

Total quality management activities after hospital accreditation from the opinion of hospital accreditation coordinators in Thailand

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Abstract:

Quality patient care must be the underlying principle of any nation's health system and it is important that health care organizations develop a systematic approach to monitoring and evaluating the quality of healthcare provided. Very few empirical studies have been made in Thailand of Total Quality Management (TQM) activities in accredited hospitals and their relationships to both the length of time elapsed since accreditation and obstacles. This study investigates the TQM activity level, obstacles and barriers. An 80-item TQM assessment scale developed from the Malcolm Baldrige framework was used to measure the level of TQM activity in accredited hospitals. Fifty two Quality Managers at accredited hospitals in Thailand were

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asked to respond to the mailed questionnaire survey, which resulted in a response rate of 79%. The results revealed that the TQM activity level is within the range of "neutral to agree" (3.82) on a 5-point scale. 'Senior Executive Leadership' achieved the highest score (4.09) followed by 'Quality Management' (3.97) and 'Information and Analysis' (3.90). There was no significant difference of TQM activity levels between any of the hospitals. The relationship between TQM activity and the length of time at an accredited hospital was statistically significant. The significant TQM activity dimensions relating to length of time at accredited hospital as shown by partial correlation coefficients were human resource management (-0.3966, $p < 0.05$), quality and operational result (-0.3911, $p < 0.05$), quality management (-0.332, $p < 0.05$), senior executive leadership (-0.3276, $p < 0.05$), strategic quality planning (-0.3197) and customer satisfaction (-0.3197, $p < 0.05$). With longer time at an accredited hospital the TQM activities decreased. It appears that the most important contributing factors to TQM activities in accredited hospitals were continuous internal and external surveys, employee participation and involvement, and commitment of the lead team. The most difficult barrier to TQM activities in accredited hospitals is staff fatigue and turnover rate. These study findings can serve as the basic knowledge necessary to improve quality management in accredited hospitals.

Key words: length of time at accredited hospital, TQM activity, hospital accreditation

บทคัดย่อ:

คุณภาพการดูแลผู้ป่วยเป็นคุณค่าพื้นฐานของระบบบริการสุขภาพแห่งชาติ องค์กรที่ดูแลสุขภาพจำเป็นต้องพัฒนาระบบการติดตามและประเมินคุณภาพบริการสุขภาพ การวิจัยครั้งนี้เพื่อศึกษาระดับกิจกรรมการบริหารคุณภาพทั่วทั้งองค์กรและความสัมพันธ์กับระยะเวลาในโรงพยาบาลที่ผ่านการรับรองคุณภาพแล้ว รวมทั้งปัจจัยสนับสนุนและอุปสรรคต่อกิจกรรมการบริหารคุณภาพทั่วทั้งองค์กร เป็นการวิจัยแบบตัดขวาง โดยใช้แบบประเมินกิจกรรมการบริหารคุณภาพทั่วทั้งองค์กรที่ศึกษาและพัฒนาจากกรอบแนวคิดของ Malcolm Baldrige ประกอบด้วย ส่วนที่ 1 ข้อมูลส่วนบุคคลและข้อมูลโรงพยาบาล ส่วนที่ 2 แบบประเมินกิจกรรมการบริหารคุณภาพทั่วทั้งองค์กร 7 ด้าน มี 80 ข้อคำถาม ส่วนที่ 3 เป็นแบบสอบถามปลายเปิดเกี่ยวกับปัจจัยส่งเสริมและอุปสรรคในการดำเนินงานการบริหารคุณภาพโรงพยาบาล ประชากรที่ใช้ในการวิจัยคือ ผู้จัดการคุณภาพหรือผู้ประสานงานคุณภาพของโรงพยาบาลที่ผ่านการรับรองคุณภาพจำนวน 52 คน ได้รับแบบสอบถามที่สมบูรณ์กลับคืนจำนวน 41 ฉบับ คิดเป็นร้อยละ 79 ผลการศึกษาพบว่า โรงพยาบาลที่ศึกษามีค่าเฉลี่ยกิจกรรมการบริหารคุณภาพทั่วทั้งองค์กรอยู่ในระดับปานกลางถึงระดับมาก (3.82) กิจกรรมการนำองค์กรโดยผู้นำระดับสูงมีจำนวนสูงสุด (4.09) รองลงมาคือ กิจกรรมการบริหารคุณภาพ (3.97) และกิจกรรมการวัดการวิเคราะห์ข้อมูล (3.90) ซึ่งระดับกิจกรรมการบริหารคุณภาพไม่มีความแตกต่างกันอย่างมีนัยสำคัญทางสถิติระหว่างขนาดและชนิดของโรงพยาบาล

