

EMERGING ROLE AND IMPORTANCE OF TOTAL QUALITY MANAGEMENT IN HOSPITAL MANAGEMENT SYSTEMS

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ABSTRACT

Through TQM intervention and implementation of a series of QC tools/techniques such as: Six sigma, Quality circles, Kaizen, SQC, 5-S, 7- tools for Quality Management, many organizations in Manufacturing and Services sector have been able to demonstrate benefit by achieving Productivity, elimination of non value added items & action, Quality, Customer Care/satisfaction, besides employee satisfaction and motivation & showing continuous improvement. Hospital Administration must wake up to the new emerging environment in health care systems, adopt data base management systems for higher productivity, quality, patient care & satisfaction.



This paper is an attempt to bring the current image of hospitals, in the eyes of the common man, to the focus /attention of hospital administrators and to highlight the urgency for change

In agony, frustration and a deep sense of helplessness, majority of the patients express that the care in Hospitals and medical care has been poor & negative, Doctors do not show concern and urgency and everything in hospital has been in a deplorable status.

The general impressions & expressions of the common man about Hospitals include; high cost, long waiting time unduly long admission & discharge procedures, lack of basic facilities, indifference & also money minded. Doctors, Nurses, and staff, bad housekeeping, poor quality of food and canteen items, unwanted and expensive tests taken are among the host of complaints raised against the Hospital system, particularly in Govt. run hospitals. Senior citizens, and rural populations have grouse are hard hit by the Indian health care systems. The Hospital Management system therefore needs a diagnostic approach of all functional areas of Management in Hospitals. Medical professions and health care administrators have not shown adequate interest and concern to these burning aspects this status is a clear indication of lack of managerial applications in the operations of Hospitals and calls for a drastic change in Management System. In this context and environment, TQM, Six sigma management approaches can help Hospitals to measure the extent of malady and help improving the situation and to bring about the much needed change and transformation.

Through TQM intervention and implementation of a series of QC tools such as Six sigma, Quality circles, Kaizen, SQC, 5-S, 7tools for Quality Management many organizations in Manufacturing and services sector have been able to demonstrate benefit by achieving Productivity, elimination of non value added items, & action, Quality, customer satisfaction, elimination of non value, besides employee satisfaction and motivation & showing continuous improvement. It is now time to adopt these tools and techniques in Hospital Management for providing better medical services to masses

According to a research study conducted by Sujatha Mitra of Tata Memorial Hospitals Mumbai;

"The benefit of adopting Total Quality Management was felt in every sphere in the Hospital. The quality initiatives led to improvements which are listed in 3 groups'. Improvement in Systems ii. Improvement in Human Resource iii. Improvement in Fiscal discipline the need of every patient visiting the Hospital is 'quick, effective health care provided in an atmosphere of comfort'. Translated into hospital service, this could mean shorter waiting time in OPD and for investigations and quality time spent with the doctor. Initially the customer need of a short waiting time but increased interaction time with the doctor appeared paradoxical. Both these needs were addressed differently. System improvement in OPD through removal of patient registration and regularization of appointment system led to an appreciable reduction in waiting time. "

"TQM is a comprehensive management approach that works horizontally across an organization, involving all departments and employees and extending backward and forward to include both suppliers and clients/customers. TQM is only one of many acronyms used to label management systems that focus on quality."

Health care organizations are supposed to be more customer-oriented than all other organizations owing to the nature of service they are meant to offer. The quality of their services is crucial to the patients and the community. Regular surveys of satisfaction from all the stakeholders as well as the employees need to be conducted to continually assess, monitor, and improve the performance.

Several studies under taken by research organizations reveal that the three types of hospitals are significantly different in India on knowledge management with the government services being the best followed by the semi government set ups. In Iran it is the leadership that makes a significant difference among the three types. Private services in Iran have got the best score on this construct. Keeping the theme of the thesis in mind, the perceptions and assessments of the Indian and Iranian hospitals on TQM are benchmarked against the performance of those hospitals in the USA which have received the Malcolm Baldrige National Quality Award in the health care sector. The average scores of Indian and Iranian hospitals on different constructs of the IHCQPM model are compared with the major results achieved by the recipients of the MBNQ award. In no case the hospitals from India and Iran are found scoring close to the benchmarks.

