

Section I:

Patient Safety and Quality

Chapter 1. Defining Patient Safety and Quality Care

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Introduction

The goal of this chapter is to provide some fundamental definitions that link patient safety with health care quality. Evidence is summarized that indicates how nurses are in a key position to improve the quality of health care through patient safety interventions and strategies.

Quality Care

Many view quality health care as the overarching umbrella under which patient safety resides. For example, the Institute of Medicine (IOM) considers patient safety “indistinguishable from the delivery of quality health care.”¹ Ancient philosophers such as Aristotle and Plato contemplated quality and its attributes. In fact, quality was one of the great ideas of the Western world.² Harteloh³ reviewed multiple conceptualizations of quality and concluded with a very abstract definition: “Quality [is] an optimal balance between possibilities realised and a framework of norms and values.” This conceptual definition reflects the fact that quality is an abstraction and does not exist as a discrete entity. Rather it is constructed based on an interaction among relevant actors who agree about standards (the norms and values) and components (the possibilities).

Work groups such as those in the IOM have attempted to define quality of health care in terms of standards. Initially, the IOM defined quality as the “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”⁴ This led to a definition of quality that appeared to be listings of quality indicators, which are expressions of the standards. These standards are not necessarily in terms of the possibilities or conceptual clusters for these indicators. Further, most clusters of quality indicators were and often continue to be comprised of the 5Ds—death, disease, disability, discomfort, and dissatisfaction⁵—rather than more positive components of quality.

The work of the American Academy of Nursing Expert Panel on Quality Health focused on the following positive indicators of high-quality care that are sensitive to nursing input: achievement of appropriate self-care, demonstration of health-promoting behaviors, health-related quality of life, perception of being well cared for, and symptom management to criterion. Mortality, morbidity, and adverse events were considered negative outcomes of interest that represented the integration of multiple provider inputs.^{6,7} The latter indicators were outlined more fully by the National Quality Forum.⁸ Safety is inferred, but not explicit in the American Academy of Nursing and National Quality Forum quality indicators.

The most recent IOM work to identify the components of quality care for the 21st century is centered on the conceptual components of quality rather than the measured indicators: quality care is safe, effective, patient centered, timely, efficient, and equitable. Thus safety is the foundation upon which all other aspects of quality care are built.⁹

Patient Safety

A definition for patient safety has emerged from the health care quality movement that is equally abstract, with various approaches to the more concrete essential components. Patient safety was defined by the IOM as “the prevention of harm to patients.”¹ Emphasis is placed on the system of care delivery that (1) prevents errors; (2) learns from the errors that do occur; and (3) is built on a culture of safety that involves health care professionals, organizations, and patients.^{1,10} The glossary at the AHRQ Patient Safety Network Web site expands upon the definition of prevention of harm: “freedom from accidental or preventable injuries produced by medical care.”¹¹

Patient safety practices have been defined as “those that reduce the risk of adverse events related to exposure to medical care across a range of diagnoses or conditions.”¹² This definition is concrete but quite incomplete, because so many practices have not been well studied with respect to their effectiveness in preventing or ameliorating harm. Practices considered to have sufficient evidence to include in the category of patient safety practices are as follows:¹²

- Appropriate use of prophylaxis to prevent venous thromboembolism in patients at risk
- Use of perioperative beta-blockers in appropriate patients to prevent perioperative morbidity and mortality
- Use of maximum sterile barriers while placing central intravenous catheters to prevent infections
- Appropriate use of antibiotic prophylaxis in surgical patients to prevent postoperative infections
- Asking that patients recall and restate what they have been told during the informed-consent process to verify their understanding
- Continuous aspiration of subglottic secretions to prevent ventilator-associated pneumonia
- Use of pressure-relieving bedding materials to prevent pressure ulcers
- Use of real-time ultrasound guidance during central line insertion to prevent complications
- Patient self-management for warfarin (Coumadin®) to achieve appropriate outpatient anticoagulation and prevent complications
- Appropriate provision of nutrition, with a particular emphasis on early enteral nutrition in critically ill and surgical patients, to prevent complications
- Use of antibiotic-impregnated central venous catheters to prevent catheter-related infections

Many patient safety practices, such as use of simulators, bar coding, computerized physician order entry, and crew resource management, have been considered as possible strategies to avoid patient safety errors and improve health care processes; research has been exploring these areas, but their remains innumerable opportunities for further research.¹² Review of evidence to date critical for the practice of nursing can be found in later chapters of this Handbook.

