

# Key Concepts in Patient Safety

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## PURPOSE

The purpose of this chapter is to provide all health professionals with the core theory and knowledge they need to understand and practice patient care using patient safety principles. This core knowledge underpins and supports the remaining chapters and case studies. Every chapter that follows incorporates these safety principles.

## OBJECTIVES

After completing this chapter, you will be able to:

- Define the scope of the problem of unsafe healthcare practices in the United States
- Compare and contrast the individual patient and public viewpoint about healthcare safety and harm
- Describe the historical development of the theories and practices of safety in industries other than health care
- Describe the rationale for professionals to integrate basic concepts of patient safety in health care
- Use the basic terminology and vocabulary of patient safety in health care

## VIGNETTE

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I watched my father in the hospital bed. He was trying to rise, but his muscles were so weak that he could not sit up on his own. Although the staff had taught him to roll over on his side and push up, he could no longer lift his upper body with his arms. What happened to him? I was only 13 years old at the time. My dad had been in the hospital for over 2 years but still kept losing weight. The doctors could not find the correct diagnosis. When entering the hospital, he was a tall man of 6'4" who weighed 195 pounds, but he weighed only 125 pounds at discharge. He was tested for all kinds of cancer and was referred for extensive psychological testing. He was accused of starving himself. He had supervised feedings and extensive counseling. Self-insured as a small business owner, my father's resources were drained, and there was no way to continue to pay for services. On the day that he was discharged, a medical bill for \$350,000 was handed to my mom. Dad's hair was sparse and his eye color faded. He was starving to death. He went home expecting to die. My mom started reading on her own. She learned about a problem with gluten absorption. Later we made a diagnosis of celiac disease. She took action and obtained help.

Five years later, I learned about parenteral nutrition in pharmacy school. Why was Dad's nutrition not maintained by this means? Missed diagnoses—they must be common. How could 2 years of testing overlook what my mom could find? My father was now a man with permanent neurologic disabilities secondary to severe malnutrition, and my family was financially insolvent. After money was no longer available, Dad was abandoned. For what were all of those resources used? The impact of unsafe health care caused by a medical error is very real to my family.

## SAFETY AS A FOUNDATION OF HIGH-QUALITY HEALTH CARE

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The safety of a patient depends on each health professional's ability to "do the right thing." As a health professional continuously works at improving quality, individual performance shifts to "doing the right thing well."<sup>1</sup> Assuring the safety of the patient to whom services are provided is an essential dimension of professional performance. The Institute of Medicine (IOM) published a report in 2000 entitled *To Err is Human: Building a Safer Health System*.<sup>2</sup> This report describes the risks of medical care in the United States and the documented harm that has

occurred because of unsafe practices in the healthcare systems.<sup>1</sup> What is a safe patient practice? A patient safety practice is a type of process or structure whose application reduces the probability of adverse events resulting from exposure to the healthcare system across a range of diseases and procedures.<sup>1</sup> The care we deliver and the way we deliver it should have the least potential to cause patient harm and the greatest potential to result in an optimal outcome for the patient. Patients assume that this is what we do when we take care of them.

## THE CASE FOR IMPROVING PATIENT SAFETY

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### *Unsafe Practices: The Scope of the Problem of Errors in Health Care*

The IOM has summarized the evidence about medical errors in the United States. This evidence estimates that up to 98,000 individuals die every year in hospitals as a result of medical errors and that 2% of hospitalized patients experience a preventable adverse event. Sufficient numbers of these events result in serious harm.<sup>2</sup> Examples of the most common errors include improper transfusions, surgical injuries and wrong-site surgery, suicides, restraint-related injuries or death, falls, burns, pressure ulcers, misdiagnoses, and mistaken patient identities. Some of the most frequent errors occur in the most intensive care environments, such as emergency rooms, operating rooms, and intensive care units. On the other hand, the majority of care is provided in outpatient and ambulatory areas, an environment that has been described as a nonsystem. Care is provided without complete access to medical information about patients; often multiple providers serve different aspects of a patient's care needs, and the emphasis on accountability and reporting is nearly nonexistent.

