**CONCEPT 50**

**Health Care Quality**

*P.J. Woods*

Health care organizations have a duty to the communities they serve to maintain the quality and safety of care. Health care quality applies within the realm of health care delivery in any public or private setting. Whatever structures, systems, and processes an organization establishes, it must be able to show evidence that standards are upheld. Nurses are a crucial link in meeting the needs of patients and ensuring patient safety, patient-centered care, and communication as part of the health care team. This concept also includes patient preferences, access, cost, and quality as intertwined variables. In other words, the delivery of quality care is irrelevant if the patient cannot access care, the cost is prohibitive (either through insurance or self-pay), or the patient does not want it. Thus both the medical provider and the nurse who want to do the best for the patient may be at odds with the patient, society norms, and best practices. The purpose of this concept presentation is to help students gain a general understanding of quality in the delivery of health care.

**Definition**

The term *quality* in health care has 19 definitions on a single quality dictionary website (<http://dictionary.reference.com/browse/quality>), and an Internet search turned up 2,680,000 results for defining quality. This includes definitions from the general meaning that it is merely an attribute of something (e.g., soft or hard) to more specific meanings associated with the degree of excellence or superiority (which, for the purpose of this concept analysis, applies more to how the term is used in health care evaluations).

The importance of quality dates back to Florence Nightingale when she assessed for quality by measuring patient outcomes.[1](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib1) Defining quality is difficult because the meaning of “quality” can vary based on context, expectations, and requirements. The expectations of patients, providers, and managers may be different. For example, according to Meade, quality care to the patient is determined by the patient's perception of whether he or she received extraordinary service.[2](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib2) This is the “wow” factor that makes the organization and the care, according to patients' perspectives, unique and unparalleled among competing facilities. An additional benefit to having superb overall quality according to patients' perspectives is that it leads to improved clinical outcomes.[3](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib3) Overall, these expectations of patients have come to be known as *patient-centered care.* This means that the patient and the patient's family as he or she defines it are at the center of care, and the health care system seeks to empower them to be active participants and make shared decisions for all aspects of their care. This is particularly important for the nurse because the basis for patient-centered care is communication.[4](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib4)

The provider might consider quality as the effects of medical interventions and scientific knowledge resulting in successful and cost-effective recovery without complications. The nurse at the bedside might view quality as the delivery of safe, caring, and competent care, whereas the nurse manager might see quality as a ratio of volume of care in relation to the available resources or the score on a patient satisfaction survey. Regardless, the focus should be on providing patients excellent services via competent health care, comprehensive communication, interprofessional teamwork, and cultural sensitivity.[5](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib5)

Quality is also both tangible and intangible. The care delivered can be technically perfect, but if the patient does not improve, according to realistic expectations, or is very dissatisfied with the care, it is useless. Although quality can be a perception, a feeling, or an impression, it can also be something measured. Quality health care is competent and cost-effective. It meets the needs of the patient and utilizes the hospital's resources in a cost-effective way. It meets and/or exceeds an established standard. At times, it seems an impossible goal, but one for which we continually strive. For the purposes of this concept presentation, the Institute of Medicine's (IOM) definition of quality is used. The IOM defines quality of care as *the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge*.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Scope**

Clearly articulating the scope of quality is challenging because of the abstract nature of this concept. However, as a starting point, it might be helpful to think about the scope of quality on a continuum ranging from consistently poor quality and poor patient outcomes to perfection—that is, always delivering error-free, high-quality care, resulting in optimal outcomes for every patient ([Figure 50-1](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#f0015)). Embedded within this continuum are multiple variables that collectively impact the overall quality of care.

**FIGURE 50-1 Scope of Quality: A Continuum of Quality Consistency**

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The foundation of quality health care is based on the premise that those who want health care have access to it. Everyone should have access to quality health care, regardless of age, geography, or socioeconomic circumstance. The U.S. health care system is largely based on fee-for-service or insurance, creating a barrier to the poor and uninsured. In addition, because of large rural areas in the United States and health provider shortages, many individuals cannot access primary care or specialty care in their communities. Even in areas where providers are available, they may not accept new patients if they have a full complement of patients (referred to as a *full panel*). In addition, access is not just having access to a provider but also being able to navigate external and internal access demands. External demands include appointment requests, referrals, calls, walk-ins, or any other way patients can gain access to a provider. Internal demands include follow-up appointments that take the place of a new patient or a returning patient with a new problem.