กิจกรรมการบริหารคุณภาพทั่วทั้งองค์กรมีความสัมพันธ์กับระยะเวลาหลังผ่านการรับรองอย่างมีนัยสำคัญทางสถิติ ($p < 0.05$) องค์ประกอบที่มีความสัมพันธ์ทางลบคือ การบริหารทรัพยากรบุคคล (-0.3966) ผลลัพธ์คุณภาพและการจัดการ (-0.3911) การบริหารคุณภาพ (-0.332) การนำองค์กรของผู้นำระดับสูง (-0.3276) การวางแผนกลยุทธ์ (-0.3197) และความพึงพอใจของผู้รับบริการ (-0.3197) แสดงว่ายิ่งระยะเวลานานกิจกรรมการบริหารคุณภาพยิ่งลดลง ปัจจัยสนับสนุนกิจกรรมการบริหารคุณภาพที่สำคัญคือ การประเมินกิจกรรมคุณภาพทั้งภายในและภายนอกอย่างต่อเนื่อง การมีส่วนร่วมของบุคลากร และความมุ่งมั่นของผู้บริหารทุกระดับ อุปสรรคและความยากลำบากในการบริหารคุณภาพคือ ความเหนื่อยล้าของบุคลากร และการลาออก โอนย้ายของบุคลากร

คำสำคัญ: กิจกรรมการบริหารคุณภาพทั่วทั้งองค์กร, โรงพยาบาลที่ผ่านการรับรองคุณภาพ, ระยะเวลา

Introduction

Today, many people are concerned with finding the best ways to meet their health care needs without compromising quality. Quality patient care must be the underlying principle of any nation's health system. In 1995 the Office of the Permanent Secretary to the Ministry of Public Health in Thailand, adopted the "Quality Hospital Policy" with the aim that all provincial hospitals were to implement Hospital Accreditation by the year 2000. It became crucial that all hospitals should develop a systematic approach to monitoring and evaluating the quality of healthcare provided.

Hospital accreditation demonstrates the health organisation's commitment to quality and patient safety. It informs the community that the health organisation meets certain rigorous standards that have been measured against the national standards set by health care professionals. There are more than 17,000 health care organisations in the United States and many other countries that are accredited by the Joint Commission on Accreditation of Healthcare Organizations. All hospitals are continually making an effort to improve care and services. In Thailand, there are 180 hospitals that have been accredited by the Institute of Hospital Quality Improvement & Accreditation¹ and more than 1,103 hospitals are implementing a stepwise programme of patient safety and quality improvement. There are also two hospitals in Thailand that have been accredited by the JCIA (Joint Commission International Accreditation).²

The Institute of Hospital Quality Improvement & Accreditation¹ has found that 3 of 10 hospitals could not pass re-accreditation two years later. In addition, interview of some chief executives revealed that many quality activities were likely to decrease within 6-12 months after passing accreditation.