The medical liability system is also regarded as a major disincentive to open disclosure of information about errors. The impact has been to discourage the

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<sup>1</sup> More recent reports have been published that inform us further about additional and emerging problems in safety and our progress in addressing these causes. For example, a 2006 report entitled *Medication Errors by the Committee on Identifying and Preventing Medication Errors Board on Health Care Services* was released. It focuses more deeply on problems with medications. These reports can be accessed through the Institute of Medicine website (<http://www.iom.edu/>). A lifelong practice of staying informed as these sentinel reports are published is vital to maintaining professional knowledge and evolving science and evidence in patient safety and professional practice.

systematic study of uncovering causes and learning how to change what we do from our errors. Many healthcare providers fear costly law suits or loss of employment and other harm that can occur to those who are involved in errors or unsafe practices. Many anecdotal reports of employment termination exist because of an individual's unfortunate involvement in a medical error. In a recent study of employees who work in physicians' offices, 24% of the offices reported that an individual has been dismissed from employment because of a medical error that occurred in that office. Not surprisingly, only 65% of the offices reported that they can openly discuss errors.<sup>3</sup> The lack of cooperation and perceived risk of disclosure discourage healthcare providers, organizations, and payers, often third party, from openly discussing and investing in the improvements needed to achieve a safer, higher quality healthcare environment.

### *The Real Problem Is Harm, Not Errors*

The harm that occurs is impressive when the financial, resource utilization, and healthcare system impact is evaluated; however, the immeasurable costs are reflected in the life experiences of the patients who are harmed and their loved ones and friends. This is clear in the stories of our authors. Fear and distrust of the health system and the individual health professionals who serve emerge as the dominant belief system for patients. The repercussions of harm are both physical and psychological. Often there is no reversing of the damages. The permanency of injuries is a constant reminder of the harm. A health professional's confidence, enthusiasm, and desire to serve in this capacity are explicitly challenged when dealing with these situations. Thus, this touches everyone.

### *Who Is to Blame?*

This common question always arises after an error occurs. It strikes fear, guilt, anger, and the desire for restitution or even revenge from some. These feelings emerge in both patients and family members, as well as in the professionals involved. It is too easy to blame an individual, such as a healthcare provider or health system employee, making the one person wholly responsible for the *complex and often inadequate health system* in which most of us work. The lack of integration of clinical decision support systems, the paucity of training in patient safety for professionals, and the lack of organizational leadership to achieve safer systems all contribute to each of the errors that get reported.

Further compounding this challenge is the cultural and social context. After harm occurs, the individuals directly involved become isolated. Because the unsafe

event usually happens to one person, one episode at a time, a critical mass of persons who are simultaneously having the experience does not exist. Socially, this means that individuals who are harmed have difficulty with advocacy because there is generally a lack of understanding at the local level among those they interact with about the nature and prevalence of this problem. Healthcare professionals need to know much more about how patients, consumers of health care, react and cope to achieve a resolution.

### *The Science of Safety: What We Have Learned from Engineering, Aviation, and Nuclear Power*

Healthcare professionals are relative newcomers to the science of safety and errors, or accidents. We have the privilege of being able to draw on a knowledge base developed in the engineering disciplines, a knowledge base that continues to expand as a result of unfortunate catastrophes (e.g., Bopal and Chernobyl) or near catastrophes (Three Mile Island). Such incidents with high-risk technologies suggest that planned safety measures are not sufficient to eliminate continuing safety threats and further accidents. For a better understanding of accidents related to high-risk technologies, read the seminal book *Normal Accidents* by sociologist Charles Perrow.<sup>4</sup>

## RISKY SYSTEMS AND NORMAL ACCIDENTS

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The ineffectiveness of planned safety measures is a result of the complicated nature of most “risky” systems. In such cases, there are an unimaginable number of ways in which “two or more failures (can occur) among components that interact in some unexpected way.”<sup>4</sup>, p.4 Perrow refers to this as the “interactive complexity” of a system.

