

Exploring the Factors Responsible for Sustainable Quality Management System in the Operation Theatre Complex of the Teaching Hospital of Pune City

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ABSTRACT

In a variety of sectors, deregulation and global competition are pushing institutions to turn to quality in order to please their consumers. Hospitals around the world, like other sectors, are also aiming for higher quality in all their operating areas. A comprehensive quality management system that has long-term consistency is needed to establish quality in hospitals. This study was conducted at a teaching hospital in Pune City's Operation Theatre Complex. The case study was used in the OT complex to analyse the contemporary QMS phenomenon. Via various sources, data was collected. In the three phases of QMS implementation, the behaviors of healthcare professionals during preoperative treatment were reported for a total of ninety general surgery patients. In order to determine the understanding of healthcare professionals relevant to general surgery OT, interview and survey data were collected on the causes of discrepancies in patient preoperative care procedures and factors responsible for the sustainable implementation of QMS. In order to clarify the causes of differences in per-operative care procedures, thematic review of interview data was conducted. The test was used to compare the behaviors of different phases of QMS. For the perception analysis of healthcare professionals, MANOVA and factor analysis were applied. Implementation of QMS is a very complex process but equally essential for the organization's development. While it is affected by a variety of factors, no single factor is responsible for the survival of the QMS.

Keywords: Hospital, Operation Theatre, Sustainable Quality Management System

INTRODUCTION

Overview of Quality and Quality Management System

In a variety of sectors, deregulation and global competition are pushing institutions to turn to quality in order to please their consumers. Hospitals around the world, like other sectors, are also aiming for higher quality in all their operating areas. A comprehensive quality management system that has long-term consistency is needed to establish quality in hospitals. The

implementation of a comprehensive quality management system, however, is a daunting challenge in a dynamic environment such as a hospital. It is much more difficult to maintain the system in the longer term because quality is a very subjective term and must adjust over time. Every person has his or her own concept of quality. At the ground level, individualized preferences of hospital stakeholders make the definition of quality more nuanced and are unique to the needs of a wide range of stakeholders. In addition, the problem of concentrating on the more important positions in a hospital such as the Operation Theatres (OT), Intensive Care Units (ICUs) are the hot spots for a healthy and quality-oriented hospital in the management range.

Meaning of Quality

Value, in the eyes of the beholder, is like beauty. Each person has numerous meanings and ways of expressing beauty, and the definition of quality is also highly individualized. Different holders of stakes view consistency differently. Receivers of Care e.g. Quality is defined differently by patients, service providers, i.e. healthcare providers or healthcare facilities, care providers, i.e. healthcare practitioners, others, e.g. insurance firms, government agencies, accreditation bodies, etc. Care recipients or patients and their families prefer to describe quality as easy and inexpensive access to almost everything in the hospital and the capacity to see these attempts made to provide patients with care.

Definitions of quality

The organizational definitions of success have evolved over time. Quality is a subjective term for which each individual or sector has its own meaning, as per the American Society for Quality (ASQua). Quality may have two definitions in technical use, firstly describing the characteristics of a product or service that bear on its ability to meet specified or implied needs, and secondly. A product or service production free of deficiencies-Deficiencies in the product or service cause consumer dissatisfaction. Quality implies fitness for use or function, according to Joseph Juran, this definition of quality measures how well the product or service performs for its intended use. While Philip Crosby implies quality as compliance with requirements (Divya Singhal & Keshav Ram Singhal, 2017). According to ISO 9000:2005, quality management systems are the degree to which a quality is the basics and vocabulary. "According to the Six Sigma philosophy, quality is "number of defects per million possibilities," whereas lean philosophy describes quality as waste disposal. According to the Six Sigma philosophy, quality is "number of defects per million possibilities. In quality-related literature, the following definition is sometimes used:

- Value is a consistent degree of uniformity and reliability, tailored to the market at low cost. - Deming, Deming, Deming (cited in Flood 2017:42)
- In essence, consistency is a way of handling an organization.
- Quality meets consumer demands. -About Oakland (2016:3)
- Quality is the totality of an entity's characteristics that are based on its ability to meet specified or implied needs. - International Definition of Norm (ISO8402, 2017: viii)

Types of Quality

Poornima M.M Charanthimath (2016, page no,8) has three kinds of quality to produce a product or service in her Complete Quality Management book and is also defined by Devbashish Sarkar (2016). Such forms are: design quality, compliance quality, output quality.

