working in hospitals or who managed healthcare-related listservs and asked the contacts to pass the link on to others with contacts in acute care settings.

The results showed that during one year, 345 CCRNs reported that they recovered 18,578 medical errors, of which they rated 4,183 as potentially lethal. The researchers in this study concluded that surveillance, clinical judgment, and interventions by CCRNs should be enhanced to identify, interrupt, and correct medical errors protected seriously ill patients from harm.

A more recent study, published by the

American Association of Critical-Care Nurses investigated the problem of healthcare worker's reluctance to speak up when confronted with medical errors. Researchers in this study interviewed 6,500 nurses and nurse managers across the United States. The results of the interviews revealed that too often, nurses did not alert their colleagues when they observed a safety measure being violated. According to the study, more than 80% of nurses stated that they had concerns about safety issues and more than 50% witnessed dangerous events; however, only 17% discussed their concerns with colleagues.

The findings of this study reveal that a tacit culture of silence regarding medical errors in American hospitals can undermine safety measures that help to prevent medical errors. It's ultimately up to healthcare professionals to identify and report potential mistakes, which may cause harm to their patients.

Role of the Patient in Prevention of Medical Errors

Well-informed patients are key participants in the effort to enhance the quality and safety of American health care. The right question from a patient at the right time may be the intervention that averts an error. Initiatives have been undertaken to encourage programs geared to education of the individual patient as well as the public at large.

An example of the latter is the Food and Drug Administration's "Take Time to Care" program, a national public awareness campaign about safe medicine use.

Reducing preventable ADEs will demand the attention and active involvement of everyone involved. This effort will pay off in far fewer medical errors and preventable adverse drug events, far less harm done to patients by medications, and far less cost to the nation's economy.

Patient Education-Helping Patients Protect Themselves

Personal/Home Care

Maintain a list of prescription drugs, non-prescription drugs and other products, such as vitamins and minerals, you are taking. Take this list with you whenever you visit a health care provider and have him or her review it. Be aware of where to find educational material related to your medication(s) in the local community and at reliable web sites.

Ambulatory Care/Outpatient Clinic

Have the prescriber write down the name of the drug (brand and generic, if available), what it is for, its dosage, and how often to take it, or provide other written material with this information. Have the prescriber explain how to use the drug properly. Ask about the drug's side effects and what to do if you experience a side effect.

Pharmacy

Make sure the name of the drug (brand or generic) and the directions for use received at the pharmacy are the same as that written down by the prescriber. Know that you can review your list of medications with the pharmacist for additional safety. Know that you have the right to counseling by the pharmacist if you have any questions. You can ask the pharmacist to explain how to properly take the drug, the side effects of the drug, and what to do if you experience side effects (just as you did with your prescriber). Ask for written information about the medication.

Hospital Inpatient Care

Ask the doctor or nurse what drugs you are being given at the hospital. Do not take a drug without being told the purpose for doing so.

Exercise your right to have a surrogate present whenever you are receiving medication and are unable to monitor the medication-use process yourself.

Prior to surgery, ask whether there are medications, especially prescription antibiotics, that you should take or any that you should stop taking preoperatively. Prior to discharge, ask for a list of the medications that you should be taking at home, have a provider review them with you, and be sure you understand how these medications should be taken.

Source: Committee on Identifying and Preventing Medication Errors, Institute of Medicine

References

- Burnham, Ted A. "Computer Beats A Pen for Getting Prescriptions Right" *NPR radio*. 31 Jan 2010. "National Patient Safety Efforts Save 125,000 Lives and Nearly \$28 Billion in Costs." *AHRQ*. ahrq.gov/news/newsroom/press-releases/national-patient-safety-efforts-save-lives.html. 12 Dec 2016.
- Wright, Armor B and Carter S. "Evaluation of Adverse Drug Events and Medication Discrepancies in Transitions of Care Between Hospital Discharge and Primary Care Follow-up." *J Pharm Prac*. 014; 10(1):

321-333

Hudson, P. "Applying the lessons of high risk industries to health care." *BMJ Journals*. qualitysafety.bmj.com/content/12/suppl_1/i7.

"*Clinical Infectious Diseases*". Volume 46, Issue Supplement_1. Pages S43-S49, doi.org/10.1086/521861. 15 Jan 2008.

"Growing Concerns About Medical Errors". *AHRQ archive*. ahrq.gov/quic/report/mederr4.htm 9 Jan 2018.

"Health Day Study: Reluctance to Speak Up Encourages Medical Errors." *health.usnews.com/health-news/family-health/brain-andbehavior/articles/2011/03/22/study-reluctance-to-speak-up-encourages-medical-errors*. 9 Nov 2014.

James, J. "A new, evidence-based estimate of patient harms associated with hospital care." *Patient Safety*. 2013; 9(3): 122-128

Maxfield D, Grenny J, Lavandero R and Groah L. "The Silent Treatment: Why safety tools and checklist aren't enough to save lives". *AACN*. 2013. aacn.org/WD/hwe/docs/the-silent-treatment.pdf. 9 Nov 2014.

"Medical Error, avoidable deaths in U.S. hospital." *medsims.com/medical-error-deaths/Updated*. 19 Sept 2013.

"Patient Safety and Quality Improvement Act of 2005 Statute and Rule." *US Department of Health and Human Services* hhs.gov/hipaa/for-professionals/patient-safety/statute-and-rule/index.html

"National Patient Safety Goals." *The Joint Commission*. jointcommission.org/standards_information/npsgs.aspx. 9 Nov 2014.