Failures resulting from interactive complexity, however, typically become significant safety threats only when the system is “tightly coupled.”<sup>4</sup> If neither the time nor a means to appropriately intervene exists after an “interactive complexity” failure, then potentially catastrophic events may ensue. Perrow notes that the system characteristics of interactive complexity and tight coupling can be expected to result in an accident, and he refers to such as “normal accidents.”

Over the years, for example, the air traffic control system has been modified in numerous ways to avoid normal accidents. Some of us may remember flying in circles (sometimes for hours) at various airports as a result of weather disturbances

that delayed arrivals and departures. The safety/accident risks of tracking and controlling planes stacked in various layers over an airport are evident. This danger no longer exists. Now, when weather events warrant, departures are delayed at the origin airport. Airspace density at the destination airport affected by the weather is reduced. Planes are no longer stacked at the destination, and passengers fume in airport lounges rather than in the air. Most observers would agree that the air traffic control system has been improved as a result of efforts to reduce interactive complexity and tight coupling.

Regardless of efforts to reduce normal accidents in many engineering environments, they continue to occur, and the blame for such accidents continues to be diffused. For example, the President's Commission to Investigate the Accident at Three Mile Island distributed blame rather diffusely but placed primary blame on the operators. Metropolitan Edison, on the other hand, blamed the equipment. A study conducted for the Nuclear Regulatory Commission blamed systems design.<sup>4</sup>

In all cases, however, healthcare professionals prefer to avoid the necessity of placing blame. Instead, we would rather an incident not occur at all. This is the focus of this book. How can the healthcare system improve in order to avoid errors, mistakes, and accidents and better ensure patient safety? How do healthcare professionals continuously assure this? Healthcare delivery systems are complex and dynamic. New technologies, care approaches, and evidence are constantly emerging. Thus, we must learn how the science of safety should be applied regularly and continuously in our practices. Given the experience that the engineering disciplines have gained in industries such as aviation and nuclear energy, we should evidently focus on system issues such as interactive complexity and tight coupling in health care.

For example, if the interactive complexity of a system results in an error in prescribing or dispensing a routine medication to a patient hospitalized for elective surgery, the loose coupling of the system may ensure that the patient suffers no severe consequences. In this instance, system redundancies have time to become active. The error may be caught by a nurse reviewing the patient's records before administering the medication to the patient, or the patient may notice that the color/shape of the medication is inconsistent with that which is routinely taken. On the other hand, if interactive complexities lead to an error in a trauma center, a place of care delivery where many rapid and near instantaneous care decisions are made, there may be neither the time nor the means to recover from the error appropriately, and the patient may suffer irreparable harm. Thus, the risks in the latter case are more significant than in the former.

## RISK ANALYSIS, PUBLIC POLICY, AND REGULATION

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As healthcare professionals strive to improve patient safety, issues such as risk analysis, public policy, and regulation must be considered. Implications of these topics for a variety of disciplines, including health and safety, can be found in journals such as *Risk Analysis* and *RISK: Health, Safety & Environment*, the journals of the Society for Risk Analysis and the Risk Assessment and Policy Association, respectively. For example, risk analysts have questioned the efficacy of public policy and regulation, which require huge expenditures for a small reduction in one type of risk, when similar expenditures could yield significant reductions in other types of risks. With respect to patient safety, the identification of potential risks and the costs of mitigating those risks need to be considered in order to prioritize patient safety efforts.

Emerging evidence and practical applications in health care have recently become available in application-oriented publications, web-based resources, and other media resources. Two recently emerging journals that focus on safety in health care are the *Journal of Quality and Patient Safety*, published by the Joint Commission on Accreditation of Healthcare Organizations, and the *Journal of Patient Safety*.

