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Maintaining quality services in Thai  
accredited hospitals in a climate of  
economic uncertainty

Panee Sitakalin  
University of Wollongong

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**Maintaining quality services in Thai accredited  
hospitals in a climate of economic uncertainty**

A thesis submitted in partial fulfillment of the requirements  
for the award of the degree

**DOCTOR OF PUBLIC HEALTH**

from

UNIVERSITY OF WOLLONGONG

by

PANEE SITAKALIN, Dip. Midwife. M Sc.(Health Care Systems)

Graduate School of Public Health

2003

## CERTIFICATION

I, Panee Sitakalin, hereby declare that this thesis, submitted in partial fulfillment of the requirements for the award of Doctor of Public health, in the Graduate School of Public Health, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualification at any other academic institution.

Panee Sitakalin.

5 November 2003

**To my dearest mother Dr. Sri sa-ang Pacherat  
and in the memory of my late father  
Lieutenant Police Chamras Pacherat,  
whose love and support has been with me all my  
life.**

## **ACKNOWLEDGMENT**

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## **ABSTRACT**

In 1997, Thailand suffered a severe economic downturn. The government was obliged to control health spending whilst also attempting to maintain the quality of hospital services. In the same year, the Thailand Hospital Accreditation Program (HA-Thai) was established. This built on earlier accreditation schemes, and an initial group of thirty-five public and private hospitals joined the program. This study explores the strategies the managers of these 35 hospitals used to maintain the quality of their services since the economic downturn. It also investigated the managers' perception and understanding of the Hospital Accreditation Program. Little is currently known about the use of quality management within Thai hospitals. The aim of this study was to provide evidence of how hospital quality management was being implemented and how its practices were affected by the economic crisis.

The study used a mixed method approach. This was felt to be appropriate given the little that was known about quality management in Thai hospitals. Baseline data were collected by a survey questionnaire. This collected data on which components of Total Quality Management (TQM) were used by the thirty-five hospitals. The hospitals were also requested to provide their strategic plans (or other planning documentation) and their financial reports or annual budgets between 1996-1999. Finally, interviews were conducted with thirty-two top and middle managers from four public hospitals in different provinces and of different size. Public hospitals were selected because they had

less access to alternative means of funding than private hospitals and, therefore, their quality programs may have been affected more by the economic downturn.

The survey questionnaire was returned by 28 hospitals (80%) in the HA Thai program. Statistical analyses were conducted to assess whether quality management activity was related to public/private status, hospital size, location and whether the hospital was fully or partially accredited. The small sample size lacked sufficient power to identify any statistically significant relationships. Nonetheless, various features were noticeable in the responses of the hospitals. Many had adopted core aspects of TQM, including the communication of the quality management principles, extensive training for various categories of staff, a customer focus, and a broad involvement of staff in hospital decision making. Fewer had strategic plans that included quality, and over half of those hospitals responding thought TQM was an adjunct to management practices rather than being fully integrated. Few hospitals used quality costing, or appeared to understand the concept.

All respondents reported collecting data on quality performance from either patient and staff surveys (or both), as well as using customer complaints. These data were primarily used to improve performance in specific areas, but none seemed to use widespread statistical monitoring. Eight hospitals reported benchmarking their services. Nursing and administrative tasks were most involved in implementing quality programs. But despite this, the perceived success of the TQM initiatives was limited. No hospital reported a decline in costs, average length of stay, customer complaints, or number of re-admissions. This may have been linked to barriers that the hospitals reported to TQM

implementation. Some hospitals reported that it was too expensive, did not have support of key personnel, or had found that information was either not available or too difficult to obtain. These were consistent with problems reported in other studies but may also reflect the difficult financial circumstances that the hospitals were operating under.

The 32 interviewed managers provided greater insight into their approach to quality management. They revealed that each of the four hospitals implemented quality strategies, including joining the HA-Thai program as a way to maintain quality during the economic downturn. The strategies increased the public recognition of the hospitals and were regarded as helping the hospitals cut costs while maintaining quality. The CEOs were regarded as being the main quality instigator. Nonetheless, there were many uncertainties for hospital staff, notably job security. Increased workloads from new quality related administration and increased patient demand, fewer resources and decreased training opportunities were common experiences. The clinical managers had some concerns about the appropriateness of the HA-Thai program for clinical services, and doctors were reported to be apprehensive, feeling they had not been consulted. Doctors also believed they were already providing a quality service. Overall, the managers thought the benefits outweighed the difficulties involved in setting up the program.

The analysis of strategic plans was fairly limited. The survey responses suggested that 16 hospitals had strategic plans, and nine hospitals submitted planning documents. Not all documents were complete and many did not contain an internal/external analysis of the hospital's operating environment.

Yet, all plans were produced in 1997 or after, demonstrating their importance to senior management. Moreover, several contained objectives that directly related to the economic crisis.

All hospitals made some mention of quality in their plans, but it is quite limited for several hospitals. All but two hospitals mentioned training, although it is unclear whether there was more or less than before the crisis. This seems to show a commitment to quality improvement as the direct effect of training is difficult to quantify. Another common quality initiative was to apply for ISO9002 accreditation. This also indicated a strong quality focus because the ISO9002 scheme involves extensive documentation and its implementation is likely to increase costs.

What the plans did not contain was also interesting. None of the plans reflected a complete “customer focus”. This was demonstrated by a lack of commitment to consulting with the local community and only a few plans contained strategies to involve customers or staff. Other aspects of TQM that were not mentioned included quality costing, and benchmarking

Unfortunately, the final aspect of the analysis provided little insight. Few hospitals supplied financial reports, possibly for commercial/privacy reasons. Moreover, the information in the supplied documents was not sufficiently consistent nor detailed to determine how the economic crisis affected individual hospitals.

In conclusion, the study findings suggest that these 35 Thai hospitals maintained a commitment to quality management during the economic crisis. Managers appear to be convinced of the long term benefits, and are prepared to

work through the difficulties of implementation, including some staff dissatisfaction and an apparent lack of measurable benefits. Despite the economic downturn, the hospitals continued to adopt various quality initiatives, involving mainly nursing and administrative staff. They also continued to provide quality training. In other areas, the use of TQM principles seemed less developed. The study did not identify examples of statistical monitoring, or the use of quality costing. In relation to the HA-Thai accreditation program, the managers were convinced that external accreditation was required to ensure the reputation of their organisation in the community. The managers did not view it uncritically, however, and suggested that it needed to increase transparency and clarity of instructions.

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# **Chapter 1**

## **Introduction**

### **1.1 Introduction**

Until comparatively recently, both public and private sector hospitals in Thailand had no guidelines for standards and quality of health care delivery. Rules and regulations affecting health care were outdated and there were different standards in the system. People believed that some public hospitals did not provide good quality care and standards of services for patients. This issue prompted the government to take two initiatives in the national health plans which are issued every four years. The 7<sup>th</sup> National Health Plan in 1992 encouraged hospitals to implement quality management programs by offering short term funding for this purpose [Ministry of Public Health, 1992]. The 8<sup>th</sup> National Health Plan initiated a set of national health care standards, in particular for hospital services, by introducing the Hospital Accreditation System [Ministry of Public Health, 1996a].

The implementation of the first phase of the Hospital Accreditation System coincided with the severe economic downturn of 1997. While the economy had been stable, managers could spend relatively freely on equipment, specialist care and training. Between 1985 and 1992 health care spending in the private sector increased by 120 billion Baht (\$US 3,168 billion).<sup>1</sup> In 1993, both public and private hospitals spent about 100 million

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<sup>1</sup> The exchange rate was between 27.2 and 25.6 Baht to the US dollar [Bank of Thailand, 2000].

Baht (\$US 252 million) on equipment alone [Fairclough, 1994].<sup>2</sup> Total public expenditure on health care was 3.5 per cent of Gross Domestic Product (**GDP**) in 1985 and 5.9 per cent in 1992 and, as a result, providers, payers and patients expected increases in the quality of care delivered [Ministry of Public Health, 1996b:101].

The economic crisis interrupted the budgetary growth to which the health care sector had become accustomed. The government, whilst attempting to maintain the quality of health care services, was obliged to control health spending. Little is known about the effect of the economic downturn on hospital services. This study aims to explore how Thailand's accredited public and private hospitals managed to maintain the quality of their services during this time. The population for this study is the 35 hospitals which volunteered to join the hospital accreditation system in its first phase. Some of these were fully accredited, while other had achieved only partial accreditation. The system covered both public and private hospitals.

This chapter begins with the aims, objectives and significance of the research. This is followed by some background information about the economic situation in Thailand pre and post 1997. There is then a brief introduction to the Thai health care system, the role of quality programs within it and the hospital accreditation process. The final section outlines the structure of the thesis.

It should be noted that data were collected for this study during 1999 and there have been ongoing changes in the economy since then. However, this research provides a rare chance to study management efforts to maintain

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<sup>2</sup> The exchange rate was 25.2 Baht to the US dollar [Bank of Thailand, 2000].

quality services during a severe and unexpected time of economic uncertainty.

## **1.2 Research aim and methods**

The aim of this research is to explore what strategies the managers of 35 hospitals, which joined the Hospital Accreditation-Thailand (**HA-Thai**) in 1997, use to maintain quality services. The specific objectives of this study are to:

1. Explore the type of quality programs that are in place in the 35 accredited Thai hospitals;
2. Discover what strategies have been put in place by managers at different levels to ensure the continuing quality of their hospital services in a climate of economic uncertainty;
3. Study the views of managers at different levels and how they address the budget constraints for quality management; and
4. Explore the managers' understanding and perception of the hospital accreditation system.

Since the situation which occurred in Thailand is a novel one, this research project is to a large extent exploratory. It was decided to use a mixed-methods approach as the best way of combining a broad survey of the 35 hospitals taking part in the accreditation process, with some more in-depth qualitative case studies of selected managers in four public hospitals of different sizes and in different parts of Thailand. Public hospitals have been most affected by the economic downturn since in general they lack the capacity of the private sector to raise funds.

To survey the hospitals, an existing survey tool, originally developed by Ross et al. [1996], was modified for Thai conditions and health system. The hospitals were also asked to provide their financial and strategic plans, where these were available. The strategic plans were analysed using the framework suggested by Jayasuriya and Sim [1998]. A semi-structured interview schedule was constructed for the case studies. These methods are discussed in detail in chapter three.

### **1.3 Significance of research**

All the factors contributing to growth and stability in Thailand changed with the economic downturn of 1997. That crisis has continued to have a significant impact on the structure of both the public and private sectors' financing of health care. In the current climate of economic uncertainty, it is important to know how management practices, and the managers who are in charge of health care services, respond to financial problems and whether or not they plan to deal with these uncertainties in their strategic plans. In order to assess current practices, there is a need to investigate the views of managers at different levels of the organisation. Apart from one study by Supachutikul [1998a], who looked at quality improvement projects in eight hospitals around Bangkok, no studies have been undertaken in Thailand about management efforts to maintain quality hospital services during a sudden change in circumstances. An understanding of these issues has important implications for management practice in Thai hospitals, and for management education.

#### **1.4 Economic situation in Thailand**

In the decade prior to the 1997 crisis, Thailand's economic development was dynamic. From 1989-1990, the real GDP had an annual average growth of 7.6 per cent followed by a blistering 8.4 per cent during 1990-1995; even in 1996 growth had only slowed to 6 per cent [Word Bank, 1998]. Nonetheless, the following figures give some indication of the depth of the crisis in 1997. The government has speculated that 2000 people on average lost their jobs everyday during that time [Nikonburiruk and Tangkitivanich, 1999]. Private sector estimates of the shrinkage of GDP in the 12 months to the end of June 1998 range from 6 per cent to 16 per cent. The inflation rate increased rapidly from 5.8 per cent in 1995 to 7.0 per cent in 1997 [World Bank, 1997].