Quality of Design: This type of quality is based on the product-of-service characteristics found by market research. This kind of quality combines product or service characteristics that reflect the consumer's current and future needs.

Quality of Conformance: Michael Milakovich (2016) clarified that compliance quality can be described as the degree to which a service product is consistent with the design intent. Equipment ability, employee training and expertise, process monitoring to determine compliance, morale of staff, and dedication to management.

Quality of Performance: Michael Milakovich (2108) Devbashish Sarkar (2106) Poornima M.M Charanthimath clarified that the reliability and accuracy of the product or service requires performance quality. Employee promptness and support facilities are a part of performance quality as well.

Quality in Healthcare:

Healthcare service quality is a unified Endeavour in a conducive environment between the healthcare provider and the patient. The quality of healthcare services is influenced by individual characteristics of the care providers, patients, and elements associated with the healthcare institution, healthcare system, and the wider climate. Supportive visionary leadership, proper preparation, education and training, availability of services, efficient resource management, personnel and processes, and coordination and cooperation between providers will enhance the quality of healthcare.

Quality Management System and Hospital as a service Industry

By definition a help industry is a business that offers types of assistance instead of items. Despite the fact that Total Quality Management or Quality Management Systems was initially created for the assembling business, its suitability and helpfulness was perceived by profoundly client driven assistance enterprises, for example, retail, neighborliness, telecom or banking. In help associations, the point is to interlink business measures in a particularly smooth way that the attention on customer is held. A methodology of value control which visualizes all the cycles of an association is required. As individuals or workers are the specialist co-ops in an assistance industry, each aspect of value is connected with every single representative and quality control division assumes a significant part. Setting up quality administration framework hardware that is successful, requests the vow and persistence of the administration and the workers in an equivalent measure, to assuage the customer.

Quality turned out to be more significant during the Word War II, for instance, when ammo delivered in one spot needed to coordinate with arms which were made at some other spot. In the first place, the military completed 100% review of its acquisition. Later on, to make the acquirement interaction simpler and quicker, without settling on security, the military distributed

determinations for the acquisition of every single thing they required. They additionally began the act of utilizing strategies for examining for examination and brought into utilization the measurable cycle control procedures proposed by Walter.

The idea of value acquired further significance after the war. American quality masters like Joseph M. Juran and W. Edwards Deming took the message of value from the Japan in mid 1950 Japanese individuals totally comprehended and actualized their information sources and achieved a quality transformation. Rather than doing 100% examination of items, the Japanese began improving all the cycles which went into the assembling of an item by including individuals who utilized them. The Japanese standing for poor fares was supplanted by top notch sends out. Accordingly, by the 1970s the modern areas, for example, gadgets and vehicles in which the U.S. had imposing business model before were diverted Japan's opposition dependent on the high-caliber of the product.(ASQ, 2016) As a response to the transformation in Japan dependent on nature of item, the Americans brought forth the idea of absolute quality administration (TQM), a quality administration strategy that accentuated the methodologies that elaborate the whole association.

In the late twentieth century, autonomous associations started turning out guidelines to help in the turn of events and execution of value the executives frameworks. The expression —Total Quality Management offered path to the term —Quality Management System or —QMS. The word _Systems ‘was liked because of the assortment of remarkable frameworks that it very well may be applied to.