We also need to recognize that risk perceptions of the lay public are relevant to efforts to improve patient safety. Evidence suggests that the public uses error rates to judge the quality of health care and that information gained from the Internet may complicate public perceptions.<sup>5,6</sup> The federal government is increasing attention on the potential for centralized reporting of unsafe events. A system for this, similar to the system that exists for aviation reporting, will likely emerge in the next few years.

Considerable research has been devoted to measuring public perceptions of an assortment of health, safety, and environmental risks. Various risk paradigms have emerged from both quantitative and qualitative research, including engineering, psychological, and cultural paradigms. Evidence shows that psychometric models (based on statistical techniques such as factor analysis and principal components analysis) may be more useful than cultural models in explaining variances in risk perception. Moreover, considerable differences exist between the level of risks that experts perceive and those the lay public perceives, and the latter group tends to use a variety of (perhaps unreliable) heuristic processes in estimating risk. If there is truth to the adage that “perception is reality,” then those who are attempting to reduce risks to patient safety and health must have an appropriate understanding of relevant risks as well as an understanding of the heuristic processes that the public uses in risk estimation. Moreover, because risk mitigation is costly, the value of a clear understanding of statistical methods and statistical decision analysis in scientific risk analysis is evident.

Although healthcare professionals may not individually be a master of the use of these tools, we all have a responsibility to understand and use the best practices and approaches that emerge from these scientific analyses as they are revealed.

## IMPORTANT GOVERNANCE AND ORGANIZATIONS IN PATIENT SAFETY

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Different groups have formed in the government, private healthcare sector, professions, and consumers to advance the causes, concerns, and solutions to the problems of patient safety. These groups have emerged from a true social need to improve the situation. Some of these organizations are oriented toward providing access to the newest information that may be useful in advancing safety. Others provide resources and funding to study difficult or newly emerging problems in safety. Political activism for regulatory, legislative, and policy change is central to some. The Appendix at the end of this chapter provides a comprehensive listing of groups whose missions and purposes are associated with the area of patient safety. You are encouraged to go to the Websites identified for these organizations to gain an appreciation and understanding of the mission and purpose of each.

## BASIC CONCEPTS OF PATIENT SAFETY

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### *The Principles and Tenets of Patient Safety*

As stated in the IOM report: “Whether a person is sick or just trying to stay healthy, they should not have to worry about being harmed by the health system itself.”<sup>2</sup> There are some key principles and tenets that serve to motivate healthcare providers to continuously improve efforts in patient safety:

- Healthcare professionals are intrinsically motivated to improve patient safety because of the ethical foundation, professional norms, and expectations of our respective disciplines.
- Organizational leaders are responsible for setting the standards for achieving safety at the highest level and will do so in response to societal expectations.
- Consumers are becoming increasingly aware of the healthcare safety problem and are not accepting of it.<sup>7</sup>
- There is substantial room for improvement of healthcare systems and practices that will result in a reduction in both error potential and harm.

To improve safety, healthcare professionals must recognize the characteristics that can make this effort a success. First, we must be able to collect data on errors and

incidents within the local organization in order to identify opportunities for improvements and to be able to track progress. Second, we must develop an organizational culture that is founded on the concept of safety. Third, complex processes must be analyzed using appropriate tools. Finally, as much standardization as is possible should be accomplished while still allowing individuals the independent authority to solve encountered problems in a creative way.

### *Safety and Quality Are Concepts on a Continuum*

It is a challenge to understand the concepts of safety and quality. According to the IOM report, these are inseparable. When does the concept of safety end and the concept of quality begin? In essence, when our care is safe, we do no harm and have the lowest potential to do harm through the processes we use and the practices we adopt. When we provide the highest quality of care, we make choices and deliver care that has the greatest potential to achieve the best outcome possible for our patients.