Health care organizations are supposed to be more customer-oriented, but unfortunately, in the Indian context the customer/patient is not satisfied with the services provided both in Government and private hospital either for reasons of cost or treatment efficiency

Total Quality Management is a systematic management approach originated in the 1950s and has steadily become more popular among Industry, Manufacturing and services systems since the early 1980s. Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operation, Several non value added materials, routine operations remain un noticed and hidden in Organizations/ hospital systems eroding profitability. These have to be periodically reviewed and eliminated.TQM implementation helps organizations to systematically measure through data and eliminate wastage.

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TQM requires a quality- oriented organizational culture supported by senior management commitment and involvement, organizational learning and entrepreneurship, team working and collaboration, risk taking, open communication, continuous improvement, customers focus (both internal and external), partnership with suppliers, and monitoring and evaluation of quality. By replicating this study in different countries and contexts the results could be very helpful for developing a model of TQM that can be implemented successfully in a cross- cultural context.

TQM, is a method by hitch management and employees become involved in the continuous improvement of the production combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices.TQM in Hospital is a new dynamic, data based Management Approach to understand patient needs and expectations to provide products and services accordingly at least cost.

TQM is a systematic database problem solving methodology for achieving higher productivity greater customer satisfaction and cutting down costs and wastage besides eliminating non valued items and actions from operations. In a hospital environment there is scope for all these and hence TQM becomes relevant. Doctors and other medical professionals are technical personnel with little exposure to Management techniques and application skills more particularly in the area of Quantitative methods which are basic to optimization. The demand for medical care with the increase in population and longevity, higher income, medical insurance increased concern for health care etc

Management approaches: Six sigma and TQM which are being widely adopted in Manufacturing and business systems in have made inroads into health care and Hospital systems particularly in US and other western countries. The easy availability of data on and off line and computer soft ware for data analysis, have supported implementation of these data based approaches.

Unfortunately, although large volumes of patient, treatment, drug data are now available they are hardly used for Analysis and decision making for managing the change and continuous improvement in Medical systems and hospital management.

Importance of TQM in healthcare

As India's healthcare establishment undergoes a paradigm shift from being a welfare activity to a revenue-driven model, it is focusing more on greater efficiency in its operations. According to experts, managing the quality of healthcare services is just as critical as managing the quality of manufacturing operations. In fact, healthcare being a service industry, quality management becomes tougher at times. "TQM should be made a habit among employees - only then one can expect to render quality services." Therefore, no longer is it enough to look after patients that walk in because now most of the time, a patient goes to the hospital not just with the idea of treatment but to get the best of treatment.

Consequently, hospitals of today need to keep a tab on complete supply chain management. "Equipment, manpower and infrastructure - these are the three most important areas which determines quality standards for a hospital and standards and guidelines ought to be formulated in these areas," Probably, this is one reason that hospitals, in the recent past, have converted into swanky five star hotels. Also, it is important to note that corporate hospitals narrate the success stories of healthcare business. For most corporate hospitals, superior quality is at the core of their business strategy. The objective is to attain the most perfect quality possible in each of the department.

Four Step Approach to Problem Solving

- 1. The first step is to define the problem.
- 2. The next step is to seek the root causes of the problem. There is a tendency to jump to the first cause that comes to mind. This is hazardous as it can focus on the wrong cause or simply correct a symptom. In many situations, the root cause can be found by brainstorming. More complex problems require more sophisticated techniques, such as cause/effect diagrams or system failure analysis.
- 3. Once the likely causes of the problem have been found, one should identify a variety of potential solutions and select the best to implement.
- 4. The final step in the problem solving sequence is to evaluate the effectiveness of the solution. This is done after it has been implemented to ensure that the solution really does work. It is also a learning experience for the organization so that people can learn from the successes and pitfalls experienced.