"Medication Errors." *U.S. Food and Drug Administration*. fda.gov/Drugs/DrugSafety/MedicationErrors/default.htm. 8 Nov 2014.

"Medication Safety for Women Accessed." *U.S. Food and Drug Administration*. fda.gov/ForConsumers/ByAudience/ForWomen/ucm116695.htm. 17 Nov 2014.

"Hospital National Safety Goals." *The Joint Commission*. mission.org/assets/1/6/2015_HAP_NPSG_ER.pdf. 1 Jan 2015.

20 Tips To Help Prevent Medical Errors: Patient Fact Sheet

Adapted from information obtained by the Agency for Healthcare Research and Quality, Rockville, MD. 2017

<https://www.ahrq.gov/patients-consumers/care-planning/errors/20tips/index.html>

Medical errors can occur anywhere in the health care system: In hospitals, clinics, surgery centers, doctors' offices, nursing homes, pharmacies, and patients' homes. Errors can involve medicines, surgery, diagnosis, equipment, or lab reports. These tips tell what you can do to get safer care.

One in seven Medicare patients in hospitals experience a medical error. But medical errors can occur anywhere in the health care system: In hospitals, clinics, surgery centers, doctors' offices, nursing homes, pharmacies, and patients' homes. Errors can involve medicines, surgery, diagnosis, equipment, or lab reports. They can happen during even the most routine tasks, such as when a hospital patient on a salt-free diet is given a high-salt meal.

Most errors result from problems created by today's complex health care system. But errors also happen when doctors* and patients have problems communicating. These tips tell what you can do to get safer care.

What You Can Do To Stay Safe

The best way you can help to prevent errors is to be an active member of your health care team. That means taking part in every decision about your health care. Research shows that patients who are more involved with their care tend to get better results.

Medicines

1. Make sure that all of your doctors know about every medicine you are taking. This includes prescription and over-the-counter medicines and dietary supplements, such as vitamins and herbs.
2. Bring all of your medicines and supplements to your doctor visits. "Brown bagging" your medicines can help you and your doctor talk about them and find out if there are any problems. It can also help your doctor keep your records up to date and help you get better quality care.
3. Make sure your doctor knows about any allergies and adverse reactions you have had to medicines. This can help you to avoid getting a medicine that could harm you.
4. When your doctor writes a prescription for you, make sure you can read it. If you cannot read your doctor's handwriting, your pharmacist might not be able to either.
5. Ask for information about your medicines in terms you can understand—both when

your medicines are prescribed and when you get them:

- What is the medicine for?
 - How am I supposed to take it and for how long?
 - What side effects are likely? What do I do if they occur?
 - Is this medicine safe to take with other medicines or dietary supplements I am taking?
 - What food, drink, or activities should I avoid while taking this medicine?
6. When you pick up your medicine from the pharmacy, ask: Is this the medicine that my doctor prescribed?
 7. If you have any questions about the directions on your medicine labels, ask. Medicine labels can be hard to understand. For example, ask if "four times daily" means taking a dose every 6 hours around the clock or just during regular waking hours.
 8. Ask your pharmacist for the best device to measure your liquid medicine. For example, many people use household teaspoons, which often do not hold a true teaspoon of liquid. Special devices, like marked syringes, help people measure the right dose.
 9. Ask for written information about the side effects your medicine could cause. If you know what might happen, you will be better prepared if it does or if something unexpected happens.

Hospital Stays

10. If you are in a hospital, consider asking all health care workers who will touch you whether they have washed their hands. Handwashing can prevent the spread of infections in hospitals.
11. When you are being discharged from the hospital, ask your doctor to explain the treatment plan you will follow at home. This includes learning about your new medicines, making sure you know when to schedule follow-up appointments, and finding out when you can get back to your regular activities. It is important to know whether or not you should keep taking the medicines you were taking before your hospital stay. Getting clear instructions may help prevent an unexpected return trip to the hospital.

Surgery

12. If you are having surgery, make sure that you, your doctor, and your surgeon all agree on exactly what will be done.

Having surgery at the wrong site (for example, operating on the left knee instead of the right) is rare. But even once is too often. The good news is that wrong-site surgery is 100 percent preventable. Surgeons are expected to sign their initials directly on the site to be operated on before the surgery.

13. If you have a choice, choose a hospital where many patients have had the procedure or surgery you need. Research shows that patients tend to have better results when they are treated in hospitals that have a great deal of experience with their condition.

Other Steps

14. Speak up if you have questions or concerns. You have a right to question anyone who is involved with your care.
15. Make sure that someone, such as your primary care doctor, coordinates your care. This is especially important if you have many health problems or are in the hospital.
16. Make sure that all your doctors have your important health information. Do not assume that everyone has all the information they need.
17. Ask a family member or friend to go to appointments with you. Even if you do not need help now, you might need it later.
18. Know that "more" is not always better. It is a good idea to find out why a test or treatment is needed and how it can help you. You could be better off without it.
19. If you have a test, do not assume that no news is good news. Ask how and when you will get the results.
20. Learn about your condition and treatments by asking your doctor and nurse and by using other reliable sources. For example, treatment options based on the latest scientific evidence are available from the Effective Health Care Web site. Ask your doctor if your treatment is based on the latest evidence.

*The term "doctor" is used in this flier to refer to the person who helps you manage your health care.