By merging the two concepts, opportunity costs are created. It costs something to assure safety. Healthcare providers must assess opportunity costs to understand the *true cost* of any course of action. If we ignore opportunity costs, we may produce the illusion that the benefits of achieving the highest standards of safety cost nothing at all. These unseen opportunity costs are *hidden costs* incurred. Although it is sometimes hard to compare the benefits and losses of alternative courses of action, it is not necessarily so difficult in patient safety. For example, if we want to reduce the number of opportunities that the wrong medicine is dispensed by the pharmacist before it is given to the patient, we must take the time to check the manufacturer's medication container against the medicines that we place into the prescription container for the patient. This process takes time and employees all get paid a salary. If we were to employ too few people, the cost would be increased by potential medication dispensing errors reaching the patient. Add to this another patient care step, counseling. When pharmacists counsel patients directly about their medications before dispensing them, 89% of product-dispensing errors are caught before reaching the patient.<sup>8</sup> If we do not adequately staff the pharmacy, such that pharmacists do not have time to counsel patients in a thorough manner, the number of medication errors that reach the patient increases dramatically.

One way to identify opportunities to improve safety is to apply the practices of continuous quality improvement, a method widely used in many industries, including health care.<sup>9</sup> Our challenge is to apply this practice from a patient-centered perspective.

## TAXONOMY, DEFINITIONS, AND TERMS

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### *What Is a Taxonomy?*

Taxonomies are the systematic arrangement of entities in any field into categories or classes based on common characteristics such as properties, morphology, and subject matter. In other words, a taxonomy organizes our ideas into relationships that have meaning. Taxonomies are global, professional, and sometimes practice-setting specific.

### *Why Is a Taxonomy Important in Patient Safety?*

System improvement is the major way in which patients will be safer when receiving health care. Much of system improvement requires our ability to count the number and types of events or occurrences that are indicators of what we are trying to affect or change. Without a common taxonomy, which is our current system, we will not be able to keep track of events to measure change. A common language is also necessary between healthcare providers and organizational and system employees. We all need to understand patient safety concepts with the same meaningfulness; therefore, your charge is to understand the patient safety taxonomy in the context of your workplace, its improvement efforts, and the patients you serve.

In patient safety, some key terms and definitions should be understood. Particularly when healthcare providers are working between and within different professional backgrounds, we must have a common understanding of definitions and terms used in patient safety. Definitions are of vital importance when they are used to describe measurements and attributes. In the case of patient safety, there is a great need to count events and determine the magnitude of impact of events. The core terms that are essential to know and understand are highlighted here. In addition, a more complete listing is included in the Taxonomy of Terms and the Source section of the textbook. A working knowledge of the terms and concepts shown here should be acquired:

*Accident*—an event that involves damage to a defined system that disrupts the ongoing or future output of the system.<sup>2</sup> Accident is another word for the event itself and not the causes that supersede it.

*Adverse event*—an injury resulting from a medical intervention.<sup>2</sup> Adverse events may occur because of error or because of an intrinsic negative reaction not related to error. Adverse events may come about because of both error and nonerror causes. For example, a patient may have an adverse drug event. This may occur because the patient could not tolerate the particular chemical structure of the drug and as a result experienced a harmful effect.

*Error*—failure of a planned action to be completed as intended or use of a wrong plan to achieve an aim; the accumulation of errors results in accidents. Errors can include problems in practice, products, procedures, and systems.<sup>2</sup> There are different types of errors. The taxonomy describing error is in the context of systems.