Like all concepts, quality cannot be applied in isolation. From a broader perspective, quality is one element within the context of improving health care in the United States. The “Triple Aim” (developed by the Institute for Healthcare Improvement) focuses on improving the patient experience through quality care but also focuses on improvements in the health of our population and reducing cost.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6),[7](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib7)

**Attributes and Criteria**

A fundamental attribute inherent in the concept of health care quality is that you cannot improve what you cannot or do not measure. For this reason the health care system uses measures to gauge progress and improve results. Measurement identifies gaps in performance and allows providers to gauge the quality of care delivered. Publicly reporting the results of measurement provides valuable information for patients choosing high-quality providers, purchasers and insurers shaping payment policies based on rewarding quality and efficiency, physicians making referral decisions, and patients recommending a specific health care system to their friends and family.[8](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib8)

It is difficult, if not impossible, to list or rank all of the many attributes associated with health care quality or to integrate them to identify a single measure that identifies quality. However, the IOM's *Crossing the Quality Chasm* identifies six characteristics or attributes for quality health care that are useful for this concept presentation: safe, effective, timely, patient-centered, efficient, and equitable ([Box 50-1](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#b0010)).[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Box 50-1**

**Attributes of Health Care Quality**

• Safe

• Effective

• Timely

• Patient-centered

• Efficient

• Equitable

**Safe**

All patients should expect care to be delivered correctly and without error. Unfortunately, tens of thousands of errors occur every day in the U.S. health system.[9](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib9) Safe health care delivery conforms to standards of practice and sound decision making. Health care professionals demonstrate appropriate knowledge of the health/illness status of the patients they are treating and practice within the appropriate scope of practice based on their licensure or certification. The outcome of a safe health care environment is the avoidance of injury in the delivery of care.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Effective**

Effective health care is care based on offering services that address the most important health care concerns to individuals and the most vulnerable population groups. Effective care involves integration of curative and preventative services and refraining from providing services to those who are not likely to benefit. In other words, effective care avoids underuse and overuse of health care services.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Timely**

Timeliness of care refers to reducing wait time for health care delivery services. This principle is particularly important to avoid harmful delays that can occur with certain medical conditions. In today's health care delivery system, there are many delays on many levels. Patients wait for parking, they wait in the clinic to get registered, they wait to be put in a room, and then they wait to be seen by the health care provider. If they need diagnostic testing, to fill a prescription, to see a physical therapist, or any other of a myriad of treatments, they will wait and wait again. Patients may have to wait for appointments, especially with specialists, for as long as 6–9 months. When health care is delivered in a timely manner, wait times and harmful delays for both the patient and the provider of care are reduced and care is offered before unnecessary complications occur.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

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**Patient-Centered Care**

Patient-centered care is responsive to individual patient preferences, needs, and values and ensures that these considerations guide all clinical decisions. It also means treating patients with respect and dignity, focusing on the patient, caring about the patient, and treating the patient the way you would like to be treated. Patient-centered care requires soliciting feedback from the patient and his or her family in every aspect of care.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Efficient**

Efficiency in health care delivery refers to efficient use of resources for care delivery, such as time, cost, supplies, and minimizing waste. Efficiency in care coordination is one example that increases the quality of the care experience and reduces redundancy and time wasted for patients and providers. Efficiency encourages best practices and prevention over a sick care model and strives to reduce reward based on volume in individual services.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Equitable**

Equitable care is providing care that does not vary in quality because of gender, ethnicity, geographic location, and socioeconomic status; it strives to serve the underserved and is delivered in a system that allows for exemptions.[5](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib5),[9](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib9) When health care is equitable, all are afforded the same access, costs, and quality.[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

**Theoretical Links**

Avedis Donabedian defined *quality* as values and goals present in the medical system and defined *outcomes* as a validator of the quality and effectiveness of medical care.[10](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib10) He stated that examining care processes instead of focusing on outcomes provided a more reliable indicator of the quality of medical care. Donabedian believed there was a framework that included all the various definitions and specifications, including how variations in care occur, or relate to one another, and the consequences they have on measuring, monitoring, and developing quality measurements in health care. This model is depicted in [Figure 50-2](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#f0020).