In a survey of hospital executives in the United States and Canada, they strongly believed that Continuous Quality Improvement (CQI) was not just a fashion but was essential to their organisations' survival. The drive to provide quality service to both internal and external customers is the primary motivation for being involved with CQI.³ Some unsuccessful CQI efforts can be attributed to a lack of CQI skills, poor

planning, and insufficient staffing. Sebastianelli and Tamimi⁴ analysed the factors on managers' ratings of frequently cited barriers to TQM and identified five underlying constructs: inadequate human resource development and management; lack of planning for quality; lack of leadership for quality; inadequate resources for TQM and lack of customer focus. Lee, et al.⁵ confirmed that the lack of an adequate information system and an inadequate level of technical skill required for CQI served as barriers against the implementation of CQI in a health care area. The three most important factors that contributed to the success or failure of a TQM project in their opinions were the attitude and involvement of all the personnel, the senior management's attitude and strong support, and training in TQM.⁶

Most of the enhancing factors evaluated for TQM were those that had been proven in non-health care settings. As a result, we lack any empirical evidence on the internal factors of an organisation that have any proven validity in the health care setting. Furthermore, past approaches used to identify influencing factors were fragmented and few studies presented a comprehensive model to illustrate the dynamics of the factors that contribute to TQM activities. In addition, there is no study related to TQM activities following the hospital accreditation process, particularly in Thailand. On the other hand, there are very few systematic empirical studies of TQM processes in organisations and their relationships to the factor influencing the process and the obstacles encountered in the system. As a result, the researchers have endeavoured to study the level of TQM activities, the influencing factors, and the obstacles and barriers. This knowledge will be beneficial to administrators of hospitals involved in quality management. This study may also be useful as a source of information for further research of TQM at accredited hospitals in Thailand.

Objectives

The objectives of this survey were to examine the differences in TQM activities among hospital levels, to compare the TQM activities of accredited hospitals after six months, one year, one and a half year, and two years, and to identify their relating factors and obstacles or barriers. The

study involved survey-based research on the obstacles and contributors associated with managing total quality in accredited hospitals. This follows on directly from a review of the relevant literature, which indicates that most obstacles to TQM can be linked directly to ineffective change management.

Research definition

1. Total Quality Management activity means that all the functions related to the needs and expectations of the customer and the community as well as the objectives of the organisation are satisfied in the most efficient and cost-effective manner by maximising the potential of all the employees in a continuing drive for improvement.

2. Hospital level is classified by the number of beds in a hospital and the characteristics of that hospital.

3. The hospital accreditation coordinator is either the director of a TQM/COI/HA department, the person most responsible for TQM/CQI activities or is in charge of hospital accreditation.

Total quality management activity

Whetsell⁷ emphasised TQM in health care as a structured, systematic process for creating organization-wide participation in planning and implementing continuous improvement in quality. According to TQM literature, quality is defined as meeting or exceeding the customer's expectations. TQM combines a set of management principles with a set of tools and techniques that enable employees to carry out these management principles in their daily work activities. The principles and tools that define TQM are as follows: customer focus, quality first and quality in everything, process management, cross-functional management, employee involvement and teamwork, continuous improvement, and standardisation. The TQM assessment scale for general hospitals under the Division of Rural Hospitals, Ministry of Public Health, Thailand, was developed in a dissertation by Srichaikul⁸ from a framework created by Malcolm Baldrige, which consisted of 7 factors and 119 items. The study has suggested that the more condensed 80-item version of TQM scale should be used. Seven factors for assessment are: senior executive leadership; information and analysis; strategic quality planning;

human resource development and management; management of process quality; quality and operational results; and customer focus and satisfaction. The Hospital Accreditation Standards of Thailand⁹ provide the basic requirements for quality systems. The standards cover six categories:

1. Commitment in quality: leadership and direction, strategic quality planning and quality goals and plans.

2. Resource and management: human resources development, employer management, environment and risk management, equipment and information support.

3. Quality management process: clinical quality management, infection control and general quality.

4. Professional standards and ethics: medical and nursing organization

5. Patients' rights and organizational ethics

6. Patient care and service: patient care team, preparation of care and treatment, care and treatment planning, implementation and evaluation, discharge and follow up.