A huge portion of the increased annual healthcare expenditure is attributed to waste and inefficiency in hospitals. There are costs associated with product and service quality. While some costs are associated with prevention of poor quality, there are others that occur after poor quality occurs. "In India, costs in the healthcare sector have increased significantly throughout the past 25 years, and this trend is expected to continue. More than 50 per cent of these costs arise in hospitals. In order to control the cost, fundamental changes in the healthcare sector are taking place,"

The healthcare industry can benefit from TQM both in cost and care. The fundamental changes that are taking place in Indian healthcare industry are therefore based on the implementation of TQM. "TQM implementation brings in process re-engineering, increased staff competence leading to efficient work methods hence reduced wastage and actual expenditure,",

Non-compliance of TQM gives place to "waste" which is astronomical. "At least 20 percent of the lab tests are unnecessary. Every infection is waste. Every complication after open-heart surgery is waste-and triples the bill," informs Dr. Kamle.

Successful implementation of TQM involves



Implementation

The prominence in product quality in business strategy for many firms has come from the painful knowledge that business can be lost to lower priced products, but they can win it back with superior product quality. "However, as Indian hospitals have not gained much experience in dealing with business issues, for many of them the implementation of TQM is a major barrier," says Dr Kamle.

There are several elements that form the core of implementation of TQM.

Involvement and commitment of Management: The involvement of top management is important. "Motivation should trickle down from the top management to the grassroots level. Efficient leadership is an important ingredient in any organization," opines Anand. The management should stay involved in not just setting business strategy based on using product quality as a weapon to capture market share but also in rewarding employees for achieving excellence in product quality. "Employees are unlikely to behave in a responsible way if they see management behaving irresponsibly," says Dr Kamle.

Participation of employees: Participation of employees in all activities is another important element of TQM since making TQM work rests with employees. To avoid poor quality in services or products it is important that employees, who are involved in the process of producing quality, are made to feel that they are responsible for customer satisfaction.

Training: Training is an essential element to implement TQM. Employees must be trained, organized, motivated, and empowered to produce services of quality. "Training should be visible in their daily duties. They should have ownership for their quality improvement program only then TQM shall succeed," says Dr Gupta. A protocol-based training is essential for employees so as to minimize deviation from processes and reduce number of complaints. Customer

Involvement: Customer- wants drive the TQM system. It is therefore important to value customers' opinion.

However, experts complain that India lacks a proper system of guideline. "TQM implementation in the healthcare industry requires government support and commitment. The big players need to develop quality standards for different segments of the healthcare industry keeping in mind the smaller players also," suggests Dr Gupta. According to experts, the government should develop and implement standards of service delivery, like set by NABH. "The government should also carry out assessments of service quality so as to identify the gap against national/international standards and improve planning," suggests Dr Gupta.

TQM Working

There are several components that work to provide a quality management process that functions like a feedback loop.

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Quality Laboratory Processes (QLP) refers to the policies, procedures, personnel standards, and physical resources that determine how work gets done in the laboratory. Laboratory method manuals describe the standard operating processes for producing test results.

Quality Control (QC) refers to procedures for monitoring the work processes, detecting problems, and making corrections prior to delivery of products or services. Statistical process control or statistical quality control is the major procedure for monitoring the analytical performance of laboratory methods.

Quality Assessment (QA) refers to the broader monitoring of other dimensions or characteristics of quality. Characteristics such as turnaround time, patient preparation, specimen acquisition are monitored through QA activities. Proficiency testing provides an external or outside measure of analytical performance.

Quality Improvement (QI) is aimed at determining the causes or sources of problems identified by QC and QA. Some problems may require a team of people and a team problem-solving process and team problem-solving tools such as the flowchart, Pareto diagram, Ishikawa cause and effect diagram, force field analysis, etc.

Quality Planning (QP) is concerned with establishing and validating processes that meet customer needs. The selection and evaluation of new methods and instruments as well as selection and design of QC procedures are part of this component of TQM.

Quality Goals represent the requirements that must be achieved to satisfy the needs of customers. For analytical quality, the requirement is to provide test results that are correct within stated limits.

Maintaining continuity

To develop benchmarking standards is one thing and to maintain the standards is another. While TQM helps an organization to manage its resources and bring in customer satisfaction, it is even more important to manage the continuity of those quality services as well improve them.

The standards set by TQM become the basis for long-term continuous improvement. TQM was felt by experts as a onetime effort put in by an organization, but quality standards should be improved upon and updated on a regular basis. That is when Continuous Quality Management (CQM) plays a pivotal role.

