



Quality management in a healthcare organisation: a case of South Indian hospital

Quality
management

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Abstract

Purpose – The purpose of this article is to provide an analysis of quality management using the Malcolm Baldrige National Quality Award Criteria (MBNQA) criteria in a 300-bed hospital in South India.

Design/methodology/approach – Based on Malcolm Baldrige National Quality Award (MBNQA) criteria in-depth interviews are conducted with the heads of the departments in the case hospital. Data is analysed and compared with the MBNQA points to evaluate the performance of the hospital in all the seven criteria's of MBNQA.

Findings – The paper presents the strengths and opportunities for improvement through MBNQA criteria. The total points scored are 753 out of 1,000 points. This reveals that quality performance of case hospital is of higher level. However among all the seven criteria, the hospital has still more opportunity to improve the quality in MBNQA criteria no. 4, i.e. measure, analysis and knowledge management.

Research limitations/implications – This study brings out a potential area of research about how the ratings and activities in the case hospital compares with other health care organisations.

Practical implications – The outcome of this paper clearly indicates that MBNQA criteria act as a powerful tool to analyse the quality performance of the hospital. The health care organisations can use MBNQA as self-assessment tool to evaluate and to improve the health of the hospitals. MBNQA as self-assessment tool help the hospitals to lay the road map for world-class performance.

Originality/value – The paper illustrates the measurement of quality performance through MBNQA to the healthcare administrators that is the first step for managing and improving quality in health care organisations. It provides lessons for those hospitals that have already started quality initiatives.

Keywords Quality management, Baldrige Award, Hospitals, India

Paper type Case study

Introduction

The health care industry presents a very dynamic, unexpected, ambiguous and uncertain environment in which “quality issues” have occupied a central position. Quality of care is related to all issues vital to health care reform-to the question of access and to the problems associated with ineffective and inappropriate care, patient preferences and patient choice, is inseparable from the issue of efficiency (Koeck, 1997). Quality literature in health care abounds with implementation of various quality



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management practices including TQM in the developed countries (Potter *et al.*, 1994; Kohli *et al.*, 1995; Moody *et al.*, 1998; Yang, 2003). As health care organisations are becoming more and more complex, old models of quality assurance, relying on provider-based preset standards are insufficient to solving quality problems. Concepts of total quality management (TQM) and continuous quality improvement (CQI) have taken a central role in the health care quality management (McLaughlin and Simpson, 1999). According to Lakhe and Mohanty (1994), TQM is a solution for improving quality of products in developing economies so that they can compete in the global market. By adopting the concepts of TQM or CQI, a health care institution can move away from an inspection-oriented quality improvement system to one that orients itself to a systematic transformation of an organisational culture through a roll-out plan involving customer focus, key-process monitoring, data-driven tools and techniques, and team empowerment (Klein *et al.*, 1998). In order to determine an organisation's level of quality management and continuous improvement, many studies have used MBNQA (Counte and Meurer, 2001). Health care organisations in India are undergoing major changes like in any other developing nations and making sincere efforts to establish quality management practices. The paper presents an analysis of quality management using the MBNQA criteria in a 300-bed hospital in South India to illustrate the importance of quality in the present context.

Quality initiatives in Indian hospitals

As hospitals in India are not only growing in number but in size, complexity and the types of services provided, there is an ever-growing need for professional management of hospitals (Tabish, 1996; Sharma, 1998). A number of private and corporate hospitals are constantly innovating and improving the technical/clinical and service aspects like never before in order to provide world-class quality. In the absence of an accrediting body for hospitals, leaders in the industry are looking at different approaches like accreditation from organisations abroad and hospital grading by commercial organisations in India to improve quality and attract new markets. Nandaraj *et al.* (2001) examined the feasibility of introducing accreditation in Mumbai hospitals, though different stakeholders supported such a system, financing the process was judged to be a major hurdle.

