

Chapter 1

The Importance of Quality

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Abstract Quality has evolved over the last five decades to a robust process assessing all aspects of the patient's, caregiver's, physician's and health system's experience and outcome. The importance of quality and the role it plays as we shift from volume to value based health care delivery systems is paramount. The quality process can be affected by all of those involved as well as the culture of the organization. Culture change can be an important part of ensuring high-quality outcomes. As health systems move from volume to value, imaging changes from a revenue center to an expense. Ensuring the highest quality outcomes from imaging, not just technically excellent images, but information that changes the delivery of healthcare at the patient level and affects satisfaction and morbidity and mortality will be essential.

Keywords Quality • Health care outcomes • Quality improvement processes

The quality improvement movement and medicine can be traced to the early 1900s when the Flexner report identified the lack of standardized requirements for medical schools. This initial standardization led to the closing of a significant number of the medical schools at the time. In the late 1960s and early 1970s the work of Donabedian described the components of quality in terms of people, preferences, systems and effectiveness and the now familiar assessment paradigm of structure, process and outcome [1]. From this came the development of the ubiquitous quality assessment and quality assurance activities leading into the total quality management initiatives initiated by Toyota in the late 1980s. More recently, quality initiatives have been more centered around national initiatives such as the National Center for Quality Assurance (NCQA) and quality improvement efforts from the Center for Medicare and Medicaid Services (CMS). The current discussion is now one of changing the entire payment model for medicine from one of quantity to quality. Unfortunately, defining quality remains elusive due to the many different definitions and perspectives. Quality can be defined in many different ways. The definitions range from that

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of the dictionary definition: (1) how good or bad something is (2) a characteristic or feature that someone or something has (3) something that can be noticed as a part of a person or thing: a high level of value or excellence [2]. To an individual perspective of “I know it when I see it” or as described by Deming, the father of the quality movement: (1) Quality is defined by the satisfaction of the customer; (2) Quality is dynamic and ever changing; and (3) To maintain a quality reputation, successful organizations must constantly adapt to change [3]. Depending upon the perspective of the person assessing, the definition of quality can vary widely. From a single patient perspective it may be exactly how something will affect them. From a physician perspective, quality can be measured as the effect on a single patient, multiple patients, their practice, or the group/hospital at which they practice. From an insurer perspective, the definition may look towards larger populations of patients and their overall outcome relative to a benchmark measures. Additionally, insurers may be assessing quality based upon the value of the care delivery which takes into account the cost necessary to achieve the quality measures [4].

The current emphasis on quality is driven by the poor performance outcomes noted in healthcare. Royer noted four drivers of the transformational change necessary if quality is to be improved. These are: (1) the lack of consistency in coordination of services among providers; (2) the high cost of care where prices and charges are unrelated to actual cost; (3) increasing physician dissatisfaction as physicians practice patterns become more guideline and protocol driven, and; (4) the current misalignment of vision with a focus on illness rather than wellness and volume rather than value [5]. In addition to these four drivers of transformational change in quality, other forces that are engaged in the marketplace include the increasing complexity of healthcare services and their delivery, customers and their knowledge, opinions, experience and other priorities. Furthermore, when taking a broader perspective, the cost and consequences of over use and inappropriate use and preventable errors enter into the equation.

One of the most important factors in limiting overuse, inappropriate use and preventable errors is a highly informed and engaged customer. Customer quality has been proposed as the third leg of the quality improvement effort [6]. Historically the quality improvement efforts have been focused around technical quality and service quality as defined by Berwick [7]. Technical quality has been defined as what the customer receives relative to what is known to be effective regarding the clinical or disease specific aspects of care and relates primarily to the healthcare provider. Service quality refers to the non-health aspects of care and the environment in which the care is delivered. It has been proposed that customer quality relates to those characteristics that the customer needs to effect improvement in the healthcare process, decision making and action to improve the quality of care delivered and received [6]. This conceptual scheme involves the customer in the delivery and decision making regarding their individual care. The use of the word “customer” can sometimes be sensitive as it relates to patients, however, in this setting many times the customer is not the patient. The customer can be a family member, a caregiver or a wellness visit patient and thus encompasses a much broader population than the use of the word patient alone.

Obtaining the highest level of quality of care delivery will require high levels of technical and service quality as well as high levels of customer quality. In order to achieve the highest level of customer quality three main attributes are necessary. These include a well-informed patient regarding knowing: (1) what and why to do; (2) how to do it and (3) the desire to do it [6]. Coaching a customer regarding these three major attributes will move the customer from a dependent stance to one who is interdependent and interacting effectively with all aspects of the healthcare delivery system. This important change in the paradigm of healthcare delivery will be necessary if we are truly going to affect the quality of care delivered.