Thailand is a small open economy. The capital inflows during 1990 to 1995 averaged approximately 10 per cent of GDP, an important step leading to the crisis occurred in 1993. The stated intention of the government was to establish Bangkok as the regional financial hub to access overseas capital. The amount of foreign debt rose sharply from US\$50.3 billion in 1993 to US\$83.3 billion the following year. In the middle of 1996, a year before the crisis, the foreign debt was 51 per cent of GDP. This put Thailand on the watch list of the International Monetary Fund (IMF) and foreign investors [MacDonald, 1998; Nikonburiruk and Tangkitivanich, 1999].

#### **1.5 The Thai health care system and quality programs**



The Thai health care system, the structure of which is described in the Appendix 1, is the product of a diverse range of economic, social, technological, legal and constitutional factors, which are unique to Thailand. However, some of the characteristics of the system (for example, the referral system and the Hospital Accreditation System) have been adapted from other countries. The Hospital Accreditation System is discussed in the next section of this chapter and such systems in general are reviewed in chapter two, the literature review.

Quality management is an important element of the Thai health system. In the 7<sup>th</sup> National Health Plan (1992-1996), the Ministry of Public Health introduced a variety of quality projects/programs into the public hospitals which it controls. These quality projects/programs included Organisation Development (**OD**), Excellence Service Behaviour (**ESB**), Continuous Quality Improvement (**CQI**), Quality Assurance (**QA**) and Total Quality Management (**TQM**) [HA-Thai, 1998]. The Ministry of Public Health anticipated that all of these quality projects/programs would have the same goal to improve the quality of hospital services over the period of the 7<sup>th</sup> National Health Plan. These quality projects/programs were initiated and implemented by different divisions of the Ministry of Public Health (see Table 1.1) and underpinned by different measurements and tools. This had potential for confusion, a point which will be returned to later in chapters six and eight.

Table 1.1      Quality programs between the 7<sup>th</sup> National Health Plan  
(1992-1996) and 8<sup>th</sup> National Health Plan(1997-2001)

Year	Project / Program	Initiator / responsible organisation	Focus
1993-1994	Standards for health care organisations joining the Social Security Office	The Social Security Office	Accredited those health care organisations which joined the Social Security Office.
1993-1996	First steps towards TQM/CQI programs in the hospitals	The Health System Research Institute/ The Provincial Hospital Division/ The Health Insurance Office	Integrated the Organisation Development (OD) program, the Excellence Services Behaviour (ESB) program and the Continuous Quality Improvement (CQI) program.
1995	Quality Assurance in Nursing Care	The Nursing Division	Nursing standards and nursing audit
1995	Guidelines for health care organisations within the Social Security Office	The Health System Research Institute	Manual for accreditation of health care organisations which joined the Social Security Office
1995	Policy for quality hospitals	The Provincial Hospital Division	During the 8 <sup>th</sup> National Health Plan, all Regional Hospitals and Medical Centres, and all General Hospitals were to implement TQM/CQI concepts in their organisations
1995-1996	Hospital standards issued for the Golden Jubilee	The Health System Research Institute	Standards focussed on the process, the customer, and CQI
1997-2001	The Hospital Accreditation Project	The Health System Research Institute/ The Provincial Hospital Division	Use of standards piloted and hospital accreditation system created

Source: HA-Thai [1998]. *Quality Care* 14 (2), p 5

In spite of the focus on quality programs, the 7th National Health Plan lacked the systems for quality inspection/assurance and for service accreditation. The Thai health system still had the problem of different quality standards for services across both the public and private sectors. The problem for the public hospitals was more serious because they were experiencing staff shortages, including at the management level [http:eng.moph.go.th (22/08/01)]. In 1993, the Social Security Office

introduced a set of standards for hospitals and health care organisations that wished to join the social security system. The organisations would be accredited by the Social Security Office itself before they did so, and this policy marked the start of hospital accreditation in Thailand. Soon after, the Health Systems Research Institution, under the Ministry of Public Health, established and coordinated a general hospital accreditation program. This was the forerunner to the Hospital Accreditation System introduced by the government in the 8th National Health Plan.

The 8th National Health Plan noted that the Thai health care system did not have an organisation to evaluate quality services, and called for both public and private hospitals to volunteer to join the new Hospital Accreditation Program. The organisation chosen to implement the government's plan was the Collaboration for Hospital Quality Improvement and Accreditation. This was set up in 1997 by a number of health bodies, including the Royal College of Physicians and Surgeons, the Hospital Association, the Thai Nurses Council, and the Thai Medical Association. It is a semi-private, not-for-profit organisation staffed by employees of the Ministry of Public Health, and with some government funding. Hospitals which are accredited by the Collaboration were eligible to join, and receive funds from, the Social Security Scheme. This organisation became Hospital Accreditation – Thailand (**HA-Thai**) in 1998.

## **1.6 Hospital Accreditation**

The voluntary Hospital Accreditation System introduced by the Thai Government in the 8<sup>th</sup> National Health Plan [Ministry of Public Health,

1996a] utilised and adapted parts of accreditation schemes from various countries, in particular, those of the Canada Council on Health Services Accreditation (**CCHSA**), the Joint Commission on Accreditation of Health Care Organisations (**JCAHO**) in the United States, and the Australian Council on Health Care Standards (**ACHS**).

The Thai Hospital Accreditation System seeks to establish and maintain a quality of hospital services appropriate to Thai society and environment. The system evaluates and accredits the quality of hospital services based on a set of standards [Health System Research Institution Newsletter, 1998], and its philosophy has been established to promote the provision of quality hospital services and the efficient use of hospital resources. But as well as setting quality standards, the hospital accreditation system seeks to promote continuous improvement in the quality of hospital services, and recognises the importance of hospital's adopting a customer-focus. In this regard, it combines the older quality assurance perspective based on maintenance of standards with the focus to keep improving quality that is a core principle of total quality management.

HA-Thai represents an important milestone in the continuing quality management for all Thai hospitals. Following its launch in 1997, the organisation was deluged with requests from volunteer hospitals wanting to join the accreditation program. Finally, 35 hospitals, both public and private, joined HA-Thai in the first phase, although not all these have completed the evaluation process (see Table 1.2).

Table 1.2 Volunteer hospitals by bedsize, sector, stage of completion and region, at time of data collection.

Hospital bedsize	Sector		Stage of the accreditation process		Region	
	Public	Private	Fully or almost	Partly	Bangkok	Rural
≤218	11	5	4	12	3	13
≥219	12	7	2	17	7	12
Total	23	12	6	29	10	25

There are two processes in the hospital accreditation program. First is the self-assessment report. The self-assessment report helps the hospital in assessing its strengths and weakness in relation to the standards. The hospital uses the self-assessment report to improve services. The second process is the survey process [Ungkasuvapala, 1998]. The survey is conducted by a team of surveyors that visit the hospital. The length of the survey visit depends on the size of the hospital, measured by the number of beds. During the visit, the survey team members conduct interviews with the board of the hospital, directors of departments and multidisciplinary service teams, talk to clients, tour the settings where services are provided, look at the documents and, during a meeting at the conclusion of the visit, report on their findings to the hospital.

Following the survey visit, the team reports its findings against the standards document and recommends an accreditation status. The HA-Thai officers review the report for consistency and alignment with the standards (for more details about the standards, see Appendix 2). Finally, the board of the HA-Thai approves the accreditation status granted to the hospital. The possible options, depending on the level of compliance achieved by the

organisation, are Accreditation, Accreditation with Report, Accreditation with a Focused Visit, and Non-Accreditation. The hospital is sent a copy of the report and the certificate with the accreditation status.

The government expects that at the end of the year 2001 (the period of the 8<sup>th</sup> National Health Plan) all Thai hospitals should have the same standard of services and maintenance of service quality [Ministry of Public Health, 1996a].

## **1.7 Structure of thesis**

Chapter two reviews literature pertinent to this study. Chapter three describes the research methods used and the steps taken to collect and analyse the data. Chapters four, five, six and seven are the data chapters where the results of the research are presented. A summary and discussion of the major findings is presented in chapter eight, which discusses the implications for management practice and education, the limitations of the research, and makes suggestions for further research.

A number of Appendices may be found at the end of the thesis. Appendix 1 describes the Thai health care system; Appendix 2 describes the Thai hospital standards; Appendix 3 is the ethics approval; in Appendix 4 are the English and Thai versions of the questionnaire; Appendix 5 has all the letters of invitation and consent forms; Appendix 6 contains the survey data; Appendix 7 contains the English and Thai versions of the semi-structured interview schedule used for the case studies.

## **Chapter 2**

### **Literature Review**

#### **2.1 Introduction**

The overall aim of this study is to understand how hospitals in the Hospital Accreditation-Thailand system have implemented quality management practices, and have tried to maintain them during a severe economic downturn. In this chapter, relevant literature is reviewed. It will not try to give a comprehensive review of the literature on total quality management in general or within the health care sector. In recent years, this literature has become extensive, although variable in quality. The focus of the chapter will be on definitions of quality management, the distinguishing features of total quality management, the role of quality management in hospitals, and its use in hospital accreditation systems

#### **2.2 Definitions of quality management**

There are a variety of different terms used to refer to the topic of quality management. Some terms are used in equivalent ways. For example, in the health literature, ‘continuous quality improvement’ is often used to refer to initiatives based on ‘total quality management’ [e.g. Shortell et al., 1995a]. The term ‘quality management’ is often a shorthand for both. In this thesis, the term total quality management (**TQM**) will be used.

Another common term is ‘quality assurance’ (**QA**) but a distinction is often made between quality assurance and TQM [Berwick, 1989]. A

typical explanation is given by Eastman [1992]. Traditionally, QA programs focus on measuring technical performance, determining whether it conforms to acceptable standards and attempting to improve performance if standards are not met. QA measures can be interpreted as “policing” the standard of care, with the collection and analysis of data being used to detect substandard performance of individuals. In contrast, the focus of TQM is on systemic performance, embodying the view that most problems are due to system failures rather than the fault of individual. Moreover, TQM is characterised by a customer focus and aims for continuous improvement rather than simply meeting standards. The standards in QA programs rarely incorporate the needs and requirements of the customer (patient), and quality assurance does not necessarily result in improved outcomes. Potter et al. [1994] and Latart et al. [1994] found that it can even suppress the development of better quality by engendering fear and/or complacency.

### **2.3 An overview of Total Quality management**

This section is divided into two parts. The first half gives a brief description of the history of total quality management. This is primarily based on the account given by Evans and Lindsay [1999]. The second half describes the basic components of TQM as generally recognised.

Total quality management developed within the manufacturing industry. It grew from the work of Walter Shewhart who developed simple statistical techniques to monitor quality (e.g. control charts), and that enabled defects in processes to be identified and eliminated.

After the second world war, these statistical quality control techniques were introduced into Japan by Dr Joseph Juran and Dr W



Edwards Deming among others. But quality management was seen to be more than a technical activity. In 1949, the Union of Japanese Scientists and Engineers (**JUSE**) formed a committee devoted to improving productivity and developed a course on quality control, followed by widespread statistical training [Powell, 1995]. A significant part of their education was directed towards upper management. With their support, quality control was integrated throughout organisations, and a culture of continuous improvement (kaizen) developed. In 1951, JUSE instituted the Deming Prize awarded to individuals/companies for their quality management practice.

Deming and Juran are the most widely known pioneers of TQM but several other people are recognised as contributing to its development and dissemination [Evans and Lindsay, 1999]. Feigenbaum is credited with coining the phrase total quality control and viewing quality as a strategic business tool that requires the involvement of all employees in a firm. The Japanese latched onto the concept of total quality in the early 1960s. He also promoted the use of quality costs as a measure of performance. Philip Crosby has authored several popular books on quality. His philosophy shares a similar commitment to total dissemination through a firm, and focuses on continuous improvement as reflected in a “zero defects” concept. Kauro Ishikawa is regarded as the father of Total Quality Control in Japan, and advocated a bottom-up approach to quality management which has become the trademark of the Japanese approach to quality management. Finally, Genichi Taguchi developed statistical approaches that introduced quality improvement to product design [Logothetis et al., 1994]. These

helped make designs robust against variability in both production and the environment in which the product was used.