A WHO report on Patient Safety features the significance of frameworks approach in medical care. Wellbeing administrations present as a framework—structures, individuals, measures, work areas, hardware, phones—yet except if individuals included comprehend the normal reason and point, the framework won't work in a bound together style. Individuals are the paste that ties and keeps up the framework. In spite of the fact that wellbeing experts face numerous difficulties in their work environments and comprehend the different segments that are inclined to brokenness, they regularly experience issues in intuition regarding frameworks, since they have not been prepared to think in the ideas of frameworks hypothesis, nor do they utilize its devices to figure out the frameworks where they work. A frameworks approach expects us to see medical care overall framework, with all its intricacy and association, moving the concentration from the person to the association. It compels us to move away from an accuse culture towards a frameworks approach.

A frameworks approach inspects the hierarchical elements that support useless medical care and mistakes (helpless cycles, helpless plans, helpless collaboration, monetary requirements and institutional components), instead of spotlight on individuals who are accused for a blunder. This sort of approach assists with moving away from accusing, towards understanding and improving the straightforwardness of the cycles of care. All wellbeing experts have moral and legitimate obligations regarding which they are responsible. While these prerequisites may differ from country to country, they intend to offer certainty to the local area that the wellbeing experts can be trusted to have the information, abilities and practices set by the significant expert body (Accreditation Bodies or Quality Organization). As per specialists, despite the fact that it is difficult to change the parts of complex frameworks, it is much harder to change the conduct of people, as far as blunders. Subsequently, the premier reaction to medical care blunders ought to

make changes to the framework utilizing a frameworks approach. A frameworks approach requires an agreement and activity on the different variables engaged with every one of the zones that make up the medical services framework. The goal of a frameworks approach is to improve the plan of the framework with the goal that blunders are kept from happening and additionally their results limited. Reason delineated the components of the framework that ought to be considered as a feature of a —systems-thinking approach: understanding elements, supplier factors, task variables, innovation and instrument factors, group factors, ecological elements and hierarchical elements.

Human Resource Development

Medical services resemble a group activity where a whole group is responsible for patients (Sevdalis and Hull, 2016). Great doctors, attendants, overseers, and auxiliary staff are basic to delivering top notch results and compelling quality improvement (ASQ, American Society for Quality, 2016). Meyer et al.(2018) revealed that top-performing medical clinics focused on the requirement for employing the perfect individuals, credentialing, and re-credentialing. Nursing staff assumes an imperative part in medical care. Their effective enrollment and all the more critically, maintenance is conceivable in the event that they are given due regard, enabled and gave openings for headway. All are required to be acceptable cooperative individuals, ready to take an interest in multi-disciplinary groups for both QI and patient consideration the board (Meyer, et al., 2019). Managing people who have assortment of manners and a scope of expert and non-proficient encounters is an essential component of cooperation (Mickan and Rodger, 2016). Medical care groups work in a setting described by serious strain, troublesome remaining task at hand, and regularly high stakes dynamic and extremely weighty mistakes. People have restricted capacities. In his exemplary survey of how human elements sway on antagonistic occasions, the therapist Reason has proposed that human disappointments present more dangers to complex and possibly perilous frameworks like medical care, as opposed to specialized disappointments.

THE IMPORTANCE OF OPERATION THEATRE IN A HOSPITAL SETUP

The activity theater is an extraordinary climate inside a medical services office, where surgeries are performed on patients in a clean climate to analyze and treat illness or injury. A surgery requires the mind boggling coordination of specialists, sedation suppliers, medical attendants, and care staff to give convenient and viable consideration; uplifted patient sharpness and time pressure expands the potential for basic blunders and exclusions in set up guidelines of care.

An activity theater is perhaps the most mind boggling units in an emergency clinic because of it's in various cycles and sub-measures straightforwardly or in a roundabout way associated with the creation of medical procedures. (American Society of Quality) The additional common intricacy of an activity theater is showed in the patient and their condition as well as in the complexity of instrumentation, the high volume of data that should be prepared, the idea of correspondence and group co-appointment and the criticalness and incidental vulnerability with which choices and intercessions should be made. This intricacy joined with substantial outstanding tasks at hand, weakness and creation pressures makes careful consideration especially helpless against unfriendly medication response. (Charles Vincent) This makes the activity theater more significant in an emergency clinic set up.