Many Indian hospitals are getting ISO certification and Apollo Group of Hospitals in its efforts to position itself as an Indian MNC in global health care is undergoing the US Joint Commission on Accreditation of Healthcare organisations (JCAHO) certification process[1]. However, external reviews rarely generate wholly new knowledge, are found to be more confirmatory than revelatory, and do not usually lead to major changes in policy, strategy or practice (Walshe *et al.*, 2001). Industry leaders in India are also voicing their concerns about the usefulness of ISO and JCAHO certification for Indian hospitals[2]. In general, ISO certification helps achieve consistency in production of a product or service and providing assurance to customers that the specific practices are in provider's stated quality systems. ISO certification does not address the people issues specifically employee motivation, leadership style, social concerns and what should be improved in order to gain a competitive position. Therefore, models of TQM based on quality awards and empirical research for identifying critical factors have provided better framework to implement quality practices and measure performance of hospitals.

Mohanty *et al.* (1996) have argued that although health care systems have some unique factors, they bear many similarities to other industrial systems and can be subjected to the same forms of analysis, evaluation and improvement. Improvement in quality has become essential in the health care sector in order to enhance efficiency and effectiveness of services. Process management (Varghese, 2001; Reddy and Acharyulu, 2003), patient satisfaction/expectation surveys (Mahapatra *et al.*, 2001; Bhardwaj *et al.*, 2001; Verma and Sobti, 2002), reducing hospital infection rates (Vij *et al.*, 2001; Gupta and Kant, 2002) and TQM (Reddy *et al.*, 2002; Arya *et al.*, 2003) are some of the reported quality improvement strategies implemented by hospitals in India.

While the TQM philosophy has its roots in manufacturing and industry, it is based on many techniques, which could easily be transferred to the health care setting. In the US MBNQA was instituted for the health care organisations on similar lines of the manufacturing industry, recognising the importance of quality (Baldrige National Quality Program, 2003)[3]. The MBNQA has evolved from a means of recognising and promoting exemplary quality management practices to a comprehensive framework for world-class performance, widely used as a model for improvement (Flynn and Saladin, 2001). Currently, there are newly established criteria for performance excellence that have been specially tailored for the health-care providers. Meyer and Collier (2001) empirically tested the Baldrige Model of quality management for the health care industry using data from 220 US hospitals and determined the causal relationships among the Baldrige Health Care pilot criteria. The seven criteria are: leadership, strategic planning, customer and market focus, measurement, analysis and knowledge management, human resource focus, process management and business results. As such, its underlying theoretical framework is of critical importance, since the relationships it portrays for the different criteria convey a message about the route to competitiveness. It was therefore judged that the MBNQA health care criteria would provide a good framework to analyse quality management practices in the case hospital that has obtained ISO certification and strives for continuous improvement based on TQM principles including committed leadership, customer focus and satisfaction, process improvement, service design, human resource management and social responsibility.

Hospital profile

It was established in 1975. This 350-bed multi/super specialty private hospital is located in a non-metro city of South India and is run by a charitable trust. The hospital was established in 1975 as a modest 40-bed hospital with a staff of three doctors and 12 nurses, now it can boast of over 20 specialty departments and a total staff of about 1,200 including 150 doctors specialised in various fields and 600 nursing staff. The hospital offers a wide range of medical and surgical specialty areas including cadaver kidney transplantation, neurosurgery, cardiac and cancer treatment facilities, etc. All the support services of a modern super specialty hospital including blood bank and state-of-the-art diagnostic and treatment facilities are available. The hospital is recognised by National Board of Examinations by the Government of India (Ministry of Health and Family Welfare) for conducting post-graduate and fellowship programs in super specialty areas[4]. The main challenges for the hospital are the competition from local hospitals, designing new healthcare services and offering services at

affordable prices, meeting ever-growing customer demands and initiating health insurance schemes.