TQM made a large impact in other countries in the late 1970s and early 1980s as Japanese firms began capturing large market shares and Japanese productivity passed that of Western firms [Powell, 1995]. In 1987, the US Congress established the Baldrige National Quality Award, and this became an influential tool for creating an awareness of quality. High profile companies, under the guidance of Deming and other consultants benchmarked Japanese practices, and their publicised success saw a significant proportion of manufacturing firms implement TQM initiatives [Powell, 1995].

Deming considered his approach to be both a model and a method and summarised its main components into 14 points [Deming, 1986]. He focussed on the need for managers to have constancy of purpose to improve products and services, and how this might be achieved. All employees were to be encouraged to participate in the management decision process. This process should lead to continuous improvement in both production and services [Walton, 1986; Deming, 1986].

The main points of Deming's approach are summarised in Table 2.1, together with the components of Juran's approach. Juran focussed on three main processes: quality planning, quality control and quality improvement. According to his theory, the organisation's mission is for its products to achieve fitness for use by identifying customers' needs and specifications [Juran, 1992; Powell, 1995]. Both approaches share many similarities (as will be discussed below), but Juran differed from Deming in his views of how an organisation's culture needed to change.

Table 2.1 The quality theories of Deming and Juran

	Components
Deming's 14 points	<ol style="list-style-type: none"> <li>1. Constancy of purpose towards improvement.</li> <li>2. Adopt the philosophy.</li> <li>3. Don't rely on mass inspection.</li> <li>4. Don't award business on price alone.</li> <li>5. Constantly improve production systems.</li> <li>6. Institute training on the job</li> <li>7. Institute leadership that helps workers</li> <li>8. Drive out fear.</li> <li>9. Break down barriers between departments</li> <li>10. Eliminate slogans and exhortations.</li> <li>11. Eliminate quotas.</li> <li>12. Remove barriers to pride of workmanship</li> <li>13. Encourage education and self-improvement</li> <li>14. Plan of action.</li> </ol>
Juran's quality theory	<ol style="list-style-type: none"> <li>1. Quality planning. Set goals. Identify customers and their needs. Develop products and processes.</li> <li>2. Quality control. Evaluate performance. Compare to goals and adapt.</li> <li>3. Quality improvement. Establish infrastructure. Identify projects and terms. Provide resource and training. Establish controls.</li> </ol>

Sources: Deming, 1986; Juran, 1992

Juran sought to work within a company's existing structure and improved quality by designing programs that were consistent with current practices [Evans and Lindsay, 1999]. He believed quality needed to be expressed in terms of dollars for top management, while at an operational level, quality was expressed in terms of conformance to product specifications. Middle management needed to be able to speak both languages and translate between dollars and things [Evans and Lindsay,

1999]. However, the two approaches share sufficient similarities that it is possible to discuss total quality management in general.

Total quality management is defined by a number of characteristics. The first is a strong customer focus. This stems from a recognition that there is no single definition of quality, and that measuring quality must be customer focussed. For example, quality can be defined as features of products that satisfy customers - usually better features, higher quality, higher income, or as freedom from defects resulting in fewer complaints, less waste and hence lower cost [Juran, 1999]. In TQM, a distinction is often made between 'internal customers', generally staff who receive goods or services from suppliers or from other departments within the company, and 'external customers' who purchase or use the company's products [Evans and Lindsay, 1999].

The second characteristic is a commitment to continually improving the quality of the product. At an operational level, this is often interpreted as improving product specifications and removing production defects. In TQM, this is achieved through the use of statistical tools rather than using inspection [Evans and Lindsay, 1999]. But Deming and Juran differed in describing processes to achieve improvement. Deming advocated the Shewhart cycle of (1) plan a change to test, (2) test the plan on a small scale, (3) observe the effects of the change, and (4) evaluate the results [Deming, 1986]. Juran emphasised a six stage process for what was described as breakthrough improvements – proof of need, project identification, organisation for breakthrough, diagnostic journey, remedial journey, holding the gains [Evans and Lindsay, 1999].

The other characteristics follow from a commitment to continuous improvement. TQM emphasizes senior management commitment and leadership as the level of desired quality is fixed by management [Deming, 1986]. In addition, it is the responsibility of management to improve process by the better allocation of people, and removing barriers to pride of workmanship. Finally, senior management are responsible for strategic planning which is required for a strategic approach to setting quality goals [Evans and Lindsay, 1999].

Another TQM characteristic is training for the entire workforce [Deming, 1986]. Management needs to understand company processes from supplier to customer, and appreciate variation. Production workers must be trained for the job to remove variation and understand customer needs. In addition, staff should be empowered to improve quality. A common TQM approach to achieve this is to create teams consisting of staff from various parts of an organisation. Teams are useful for breaking down barriers between people and also because an individual rarely has the knowledge to understand all aspects of a process [Evans and Lindsay, 1999].

The final characteristic of TQM is its emphasis on the link between quality and costs. This is stressed by Deming [1986], Juran [1999] and others [Crosby, 1979]. Higher costs can result from poor quality because of excessive waste, products failing to meet specifications (internal failure costs), or warranty charges, returned products and lost sales (external failure costs). A benefit of TQM is claimed to be that the price of implementing quality improvement programs is less than the gains to be made from improved quality.

## **2.4 The international standardisation of quality management**

The worldwide spread of quality management raised the problem of standardising quality programs between countries. Until the late 1980s, there was no system of international certification which could be used for international trade [Marquardt, 1999]. To tackle this issue, the International Organisation for Standardisation produced the ISO 9000 series of quality standards. These standards are designed to be independent of cultural, national and regional differences [Schyve, 1998] and so provide a common language of quality for international trade. At present, more than 100 countries have adopted the ISO 9000 series as their national quality standard [Marquardt, 1999] including the United States, the United Kingdom, Australia, New Zealand and Japan [Yung, 1997].

The ISO 9000 series contains a number of standards – ISO 9000 to ISO 9004 [Evans and Lindsay, 1999]. Standards ISO 9001, 9002, 9003 define three levels of compliance with ISO 9001 covering the greatest number of processes, and ISO 9003 the least. ISO 9000 describes the basic concepts of quality assurance and ISO 9004 describes the development of a quality system. The standards do not define a specific level of quality performance but a company is required to have an auditable quality process [Evans and Lindsay, 1999]. The standards require a company to adopt a documented quality system and ensure its processes comply with it. Yet, the ISO 9000 series aim to build TQM characteristics into an organisation's system, including quality awareness and improvement, management commitment, and customer satisfaction [Yung, 1997]. Everyone in an organisation must know about its structure and policies, the procedures

required for quality processes and for specific tasks, all of which are in the ISO document.

The ISO 9000 standards were introduced into Thailand in 1990. The first certification of companies occurred in 1992 and, by 1996, ISO 9000 implementation had increased more than 40 fold [Krasachol et al., 1998]. These companies found there were a number of beneficial effects from ISO 9000 implementation, including internal improvements in the organisation and improved global competitiveness. Implementation was a good way to introduce TQM into the organisation [Krasachol et al., 1998]. As a consequence of these findings, ISO 9000 certification began to be introduced into health care organisations, at the time when the hospital accreditation system was beginning.

## **2.5 Hospital accreditation and quality management in Health Care**

There are various aspects of quality within hospitals that cover both clinical practice and management. In the clinical area, the principal approaches to quality are medical audit [Ellis, 1989] and research into the effectiveness of new and competing therapies (evidence-based medicine) [Sackett et al., 1996]. In hospital management, the main approach to maintaining quality has been external accreditation.

The original purpose of hospital accreditation was to protect staff and patients, and was established to encourage best practice in hospital management systems, notably safety and keeping medical records [Scrivens, 1995]. Every accreditation system involves defining standards, processes for assessing compliance and processes used to score an organisation's performance. On accreditation, a hospital receives a grading which denotes

the degree of compliance with standards, and which often affects the years before the next survey is required (for example, 4 years for high compliance, 1 year for low).

Scrivens [1995; 1997] has described the development of hospital accreditation systems in various countries. The first was established in 1917 in the USA by the American College of Surgeons. This voluntary scheme was operated by the College until 1950 when was replaced by an expanded scheme run by the Joint Commission on the Accreditation of Hospitals. Similar systems were established in Canada (1953) and in Australia (1974). Since then, accreditation schemes have been developed in many other countries.

Not surprisingly, the characteristics of the schemes differ between countries. For example, the role of government in hospital accreditation systems varies from country to country [Scrivens, 1995]. In some countries such as Spain, Switzerland, Italy and Canada, the hospital accreditation system is supported by local government. In Hungary and Sweden, it is the national government that has responsibility for hospital accreditation. Table 2.2 summarises the features from a selection of countries. The systems in Spain, Italy, Taiwan and Japan are based on the principles of Quality Assurance. The schemes in Canada, United States, and Australia have evolved to embrace a philosophy of continuous quality improvement [Scrivens, 1995; Ministry of Public Health, 1996c].

Table 2.2      Comparison between hospital accreditation systems



Country	The accreditation organisation	Membership of accreditation bodies	Philosophy
United States of America	The Joint Commission on the Accreditation of Healthcare organisations (JCAHO)	<ul style="list-style-type: none"> <li>▪ Independent of government.</li> <li>▪ Created by professional organisations.</li> <li>▪ Medical professionals dominate.</li> </ul>	Continuous Quality Improvement
Canada	The Canadian Council on Health Services Accreditation (CCHSA)	<ul style="list-style-type: none"> <li>▪ Non-government sector observes on the boards.</li> <li>▪ Local government responsible.</li> <li>▪ Medical professionals dominate.</li> </ul>	Continuous Quality Improvement and consumer oriented (client-centred) Provide value for money, which has quality as its central focus.
Australia	The Australian Council on Healthcare Standards (ACHS)	<ul style="list-style-type: none"> <li>▪ Government a member of the boards.</li> <li>▪ Medical professionals dominate.</li> </ul>	Continuous Quality Improvement and consumer oriented (client-centred) Community involvement in services.
Thailand	The Hospital Accreditation-Thailand (HA-Thai)	<ul style="list-style-type: none"> <li>▪ Independent of the government.</li> <li>▪ Created by professional organisations.</li> <li>▪ Supported by government.</li> </ul>	Continuous Quality Improvement and consumer oriented (client-centred).
Spain	The regional Departments of Health	<ul style="list-style-type: none"> <li>▪ Dominated by state government departments.</li> <li>▪ Administration and healthcare professionals represented.</li> <li>▪ Government runs the accreditation system.</li> </ul>	Quality Assurance.
Taiwan.	Department of Health's hospital accreditation committee.	<ul style="list-style-type: none"> <li>• Central government.</li> <li>• Administrators, specialists and professional groups.</li> </ul>	Quality Assurance.

Souces: Scrivens, 1995; JCAHO, 1994; ACHS; 1997; Heidemann, 1995;  
Ministry of Public Health, 1996c; Simon et al., 1995; Huang,  
1995

In addition to these approaches, several countries are examining how hospital accreditation schemes may be based on the ISO standards [Scrivens, 1995]. These include the Netherlands and Sweden.