CQM is a calculated vision, which depends on people having good problem solving skills. According to Dr Kamle, it is through the continuous process of identifying problems, and solving and implementing solutions that the business is improved. Problem solving consists of identifying the root causes of a problem and implementing actions to correct the situation.

Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their with processes being done right the first time and defects and waste eradicated from operations... TQM culture requires quality in all aspects of the company's operations,

Total Quality Management, TQM, is a method by which management and employees can become involved in the continuous improvement of the production combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices.

Some of the companies which have implemented & benefitted from TQM implementation include: Ford Motor Company, Phillips Semiconductor, SGL Carbon, Motorola and Toyota Motor Company.1

TQM is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives.

TQM views an organization as a collection of processes. It maintains that organizations must strive to continuously improve these processes by incorporating the knowledge and experiences of workers. The simple objective of TQM is "Do the right things, right the first time, every time." TQM is infinitely variable and adaptable. Although originally applied to manufacturing operations, and for a number of years only used in that area, TQM is now becoming recognized as a generic management tool, just as applicable in service and public sector organizations. There are a number of evolutionary strands, with different sectors creating their own versions from the common ancestor. TQM is the foundation for activities, which include:

- Commitment by senior management and all employees
- Meeting customer requirements
- Reducing development cycle times
- Just in time/demand flow manufacturing

- Improvement teams
- Reducing product and service costs
- Systems to facilitate improvement
- Line management ownership
- Employee involvement and empowerment
- Recognition and celebration
- Challenging quantified goals and benchmarking
- Focus on processes / improvement plans
- Specific incorporation in strategic planning

This shows that TQM must be practiced in all activities, by all personnel, in manufacturing, marketing, engineering, R&D, sales, purchasing, HR, etc.2

Principles of TQM

The key principles of TQM are as following:3

- Management Commitment
 - Plan (drive, direct)
 - Do (deploy, support, participate)
 - Check (review)
 - Act (recognize, communicate, revise)
 - Employee Empowerment
 - Training
 - Suggestion scheme
 - Measurement and recognition
 - Excellence teams
 - Fact Based Decision Making
 - SPC (statistical process control)
 - DOE, FMEA
 - The 7 statistical tools
 - TOPS (Ford 8D team-oriented problem solving)
 - Continuous Improvement
 - Systematic measurement and focus on CONQ
 - Excellence teams
 - Cross-functional process management
 - Attain, maintain, improve standards
 - Customer Focus
 - Supplier partnership
 - Service relationship with internal customers
 - Never compromise quality
 - Customer driven standards
- The Concept of Continuous Improvement by TQM

TQM is mainly concerned with continuous improvement in all work, from high level strategic planning and decision-making, to detailed execution of work elements on the shop floor. It stems from the belief that mistakes can be avoided and defects can be prevented. It leads to continuously improving results, in all aspects of work, as a result of continuously improving capabilities, people, processes, and technology and machine capabilities.

Continuous improvement must deal not only with improving results, but more importantly with improving capabilities to produce better results in the future. The five major areas of focus for capability improvement are demand generation, supply generation, technology, operations and people capability.

Case studies

A central principle of TQM is that mistakes may be made by people, but most of them are caused, or at least permitted, by faulty systems and processes. This means that the root cause of such mistakes can be identified and eliminated, and repetition can be prevented by changing the process.1

There are three major mechanisms of prevention:

- 1. Preventing mistakes (defects) from occurring (mistake-proofing or poka-yoke).
- 2. Where mistakes can't be absolutely prevented, detecting them early to prevent them being passed down the value-added chain (inspection at source or by the next operation).
- 3. Where mistakes recur, stopping production until the process can be corrected, to prevent the production of more defects. (Stop in time).

Implementation Principles and Processes

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A preliminary step in TQM implementation is to assess the organization's current reality. Relevant preconditions have to do with the organization's history, its current needs, precipitating events leading to TQM, and the existing employee quality of working life. If the current reality does not include important preconditions, TQM implementation should be delayed until the organization is in a state in which TQM is likely to succeed.