**FIGURE 50-2 Donabedian Model of Structure–Process–Outcomes**

The model identifies ways to define, categorize, and measure quality. This has become increasingly important in the era of managed care and cost containment. Most attempts at developing quality indicators have been based on the development of outcome measures. The framework in the Donabedian model is founded on quality using a three-part procedure—structure, process, and outcomes:

• *Structure* is defined as the attributes of settings in which care is delivered. These include the adequacy of facilities, equipment, supplies, staff training, provider knowledge and attitudes, and supervision. The context (structure) in which care is delivered affects processes and outcomes. For example, if the facility is lacking in amenities, wait times are too long, or the providers and staff are not adequately prepared, people will prefer to avoid the facility.

• Service *process* dimensions include the services offered; the technical quality of the services (i.e., the staff and providers perform the technical aspects of the task or job); the quality of interpersonal relations; and the adequacy of patient education, access, safety, and promotion of continuity of care (i.e., appropriate referral and follow-up).

• *Outcomes* are the impact of structure and process on the patient's satisfaction; perceptions of quality, knowledge, attitudes, and behavior; and health outcomes. For example, if a provider or facility is unavailable or if patients do not have accessibility, then the outcome will be a direct result of inadequate access.[11](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib11) The Donabedian model is the most common quality-of-care framework employed, and it has been universally accepted and used as the basis for much of the work addressing quality and outcome.[11](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib11),[12](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib12)

**Context to Nursing and Health Care**

Delivering quality health care and monitoring its outcomes are inherent in all nursing practice environments, and all nurses are responsible for delivering safe, effective, and efficient care. Nurses are the front-line defense against actual and potential risks to patients; this requires an understanding of, and willingness to participate in, measures that promote and ensure the health and safety of patients. This includes **475**being able to identify unsafe practices and respond appropriately to ensure a safe outcome for patients, clients, oneself, and others.

Quality is evaluated on the basis of process and outcomes. Process components include how health care is provided and how the system works. Outcome components include health status and the difference the process made. Improving health care quality is a shared responsibility among all health care professionals. Efforts to achieve quality through quality improvement, the adoption of quality improvement plans, and error reduction are expected in all health care organizations.

**Error Reduction**

According to IOM,[13](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib13) a medical error or adverse event is defined as the failure of a planned intervention or action to be completed as intended and includes a variation from the standard of care. This is referred to as an error of execution. Adverse events are caused by someone on the health care team or by a system failure rather than by the underlying disease or condition of the patient.[14](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib14) Another type of error is using the wrong plan to achieve an outcome, which is an error in diagnosis, planning, or delivery of care. As shown in [Table 50-1](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#t0010), errors are classified as near-miss, adverse, or sentinel events.

**TABLE 50-1**

**Classifications of Safety Events**

| **Type of Event** | **Criteria** |
| --- | --- |
| *Near-miss event*: An error that could have caused harm to a patient, but did not, as a result of chance, prevention, or some intervention that mitigated the impact. The majority of adverse events are near-miss events. | • Mild variation in standard of care• Caused by human or system error• Does not reach the patient• Does not cause harm• Use FMEA to analyze causes |
| *Adverse event*: An error that results in moderate to severe harm to a patient. One of the most common adverse events involves medication administration. | • Moderate variation in standard of care• Caused by human or system error• Reaches the patient• Minimal or no harm• Use FMEA to analyze causes |
| *Sentinel event*: A serious error that results in patient death or a serious, undesirable outcome as a result of the error.[33](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib33) | • Severe variation in standard of care• Caused by human or system error• Reaches the patient• Death or major harm• Use RCA to analyze causes |

FMEA, failure mode effective analysis; RCA, root cause analysis.