In the United States, the accreditation system is independent of government and is supported by the health professions, with the medical

associations dominating. The country has several accrediting bodies such as the Joint Commission on Accreditation of Healthcare Organisations (JCAHO) and the National Committee for Quality Assurance (NCQA) [Bergman, 1994]. The accreditation process used to be based on a quality assurance approach and the adherence to standards. The measurement of quality in health care had been influenced by the work of Donabedian [1980]. He stressed the need to measure quality across three dimensions: structure, process and outcome. Structure refers to the human, physical and financial resources involved in the delivery of health care to the patient. Process includes all the processes and activities used by providers to deliver care. Outcome includes the results of the care process e.g. indicators such as mortality rates, and patient satisfaction. To assess quality in health care organisations, these three components must be integrated. However, Al-Assaf et al. [1993] have argued that the health care industry has not understood this, often using the components separately and independently of each other.

By the 1980s, there was growing problems with the standards based approach in the USA [Scrivens, 1997]. Methods developed to measure the outcome of care could not be easily linked to standards of process. The number of standards and their complexity were also increasing, which led hospitals to question the cost-effectiveness of the accreditation process. In addition, people began to argue that quality assurance was no longer adequate and that health care should adopt total quality management [Berwick, 1989]. It was argued that the old approach was incompatible with continuous improvement and that external review was negative and punitive, laying the blame for mistakes on professionals rather than

encouraging improvement of the system. External accreditation did make recommendations for change, but CQI advocates argued that quality could only be promoted through the internal review of processes [Scrivens, 1997]. Consequently, the largest US accreditation body, the JCAHO, adopted a continuous improvement approach. The role of the patient in determining quality was recognised, with standards rewritten to reflect the patient's experience. The relationship between clinical management and organisational management was also examined, and to improve cooperation and teamwork, the JCAHO emphasised how continuous improvement relied on the removal of structural barriers [Scrivens, 1997].

In 1991, the Canadian Accreditation body, the Canadian Council on Health Services Accreditation (**CCHSA**), similarly announced a shift in its philosophy to embrace TQM principles [Scrivens, 1995]. Its revised assessment was designed to address process, outcomes, and structures with a focus on continuous improvement within the health service delivery system [CCHSA, 1995]. Hospitals accredited under the CCHSA's Accreditation Guidelines had to demonstrate a commitment to provide quality care, and apply the principles of quality improvement to monitor and improve the quality of their services based on client-centredness.

Equivalent changes were made by The Australian Council on Healthcare Standards (**ACHS**) with the introduction of its Evaluation and Quality Improvement Program (**EQuIP**) in 1996 [Fairbrother et al., 1996]. The ACHS saw its introduction as representing a radical departure from the former accreditation program [ACHS, 1997] which was largely based on quality assurance principles. The adopted standards again focus on the

patient in the care process, and hospitals are asked to document gaps and weaknesses, and corresponding action plans on an ongoing basis. A new feature of the scheme was the self-assessment of hospitals prior to the visit by the ACHS team of surveyors.

It is worth noting that the self-assessment of quality by hospitals is being undertaken by an increasing number of hospitals [Counte et al., 2001]. Some hospitals have adopted the Baldrige award criteria [Goldstein et al., 2002]. In Europe, the European Foundation for Quality Management has developed a similar model which incorporates the measurement principles of Donabedian and this is being applied by various hospitals in the Netherlands [Nabitz et al. 2000].

The concept of quality management adopted in the Thai hospital accreditation system is also 'Continuous Quality Improvement' [Hospital Standards, 1996] although individual Thai hospitals may use different names for their quality improvement programs [BanChoan, 1998]. The Thai government intends that the hospital accreditation system will monitor and provide quality public hospitals. Furthermore, the hospital accreditation system should not only produce quality improvement but also improve efficiency in services [Supachutikul, 1998b].

## **2.6 Critique of quality management in hospitals**

The notion of quality management has been widely adopted in industry since the 1980s, and many studies have reported that it can improve an organisation's performance and competitiveness. Powell [1995] cites evidence from six large surveys of firms (some in multiple countries) that suggested some TQM components universally improve performance whereas the benefit of other components seem to be linked to how advanced

TQM implementation was within a firm. Also, the stocks of six Baldrige winners were noted to outperform other stocks on Standard and Poor's 500 [Business Week, 1993].

Given this apparent success, it is not surprising that TQM has also been widely adopted within hospitals. The implementation of TQM programs was quick in the USA. Barsness et al. [1993a], Deitch et al. [1994], and McLaughlin et al. [1994] found evidence that by the early 1990s, approximately 70 per cent of US hospitals had adopted aspects of Total Quality Management. Furthermore, the surveys reported that the hospitals which had a TQM system in place were more satisfied with their quality efforts and had experienced a significant improvement of outcomes such as cost saving, improved patient care, and internal and external customer satisfaction.

This satisfaction with TQM was still found by a later large survey. Chan et al. [1997] undertook a random survey of American and Canadian hospital executives who had implemented TQM programs. They found that these executives are likely to continue to be committed to TQM efforts in the future. Although hospital executives' decisions have been influenced by external pressures, such as hospital accreditation requirements, external pressure seemed not to be as important as internal drive in providing better services. To be successful in using TQM/CQI as a strategic tool, hospitals require the commitment of top management and the involvement of all employees in the implementation of quality programs [Chan et al., 1997].

The take up of TQM within the Australian health care system was comparatively slower. A survey in 1994-95 of ACHS accredited NSW hospitals by Ross et al. [1996] showed that TQM practices had only been

adopted since 1993 and that implementation had been fragmentary. Bartlett et al. [1997a] undertook a secondary analysis of these data, examining whether practices differed between public and private hospitals. They reported that there are no significant differences in the proportion of the TQM practices adopted within public and private hospitals, and where small differences existed, it was likely to be due to their operating environment.

A weakness with some of these studies was a reliance on the opinions of respondents as the main evidence of the effectiveness of TQM. Shortell et al. [1995a] performed a more complex analysis examining the relationship between hospital culture, quality improvement processes and various outcome measures. The results suggested hospital with TQM programs had better clinical efficiency (lower lengths of stay), and implementation of TQM was positively associated with better perceived patient outcomes. Poorer performance by larger hospitals suggested that these hospitals were less likely to have cultures that emphasised teamwork, empowerment and risk taking. They suggested large hospitals have cultures less conducive to implementing QI work.

But while these studies show the relevance and success of quality management programs in health care organizations, they have also tended to highlight difficulties in using a system designed for the manufacturing industry. Various factors have been identified as barriers to the successful implementation of TQM in health care organizations.

Brocka and Brocka [1992] have referred to a tendency of managers to use only the parts of quality management which are seen to have the most immediate relevance and return. Therefore, the systemic nature of TQM is removed, with only 'quality management' being selectively used, inevitably

resulting in the partial implementation of TQM. Sinclair [1993] stated that most managers see TQM as a strategy that can be ‘bolted on’ to existing organizational cultures without adequate realignment of all components of the corporate system. This reflects a lack of attention directed to the ‘people issues’ within organisations, which are likely to limit the successful implementation of TQM. Indeed, Reinertsen [1995] suggested that the most common obstacle to the application of TQM in health care organizations is the individual worker who feels at risk from innovation.

Zabada et al. [1998], reviewing the work of Shortell et al [1995a], Greene et al [1976] and Hamilton [1982], compiled a list of barriers to the implementation of quality management in health care organisations. These include:

- Health care organizations are inward-looking; they tend to focus more on the needs of care-givers and professionals rather than on the external customers.
- Large health care organizations are typically organised on a relatively hierarchical basis, exemplifying bureaucratic cultures that are resistant to employee empowerment.
- There can be a lack of senior management commitment to TQM in some health care organizations. Middle managers, on the other hand, perceive TQM as a threat that might eliminate their jobs and resist its introduction.
- In health care organizations, leadership style is based on command and control and hero/heroine models, rather than empowerment and the manager as developer, (or manager as coach).

- Physicians tend not to be concerned with TQM activities. They feel it is not applicable to them because they are already doing quality work, they are too busy, they are inexperienced or unwilling to work in a team, and they see TQM primarily as a cost-control mechanism.

Many authors have discussed the role of doctors within the hospital bureaucracy and how this can affect TQM implementation [Mintzberg, 1995; Arndt and Bigelow, 1995]. Hospitals are unique because they rely on professional standards and skills, and this gives professionals power within the organisation. This power extends also to the associations and institutions which selected and trained them in the first place [Mintzberg, 1995]. This means that the doctors are keenly sensitive about power and control within the health delivery system, and will resist what they see as attempts to limit theirs. In addition, Arndt and Bigelow [1995] argue that this means a hospital does not conform to the assumed TQM model of hierarchical control. As physicians have considerable degree of autonomy, this can undermine management leadership and leads to negotiated decision making rather than "rational" decision making.

In Thailand, doctors are employed either by individual hospitals (the private sector) or by the government (the public sector) and there are indications that, in the public sector at least, they resisted the introduction of quality programs, as the literature suggests they would. However, doctors also occupy most of the hospital management positions and, unlike their more clinical colleagues, this group may be more committed to introducing quality programs. Supachutikul [1998a] undertook a pilot project of quality improvement of hospital services in eight public hospitals run by the Ministry of Public Health around Bangkok. This study isolated a number of



factors which led either to success or failure of the quality projects. Five hospitals achieved quality improvement, this being linked to:

- Provision of a training program in TQM to all employees,
- Co-ordination and support by quality improvement team and key staff,
- Commitment to TQM/CQI by the leader,
- Follow up by the external consultant, and
- Integration of TQM/CQI with other quality techniques.

The reasons the other three hospitals were not successful were:

- The change of the CEO,
- Discontinuing the quality training program, and
- Internal conflict within departments and units.

## **2.7 Conclusion**

Total quality management has become a widely used management technique, being adopted across many industries including the health care sector. In general, its customer focus and commitment to continuous improvement are seen as producing real gains in performance and giving organisations' a competitive edge. In the hospital sector, its principles represented a significant change from the quality assurance approach that had been the foundation of many accreditation systems. This led to many systems making substantial changes to their philosophy and surveying techniques [Scrivens, 1997]. Yet, the evidence that TQM always delivers benefits is balanced by some criticism. In general, critics have argued that it entails substantial investments for managers and is expensive due to

training, meetings, and increased documentation [Powell, 1995]. A study by Powell [1995] further reveals that successful implementation of TQM can depend on various factors, but notably an open organisational culture and executive commitment. The study also found that TQM firms can be outperformed by non-TQM firms who regarded some components of TQM as common business sense.

The evidence in the hospital sector has been similarly undramatic. The principles behind quality improvement seem to be readily embraced by hospital management, and yet have so far failed to produce widespread gains in performance [Bigelow and Arndt, 1995]. This may be because initial TQM initiatives have tended to be administrative areas [Shortell et al., 1995b] but it also seems that there are considerable barriers to TQM programs. Some are related to the initial introduction of such programs, but others may be more structural. These relate to a mismatch in the organisational structures assumed in TQM theory and the structure of hospitals with the important role played by doctors [Arndt and Bigelow, 1995]. Nonetheless, commitment to the principles of quality management remain strong and benefits are expected to increase as lessons are learnt from the initial experiences in adopting TQM [Blumenthal et al., 1998].



## **Chapter 3**

### **Methodology**

#### **3.1 Introduction**

This chapter discusses the methods used to explore the study questions, which are outlined below. The methods included a survey to collect baseline data from the 35 hospitals involved in the hospital accreditation program, concentrating on their quality programs and tools. Hospitals were also asked to supply their financial plans which provided data about the extent of their adaptation to budgetary restraint. Strategic plans were also analysed where available. Finally a series of 32 semi-structured interviews was carried out with a variety of managers from four public hospitals, in order to gain a greater depth of understanding about their approach to quality management and their views of the hospital accreditation system.

#### **3.2 Specific study questions**

1. What quality programs are currently in place in Thai hospitals which have joined the Hospital Accreditation - Thailand (**HA-Thai**) program?
2. What strategies have managers' put in place to ensure the continuing quality of their hospital services in a climate of economic uncertainty?
3. What are the implications of budget constraints for quality management?
4. How do hospital managers at different levels view and address these constraints?
5. How do the managers perceive and understand the hospital

accreditation system?