This hospital is in forefront in adopting quality practices. Today it is one of the best hospitals in the region and is known for its excellent technical and professional service capabilities as well as its ever-expanding specialty care areas have given the hospital a competitive edge. It is the fourth hospital in the country to have obtained ISO 9002 certification for rendering quality medical care. The hospital has established formal quality management programme using Gurus approach. The chairman of the hospital has received a number of prestigious awards in recognition of his contributions to the community in health care. Therefore this hospital is chosen for the present study.

Method and data analysis

Question items from the criteria of MBNQA were used as a tool to evaluate quality at the Hospital. Top-level management, senior consultants, clinical and non-clinical heads of departments were part of the study as they are responsible for guidance, implementation of quality initiatives and achievement of results. A total of eight people were interviewed including the chairman, human resource manager, senior medical consultants, head-house keeping and head-legal. Data collection included in-depth interviews, structured and unstructured. With prior appointment and necessary permissions, each participating manager was interviewed. The interview time ranged from one to one and half hours per person. After describing the purpose of study each respondent was asked the questions and answers were noted down during the interview. The respondents were asked to rate each question based on hospital's quality programs. A Likert scale of 1 to 10 was used to rate each question with 1 being "no quality program in place" to 10 being "completion of the project". The respondents substantiated their ratings based on the current quality practices including structures, processes, outcomes and/or implementation levels. Approximately another eight to ten hours of time was spent in the hospital visiting various departments and areas of the hospital to make observations and to gather further evidence. Relevant documents (such as brochures hospital magazines, policy statements etc.) were examined with the permission of the managers. During the analysis of the data some additional inputs were sought through telephonic interviews and emails with the senior consultants.

Respondents' ratings were averaged for each sub criteria (R) of MBNQA. The average rating was converted to MBNQA points with reference to its maximum points. $R = \text{average rating for each sub criteria (ratings from all respondents were considered)}$. MBNQA points for case hospital = $R/10 \times \text{Max MBNQA points}$.

Finally MBNQA points for each sub criteria were added to give the total MBNQA points for the case hospital. The results of averaged ratings (R) and the MBNQA points are given in Table I.

Analysis of quality performance based on Baldrige Criteria

The results of averaged ratings (R) for each sub criteria and the MBNQA points are given in Table I. This case hospital with more than 750 MBNQA points (out of 1,000) is judged to be performing at golden level. The hospital has been quite successful in moving forward from ISO certification and in integrating continuous quality improvement in many areas of management.

Baldrige criteria category	Average score "R" for MBNQA sub-criteria on a scale of 1-10	MBNQA points for case hospital	Maximum MBNQA points
Organisational profile			
(a) Organisational environment			
(b) Organisational relationships			
1. Leadership		103	120
(a) Senior leadership	9	63	70
(b) Governance and social responsibilities	8	40	50
2. Strategic planning		68	85
(a) Strategy development process	8	32	40
(b) Strategic objective	8	36	45
3. Patients/market focus		68	85
(a) Patient, other customer, and health care market knowledge	8	32	40
(b) Patient and other customer relationships and satisfaction	8	36	45
4. Measure, analysis and knowledge management		54	90
(a) Performance measurement	6	27	45
(b) Performance analysis	6	27	45
5. Staff focus		78	85
(a) Work systems	9	32	35
(b) Staff learning and motivation	9	23	25
(c) Staff well-being and satisfaction	9	23	25
6. Process management		68	85
(a) Health care processes	8	36	45
(b) Support processes	8	32	40
7. Organisational performance results		314	450
(a) Health care results	9	90	100
(b) Patient- and other customer-focused results	8	56	70
(c) Financial market results	9	63	70
(d) Staff and work systems	9	63	70
(e) Organisational effectiveness results	8	56	70
(f) Governance and social responsibility results	7	49	70
Total points		753	1,000

Table I.
Showing MBNQA points
for the case hospital
based on self-reporting
by senior managers