OBJECTIVE OF THE STUDY

1. To analyze the current Quality Management System (QMS) relating to the complex of the operating theatre.
2. To define the quality parameter variations across all phases (initial phase, mid phase and late phase) of the OT complex implementation of QMS.

OPERATION THEATRE AND QUALITY MANAGEMENT SYSTEM

Contaminations at the careful site are the most well-known of the medical services related diseases. The underlying presentation of microbial microorganisms happens regularly during the surgery acted in the Operating Theater (OT). The wellspring of microbes in such diseases is the endogenous greenery of the patient's skin, mucous layers, or empty viscera. Exogenous wellsprings of careful site contamination microbes incorporate careful work force (particularly individuals from the careful group), the working room climate (counting air), and all devices, instruments, and materials brought to the clean field during an activity. Mediations to forestall careful site diseases accordingly are pointed toward decreasing or forestalling microbial tainting of the patient's tissues or of clean careful instruments other than different intercessions, for example, preoperative anti-toxin prophylaxis, cautious careful strategy, satisfactory ventilation of the OT, and so forth It is essential to have a quality administration framework that successfully addresses the issue of disease control in the activity theater as the aforementioned factors are simpler to control than persistent danger factors, for example, presence of fundamental diabetes, age, smoking, history, and heftiness.

Adroitly, the Quality Management writing would prompt some idea that Quality Management could build execution in the medical care industry. Deming (2016) and Juran (2016) explicitly referenced medical services as a significant industry that could profit by utilizing Quality Management standards. However, how this really happens is maybe less clear than the association between Quality Management and quality merchandise and enterprises. The intricacy of the medical care calling medical care conveyance framework at the clinic level and mechanical progression has made the need to synchronize the quality administration system(QMS) with the progressions happening at the different levels of each hospital.QMS in emergency clinic (QMS-H) is an instrument or work technique that guarantees a reliably high caliber of medical care. Studies directed in the different kind of the medical services offices across the globe(Lin and Closing, 2015,Shortell et al ,2016,Carman et al,1996,Kennedy et al, 2108,Clare and Goh M,2016-2017, Badrick and Preston, 2018) were done in created nations like, USA, Australia, France and those solitary center the way of life, environment and the meaning of inclusion or administration of top administration or association of clinicians in QMS execution, however don't propose every single related factor and the methodologies to support a QMS. In this investigation analyst attempted to investigate the components capable to support the quality administration framework that will help the instructing emergency clinics to build up a procedure for defeating the hindrances to support a QMS execution in the emergency clinics.

CONCLUSION

Activity theater is one of the vital territory of the clinic .It is a profoundly clean region where exceptionally talented labor force do a medical procedure and give careful consideration to the patients. It is important to set up a quality administration framework in such a climate. Current examination shows the improvement in the acts of the medical services experts across the three phase of QMS and maintainability of the some QM conventions were seen more in the late stages. Mediation of multifaceted quality administration exercises eg, new arrangement of assent structures and different kinds of agendas, preparing program, assessments assumed vital part in supporting the framework in the OT complex. It is as of now demonstrated that the fastidious utilization of WHO agenda improves the patient security by diminishing the odds of blunder and keep up nature of careful consideration by expanding the consistence rate.(Brigid M. Gillespie et al,2016,Askarian M, Kouchak et al,2017, Haynes An et al,2019,).This study shows that these mediations will be compelling and will help in supporting the framework except if these ought to be followed as they are expected to be followed. It is regular among medical care proficient that they top off arrangements and agendas precisely without deduction the appropriateness of a specific boundaries. This ticking and flicking had been found now and again. These outcomes are like the examination done by Brigid M. Gillespie et al (2016) in an enormous size Australian tertiary consideration community and study led by Tanzanian emergency clinic by Goetz Boss (2015).

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