Literature related factors influencing TQM activities

Hospital level: According to a survey by Chareonvong-rayub,¹⁰ the overall perception of importance towards both specified activities in community hospitals and dimensions of quality improvement differed by hospital size and were statistically significant. Zelealem and Getachew¹¹ also supported this notion, concluding that TQM perceptions vary with firm size and planning behavior.

Leadership: Obstacles to TQM implementation in healthcare organisations were a lack of senior management commitment and the short-term orientation of administrators.¹²⁻¹³ However, conversely, it was found that transformational leadership characteristics are positively related at the high level to the organisational effectiveness and service quality improvement.

Employee participation and involvement: Obstacles to TQM implementation in healthcare organizations are tensions and misunderstandings between management and medical professionals and resistance by physicians, nurses and other medical staff.¹²⁻¹³ The TQM successes have resulted from employee involvement¹⁴ with job involvement having a positive and significant relationship, which could also predict job performance of professional nurses.¹⁵

Audit and assessment: It has been identified that one of the most powerful ways to support project continuity is to undertake regular and objective assessments of the hospital's TQM procedures. The group felt that if they audited their own operations, there would be a clear conflict of interest.¹⁶ Saithanya¹⁷ has studied: internal quality audit; performance indicators; corrective actions; management reviews and training, which are the major factors affecting the maintenance of a quality system. The internal quality audit should include planning, conducting, reporting, and evaluating.

The support systems: Zelealem and Getachew¹¹ strongly emphasised that short-term profitability, a lack of resources, business planning and vision are among the main obstacles to the adoption of a formal TQM programme. In this work there was a significant correlation between resources and rewards and participative management behavior, which led to employees' participation.¹⁸ In addition, appropriate rewards must be provided and should be aligned with the quality performance indicators.

Organizational structure: The administrative structure that supports the organizational climate, in turn influences practices. These structural characteristics can serve as resources or barriers to client outcomes. Several authors have reported^{12-13, 19} that when the organisational structures tend to be strongly departmentalised, hierarchical and authoritative and with "fuzzy" missions they act as obstacles to TQM implementation in a healthcare organisation. Additionally, the organizational structure of nursing departments has a positive significant relationship with the effectiveness of patient units.²⁰

Materials and methods

The directors of TQM departments in 52 hospitals that had certified hospital accreditation were surveyed using a cross-sectional survey methodology. A mailed questionnaire was sent to either the director of the quality unit or the person most responsible for TQM activity or who was in charge of hospital accreditation at each of the targeted hospitals. Opinion related questions to assess TQM actions of the hospitals were modified by Srichaikul from the framework of the TQM

assessment scale devised Malcolm Baldrige.⁸ General information about the characteristics of each hospital such as size, status, location, time frame of hospital accreditation were accounted for by five questions. There were 80 items that used a five level range and asked about details of TQM activities and additionally there were some open-ended questions concerning the obstacles, barriers and influential factors of TQM activities. The range of questions asked were related to, for example:

1. The reasons for introducing TQM,
2. The difficulties that were encountered and how these were overcome,
3. The factors critical to the success in the hospital,
4. Whether the obstacles associated with TQM perceived as real barriers to TQM.

Data analysis

In order to examine the degree of TQM activities among the accredited hospitals, the mean score across the seven dimensions of total quality management assessment scale⁸ was computed. The level of internal consistency reliability was evaluated for question items belonging to each of the seven dimensions by the Cronbach test ($\alpha=0.75-0.85$). To examine whether there were significant differences between TQM activities scores of the accredited hospitals with different characteristics, *f*-tests and analysis of variance (ANOVA) were performed. The relationships between TQM activities in the accredited hospitals from the opinion of hospital accreditation coordinator and the time frame were analyzed by Pearson's product moment correlation. Similar contributing and barrier factors to TQM activity were grouped together, enabling the identification of the most common factors affecting to TQM activity.

Results

The response rate was 79% (n=41). The greatest proportion of the accredited hospitals (56%) was hospitals under the Ministry of Public Health. University hospitals had the highest score (Table 1).