Plsek and Greenhalgh define complex adaptive systems (CAS) as a collection of individuals who have freedom to act in ways that are not always predictable and who are interconnected so that small changes can affect other individuals in the CAS.[15](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib15) Our current health care system is a perfect example of a CAS. There are multiple relationships that are organized and evolving together to meet patient needs. These relationships are often nonlinear and dependent on individual behavior. Medical errors are rarely the result of personal negligence or criminal activity; rather, medical errors occur as a result of human fallibility compounded by poor system designs that allow for error. Error prevention management strategies include quality analysis tools such as root cause analysis (RCA) and failure mode effective analysis (FMEA). These are used to analyze and report quality measures, including analyzing errors and near misses as well as preventing adverse events in the first place.

**Regulatory Agencies**

Multiple oversight bodies and regulatory agencies exist to ensure the safety of the public. These regulatory agencies license health care facilities for operation (e.g., specific state licensing regulations) and can fine organizations or restrict services and suspend operations if there is a failure to meet expected standards. For example, Medicare or Medicaid reimbursement can be withheld if the delivery of patient care does not meet national quality standards. The Centers for Medicare & Medicaid Services (CMS), The Joint Commission (TJC), and the Occupational Safety and Health Administration are the major agencies that regulate care provided in hospitals and in community-based settings. Other important regulatory agencies that ensure health care quality include the U.S. Food and Drug Administration, the U.S. Department of Justice, the Office of the Inspector General, and the U.S. Drug Enforcement Administration.

An example of the influence on quality from the regulatory agencies is the establishment of the National Patient Safety Goals (NPSGs) program by TJC to help accredited organizations address specific areas of concern with regard to patient safety.[16](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib16) The NPSG program (updated annually) covers nine health care delivery system areas, each of which has specific patient safety goals. For each of these goals, there are specific measures that the organization must attain.

**Advisory Bodies**

Advisory bodies have an important role in influencing standards for the delivery of quality health care. Although the focus of various advisory bodies varies, contributions to quality health care include efforts such as studies and recommendations regarding best practices for the improvement of health care, establishment of health care performance measures, provision of data on care and outcomes, and collaborative learning efforts.

One of the most influential advisory bodies is IOM, an independent, nonprofit organization that conducts studies and provides un­biased and authoritative advice to improve the nation's health.[14](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib14) Many of the studies that IOM undertakes begin as specific mandates from Congress, whereas others are requested by federal agencies and independent organizations. Examples of landmark studies that have directly influenced health care quality include *To Err Is Human: Building a Safer Health System*[17](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib17) and *Crossing the Quality Chasm: A New Health System for the 21st Century*.[18](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib18)

Some advisory bodies are specific to nursing. For example, an initiative of the National Center for Nursing Quality (NCNQ) originally developed the National Database of Nursing Quality Indicators (NDNQI), a research-based national comparative database on nursing care and its relationship to patient outcomes. NDNQI is the only national nursing database that collects and evaluates unit-specific nurse-sensitive indicators (such as patient falls, pressure ulcer rate, nursing hours per patient day, and nursing turnover rate, to name a few), and provides quarterly and annual reporting of structure, process, and outcome indicators to evaluate nursing care at the unit level.[19](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib19) Participating organizations receive unit-level comparative data reports to use for quality improvement purposes.

**Quality Management Programs and Philosophies**

Health care agencies deliver health care within the context of a quality plan or philosophy designed to continually improve the quality of care **476**delivery and reduce the chance of causing harm to a patient. There are many quality management programs. Health care organizations adopt a program based on the type of care given, patients served, the mission and core values of the organization, and the perspective of organizational leadership. Regardless of the plan adopted, quality management plans should be comprehensive, incorporating all areas of the organization, including clinical areas, administrative and management practices, and facility operation. Common to all quality management plans is a focus on the patient with purposeful collection and analysis of data to improve outcomes and patient satisfaction. Quality measures are used to gauge how well a health care entity provides care to its patients. Measures are based on scientific evidence and can reflect guidelines, standards of care, or practice parameters. A quality measure converts medical information from patient records or patient satisfaction surveys into a rate or percentage that allows facilities to assess their performance.[20](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib20) Examples of quality management programs are total quality management (TQM), continuous quality improvement, Six Sigma, and Lean Six Sigma.

