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**Review of Different Dimensions of Quality and Assessment of Health Care Quality; A  
review**

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**ABSTRACT**

Health care quality is defined as the degree to which health services meet the needs, expectations and standards of care of the patients, families and other beneficiaries. It is multi-faceted and gives different meanings to different stakeholders such as the government, service providers, hospital administrators, patients, [1] payers, relatives of patients political and community leaders, delivery organizations and regulatory bodies. Quality can be divided into four main dimensions; Functional Quality, Technical Quality, Administrative Quality and Environment Quality. Functional Quality is the interaction between service provider and a customer during service production, distribution and consumption. Technical Quality is the technical care refers to the application of medical science and technology to health care or how well diagnostic and therapeutic processes are applied during patient care. Administrative Quality is the link between quality and hospital organizational structure; organizational culture; management processes; and internal & external environment. Environment quality is the atmosphere which consists of both intangibles such as the pleasantness of the environment and tangibles which are the design, function, layout and signs found in the environment [2].

**Keywords:** *Dimensions of quality, assessment of healthcare quality, models to assess healthcare quality.*

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**Introduction:**

**Health Care Quality**

Quality was initially discussed in the manufacturing sector and later it migrated to the service sector because of its importance for financial benefit, customer satisfaction and customer retention. [3] Quality is viewed by different stakeholders differently [4]. It is multi-faceted and gives different meanings to different stakeholders such as the government, service providers, hospital administrators, patients, [1] payers, relatives of patients political and community leaders, delivery organizations and regulatory bodies [4].

Health care quality is defined as the degree to which health services meet the needs, expectations and standards of care of the patients, families and other beneficiaries. There are three main facets of health care quality i.e., 1. client quality which meets patients' needs and wants; 2. Professional quality which appreciates how techniques and procedures are carried out to meet patients' requirement and 3. managerial quality giving optimum and efficient utilization of resources to achieve objectives [1].

Quality in health care has received professional, political and managerial attention, due to its competitive value, long term profitability and better health outcomes. [2] Additionally, quality can reduce the cost by preventing illnesses, complications, enhancing quality of life and prolonging productive life [5].

**Dimensions of health care quality**

Quality can be divided into four main dimensions; Functional Quality, Technical Quality, Administrative Quality and Environment Quality [2,6].

**a) Functional Quality**

Functional Quality is defined as the discrepancy between consumer's expectations and the perception. Functional quality is intangible, inseparable, heterogeneous, and perishable. [7] It is the interaction between service provider and a customer during service production, distribution and consumption. [2] Functional quality is the consumers overall impression of the relative inferiority or the superiority of the organization and its services which has effects on customer retention. More customers are lost due to service providers' poor attitudes towards customers, than those lost due to poor product or due to higher price [8].

Hospitals in developing countries are faced with the challenges of less client orientation, indifferent treatment methods and less responsiveness to people's needs and expectations. Patients' perspective gives the hospital long term survival with loyal patients [9].

#### **b) Technical Quality**

Technical care refers to the application of medical science and technology to health care or how well diagnostic and therapeutic processes are applied during patient care. [2] Technical Quality is the knowledge of the provider about the illness and treatment; technical skillfulness in procedures and tests; competence in communicating effectively with the team members; and giving patients more outcomes than the risks [10].

Health care quality from provider's perspective is evaluated by the technical performance or extent to which the health care provider adhere to best practices established by medical guidelines. According to health economics, it is difficult for patients to evaluate the technical quality; due to asymmetry of information, heterogeneity of supply with different treatment regimens for the same illness, at varying costs and quality.[11] However, it can be evaluated by qualitative studies, open ended surveys, and by in-depth interviews, even though it takes a longer time. At last, Technical quality significantly affects customers' perception of service quality [12].

#### **c) Administrative Quality**

There is a link between quality and hospital organizational structure (whether participative management or innovative work practices); organizational culture (whether "Blame to one" culture to "Learn from mistakes" culture); management processes (eg: human resource management, inter personal relationships, problem solving, leadership, conflict management, coordination of care, efficiency, effectiveness and organizational growth); and internal & external environment (staff relationships and community participation) [13].

All these aspects affect the staff outcomes (lower burnout rate and high job satisfaction) and hospital outcomes (high performance and low absenteeism). It leads to high quality of care and safety, with less morbidity, mortality, adverse events, drug errors, near misses, hospital acquired infections, short waiting lists, less patient complaints and better patient satisfaction [13].

Hospital management, quality of care and patient perception are inter-dependent.

#### **d) Environment Quality**

Environment quality is the atmosphere which consists of both intangibles such as the pleasantness of the environment and tangibles which are the design, function, layout and signs found in the environment [2].

There is a relationship between socio demographic factors of patients with their satisfaction with the physical environment. It has been shown that females, younger patients, first time patients and patients who come in the morning hours have less satisfaction with the physical environment, compared to males, older patients, patients who have visited the facility several times and patients who come in afternoon hours [14].

#### **Assessment of health care quality**

Gap model describes five gaps causing quality problems; 1. Customer expectations and management perception gap; 2. Management perception and service quality specification gap; 3. Service quality specification and service delivery gap; 4. Service delivery and external communication gap; 5. Gap between customer expectations and perception of services actually received [7].