If an organization has a track record of effective responsiveness to the environment, and if it has been able to successfully change the way it operates when needed, TQM will be easier to implement. If an organization has been historically reactive and has no skill at improving its operating systems, there will be both employee criticism and a lack of skilled change agents. If this condition prevails, a comprehensive program of management and leadership development may be instituted. A management audit is a good assessment tool to identify current levels of organizational functioning and areas in need of change. An organization should be basically healthy before beginning TQM. If it has significant problems such as a very unstable funding base, weak administrative systems, lack of managerial skill, or poor employee morale, TQM would not be appropriate.5

However, a certain level of stress is probably desirable to initiate TQM. People need to feel a need for a change. Kanter (1983) addresses this phenomenon be describing building blocks which are present in effective organizational change. These forces include departures from tradition, a crisis or galvanizing event, strategic decisions, individual "prime movers," and action vehicles. Departures from tradition are activities, usually at lower levels of the organization, which occur when entrepreneurs move outside the normal ways of operating to solve a problem. A crisis, if it is not too disabling, can also help create a sense of urgency which can mobilize people to act. In the case of TQM, this may be a funding cut or threat, or demands from consumers or other stakeholders for improved quality of service. After a crisis, a leader may intervene strategically by articulating a new vision of the future to help the organization deal with it. A plan to implement TQM may be such a strategic decision. Such a leader may then become a prime mover, who takes charge in championing the new idea and showing others how it will help them get where they want to go. Finally, action vehicles are needed and mechanisms or structures to enable the change to occur and become institutionalized.8

Steps in Managing the Transition

Beckhard and Pritchard (1992) have outlined the basic steps in managing a transition to a new system such as TQM: identifying tasks to be done, creating necessary management structures, developing strategies for building commitment, designing mechanisms to communicate the change, and assigning resources.

Task identification would include a study of present conditions (assessing current reality, as described above); assessing readiness, such as through a force field analysis; creating a model of the desired state, in this case, implementation of TQM; announcing the change goals to the organization; and assigning responsibilities and resources. This final step would include securing outside consultation and training and assigning someone within the organization to oversee the effort. This should be a responsibility of top management. In fact, the next step, designing transition management structures, is also a responsibility of top management. In fact, Cohen and Brand (1993) and Hyde (1992) assert that management must be heavily involved as leaders rather than relying on a separate staff person or function to shepherd the effort. An organization wide steering committee to oversee the effort may be appropriate. Developing commitment strategies was discussed above in the sections on resistance and on visionary leadership.6 To communicate the change, mechanisms beyond existing processes will need to be developed. Special all-staff meetings attended by executives, sometimes designed as input or dialog sessions, may be used to kick off the process, and TQM newsletters may be an effective ongoing communication tool to keep employees aware of activities and accomplishments.

Management of resources for the change effort is important with TQM because outside consultants will almost always be required. Choose consultants based on their prior relevant experience and their commitment to adapting the process to fit unique organizational needs. While consultants will be invaluable with initial training of staff and TQM system design, employees (management and others) should be actively involved in TQM implementation, perhaps after receiving training in change management which they can then pass on to other employees. A collaborative relationship with consultants and clear role definitions and specification of activities must be established.

In summary, first assess preconditions and the current state of the organization to make sure the need for change is clear and that TQM is an appropriate strategy. Leadership styles and organizational culture must be congruent with TQM. If they are not, this should be worked on or TQM implementation should be avoided or delayed until favorable conditions exist.

Remember that this will be a difficult, comprehensive, and long-term process. Leaders will need to maintain their commitment, keep the process visible, provide necessary support, and hold people accountable for results. Use input from stakeholder (clients, referring agencies, funding sources, etc.) as possible; and, of course, maximize employee involvement in design of the system.7 Always keep in mind that TQM should be purpose driven. Be clear on the organization's vision for the future and stay focused on it. TQM can be a powerful technique for unleashing employee creativity and potential, reducing bureaucracy and costs, and improving service to clients and the community. in summary,TQM encourages participation amongst shop floor workers and managers. There is no single theoretical formalization of total quality, but Deming, Juran and Ishikawa provide the core assumptions, as a "…discipline and philosophy of management which institutionalizes planned and continuous… improvement … and assumes that quality is the outcome of all activities that take place within an organization; that all functions and all employees have to participate in the improvement process; that organizations need both quality systems and a quality culture."

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