One example of a quality improvement process associated with the TQM approach is plan–do–study–act (PDSA).[21](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib21) The PDSA cycle includes developing a plan to test the change (plan), trying out the change (do), analyzing what happened from the change (study), and determining what was learned (act) ([Figure 50-3](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#f0025)). The team then refines the change based on what was learned, and then this cycle is repeated. The PDSA cycle is usually done on a small scale so the health care team can quickly determine what will provide the best results before they implement a change on a large scale.[21](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib21)

**FIGURE 50-3 The Plan–Do–Study–Act Cycle of Quality Improvement (Source: From Topol EJ, Teirstein PS: *Textbook of Interventional Cardiology*, ed 6, Philadelphia, 2012, Elsevier.)**

Integral elements of quality management systems are error prevention and management strategies. Health care organizations strive for an error-free environment. To develop and maintain the goal of zero errors, many organizations have adopted a *culture of safety*, defined as the shared commitment of management and employees to ensure the safety of the work environment. In a comprehensive literature review, the following seven subcultures were identified: leadership, teamwork, evidence-based, communication, learning, just, and patient-centered.[22](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib22) A culture of safety acknowledges the inevitability of error and proactively seeks to identify latent threats.[23](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib23) The following are characteristics of such a culture:

• Acknowledgment of the high-risk, error-prone nature of an organization's activities

• A blame-free environment in which individuals are able to report errors or close calls without fear of reprimand or punishment

• An expectation of collaboration across ranks to seek solutions to vulnerabilities

• A willingness on the part of the organization to direct resources for addressing safety concerns

**Health Information Technology**

Health information technology (HIT) enables organizations to mine the data collected in the delivery of patient care and track performance against established benchmarks more quickly and economically than with manual systems. This speeds adjustments to improve outcomes, regardless of whether they are clinical nursing outcomes, workforce outcomes, patient and consumer outcomes, or organizational outcomes. The RAND Foundation estimates that widespread adoption of various HITs could save up to $77 billion annually.[24](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib24) HIT structural measures are intended to help providers assess the efficiency and standardization of current HIT systems and identify areas in which additional HIT tools can be used.[24](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib24) IOM emphasizes the importance of using HIT to accomplish the following:[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6)

• Design care processes based on best practices

• Translate new clinical knowledge and skills into practice

• Support the work of multidisciplinary teams

• Enable the coordination of care across patient conditions, services, and settings

• Measure and improve performance

**Interrelated Concepts**

This concept represents areas that relate to health care quality. Several concepts featured in this textbook have a relationship with this concept. **Health Policy** is used to provide overarching goals and set priorities for the allocation of valuable health resources. **Health Care Economics** is concerned with issues related to the scarcity of resources in the allocation of health and health care. **Health Care Organizations** and delivery systems provide the framework for the delivery of health care. The concept **Safety** examines how we prevent accidental injury or harm to patients, and **Technology and Informatics** provides tools to help deliver quality health care. These interrelationships are depicted in [Figure 50-4](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#f0030).

**FIGURE 50-4 Health Care Quality and Interrelated Concepts**

**Clinical Exemplars**

In the United States, nurses can expect to encounter health care quality in any setting and whenever they interact with a patient. Nurses will encounter regulations and standards that their health care organization must meet along with nurse-sensitive indicators for which they are personally responsible. A sample of exemplars, based on categories previously described, are listed in [Box 50-2](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#b0015). It is beyond the scope of this text to describe all these in detail, but several are briefly presented next.