#### **Popular models used to assess service quality**

Different models are formulated to measure gaps at different levels.

##### **a) Donabedian's Model (1966)**

Avedis Donabedian, in his article published on "evaluating the quality of medical care" in 1966 has identified, three aspects to evaluate the quality of care [15]; structure, process and outcome.[16] Here, 1. Structure consists of; leadership, organizational hierarchy, decision making process, distribution of power and financial management; 2. Process consists of; provision of care, practice style, receipt of care and costs of care; and 3. Outcome consists of; comfort, perceived wellbeing, cost effectiveness and longevity.

Likewise, Health care quality can be measured using, structural standards (eg: rules), process standards (eg: practice guidelines, procedures, methods and techniques) and outcome standards (eg: level of satisfaction, mortality rates) [4,5].

##### **b) Gronroos' Model (1984)**

It is the European model of measuring quality, using three dimensions; 1. Technical Quality, 2. Functional Quality and 3. Image. [12] It has additional dimensions to the American model of measuring, primarily functional quality.

In his model; Technical quality is the technical accuracy of medical diagnosis and procedures; Functional quality is the manner of providing health care, which is the basis for patients' evaluations; and Image is the reputation of the organization. Positive image can cause minor mistakes to be forgiven while negative image will make mistakes to be magnified [12].

**c) SERVQUAL Model (1985)**

SERVQUAL model was developed in 1985, by Parasuraman, Zeithaml and Berry for the business world. It is the most popular, highly valid, reliable, quality measurement instrument, used in industrial, commercial, noncommercial and service settings. [1] It is composed of five dimensions listed as; 1. Tangibles, 2. Reliability, 3. Responsiveness, 4. Assurance and 5. Empathy. [4] They define service quality as the difference (gap) between customer expectation of care and customer perception of care. A positive service gap is found, if expectations are greater than perception. [17] However, SERVQUAL was criticized, as not representing the wide spectrum of dimensions of the health service quality including health outcomes, which is different from business world. [18] In addition, SERVQUAL should be customized to the specific service area.

**d) SERVPERF Model (1992)**

SERVPERF model was developed by Cronin and Taylor in 1994 after finding deficiencies in SERVQUAL model. SERVPERF is the performance component of the service quality scale of SERVQUAL which measures tangibles, reliability, responsiveness, assurance and empathy using only 22 items once in the questionnaire. It is more efficient and showed superiority over other models. Their argument is that evidence is lacking to support the expectation-performance gap as a predictor of service quality. Perception, already considers his expectation, and it is unnecessary to duplicate questions [8].

**e) HIERARCHICAL Model (2007)**

It was developed by Dagger et al in 2007 [2] in Australia, and identified four primary (functional, technical, environmental and administrative) dimensions of quality which are further subdivided into nine sub dimensions (Interaction, relationship, outcome, expertise, atmosphere, tangibles, timeliness, operation and support) and underlying forty elements which are important in customer satisfaction and behavioral intentions. It is a new conceptualization of health care service quality with a highly valid and reliable scale to measure service quality perception from the patients' perspective. It has shown that managers should improve the quality across these four primary domains.

**f) WHO Quality of Care framework (2007)**

WHO has focused on both technical and functional quality as follows; 1. Optimal health for all (RAND to measure the outcome of quality of life); 2. Responsiveness (Respect for person -dignity, confidentiality and need for information; PROMIS - Patient Reported Outcomes Measurement Information system; and Client orientation); 3. Fair financing [16]. There are various other models developed to measure health care quality.

**Health care quality from patients' perspective:**

The quality of medical care was traditionally measured using objective criteria such as mortality and morbidity. [2] There is a considerable difference in the quality of care, among patient's perspective, provider's perspective and manager's perspective. [19] In health care, patients rely mainly on aspects of functional quality, to assess the overall quality. [17] Evaluation by patients makes staff aware about their shortcomings and to acknowledge patients' rights. Patients' suggestions help policy makers to identify bottlenecks [20] and patient satisfaction leads to improved compliance to treatment, continuing relationships, better outcomes and increased utilization. Patient surveys are less susceptible to the influence by providers on data. Further, Patient evaluations of the quality, also has a positive relationship to WHO performance measures. [16] Therefore, customer feedback is very important to meet customer expectations.

Different terminologies have been used to describe patients' perspective, namely: 1. Patient experience, 2. Patient perception and 3. Patient satisfaction. Patient experience is observational evidence of staff team work, safe practice, confidence in staff and their active involvement in decision making [16] Patient perception is the process of patients' interpretation of information, which affects patients' health seeking behavior and utilization of services. Patient satisfaction is a temporary feeling rather than a judgment and there is more influence by external factors. [1] There is a direct effect of the experience, on perceived value and satisfaction, which further leads to, willingness to recommend and return [17].

**Conclusion:**

There are different dimensions to the healthcare quality. It gives different meanings to different stakeholders. There are different models developed to assess health care quality from different aspects and different levels. Therefore,

managers and clinicians need to have a broad knowledge in planning and implementing quality improvement initiatives to have a better technical outcome and a better patient satisfaction.

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