*Active error*—an error that occurs at the level of the front-line operator and whose effects are felt almost immediately.<sup>2</sup>

*Latent error*—errors in the design, organization, training, or maintenance that lead to operator errors and whose effects typically lie dormant in the system for lengthy periods of time.<sup>2</sup>

*Human factors*—study of the interrelationships between humans, the tools they use, and the environment in which they live and work.<sup>2</sup> Human factors testing and evaluation is a field of methodologies to assess the effectiveness and suitability of any human–system interface.<sup>10</sup>

*Patient safety*—freedom from accidental injury; ensuring patient safety involves the establishment of operational systems and processes that minimize the likelihood of errors and maximize the likelihood of intercepting them when they occur.<sup>2</sup> The concept of patient safety includes both responding to and preventing errors.

*Patient safety practice*—a type of process or structure whose application reduces the probability of adverse events resulting from exposure to the health system across a range of conditions or procedures.<sup>11</sup>

*Quality of care*—the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.<sup>2</sup> Donabedian points out that depending on where we are located in the system of care and the nature and extent of our responsibilities, several formulations of quality are legitimate. In general, quality of care is inclusive of care by practitioners and other providers, care received by the patient, and care received by the community. These are levels of care that can be assessed for quality.<sup>12</sup>

*Standard*—a minimum level of acceptable performance or results, or excellent levels of performance, or the range of acceptable performance or results. The American Society for Testing and Materials defines six types of standards.<sup>2</sup>

1. Standard test method—a procedure for identifying, measuring, and evaluating a material, product, or system.
2. Standard specification—a statement of a set of requirements to be satisfied and the procedures to determine whether each of the requirements is satisfied.

3. Standard practice—a procedure for performing one or more specific operations or functions.
4. Standard terminology—a document comprising terms, definitions, descriptions, explanations, abbreviations, or acronyms.
5. Standard guide—a series of options or instructions that do not recommend a specific course of action.
6. Standard classification—a systematic arrangement or division of products, systems, or services into groups based on similar characteristics.

*System*—a set of interdependent elements interacting to achieve a common aim. These elements may be both human and nonhuman (equipment, technologies, etc.).<sup>2</sup> In health care, it is well recognized that all systems have a human–system interdependency and interface. In the patient safety work we do, we concentrate on system failures and improvements.

*Microsystem*—an organizational unit built around the definition of repeatable core service competencies. Elements of a microsystem include (1) a core team of healthcare professionals, (2) a defined population of patients, (3) carefully designed work processes, and (4) an environment capable of linking information on all aspects of work and patient or population outcomes to support ongoing evaluation of performance.<sup>2</sup>

## SUMMARY

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The scope of the problem of unsafe healthcare practices in the United States is large. The dynamic nature of health care further complicates the problem of safety. As new technologies and approaches to care are incorporated into the daily practice of health professionals, new opportunities for unsafe practices are created. By understanding the historical development of the theories and practices of safety in industries other than health care, we are better positioned in health care to incorporate improvements from these lessons learned. Thus, it is important for professionals to integrate basic concepts of patient safety into health care. We must know the basic terminology and vocabulary of patient safety in health care as a common language between us in our disciplines in order to incorporate patient safety practices that are understood and supported by all of us. The harm, fear, isolation, and eventual poor health outcome for patients as a result of unsafe practices are avoidable for most patients. If we incorporate the science of safety into our ongoing daily practices, we are sure to reduce the magnitude and extent of harm and injury that results for all of us.

## A CLOSING CASE

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Read the following case, and use the questions that follow to apply what you have learned in this chapter:

A.L. was in a rollover motor vehicle accident while traveling 3 hours from her home early one weekend morning. She was removed from the vehicle by paramedics and transported by ambulance to the nearest regional hospital. In the emergency room, she was examined, received staples to close a head wound, and had radiographs taken. Although she was sore all over, her main complaint was pain and numbness in the middle of her shoulder that continued down her arm into her fingers. The radiographs were negative, and the patient was discharged from the hospital after 2 days of observation. She was to see her family physician to get the staples removed.