Just as important as the empowered patient is to quality, the culture in which the care is delivered is essential. The first step in the necessary culture change to promote quality is one that is patient centric. In this model, provider convenience is relegated to a lesser importance. The major change in the perspective of the organizational culture that must be achieved are creating a safe and just culture within the organizational structure. Creating a culture of safety requires everyone in the organization to be practicing in a mindful and consciousness based manner while striving for perfection. This culture of mindfulness encourages the organization to be constantly evaluating workflow processes for any indications of a failure or hazard that may grow into an adverse event. If an organization is to obtain the high quality that will be necessary for the successful transformation of healthcare, it will be necessary to strive for perfection. Given the high volume with which healthcare organizations are functioning today, a small percentage error, are although seemingly acceptable, can lead to completely unacceptable population outcomes. It will no longer be acceptable to be good enough. Those organizations that hesitate in the process of quality improvement will soon find themselves passed by others that continue to strive for perfection. Thus an organization that was high performing becomes good while others strive for perfection and greatness [8]. For organizations to be successful and achieve this high functioning status, it will be necessary for them also to develop a just culture, characterized by a non-blaming quality improvement process [9]. This non-blaming process allows staff to report potential areas for improvement with the understanding that punitive measures will not be a result and requires civility on the part of all [10].

Those organizations which will be able to perform at the highest levels of quality are those that will include all of the tools mentioned as part of their quality initiatives to ensure a highly reliable and safe environment (Fig. 1.1). In addition to the utilization of the previously mentioned tools, understanding the importance of process improvement tools such as DMAIC: define, measure, analyze, improve and control; and their implementation in all aspects of the organization will be necessary to ensure quality outcomes. As part of this analysis, it is important to ensure that there is a continual return on investment as an organization strives to obtain perfection with regard to its quality. Most importantly, the return on investment is more than just a financial measure. As the organization is investing leadership, personnel, patient's and family's time and well-being, and the organizations dollars, the return on investment is important to be measured in other outcomes. These can include performance measures regarding the organization's mission, vision and values as well as goals outlined in the strategic plan from a leadership perspective. Second, patient satisfaction, well-being

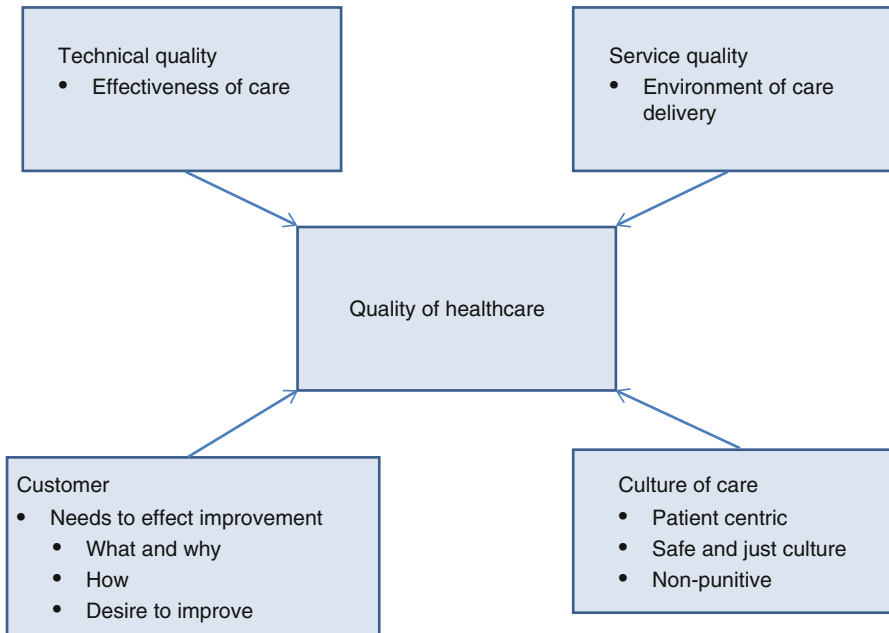


Fig. 1.1 Conceptual diagram outlining the four major components influencing quality in healthcare

and clinical outcomes from a patient and family perspective are important measures of success. Finally, financial outcomes given the financial resources that are invested in an effort to achieve the outcomes should be evaluated [10].

Therefore, quality is becoming central to everything that we will be doing in healthcare especially with regard to imaging. Developing tools and processes that allow us to continually improve, empowered patients and caregivers, and that have definable, measurable and comparable outcomes that allow assessment of organizational performance will be essential moving forward. If these are all done correctly patient, physician, insurer, regulatory agencies and large populations will all benefit [11]. The implications for imaging are significant. Quality of services delivered will become paramount, as imaging will become an expense rather than a revenue center as we move from volume to value. Determining the quality of an imaging study will no longer be determined only by the technical quality of the images but in terms of downstream care and health events such as functional status, quality of life, and reductions in morbidity and mortality [12].

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