### **3.3 Study design**

This study was conducted in three parts. In the first two parts, baseline data were collected and analysed using a survey and two documents - strategic plans and financial reports. In the third part, interviews were carried out to explore management strategies and management perceptions. The study as a whole was submitted to the Human Ethics Committee of the University of Wollongong for evaluation. Their approval is copied in Appendix 3.

The survey addressed study question number 2. The analysis of the documents addressed study question numbers 2 and 3, while the interviews addressed study question numbers 1, 2, 3, 4 and 5.

#### **3.3.1 The survey**

In the first part of this study, baseline data were collected by surveying the Chief Executive Officers (**CEOs**) of the 35 hospitals which joined HA-Thai in 1997. The purpose of the survey was to identify which quality programs and tools are used by managers to maintain quality services in those hospitals.

The survey instrument is based on that designed by Ross et al. [1996] for studying the effectiveness of Total Quality Management (**TQM**) in hospitals in New South Wales (NSW). The analysis approach was also informed by the paper of Bartlett et al. [1997a], who used the Ross et al. instrument to compare the effectiveness of TQM in accredited public and private hospitals in NSW. The questions were adapted to the Thai hospital

system, and details of the adaptation are presented in chapter five. This instrument was chosen primarily because it could demonstrate quality practices and secondly, because it has been validated to measure quality management strategies [Ross et al., 1996].

The survey questionnaire contained four sections (see Appendix 4). The first part asks for general information about each hospital such as classification, bed-size, location, budgets and numbers of staff. The second section asks about the quality systems which have been implemented in the hospital such as the strategic plan and quality program. The third part asks about the costs involved in maintaining quality. The questions in the fourth section ask about which groups of staff members are involved in decision-making within the hospital, and whether or not partners and patients/ clients/ customers are involved.

As the survey instrument does not elicit details about the hospitals' strategic direction and budgetary constraints, strategic plans and financial reports were requested for analysis. These data represent the second part of the study (to be discussed later).

#### *Logistics for part one*

The following procedure and timetable was followed to obtain the required information. All letters and consent forms may be found in Appendix 5.

1. A letter of introduction, an information sheet and the questionnaire (including a request for strategic planning and financial reports) were sent to the CEOs of the 35 HA-Thai hospitals.
2. The CEOs were requested to return the completed questionnaire within 7-14 days.

3. After checking incoming data, the researcher phoned or sent reminder letters if anything was missing or a hospital had not replied.
4. A thank you letter was sent to all 35 hospitals.
5. The data were analysed using appropriate statistical tests.

### *Population*

CEOs and Directors of all the 35 public and private hospitals which joined the HA-Thai in 1997.

### *Analysis (for more detail see Chapter 5)*

Chi-square tests were performed between the ‘use of strategies’ variables (yes/no) and a number of hospital features and characteristics of hospitals’ quality programs in order to identify statistical variables for analysis. Fisher’s exact test version was used to indicate significance where there was an expected count of less than five. SPSS for Windows was used for all analysis.

The questionnaire data were used to investigate the relationship between quality programs, in those hospitals that have them, and hospital characteristics such as classification, bed-size, and type of accreditation process. Analysis of strategies used by hospital managers to maintain quality services were used to demonstrate the strategic direction of the hospital.

### *Bias*

Some bias may have occurred in this part of the study because of non-response. It could be that those CEOs who are not comfortable with the direction of quality management practices did not reply. To reduce this bias,

the researcher phoned all CEOs to explain the study and try to remove some anxieties by restating the purpose of the study (i.e. describing the research).

### **3.3.2 Strategic plans and financial reports**

The survey was unable to elicit explicit details about a number of important issues, including the strategic directions to ensure the quality of services and, if the budgets were constrained, whether the hospitals changed their strategic direction to maintain quality services. This information was assessed by analysing other available documents.

The 35 hospitals were asked for their strategic plans and financial reports. The financial reports were analysed in an attempt to determine the size of the budget/ funding constraints that hospitals faced (Chapter 4), while the strategic plans were analysed to provide a more detailed picture of how quality was valued by senior hospital management (Chapter 7).

#### *Population*

The population in this part was the same as for the survey.

#### *Analysis (for more detail see Chapters 4 and 7).*

The analysis of the financial reports aimed to give descriptive statistics about the change in hospital budgets over the period before and after the economic crisis. The analysis looked at total budgets as well as budgets that were related to quality processes (such as training).

The analysis of the strategic plans was based on Jayasuriya and Sim [1998], who investigated the strategic plans of hospitals in two Australian states using planning documentation. Jayasuriya and Sim's framework was



chosen because it allows for the systematic analysis of the strategic directions (goals, objectives and comprehensive strategies), which are stated in the strategic plans of each hospital. Their approach was chosen, firstly, because it could demonstrate strategic directions as reflected in strategic planning, and secondly, it has been validated to measure strategic direction.

### *Bias*

Some bias occurred in this part of the study due to non-response. It could be that the CEOs were uncomfortable with sending documents. To reduce this bias, the researcher phoned all CEOs and explained more about this part of the study including that all information is confidential. The response rates are discussed in the relevant chapters.

### **3.3.3 Interviews**

Although the survey and documents provided much information, a more detailed picture was needed to answer the research questions. The survey and the analysis of the documents could not elicit more in-depth information, such as the use of successful strategies to maintain the quality of services by managers at different levels, the strategies used by the managers to maintain quality of services in a climate of economic uncertainty, and the managers' viewpoint, perception and understanding of the Thai hospital accreditation system. The interviews provided the data for an in-depth assessment and analysis of those issues.

The interviews, thirty-two in total, were conducted with the 'top' and 'middle' managers of four public hospitals (the CEO/Director of the hospital, Deputy Director of Medical Services, the Deputy Director of

Administration, the Director of Nursing, the Heads of Department of Medicine, Surgery, Obstetrics and Gynaecology and the Director of the Division of Finance and Accounting). Only two positions are filled by non-clinical people, i.e. Deputy Directors of Administration and Directors of the Division of Finance and Accounting. Each interview lasted approximately one hour and was audiotaped.

There were four groups of questions. The first group asked about the quality programs in place, including who initiated their implementation. The second group asked about the accreditation program, such as why did the hospital join it in the first phase. The third group asked about how the hospital had been affected by the economic downturn. The fourth group asked about the future directions for quality programs. (for more detail see Chapter 6).

### *Logistics*

1. A letter of introduction, and information sheet was sent to the four directors of the four selected public hospital asking for permission to interview.
2. Hospitals not replying within 7 days were phoned to confirm that the request had arrived.
3. Once the letter of acceptance was received, the researcher phoned and wrote to arrange an appointments for interviews with the CEO, the Deputy CEO and the Heads of Departments, at times convenient for the individuals concerned.

4. If any hospital declined, an alternative hospital from a predetermined list would have been chosen and the same procedure followed, but this was not required.
5. A thank you letter was sent to all participants.
6. The tapes were transcribed and a content analysis undertaken.

#### *Population selection*

Of the 35 hospitals which joined the HA-Thai program in 1997, 23 are run by the public system and 12 are run by the private sector. The privately owned facilities are run by a CEO who is directly responsible to a board of trustees. Each hospital has a different management structure and sources of funding are different from each other. In public hospitals, the structure is different from that in the private sector but it is the same across the country. Therefore, it was decided to choose public hospitals, primarily because the structure of management is the same and, secondly, because these hospitals have the same source of funding (the Ministry of Public Health). Public hospitals were likely to have been more effected by the economic downturn than private sector hospitals, which have access to wider sources of funding.

The interviews were conducted in four public sector hospitals run by the Ministry of Public Health. Two of these hospitals were fully accredited, two were partly accredited. The hospitals were matched for bed-size (two large, two small) and were located in different areas.

*Analysis (for more detail see Chapter 6).*

To analyse the data from the interviews, the tape recordings were transcribed verbatim and a content analysis performed.

### *Bias*

Non-response may have led to bias, but this did not occur. The researcher was careful to make clear to each individual that all information would be kept confidential and the individuals would not be identified in any way when the research was written up.

Another bias may have occurred in this part of study because of observation. Due to the researcher's previous knowledge about each hospital and its accreditation status, and about the people involved in management, the way she conducted the interview and her manner may have influenced the response. To reduce this bias, the researcher pre-constructed all the interview questions (see Appendix 7).



## **Chapter 4**

### **Financial reports**

#### **4.1 Introduction**

The general characteristics of the economic crisis in Thailand during 1997 were outlined in Chapter 1. Here, the aspects specifically relevant to the health system will be discussed. Both private and public hospitals were affected with the devaluation of the Thai (Baht) currency and changes in household income both being important factors. The National Economic and Social Development Board estimated that the total ratio of unemployed increased from 1.91 per cent (626 thousand people) in 1997 to 2.95 per cent (977 thousand people) in 1998 [Hoa, 2000]. The resulting 24 per cent reduction of the household health expenditure impacted significantly on the poorer households. There were a greater number of people who could not afford treatment in either public or private hospitals, and who could not buy drugs at local pharmacies for self-medication [Tangcharoonsathien et al., 2000], and many people sought treatment in public hospitals instead of using private health care. The Ministry of Public Health [1999] reported that the number of patients attending private hospitals declined by 20 per cent to 70 per cent, while activity in the Ministry of Public Health provincial and district hospitals increased. Out-patient visits increased by 6.5 per cent in 1997 and 12.4% in 1998, and in-patient activity increased by 3.1% and 8.7 per cent during the same period [Ministry of Health, 1999]. This led to all private hospitals being in some financial difficulty [Asia Pacific Economic Cooperation, 2001]. In some instances, the situation was serious enough for a hospital to either close down or for some of the wards to close and for some staff to be dismissed.

Despite the greater demand for public services, the economic crisis reduced the funds the Thai government had available for health care. In 1998, the budget from the Ministry of Public Health decreased by 16 per

cent in real terms [Tangcharoensatien et al., 1998]. Since 1969 up until the crisis, the Ministry of Public Health had been allocated between 2.7 to 7.7 per cent of the overall national budget, which translates to between 0.4 and 1.0 per cent of the Gross Domestic Product (**GDP**). During the economic downturn, the proportion of the national budget allocated to the Ministry of Public Health declined to 7.1 per cent. In real terms, the 1999 financial year budget was less than that for the 1996. This included the sizeable foreign loans accepted by the government between 1997 and 1999 [The Ministry of Public, 1999].

The government took some specific actions to protect essential services. One strategy was to decrease the construction/capital budgets of hospitals. After 1997, the proportion of the Ministry of Public Health's investment budget spent on capital works decreased from 38.7 per cent in 1997 to 11.5 per cent in 2000. Two other strategies were to promote the use of drugs manufactured in Thailand and to reduce the range of subsidised drugs by introducing the Essential Drug List [Tangcharoensatien et al., 1998; Ministry of Public Health, 2001b]. Yet, funds were made available for essential programs such as HIV/AIDS, and immunization [Asia Pacific Economic Cooperation, 2001; The Ministry of Public, 1999].

It seems reasonable to assume that these massive economic changes would have affected the hospitals that joined the Hospital-Accreditation-Thailand (**HA-Thai**). The aim of this chapter is to assess the influence the economic crisis has had on the annual budgets and specific budgets for quality maintenance of these 35 hospitals.

## 4.2 Method

Financial reports were used to collect budget data from 1996 to 1999 for the thirty-five hospitals that joined the HA-Thai in 1997. The financial reports were analysed primarily to see whether or not the hospitals suffered any budgetary constraints around the time of the economic crisis in Thailand, and secondly, whether or not a restriction in funds affected a hospital's quality management program.