Table 1 Baseline characteristics of the accredited hospitals

Characteristics	N (%)	Mean (N=41)
University hospitals	4 (10)	4.13
Medical centers, general and community hospitals under the Ministry of Public Health	23 (56)	3.88
Specialty hospitals	4 (10)	3.80
Private hospitals	9 (22)	3.61
Other hospitals	1 (2)	4.02
Total	41	

Degree of TQM activities

The average score across the seven dimensions of TQM activities was 3.82, which is within the range of 'neutral' to 'agree' (Table 2). Of the seven dimensions, 'Senior executive leadership' achieved the highest score (4.09±0.73), followed by 'Quality management' (3.97±0.76) and 'Information and analysis' (3.90±0.64). There was no significant difference of overall TQM activity levels amongst the hospitals.

Association between the degree of TQM activities and time

From the bivariate analysis, it was revealed that most of the TQM activity dimensions were significantly negatively associated with the length of time in accredited hospitals, except for information and analysis (Table 3).

Discussion

In this study we examined the overall state of the TQM activities within the accredited hospitals in Thailand. The study has attempted to prove an empiric link between the TQM activities performed and the length of time after passing the hospital accreditation and also to describe both the facilitators and inhibitors of TQM activities at the accredited hospitals. The mean score computed across the seven dimensions of TQM assessment scale was at a moderate level (3.82±0.71), little more than the score achieved in US hospitals (3.33±0.15),²¹ and correspond to the neutral (3) to slightly agree (4) response categories, suggesting there is room for improvement.

Table 2 TQM activity scores using the TQM assessment scale

Demension (No. of question items)	TQM activity score (mean ± SD)				
	Number of hospital beds			Mean	F-value
	30-149 (N=17)	150-499 (N=8)	≥500 (N=16)		
Senior executive leadership (8)	4.16±0.73	3.70±0.87	4.22±0.64	4.09±0.73	1.47
Strategic quality planning (14)	3.87±0.62	3.34±0.93	3.98±0.66	3.81±0.72	2.32
Human resource management (14)	3.92±0.66	3.13±0.89	4.04±0.64	3.82±0.77	4.81*
Information and analysis (4)	3.90±0.45	3.56±0.90	4.08±0.62	3.90±0.64	1.82
Quality management (12)	4.03±0.72	3.51±0.91	4.13±0.69	3.97±0.76	1.95
Quality and operational result (10)	3.42±0.75	2.93±0.99	3.56±0.77	3.38±0.82	1.67
Customer satisfaction (14)	4.00±0.99	3.38±0.88	3.86±0.70	3.83±0.88	1.46
Mean	3.90±0.64	3.33±0.87	3.97±0.62	3.82±0.71	1.47

TQM activity scores were computed for each of the seven dimensions of the TQM Assessment Scale by calculating the average of the respondents' rating of their hospitals on a 5-point scale (1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree; 5 = strongly agree)

*P<0.05

Table 3 Partial correlations between TQM activities and length of time controlling for type and level of hospital (N=41)

	Senior executive leadership	Strategic quality planning	Customer satisfaction	Information and analysis	Human resource management	Quality management	Quality and operational result	Time
Senior executive leadership	1							
Strategic quality planning	0.8358*	1						
Customer satisfaction	0.6682*	0.7623*	1					
Information and analysis	0.7453*	0.8712*	0.7041*	1				
Human resource management	0.8334*	0.9180*	0.7539*	0.8604*	1			
Quality management	0.7688*	0.7931*	0.7094*	0.7197*	0.8647*	1		
Quality and operational result	0.6479*	0.8232*	0.7357*	0.7731*	0.8346*	0.8133*	1	
Time	-0.3276*	-0.3197*	-0.3197*	-0.2557	-0.3966*	-0.332*	-0.3911*	1

*P<0.05; 2-tailed test

Compared to a study by Chareonvongrayub,¹⁰ who found hospital size did correlate with activity, the above results contrast and suggest there are insignificant differences between the TQM activity scores and types of hospitals from the variance (ANOVA) and f-test.