The National Quality Forum attempted to bring clarity and concreteness to the multiple definitions with its report, *Standardizing a Patient Safety Taxonomy*.¹³ This framework and taxonomy defines harm as the impact and severity of a process of care failure: “temporary or permanent impairment of physical or psychological body functions or structure.” Note that this classification refers to the negative outcomes of lack of patient safety; it is not a positive classification of what promotes safety and prevents harm. The origins of the patient safety

problem are classified in terms of type (error), communication (failures between patient or patient proxy and practitioners, practitioner and nonmedical staff, or among practitioners), patient management (improper delegation, failure in tracking, wrong referral, or wrong use of resources), and clinical performance (before, during, and after intervention).

The types of errors and harm are further classified regarding domain, or where they occurred across the spectrum of health care providers and settings. The root causes of harm are identified in the following terms:⁸

- Latent failure—removed from the practitioner and involving decisions that affect the organizational policies, procedures, allocation of resources
- Active failure—direct contact with the patient
- Organizational system failure—indirect failures involving management, organizational culture, protocols/processes, transfer of knowledge, and external factors
- Technical failure—indirect failure of facilities or external resources

Finally, a small component of the taxonomy is devoted to prevention or mitigation activities. These mitigation activities can be universal (implemented throughout the organization or health care settings), selective (within certain high-risk areas), or indicated (specific to a clinical or organizational process that has failed or has high potential to fail).

Nursing As the Key to Improving Quality Through Patient Safety

Nursing has clearly been concerned with defining and measuring quality long before the current national and State-level emphasis on quality improvement. Florence Nightingale analyzed mortality data among British troops in 1855 and accomplished significant reduction in mortality through organizational and hygienic practices.¹⁴ She is also credited with creating the world's first performance measures of hospitals in 1859. In the 1970s, Wandelt¹⁵ reminded us of the fundamental definitions of quality as characteristics and degrees of excellence, with standards referring to a general agreement of how things should be (to be considered of high quality). About the same time, Lang¹⁶ proposed a quality assurance model that has endured with its foundation of societal and professional values as well as the most current scientific knowledge (two decades before the IOM definition was put forth).

In the past, we have often viewed nursing's responsibility in patient safety in narrow aspects of patient care, for example, avoiding medication errors and preventing patient falls. While these dimensions of safety remain important within the nursing purview, the breadth and depth of patient safety and quality improvement are far greater. The most critical contribution of nursing to patient safety, in any setting, is the ability to coordinate and integrate the multiple aspects of quality within the care directly provided by nursing, and across the care delivered by others in the setting. This integrative function is probably a component of the oft-repeated finding that richer staffing (greater percentage of registered nurses to other nursing staff) is associated with fewer complications and lower mortality.¹⁷ While the mechanism of this association is not evident in these correlational studies, many speculate it is related to the roles of professional nurses in integrating care (which includes interception of errors by others—near misses), as well as the monitoring and surveillance that identifies hazards and patient deterioration before they become errors and adverse events.¹⁸ Relatively few studies have had the wealth of process data evident in the RAND study of Medicare mortality before and after implementation of diagnosis-related groups. The RAND study demonstrated lower severity-adjusted mortality related to better

nurse and physician cognitive diagnostic and treatment decisions, more effective diagnostic and therapeutic processes, and better nursing surveillance.^{19, 20}

Further, when we consider the key role of communication or communication lapses in the commission of error, the role of nursing as a prime communication link in all health care settings becomes evident. The definition of “error chain” at PSNet clearly indicates the role of leadership and communication in the series of events that leads to patient harm. Root-cause analyses of errors provide categories of linked causes, including “(1) failure to follow standard operating procedures, (2) poor leadership, (3) breakdowns in communication or teamwork, (4) overlooking or ignoring individual fallibility, and (5) losing track of objectives.”²¹ This evidence was used in developing the cause portion of the National Quality Forum’s patient safety taxonomy and is further discussed in other chapters of this book.

Conclusion

Patient safety is the cornerstone of high-quality health care. Much of the work defining patient safety and practices that prevent harm have focused on negative outcomes of care, such as mortality and morbidity. Nurses are critical to the surveillance and coordination that reduce such adverse outcomes. Much work remains to be done in evaluating the impact of nursing care on positive quality indicators, such as appropriate self-care and other measures of improved health status.

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