The patient's symptoms did not improve, and when she saw her family physician, she requested a referral to physical therapy. When her symptoms did not improve with physical therapy, the physical therapist discussed additional imaging studies with the patient's physician. Magnetic resonance imaging (MRI) revealed three fractures and a subluxation of the C6-C7 vertebrae, which would be consistent with the patient's symptoms. (The original plain films were blurry in this area.) Subsequently, A.L. underwent a cervical fusion. Although improvement was noted, she now has some restriction in her neck movements.

1. Describe the adverse event in this case.
2. Did an error occur? If so, what was it?
3. Was the patient harmed?
4. Who should be blamed?

### Discussion Questions to Launch Further Investigation

For further investigation, seek answers to these questions. The following resource list may be helpful to you in this inquiry:

1. Distinguish between risk and harm. Why is it important to differentiate these two concepts?
2. Why do we need to openly discuss errors that occur in practice?
3. Why is it incorrect to hold one person solely responsible for an error that occurs and reaches a patient?

- Agency for Health care Research and Quality. Web M&M: Morbidity and Mortality Rounds on the Web. Available at: <http://www.webmm.ahrq.gov/>. Accessed September 8, 2008.
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# Appendix

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## Patient Safety Relevant Organizations and Acronyms Guide

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Agency for Health Care Policy and Research	AHCPR
Agency for Healthcare Research and Quality	AHRQ
American Hospital Association	AHA
American Medical Association	AMA
American National Standards Institute	ANSI
American Nurses Association	ANA
Area Health Education Center Program	AHEC
Association for the Advancement of Medical Instrumentation	AAMI
Aviation Safety Reporting System	ASRS
Center for Quality Improvement and Patient Safety	CQuIPS
Centers for Disease Control and Prevention	CDC
Centers for Education and Research on Therapeutics	CERTs
Conditions of Participation	CoP
Department of Defense	DoD
Department of Health and Human Services	DHHS
Department of Labor	DOL
Department of Veterans Affairs	VA
Diabetes Quality Improvement Project	DQIP
Employee Benefit Research Institute	EBRI
Employee Retirement Income Security Act	ERISA
Epidemic Intelligence Service	EIS
Federal Aviation Administration	FAA

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**Patient Safety Relevant Organizations and Acronyms Guide (continued)**


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Federation of State Medical Boards	FSMB
Fiscal Year	FY
Food and Drug Administration	FDA
Health Care Financing Administration	HCFA
Health Resources and Services Administration	HRSA
Healthcare Cost and Utilization Project	HCUP
Indian Health Service	HIS
Institute of Medicine	IOM
Intensive care unit	ICU
Joint Commission on Accreditation of Healthcare Organizations	JCAHO
National Aeronautics and Space Administration	NASA
National Association of Insurance Commissioners	NAIC
National Business Coalition on Health	NBCH
National Committee for Quality Assurance	NCQA
National Coordinating Council for Medication Error Reporting and Prevention	NCCMERP
The National Forum for Health Care Quality Measurement and Reporting	Quality Forum
National Health Care Survey	NHCS
National Nosocomial Infections Surveillance	NNIS
National Patient Safety Foundation	NPSF
National Patient Safety Partnership	NPSP
National Practitioner Data Bank	NPDB
Occupational Safety and Health Administration	OSHA
Office of Personnel Management	OPM
Operating room	OR
Pension and Welfare Benefits Administration	PWBA
Quality Assessment/Performance Improvement	QAPI
Quality Interagency Coordination Task Force	QuIC
Study of Clinically Relevant Indicators for Pharmacologic Therapy	SCRIPT
Veterans Health Administration	VHA
Washington (DC) Business Group on Health	WBGH

Adapted from *Doing What Counts for Patient Safety: Federal Actions to Reduce Medical Errors and Their Impact*. Report of the Quality Interagency Coordination Task Force (QuIC) to the President, February 2000. Quality Interagency Coordination Task Force. Washington, DC. Available from: <http://www.quic.gov/report/toc.htm>.