Chief Executive Officers (CEOs) and/or Directors of the thirty-five public and private hospitals were asked to provide the financial reports or annual hospital budgets for the years from 1996 to 1999. The request was made by letter which was accompanied by an information sheet that explained the purpose of the study, and that assured them about the confidential nature of the study. If these reports were not received within 7-14 days, the researcher either phoned or sent the hospital a reminder letter. The hospitals that did not send reports were identified. After the final round of checks, the researcher sent thank you letters to all the thirty-five hospitals.

### *Analysis*

Each financial report/annual budget was read, translated and summarized. Calculations of totals were derived in both the Baht currency and in US dollars, using the appropriate conversion rate. The conversion to US dollars was performed to examine the overseas buying power of the budget, something relevant to the purchase of medications and equipment. The conversions used were based on Bank of Thailand Exchange rates



(1996: 25.34 Baht / US\$; 1997: 31.37 Baht / US\$; 1998: 41.36 Baht / US\$; 1999: 37.84 Baht / US\$). [Bank of Thailand, 2000]

The analysis examined the total budget (income) and expenditure of each hospital between 1996 and 1999. Percentage changes compared to the previous year were calculated as well as average cost per bed, and the researcher tried to identify budget items within the reports that were vulnerable to changes in exchange rates (e.g. equipment) or were related to quality management programs (e.g. training). Subsequent analysis examined whether changes in the hospital budgets were related to hospital characteristics, such as public vs. private hospitals, large vs. small hospitals, fully accredited vs. partially accredited and Bangkok vs. not-Bangkok hospitals.

### **4.3 Results**

Ten of 35 hospitals responded by sending their financial reports. The twenty-five non-responding hospitals were classified in their groupings based on knowledge from the accreditation system. The distribution of general characteristics is presented in Table 4.1.

Table 4.1 Characteristics of the responding/ non-responding hospitals

	Class		Bed size		Accreditation process		Region	
	P u b l i c	P r i v a t e	Smal l (<21 8)	Larg e (>21 8)	Ful ly	Pa rti al	Ba ng ko k	Not- Ban gkok
Participating hospitals	6	4	4	6	9	1	3	7
Non-responding hospitals	17	8	13	12	16	9	7	18
Total	23	12	17	18	25	10	10	25

The participating hospitals were mostly public and fully accredited. The representation of large vs. small and Bangkok vs. not-Bangkok was more comparable to the total population. But as the total number of responders was small, it was not possible to determine whether financial aspects of the hospitals were statistically associated with these hospital characteristics.

Table 4.2 Characteristics of documents supplied by the responding hospitals

Hospital	Material	Years covered				
		1996	1997	1998	1999	2000
A	Specified expenditure statement for government funding only	X	X	X	X	-
B	Crude income statement	X	X	X	X	-
C	Balance sheets, profit statement, some expenditure detail	X	X	X	-	-
D	Specified income statement for government funding and other income some expenditure detail	X	X	X	-	-
E	Specified income statement for government funding only	-	X	X	X	-
F	Specified income statement for government funding and other income	X	X	X	X	-
G	Crude income statement for government funding	X	X	X	X	X
H	Specified income statement for government funding and other income	X	X	X	-	-
I	Balance sheet only, some expenses mentioned and taken as budget for the hospital	X	X	X	-	-
J	Balance sheet only, no expenses mentioned	-	-	X	X	-

Surprisingly, the supplied financial documents did not give information about the budget model used and did not consistently present details in a similar fashion. For example, some provided balance sheet information only, whereas others provided information on income and expenditure. More importantly, some of the budgets of public hospitals referred to the Governmental component of the budget only whereas it seems clear from the other financial reports that public hospitals get income from other sources. To allow comparisons, separate analyses were conducted for total budgets where available and government source of funding. However, the analysis could not include three of the responding hospitals as they only supplied balance sheets, and these did not provide useful information about yearly variations in income and costs.

The annual budgets for the seven hospitals in Thai Baht and US dollars for 1996, 1997, 1998 and 1999 are presented in Tables 4.3 and 4.4. These show a curious lack of consistency in how budgets fluctuated over time, in one case, almost doubling. There is little evidence of a widespread fall in income in 1998 and 1999, although one private hospital mentioned in its financial statements that in 1997 the hospital lost 59,463,521 Baht because of the float of the Thai Baht.

Table 4.3 Hospital budgets as (estimated) total, 1996 –1999 in Baht.

Hospital	1996	1997	1998	1999
A*	63,622,800	123,058,088	101,837,634	144,635,630
B	115,702,709	132,170,084	183,625,045	139,434,346
D	15,429,769	22,256,958	21,122,035	n.a.
E	n.a.	2,196,325	1,822,458	1,909,709
F	108,585,980	133,078,423	143,621,276	124,065,901
G	n.a.	n.a.	n.a.	n.a.
H	96,917,208	122,674,598	121,842,286	n.a.

Note: \*: In 1999 this includes 10,000 Baht for an IT project and 5,890,655 Baht of a World Bank loan; n.a.: refers to not available

Table 4.4 Hospital budgets from the Ministry of Public Health, 1996 – 1999 in Baht.

Hospital	1996	1997	1998	1999
A	41,384,000	99,863,088	76,137,200	95,882,619
B	64,084,080	74,865,059	105,672,894	76,209,300
D	38,892,304	43,368,694	51,913,716	n.a.
E	1,033,880	1,087,289	901,500	946,662
F	129,585,646	155,942,290	151,829,337	148,194,627
G	204,568,063	194,986,547	257,034,075	261,008,075
H	51,613,185	65,595,705	63,278,068	n.a.

Note: n.a. refers to not available

Table 4.5 Percentage change from the previous year in total budget, 1996 –1999 in Baht.

Hospital	Total budget			Budget from Ministry of Public Health		
	1997	1998	1999	1997	1998	1999
A*	48.30	-20.84	29.59	58.56	-31.16	20.59
B	12.46	28.02	-31.69	14.40	29.15	-38.66
D	30.67	-5.37	n.a.	10.32	16.46	n.a.
E	n.a.	-20.51	4.57	4.91	-20.61	4.77
F	18.40	7.34	-15.76	16.90	-2.71	-2.45
G	n.a.	n.a.	n.a.	-4.91	24.14	1.52
H	21.00	-0.68	n.a.	21.32	-3.66	n.a.

Note: \*: In 1999 this includes 10,000 Baht for an IT project and 5,890,655 Baht of a World Bank loan for the total budget; n.a. refers to not available.

It was potentially possible that these substantial changes between the annual budgets were related to expansions (such as an amalgamation of hospitals) or contractions of capacity. This does not appear to be the case however, as the cost per bed based on either of these total budget figures show (see Tables 4.6 and 4.7).

Table 4.6 Cost per bed based on total budget, 1996 –1999 in Baht.

Hospital	1996	1997	1998	1999
A*	706,920.00	1,367,312.09	1,131,529.26	1,607,062.56
B	380,601.02	434,770.01	604,029.75	458,665.61
D	128,581.41	185,474.65	176,016.96	n.a.
E	n.a.	8,785.30	7,289.83	7,638.84
F	252,525.53	309,484.70	334,002.97	288,525.35
G	n.a.	n.a.	n.a.	n.a.
H	605,732.55	766,716.24	761,514.29	n.a.

Note: \* In 1999 this includes 10,000 Baht for an IT project and 5,890,655 Baht of a World Bank loan; n.a. refers to not available.

Table 4.7 Cost per bed based on budgets from the Ministry of Public Health, 1996 –1999 in Baht.

Hospital	1996	1997	1998	1999
A	459,822.22	1,109,589.87	845,968.89	1,065,362.43
B	210,802.89	246,266.64	347,608.20	250,688.49
D	324,102.53	361,405.78	432,614.30	n.a.
E	4,135.52	4,349.16	3,606.00	3,786.65
F	301,361.97	362,656.49	353,091.48	344,638.67
G	270,235.22	257,578.00	339,543.03	344,792.70
H	322,582.41	409,973.16	395,487.93	n.a.

Note: n.a. refers to not available.

As it seems unreasonable that hospital budgets would change by more than 20 per cent per year and that the cost per bed would vary as

widely as these figures indicate, the figures raise questions about the comparability of the budgets, both over time and between hospitals. Consequently, further analysis of the total budgets was abandoned.

An analysis of the budget available for drugs indicates the effect of the economic crisis and the possible some of the measures taken was again handicapped by a sparse data, as can be seen in Table 4.8. Only two financial reports had line items giving the hospital's drugs budget. One of these was quite stable, while the other varied widely.

Table 4.8 Hospital budgets for drugs, 1996 –1999 in Baht.

Hospital	1996	1997	1998	1999
D	2,518,022	1,665,492	5,025,323	n.a.
E	n.a.	391,647	314,518	311,603

Note: n.a. refers to not available

Due to the limited comparability of the data, the analysis of how the crisis affected quality management programs was restricted to examining the training budgets of the hospitals. Five hospitals had a separate category for this, although one had two entries under training. The data are presented in table 4.9. As before, the main feature of these data is the different patterns among the hospitals. The budgets for some hospitals vary widely but for some others the entries seem quite consistent between the years. For two of the five hospitals the budget was down for 1998 but in two of the other cases, there was a large increase. To assess how realistic these budgets were, they were expressed as a percentage of the total hospital budget (both previous totals were used, i.e. the overall total and the income from the

Ministry of Public Health). The results of these calculations are presented in Table 4.10. Again, some of the percentages seem unrealistic and vary quite widely.

Table 4.9. Budgets for training for 1996 –1999 in Baht.

Hospital	1996	1997	1998	1999
A*	10,620,000	15,477,800	18,094,200	13,626,190
A**	38,000	20,000	40,000	15,000
B	35,943,967	37,246,115	51,504,158	41,728,999
D	5,595,031	5,806,113	31,19,520	n.a.
E	n.a.	94,672	82,418	83,898
F	6,590,470	6,606,858	3,444,013	4,448,063

Note: Hospital A had two budget entries for training, one (\*) a general one including other activities and the other (\*\*) a training budget for ‘performance and education’; n.a. refers to not available.

Table 4.10. Percentage of hospital budget going to training, 1996 –1999 in Baht.

Hospital	Total budget				Budget from Ministry of Public Health			
	1996	1997	1998	1999	1996	1997	1998	1999
A*	16.69	12.58	17.77	9.42	25.66	15.50	23.77	14.21
A**	0.06	0.02	0.04	0.01	0.09	0.02	0.05	0.02
B	31.07	28.18	28.05	29.93	56.09	49.75	48.74	54.76
D	36.26	26.09	14.77	n.a.	14.39	13.39	6.01	n.a.
E	n.a.	4.31	4.52	4.39	n.a.	8.71	9.14	8.86
F	6.07	4.96	2.40	3.59	5.09	4.24	2.27	3.00
G	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
H	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Note: Hospital A had two budget entries for training, one a general one (\*) including other activities and the other (\*\*) a training budget for ‘performance and education’; n.a. refers to not available.

Given the results this far, it was decided that analysing the data to evaluate the influence of the exchange rate fluctuations or the changes in the salaries and wages, was not warranted.

#### **4.4 Discussion**

It is clear from the data regarding the whole country, that the economic crisis in 1997 affected the Thai health system severely. However, from the data supplied by the hospitals, it is unclear how this crisis affected the individual hospitals in the sample.

Theoretically, an evaluation of financial reports along standard lines [Watson, 1997] should have been possible. More specifically, the focus of this particular study highlighted issues surrounding drug expenditure and the use of generic drugs made in Thailand, and the discretionary use of training budgets to maintain or temporarily lessen the focus on quality. However, the financial reports did not seem to contain the detailed and systematic reporting required for this analysis. This is surprising as the budgets reflect the expenditure of public money, especially in the case of the public hospitals. Moreover, the Ministry of Public Health allocates budgets quite specifically. For example, money earmarked for salaries cannot be spent on anything else, and one would expect that financial reports would have clearly delineated between these items and budgets for specific projects requested by the Ministry. But either that data were not provided or not available.