Most TQM activity dimensions were negatively associated with length of time in accredited hospitals except information and analysis, controlling for type and level of hospital. The significant TQM activity elements relating to length of time at accredited hospital as shown by partial correlation coefficients were human resource management (-0.3966, p<0.01), quality and operational result (-0.3911, p<0.001), quality management (-0.332, p<0.01), senior executive leadership (-0.3276, p<0.01), strategic quality planning and customer satisfaction (-0.3197, p<0.01). This finding is in agreement with that of the Institute of Hospital Quality Improvement & Accreditation that 3 of 10 hospitals could not pass re-accreditation in two years later. One area of particular concern is that, following the launch of the TQM program, a period of high optimism ensues, to be followed by the slowing down of progress, and signs that improvements are becoming more difficult to achieve. Foster, et al.²² indicated that TQM is likely to fail or run out of steam 18-24 months into the endeavor. All of this confirms that the longer the time elapsed then the more the TQM activities decrease at accredited hospitals. However, information and analysis was

insignificantly associated with length of time because of this dimension was necessary for hospital management. The hospitals use these reviews to assess organizational success, progress relative to strategic and action plans, ability to respond to organization and external environment change.

Findings have identified a number of factors which impact on the continuity of TQM over the long-term. These include continuous internal and external surveys, employee participation and involvement and commitment of the lead team. The best thing about employee participation and involvement is making employees feel a real sense of worth in the organization. This sense gives them more power within the activity, they keep organizations alert to the gap between its internal satisfaction with the existing systems and the changing external demands in relation to externally defined systems.

In agreement with a study by Wiele and Brown²¹ the most difficult barriers to TQM activities were found to be staff fatigue, discontinuation of commitment by senior management, the turnover rate of staff and new policies, and the short-term orientation of administrators. Wiele and Brown's study also included the role of audits and assessments, the role of quality frameworks, customer orientation and information systems as having an impact on TQM activities. In addition, obstacles to TQM implementation that were identified in healthcare organizations were as follows:¹²⁻¹³ a lack of senior

management commitment, unclear mission statements; the short-term orientation of administrators; poor communication of the strategies and goals of the organization; tensions and misunderstanding between management and medical professionals; resistance to change by physicians, nurses and other medical staff; a strongly departmentalised organisational structure that is both hierarchical and authoritative; strong inter-functional barriers; professional autonomy; and occupational subcultures.

In contrast to the finding of a previous study by Adinofi,¹² the difficult barriers to implementing TQM in hospitals are the compensation system, healthcare organizations that are inward-looking, failure of healthcare providers to understand the voice of the customer, and the lack of appropriate budgetary control. Also problematic is the unique relationship that hospitals have with their physicians; the conflict between the philosophies of the hospital management and the TQM philosophies, existing quality assurance programmers and union-management relationships.²³ This is probably because the situation of TQM in Thailand is more driven by internal pressure, such as leadership, employee participation. Thus, for many Thai accredited hospitals, TQM activities faced the difficulty of neglect by physicians and nurses.

Several limitations of this study must be mentioned. Firstly, this study is based on a cross-sectional design, therefore, the degree to which this survey accurately represents the real situation in individual hospitals is limited. In addition, certain questions included in the survey required subjective judgments to be made, or relied upon the perceived values of the individual respondents, and, therefore, there is a risk that the answers do not correctly reflect the reality. However, because the individuals chosen were considered to have expert knowledge of the situations within their organizations with respect to TQM, these individuals were undoubtedly the most appropriate choice for the purpose of this study.

Conclusion

In summary, this study enabled us to assess systematically the status of TQM activities in the accredited hospitals in Thailand. The major findings of this study confirmed that

the longer the time period that had elapsed since accreditation then the more TQM activities had decreased at the accredited hospital.

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