As seen from Table I overall "leadership" criterion points are high (103 out of 120 MBNQA points). The analysis of quality management using MBNQA criteria of the case hospital supports that committed leadership is a driver for management accountability and creation of environment for empowerment and organisational agility. The hospital has effectively implemented the leadership's vision even though it

has a top-down structure at the outset. Leadership vision is “to make the hospital a Mayo Clinic of India” and one senior consultant noted “. . . the chairman is a man with great foresight and intellect”. Allocation of resources, setting up of systems, formal daily meetings with various level managers and proper communication (open door policy) indicate management commitment for continuous improvement. Result oriented work culture with appropriate systems/mechanisms to facilitate achievement of organisation goals is promoted. There is clear indication of good governance practices with legal, human resource and finance functions of the organisation.

Social responsibility issues are addressed through free medical camps, cataract eradication programs, and treatment at concession rates for those who cannot pay full charges. According to the human resource manager the hospital is run on the basis of “highly reasonable ethical practice”. However, as noted by one of the senior consultants, high costs of medical care with advanced technology and medicines has made it difficult to balance the social equity issues and profits for a private hospital. This explains an overall rating of the sub criteria “governance and social responsibility” being 8. The hospital is initiating programs with medical insurance companies to help overcome this.

Strategic planning areas include setting up of high quality standards, improving organ transplant/donor availability, education of Insurance companies for customising medical insurance schemes and tapping the international market (also referred to as medical tourism), expanding to Dubai. Strategic development process and implementation is obviously a great plus for the hospital considering its growth, positioning in the region and the range of services such as new Cancer Centre and the success of cardiac centre. This is clearly reflected in its MBNQA points of 68 out of 85.

Focus on patients, other customers and markets is highlighted in the use of patient satisfaction survey and feedback forms effectively. A number of open communication channels interfacing patients/families, suppliers, community and staff are used to ensure patient satisfaction. Regular referrals to other hospitals, technology/knowledge and responding to social causes help optimise knowledge about the market and other customers. Well-planned physical infrastructure and artefacts (brochures, website, grievance and complaint boxes on all floors) and a clean/hygienic ambience support the services. A general customer friendly environment and helpful front desk staff further add to value the service aspects of care. Score for patient/market focus is quite high with 68 MBNQA points (out of 85).

Measurement, analysis and knowledge management of medical care procedures and outcomes are given primary importance. Mortality and morbidity data analysis along with medical records, department records and summary of results are maintained. Accessibility, security and confidentiality issues of information are strictly adhered to. Data was insufficient for the interviewer to make conclusive judgments about the hospital data analysis used for performance review by senior leaders. Data analysis for various processes and a number of performance measures is rather limited due to a heavy patient load and excess work demands on the hospital staff. At this point, this is an area of weakness for the hospital; however, information technology based hospital information system is being developed and necessary investments are being made towards this. This is one area where the hospital is presently rated rather low with 54 MBNQA points out of 90.

Human resource development is judged to be highly effective based on training, continuous learning and professional development activities carried out in this hospital. Work systems and procedures for recruitment (both internal and external sources) and career progression are done in letter and spirit. Customers, co-workers and senior colleagues' feedback constitute an important component of performance appraisal, done every six months. Staff orientation, training-general skills and special skills (e.g. interpersonal skills, cardiac surgery team related), continuous medical education and continuous professional development programs are the major efforts in training and skill development. Rewards, monetary and others (e.g. best employee of the month) are used for motivating staff. Nursing staff attrition is reportedly more than that of doctors and the HR department tries to analyse and understand reasons, and minimise attrition through a number of benefits, such as children's educational support, training for professional development etc. Some challenges like staff retention, motivation, transparency and procedures continue to exist. Staff counselling and support programs are a part of staff development in addition to training and career progression. This is one of the best-reported areas of hospital performance and highlights the importance of human resource development in quality management. The MBNQA score on staff focus is 78 out of 85.