#### **4.5 Conclusion**

The analysis of the financial reports and the annual budgets was focused on the annual budget, the quality maintenance service budgets, and the budgets for drugs and aimed to assess the impact of Thailand's economic downturn in 1997. However, the data submitted by the hospitals was not of sufficient detail nor sufficiently standardised to allow for anything other than a rudimentary analysis of income and costs over time. From the national data it seems clear that there was a major impact of the crisis on the hospitals. But from these supplied data, the affect of the crisis on the individual hospitals could not be determined.

## Chapter 5

### Survey

#### 5.1 Introduction

Although Total Quality Management (**TQM**) is based on an integrated management approach, surveys of hospitals have found the extent to which its principles are adopted vary among the organisations [Barsness et al., 1993a, ; Barsness et al., 1993b; Shortell et al., 1995b; Ross et al., 1996; Bartlett et al., 1997b; Chan et al., 1997]. This variation may arise for various reasons. It may represent an incremental uptake of TQM principles as hospitals become more experienced [Chan et al., 1997]. For example, Ross et al. [1996] reported Australian hospitals had initially focussed on patient/staff surveys. It is unclear whether this fragmentation reflects a deliberate decision to implement only those principles that seem most useful to a hospital, or whether it represents a reduction in enthusiasm for the TQM approach after encountering barriers to implementation. The surveys, as they are generally cross-sectional, do not provide a clear picture. A reduction in enthusiasm seems unlikely if the response of Chief Executive Officers (**CEOs**) in USA and Canada is representative; the majority expected their use of TQM to increase in the future [Chan et al., 1997]. Nonetheless, a common finding of these surveys are various barriers to the successful implementation of TQM. In a review article, Shortell et al. [1995b] reported obstacles of a technical nature (like training or data), a strategic nature (like the coordination of work) as well as of a structural

nature (like the need to align budgeting and planning to support quality). In addition, they cited evidence that suggest these obstacles are associated with different stages of a hospital's adoption of TQM. Other work suggest that the uptake of TQM is linked to characteristics of the hospitals, such as whether or not they are public or private [Bartlett et al. 1997a] and the size of the hospital and how bureaucratic its culture is [Shortell et al., 1995a].

It is reasonable to suspect that the hospitals that joined the Hospital Accreditation-Thailand (**HA-Thai**) are at different stages of implementing quality and that there is variation in the degree to which TQM is fully integrated. It is likely that they would have encountered similar obstacles. But in the context of Thailand, an important additional factor affecting the adoption of TQM is likely to have been the economic crisis in 1997, although it is unclear what the effect may have been. It may have had a positive effect if TQM helped, or was perceived to help, a hospital become more cost-effective. The financial restrictions may have caused budgets to be cut, however, and so result in cuts to TQM programs. The aim of this part of the study was to identify the components of TQM in programs, strategies, and tools used by managers of the thirty-five hospitals that joined the HA-Thai in 1997 to maintain quality services in a climate of economic uncertainty.

## **5.2 Methods**

A survey was used to collect the baseline data regarding TQM practices in the thirty-five hospitals that joined the HA-Thai in 1997. The questionnaire was based on the one designed by Ross et al. [1996]. This original questionnaire was

used in a study on the effectiveness of TQM in New South Wales hospitals. This instrument was chosen primarily because it should demonstrate quality practice, and secondly because it had been validated to measure quality management strategies [Ross et al., 1996]. The questions were adapted to the Thai hospitals system, and details of the adaptation, the English version and the Thai version of the questionnaire used are presented in Appendix 4.

#### *The instrument*

The survey instrument had four parts. The first part asked about general aspects of the hospital that might characterise its operation, such as public/private funding, bed size, location, budgets, and numbers of staff. The second part asked about the quality systems that had been implemented in the hospital such as a strategic plan and a quality program. The third part asked about the cost involved in maintaining quality. The fourth part of the questionnaire asked about the involvement of staff members in decision making within the hospital, and whether or not partners and patient/client/customers were involved.

#### *The population*

The survey was sent to CEO's and Directors of all the thirty-five public and private hospitals which joined the HA-Thai in 1997. The CEO's received a letter of introduction, an information sheet and questionnaire. The CEO's were asked to return the filled-out questionnaire in 7-14 days time. After a questionnaire was returned, all data were checked. If there were missing data or a hospital had not replied, the

researcher phoned and/or sent one reminder letter. After all material was received, the researcher sent thank you letters to all thirty-five hospitals.

### *Analysis*

The questionnaire was analysed in two parts. Part one analysed the more general characteristics of the hospitals, particularly the continuous variables such as bed and staff size. Part two was an analysis addressing the specific objectives of the study. For this purpose, the questions were clustered into various groups that related to different TQM practices. This approach was modelled on that used by Bartlett et al. [1997a] when they undertook a secondary analysis of the data collected using the "Ross" questionnaire. The TQM practice groups and the related question-numbers from the survey are listed in Table 5.1.

Chi-square tests were used to analyse discrete variables and distinguish between a number of general hospital characteristics. Fisher's exact test was used to assess significance where there was an expected count of less than five. Student's t-test was used for continuous variables and again differences between a number of general hospital characteristics were examined. SPSS version 7.5 for Windows was used for all analysis.

Table 5.1. Survey analyses strategy.

Specific objectives	Quest. item
<b>1. Implementation</b> 1.1 Have the hospitals adopted TQM practices, and if so, since when? 1.2 How are TQM practices communicated internally and what methods are used? 1.3 Have TQM practices been implemented by various staff groups? Have TQM consultants been employed? 1.4 Is TQM seen as an adjunct to management or fully integrated? 1.5 What are the hospitals' experiences in implementing TQM practices? 1.6 To whom is a quality training program offered, when is it offered, and who runs it? Is there a budget for quality training?	B4, B5 B11, D8 B12, B13, B25 B26 C1, B27, B28, B29 B21, B22, B23, B24, B19, B20
<b>2 Planning</b> 2.1 Does the hospital have a strategic plan? 2.2 Does the strategic plan address quality? 2.3 Does the strategic plan address quality through broad statements, goals and/or targets?	B1 B2 B3
<b>3 Monitoring</b> 3.1 Are quality costs being measured, and if not why? 3.2 How do the hospitals measure quality performance? 3.3 How do the hospitals make use of the collected data? 3.4 Do the hospitals report their quality activities externally?	C2, C3, C4, C5, C6, C7, C8, C9, C10, C11, C12, C13, C15 B9, B10, B14 B15, B16, C14, C16 B6, B7, B8, B 17, B18
<b>4. Participation</b> 4.1 Which staff groups are involved in decision making processes? 4.2 Are the service partners involved in the decision making processes? 4.3 Are the clients consulted when decisions are made about hospital practices regarding: inpatient care; outpatient care; and allied health staff issues? 4.4 Are the clients represented in the hospital's decision making processes regarding: inpatient care; outpatient care; and allied health staff issues? 4.5 Do the hospitals gather information from population groups to inform service provision? 4.6 Do the hospitals consult community groups about policies and service provision?	D1, D2, D3, D4, D5, D6, D7 D9, D10, D11, D12 D13, D14, D15, D16 D17, D18, D19, D20, D21 D22 D23, D24 D25, D26, D27

### 5.3 Results

Twenty eight (28) of the 35 hospitals responded to the survey. The seven non-responding hospitals are different from the responding hospitals in that they are significantly more likely to be only partially accredited. The non-responding hospitals were more often private and from Bangkok, but these differences were not statistically significant. They were not different in relation to bed-size. The distribution of known characteristics is presented in Table 5.2.

Table 5.2. Characteristics of responding and non-responding hospitals.

	Class		Bed Size		Accredited		Region	
	P u b l i c	P r i v a t e	S m a l l ( 21 8)	L a r g e ( 21 8)	F u l l	P a r t i a l	B a n g k o k	n o t - B a n g k o k
Participating hospitals	20	8	14	14	24	4	6	22
Non-responding hospitals	3	4	3	4	1	6	4	3
Chi <sup>2</sup>		0.96		0.01		10.72		1.97
P-value		0.20		1.00		0.00		0.16

In terms of the general characteristics of the responding hospitals, it seems that the public hospitals are larger than the private ones and that their occupancy is generally higher, although their annual expenditure is much lower. The fully accredited hospitals are larger than the partially accredited ones and their average number of bed days seems to be higher. The hospitals in Bangkok are similar in size to the rural hospitals but they have a lower occupancy rate and a much higher budget. The results are presented in detail in Appendix 6.1.

The detailed reporting of the results for the groups of TQM practices are presented in Appendix 6.2. The summaries for these results are presented here in four parts. As noted earlier, statistical tests were used to assess differences between private vs. public, large vs. small, rural vs. urban and fully vs partly accredited hospitals. However, the number of statistically significant tests is within that expected based on chance and there is no clear pattern. Therefore, only the overall counts are presented in the chapter.

The initial analyses focused on implementation of TQM and the results are described in Tables 5.3 to 5.5, and the accompanying text. Table 5.3 reflects general aspects of implementation. Twenty-two hospitals reported that they had implemented TQM practices, although 28 hospitals gave a date to the questions "when were practices introduced". There was a fairly even split among hospitals implementing practices before and after the economic crisis.

Most hospitals (23 of 24) reported communicating TQM policies throughout the hospital. When asked who is responsible for monitoring overall implementation of TQM, 17 hospitals reported that it was a committee. Four reported that it was a division, while three reported that it was a manager. In 12 hospitals, only internal staff were responsible for conducting the quality program, while in another 11, the responsibility was shared between internal and external staff. In only two hospitals was it the sole responsibility of external staff. Nonetheless, 16 of 25 hospitals had used external consultants to assist with their TQM practices. For 11 out of 24 hospitals, TQM was classified as an adjunct to management practices, for nine hospitals it was fully integrated into management practices. Four hospitals responded



viewing it as both integrated and as an adjunct to practices, which may reflect how it is viewed in different parts of the hospital.

Table 5.3. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 1a: implementation.

Question	Response				
Have the hospitals and if so, since when adopted TQM practices.	pre-1997	post-1997	no		NR
	16	12	0		0
How are TQM practices communicated internally and what methods are used.	not at all	some-times	often		NR
a. distribution of written policy	7	11	8		2
b. via formal word of mouth	6	10	10		2
c. via informal word of mouth	6	7	12		3
d. newsletter	8	7	12		1
e. performance report	7	9	9		3
f. in other ways	0	0	1		27
Have TQM practices been implemented by various staff groups.	not at all	modest-ly	mostly		NR
a. senior management	3	3	19		3
b. middle management	1	7	17		3
c. medical officers	13	9	3		3
d. nurses	0	6	19		3
e. allied health staff	2	9	14		3
f. administrative staff	4	5	2		17
To what extent have various staff groups reported on the implementation of TQM.	not at all	rarely	some-times	often	NR
a. senior management	6	0	10	9	3
b. middle management	6	0	12	7	3
c. medical officers	16	0	7	2	3
d. nurses	4	1	10	10	3
e. allied health staff	9	1	12	3	3
f. administrative staff	12	1	9	3	3
Have TQM consultants been employed.			yes	no	NR
			16	9	3

As reflected in Table 5.4, 19 of 23 hospitals reported barriers to TQM implementation. Of these 13 reported that it was too expensive, 14 reported lack of

support from key personnel, and 18 hospitals identified that information was either not available or too difficult to obtain. As can be seen in Table 5.4, the costs were also perceived to have gone up by many of the responding hospitals, either due to increased end cost (14 out of 22 responding) or increased average bad days (10 out of 20 responding). No hospital reported a reduction in costs.

Table 5.4. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 1b: experience and barriers.