**Box 50-2**

**Exemplars of Quality**

**Regulatory Agencies**

• Accreditation Association for Ambulatory Health Care (AAAHC)

• Accreditation Commission for Health Care (ACHC)

• [Centers for Medicare & Medicaid Services (CMS)](http://pageburstls.elsevier.com/books/bookshelf?q=%22Centers%20for%20Medicare%20Medicaid%20Exemplar%22)

• Community Health Accreditation Program (CHAP)

• Healthcare Facilities Accreditation Program (HFAP)

• Healthcare Quality Association on Accreditation (HQAA)

• National Committee for Quality Assurance (NCQA)

• Occupational Safety and Health Administration (OSHA)

• [The Joint Commission (TJC)](http://pageburstls.elsevier.com/books/bookshelf?q=%22The%20Joint%20Commission%20Exemplar%22)

**Advisory Bodies**

• American Nurses Association (ANA)

• Association for Healthcare Research and Quality (AHRQ)

• [Institute of Medicine](http://pageburstls.elsevier.com/books/bookshelf?q=%22The%20Institute%20of%20Medicine%20Exemplar%22) (IOM)

• Institute for Healthcare Improvement (IHI)

• [Leapfrog Group](http://pageburstls.elsevier.com/books/bookshelf?q=%22leapfrog%20group%20exemplar%22)

• [National Center for Nursing Quality](http://pageburstls.elsevier.com/books/bookshelf?q=%22national%20center%20for%20nursing%20quality%20exemplar%22) (NCNQ)

• National Quality Forum (NQF)

**Quality Plans and Philosophies**

• Baldrige

• Culture of safety

• ANCC Magnet designation

• Plan–do–study–act (PDSA)

• Six Sigma

• Synergy

• Total quality improvement (TQI)

• Total quality management (TQM)

**Error Prevention Management**

• [Failure mode effective analysis](http://pageburstls.elsevier.com/books/bookshelf?q=%22failure%20mode%20effective%20analysis%20exemplar%22) (FMEA)

• [Root cause analysis](http://pageburstls.elsevier.com/books/bookshelf?q=%22root%20cause%20analysis%20exemplar%22) (RCA)

• Risk analysis

**Health Information Technology**

• [Computerized physician order entry](http://pageburstls.elsevier.com/books/bookshelf?q=%22computer%20physician%20order%20entry%20exemplar%22) (CPOE)

• Electronic health records (EHRs)

• Medication administration systems

**Featured Exemplars**

**The Joint Commission**

The Joint Commission is a regulatory agency that has perhaps had the greatest influence on quality as the leader in developing the highest standards for quality and safety and evaluating organization **477**performance based on these standards.[25](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib25) TJC is also the only accrediting organization with the capability and experience to evaluate health care organizations across the continuum of care. TJC accreditation and certification is recognized nationwide as a symbol of quality that reflects an organization's commitment to meeting certain performance standards.[26](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib26) In order for a health care organization to participate in and receive payment from the Medicare and Medicaid programs, it must be certified as complying with TJC regulations.[16](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib16)

**The National Quality Forum**

As an advisory body, the National Quality Forum (NQF) has been instrumental in advancing efforts to improve quality through performance measurement and public reporting. NQF is a private, nonprofit organization with more than 375 members representing virtually every sector of the health care system. NQF has become the “gold standard” for health care performance measures. Major health care purchasers rely on NQF-endorsed measures to ensure that the measures are scientifically sound and meaningful and to help standardize performance measures used across the industry. To date, NQF has endorsed more than 500 measures.[27](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib27)

**The National Center for Nursing Quality**

Created by the American Nurses Association, the NCNQ is a nursing-specific advisory body that addresses patient safety and quality in nursing care and nurses' work lives. The center advocates for nursing quality through quality measurement, novel research, and collaborative learning. Issues such as the nursing workforce shortages and impact on patient outcomes are dealt with through innovative initiatives, including the NDNQI and Safe Staffing Saves Lives.[19](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib19),[28](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib28)

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**Root Cause Analysis**

A root cause analysis (RCA) is an exemplar representing error prevention management and is used when a patient has been seriously harmed or has died as a result of a medical error. The RCA is a critical tool to identify the systems that failed during the course of a given patient's care**.** Each level of the adverse event is investigated in order to identify problems that affect the entire system. Dlugacz and colleagues identified a series of specific questions that dissect the causes of an event to uncover the fundamental flaws in the process, which is important in determining risk points.[29](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib29)

**Failure Mode Effective Analysis**

Failure mode effective analysis (FMEA) is designed to prevent the occurrence of errors or system failures. The first step is to define the critical problem and then identify potential failure modes, analyze causes of system failure, identify solutions to the problem, and evaluate the results.