Health care process management involves department procedure/protocols written (and documented) and key processes monitoring. Standard operating procedures (SOPs) for emergency, laboratory, routine admissions and registrations, etc., are in place. Feedback to improve healthcare processes is an important feature; patient feedback is obtained on service, technology/equipment used and treatment aspects of care. Doctors' inputs, latest information from medical journals and management inputs are used for improving care processes. Measurement and data analysis for healthcare processes and outcomes are rather basic and needs improvement. Support processes like pharmacy, central sterilisation, diet and nutrition, etc., are very well streamlined with other processes. Safety and security processes (e.g. fire drills, security logs, disaster management team etc) are standardised. There is an active disaster management team consisting of doctors, managers and supervisors. Rules and hazards are clearly displayed for various equipments used in the hospital. The Biomedical Equipments Department ensures that all the equipments are in good condition. Processes of safety and security are integrated with electrical, fire fighting and security department plans. Overall process management is judged to be good (68 out of 85 MBNQA points), however, improvements such as incorporating data analysis into improving care processes are needed which the senior managers felt would improve with computerised information system.

Organisational performance results as per the reporting of the managers is comparable to any multi-specialty hospital in India. The overall results are comparable to any multi specialty hospital in India as per reporting of managers. The hospital obtained 314 out of 450 MBNQA points, which reflects good performance. The customers including patients, employees and others like suppliers are highly satisfied as understood from loyalty and work performance results. The hospital's reputation and good quality services have been a major attraction to different groups of customers. In terms of referral within and outside, the relationships with various groups of customers are judged to be very positive. The patients show preference and return to the same consultant, which is seen as a good sign of customer loyalty. The

hospital is reported to be a profit making venture though no specific financial data were revealed. The hospital has entered the field of cardio thoracic surgery in the last three years and it has already broken even at the end of two years. Results of free camps in and around the town have been very successful also.

Conclusions

The business orientation and healthcare focus have been integrated well in the hospital. The hospital has been quite successful in moving forward from ISO certification and in integrating continuous quality improvement in many areas of management. The analysis of quality management using MBNQA criteria of the case hospital supports that committed leadership is a driver for management accountability and creation of environment for empowerment and organisational agility. The hospital has effectively implemented the leadership's vision even though it has a top-down structure at the outset. Human resource development is judged to be highly effective based on training, continuous learning and professional development activities carried out in this hospital. Customer focus as understood from the feedback systems and follow through later that has resulted in high customer loyalty is a positive change in a traditional health care system that is primarily provider based. Measurement, analysis and knowledge management and information technology based hospital information systems is an area of weakness for the case hospital. Also, a senior manager noted it during the interview that there is very limited amount of information for benchmarking of hospital performance in India and that in itself poses challenges for comparisons among hospitals in the country. Though the hospital has made good efforts towards subsidising the availability of medical care to patients in the lower end of economic scale, areas of social equity are still a difficult proposition to be achieved by a private health care provider owing to costs of high technology medical care.

Since TQM in health care organisations in India is in its nascent stages, the analysis of quality management using MBNQA criteria appears to be one of the best approaches in achieving performance excellence. Though Baldrige criteria allowed quality performance evaluation in all areas, the areas of administrative practices for streamlining patient/healthcare processes and legal procedures could not be directly explored in-depth. Also, for TQM to be successful establishing quality and service culture need special attention and need to be further researched. Overall, this case hospital with more than 750 MBNQA points (out of 1,000) is judged to be performing at golden level. The hospital has followed the lead of other leading sectors in implementation of TQM. The rich experience and knowledge of quality management available with this hospital really provides lessons to other hospitals in India and abroad in achieving superior performance. This study brings out a potential area of research about how the ratings and activities in the case hospital compares with other health care organisations.

Notes

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3. Viswanathan, S. "Do ISO certified hospitals really follow the standards?" in *Express Health Care Management*, August 15 2002, www.expresshealthcaremgmt.com/20020815/cover1.shtml
3. Baldrige National Quality Program: "Health care criteria for performance excellence," National Institute of Science and Technology (2003), www.quality.nist.gov
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