**Leapfrog Group**

The Leapfrog Group, an employer-based coalition, works with medical experts throughout the United States to identify and propose solutions designed to reduce medical errors through the adoption of specific best practices.[30](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib30) Leapfrog Group's “never events” policy (events that should never occur in health care) requires hospitals to do the following when a never event occurs:[31](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib31)

• Apologize to the patient and/or family affected.

• Report the event to designated agencies.

• Conduct a root cause analysis, consistent with instructions from the chosen reporting agency.

• Waive all costs directly related to the event.

• Make the organization's policy available to patients and payers upon request.

**Computer Physician Order Entry**

Computer physician order entry (CPOE) is a health information technology exemplar of quality. CPOE is an electronic prescribing system that intercepts errors when medications are ordered, before they reach the patient.[32](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib32) With CPOE, rates of serious errors can be reduced by nearly 90% because immediate information to physicians is provided (e.g., warning them about a potential adverse reaction with the patient's other drugs).[5](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib5),[6](https://jigsaw.vitalsource.com/books/9780323374736/epub/OEBPS/xhtml/chp0050.xhtml?favre=brett#bib6) Although CPOE is focused on the physician, the role of the nurse remains critical in avoiding errors by adhering to the “five rights” of medication administration.

**Case Study**

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**Case Presentation**

While hospitalized on a cardiac step-down unit, a patient undergoing cardiac monitoring died when a lethal cardiac rhythm was missed by the hospital staff. Because of the severity of the outcome, an RCA was done. The RCA determined the central monitor screens for the cardiac units were at the nurses' stations, giving them primary responsibility for oversight. However, the nurses were so busy that the unit secretaries were eventually trained to watch the monitors because they sat at the desk where the monitors were located.

The unit secretaries were also very busy, making it almost impossible to keep a constant eye on the cardiac monitors, resulting in inconsistent monitoring, reporting, and follow-up related to monitor alarms. During the RCA, it was determined that the nurses did not intend the secretaries to be the only pair of eyes on the monitors and had every intention of being closely involved. Secretaries were instructed to notify a nurse of any monitor alarm, and it was the nurse's responsibility to respond. However, when the nurses assigned the responsibility to the secretaries, they became complacent in their primary responsibility to ensure someone observed, reported, and responded to any alarm. In the case of the death, the secretary had learned to silence the monitors once she had alerted the nurse because the noise was overwhelming. The secretary reported, “I had seen the nurses do it all the time because they often complained that patients turning over could cause the alarms to go off.” This statement was corroborated by the nursing staff, and they admitted that they often instructed the secretaries to “shut it off” based on their having just been in a patient's room several times for monitor alarms and the patient was fine.

On the day of the event, the monitor was alarming and the secretary told the nurse as usual, but on her way to the patient's room, the nurse was called to an emergency at the other end of the hall, preventing her from checking the patient immediately. The secretary silenced the alarm on two subsequent times after she had notified the nurse, believing it had been addressed. The patient had been in ventricular fibrillation and died before the nurse returned to the room.

During the investigation, it was discovered there had been five other incident reports filed for similar problems during the past 2 years, including two near-death cases. In a review of the other incident reports, it was documented that the solution to the early problems had been to train the secretaries as a backup because the nurses were often in the hallways or in patients' rooms. It was believed that having someone who was always near the monitors and who could watch them and report alarms to the nurses would solve the problem. It became clear, based on the recent death, that a more drastic solution was needed. After analyzing several proposed solutions, it was decided that having a centralized monitor room separate from the nursing station monitors and staffed with monitor techs was the best solution. In addition to the centralized monitor room, the ability to silence a monitor was removed from the central unit at the nurses' station, so the alarm could only be silenced by a nurse at the patient's bedside to ensure someone had seen the patient before silencing the alarm. Finally, in the event of a lethal alarm, the monitor room techs would call a code blue before phoning the nursing unit.

**Case Analysis**

This model case illustrated a system failure that did not meet the major attributes of health care quality of being safe, patient-centered, timely, effective, and efficient. This effort would be classified as a sentinel event because there was a severe variation in the standard of care caused by both human error and system error, resulting in death.

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