Question	Response			
	up	neutral	down	NR
What were the experiences in implementing TQM practices				
a. total end cost	14	8	0	6
b. customer complaints	6	17	0	5
c. average bed days	10	10	0	8
d. number of re-admissions	6	15	0	7
Are there barriers to implementing TQM?		yes	no	NR
		19	4	5

The issues related to training are presented in Table 5.5. All 23 hospitals that responded stated that they had a training program, though the budget could be a small percentage (<5%) of the total hospital budget. Training was typically offered on a regular (but not ongoing) basis (13 hospitals) or on an occasional basis (12 hospitals). Training was also primarily offered (either totally or partly) by staff internal to the hospital (21/25), and was aimed in all hospitals to some or all clinical staff. Fewer hospitals reported giving training to senior management and the hotel staff.

Table 5.5. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 1c: training.

Question	Response				
			yes	No	NR
To whom is a quality training program offered.					
a. senior management			15	10	3
b. middle management			22	3	3
c. medical officers			19	6	3
d. nurses			25	0	3
e. allied health staff			24	0	3
f. administrative staff			23	2	3
g. hotel staff			7	16	3
How often is the training program offered			yes	No	NR
a. on an ongoing bases			3	22	3
b. at introduction to the organisation			3	22	3
c. regularly			13	12	3
d. occasionally			12	13	3
Who is responsible for the training program	extern	intern.	in&ex	Other	NR
	2	12	9	2	3
Do the hospitals have a budget for quality training	> 5%	3-4%	1-2%	0-1%	NR
	7	2	4	7	8

Table 5.6. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 2: planning.

Question	Response		
	yes	no	N/A
Does the hospital have a strategic plan?	16	12	0
Does the strategic plan address quality?	16	0	12
Does the strategic plan addresses quality by			
a. broad statements of intent?	15	2	12
b. specific goals?	13	4	12
c. specific targets?	14	3	12

Most hospitals, although only slightly more than half, claim to have a strategic

plan (see Table 5.6). Those with a plan reported that it addresses quality issues by using broad statements, and specific goals and targets.

The third part of the analyses addressed monitoring of the implementation and is reflected in the Table 5.7. This covered the TQM practices of measuring quality cost, bench-marking of the hospitals' performance, and the involvement of various staff and clientele groups in the TQM process. With regard to measuring quality cost, ten hospitals reported that their strategic plan made reference to the cost of quality. However, only five reported actually measuring cost of quality. Why hospitals did not measure quality cost is unclear as 19 of the 28 hospitals did not answer these questions. Among the reasons given by the few completed questions were: the need for parallel costing systems, complexity of the service, and lack of support for the process.

The hospitals' use of bench-marking and its various forms including surveying the public and patients are summarised in Table 5.7. The majority of answers indicate the use of patient and staff surveys, monitoring of customer complaints, and comparing performance with other hospitals in one form or another. All but one hospital reported making use of data collected on quality, although all hospitals reported using it to improve performance. Most hospitals stated that they compared their performance with other hospitals, three hospitals did this formally (with or without reports), while 15 hospitals stated they did this informally. Eleven hospitals stated they reported on TQM to external bodies. For public hospitals, this was always to either the Ministry of Public Health or another government organisation (or both). This was true for one of the two private hospitals that responded. The other

hospital reported to a non-governmental organisation. Nonetheless, the response rate for this question was low suggesting those answering the question may not have known who the reports went to.

Table 5.7. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 3: monitoring.

Question	Response		
	yes	no	NR
How does your hospital measure quality?			
a. patient survey	23	2	3
b. staff survey	19	6	3
c. meeting predetermined standards	14	11	3
d. monitoring consumer complaints	21	4	3
e. bench-marking	8	17	3
In what area is quality data used?	yes	no	NR
a. service improvement	18	6	4
b. system improvement	22	2	4
c. strategic quality planning	12	12	4
d. performance improvement	24	0	4

The frequency and way in which various staff groups were involved in decision making process is summarised in Table 5.8 and 5.9. It can be seen that the frequency or level of involvement is highest for the senior management for most types of decision. It becomes less frequent for the middle management except for practice (clinical) decisions and quality improvement, a pattern repeated for the other employees category.

Table 5.9 summarises which of three types of process were used to collect information from staff to support decision making: formal meetings, consultation and surveys. A hospital could indicate one or more processes. The different categories of staff clearly rely on meetings for each type of decision, either on its own or with consultation. The use of surveys is the only one whose use changes by decision type, being used more frequently for quality improvement and clinical practices. It is also used more frequently by other staff, probably reflecting their greater contact with patients.

Table 5.8. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 4a: staff level of involvement per topic area.

Question	Response			
	not at all	from time to time	regularly	NR
Senior managements involvement in various decision making areas is				
a. policy	1	8	17	2
b. resource allocation	0	5	22	1
c. recruitment	1	10	16	1
d. quality improvement	2	7	18	1
e. practice (clinical)	1	9	17	1

Middle managements involvement in various decision making areas is	not at all	from time to time	regularly	NR
a. policy	7	8	12	1
b. resource allocation	3	10	14	1
c. recruitment	3	13	11	1
d. quality improvement	2	7	18	1
e. practice (clinical)	1	6	19	2
Other employees involvement in various decision making areas is	not at all	from time to time	regularly	NR
a. policy	8	11	8	1
b. resource allocation	10	9	8	1
c. recruitment	8	11	8	1
d. quality improvement	4	7	16	1
e. practice (clinical)	2	6	19	1

Table 5.9. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 4b: staff involvement per topic area and process

	Policy			Resource allocation			Recruitment		
Process	Senior	Middle	Other	Senior	Middle	Other	Senior	Middle	Other
Meeting	22	21	16	22	18	12	19	16	12
Consult	10	10	10	10	16	15	15	16	16
Survey	1	2	6	1	1	5	3	0	3
NR	1	2	3	1	2	6	1	2	4

	Quality improvement			Clinical practices			Note: more than 1 answer possible
Process	Senior	Middle	Other	Senior	Middle	Other	
Meeting	20	22	17	18	22	16	
Consult	15	18	14	20	19	16	
Survey	8	5	9	7	1	7	
NR	2	1	2	1	1	5	

Twenty-three hospitals reported service partners being represented in the hospital administration. Twenty hospitals reported the groups being regularly represented on the hospital management committee and 13 reported regular representation on the hospital management sub-committee. No hospital reported

having no representation at the hospital administration level of the service partners, while only one hospital reported no representation on its quality committee, though attendance at a few hospitals was rated as only "from time to time".

All service partners were informed of policy and service provision, with hospitals informing them in various ways: by written policy, via formal word of mouth, via informal word of mouth, newsletter and performance reports. Newsletters and performance reports were used less frequently than other methods.

The involvement of the customers of the hospital in the decision making process is summarised in Table 5.10. Only four responding hospitals did not involve customers in decision making, though their level of involvement differed by type of decision. With respect to in-patients, they were typically not involved in decisions about policy, resource allocation, and recruitment. But in-patients were very regularly involved in quality improvement activities and clinical practice. The same is roughly true for out-patients and patient of allied health services.

The questionnaire asked which of three types of processes were used to collect information from customers to support decision making: formal meetings, consultation and surveys. A hospital could indicate one or more processes. The results suggest that, for each type of decision, patients provide information predominantly via meetings. The use of surveys is the only option whose use changes by decision type, being using more frequently for quality improvement and clinical practice decision. All but four responding hospitals informed patients of hospital policy and services, with hospitals using various ways, typically: by written policy (17/23), via formal word of mouth (14/22), via informal word of mouth (20/23), and



newsletter (14/23). Only 5 of the 23 responding hospitals provided performance reports to patients.

Table 5.10. Results of the survey on strategic management in (partially) accredited hospitals in Thailand, part 4c: customer involvement per topic area and process

Process	Policy			Resource allocation			Recruitment		
	In-Patients	Out-Patients	Allied Health Patients	In-Patients	Out-Patients	Allied Health Patients	In-Patients	Out-Patients	Allied Health Patients
Meeting	20	21	21	20	19	17	14	13	15
Consult	12	14	14	14	14	16	16	17	15
Survey	4	2	2	1	1	1	1	2	2
NR	3	3	3	4	3	3	3	3	3

Process	Quality improvement			Clinical practices			Note: more than 1 answer possible
	In-Patients	Out-Patients	Allied Health Patients	In-Patients	Out-Patients	Allied Health Patients	
Meeting	19	19	17	20	21	22	
Consult	16	14	17	14	15	14	
Survey	8	10	9	7	6	5	
NR	2	2	2	2	2	3	

Community groups were the other stakeholder the hospitals were asked about. Thirteen hospitals reported that they surveyed specific population groups within the local community, using internal staff to do this. The surveys were typically used by individual units for decisions on practice and by administration for planning. Sixteen hospitals reported consulting with the local general community. Hospitals report using both formal and informal methods of approaching the groups, and that groups do approach them. Few hospitals reported that interest groups for women, parents of pre-school age children, workers, and the aged were not represented. The only section of the community, which some hospitals reported less representation appeared to be religious groups.

## **5.4 Discussion**

This survey had a reasonable response rate at 80 per cent. Also, from the non-response analyses, it seems that the differences between non-responding hospitals and responding ones are not generally statistically significant. Therefore, the results can be expected to be a representative cross-sectional view of those hospitals that joined the HA-Thai in 1997.

Unfortunately, the small size of the sample meant that there was little statistical power to examine associations between particular hospital characteristics and the extent of a hospital's adoption of TQM. The responses from each hospital, however, reveal that many have adopted core aspects of TQM, including the communication of the quality management principles, extensive training, having a customer focus, and a broad involvement of staff in hospital decision making. Fewer have strategic plans that include quality, and over half of those hospitals responding thought TQM was an adjunct to management practices rather than being fully integrated. However, it appears that the level of adoption at the time of the survey is less fragmentary than that reported by other surveys of hospitals [Ross et al., 1996]. This may be due to various reasons. As reported elsewhere [Chan et al., 1997], this level of implementation may simply be due to the length of the time that TQM had been adopted. Sixteen of the hospitals had started to implement TQM before 1997. Alternatively, it may reflect the hospital population of this survey having a stronger commitment to TQM than hospitals not in the HA-Thai program. Other surveys have not been restricted to such a specific subset of hospitals [Barsness et al., 1993a; Shortell et al., 1995a; Ross et al., 1996; Chan et al., 1997].

Measuring and using quantitative data to monitor performance is another important aspect of TQM [Deming, 1986; Crosby, 1979]. In this study, all respondents reported that they collected data on quality performance from either patient and staff surveys (or both), as well as using customer complaints to monitor their performance. These data were used to improve performance in various areas, though the use of data in strategic planning was noticeably less. In addition, only eight hospitals reported benchmarking their services. This includes reporting to external organisation even though the resulting comparison may not be fed back to allow comparisons. This may reflect the difficulty of benchmarking hospital services. For benchmarking to be effective, it is necessary to ensure differences among patients are taken into account and this can be a barrier to benchmarking [Yurk et al., 2001].

A feature of the TQM literature is the emphasis on training dedicated to quality improvement. Many advocate that training has to be conducted on an on-going bases and has to be directed at all groups in the organisation. For example, Newall and Dale [1990] found that the lack of quality education and training programs were a major obstacle in the development and implementation of a quality program. However, an alternative view has been that training should be targeted as it saves money, time and avoids training people who then have nothing to do [Boerstler et al., 1996]. In this study, it was found that most hospitals offered training across all staff categories, though nurses, allied and administrative staff received predominantly more than medical staff and hotel staff. The frequency of training was reported as being occasional, and may indicate a targeted approach. The predominance of training for nursing and administrative tasks reflected the staff groups who were most

involved in implementing quality programs. There was no difference between hospitals with regard to having a budget for quality training based on private/public status. This is different from a study in New South Wales, Australia where a private/public difference was found [Bartlett et al., 1997a].

Despite this apparent commitment to TQM principles, the perceived success of the TQM initiatives was limited. None of the hospitals reported a decline in costs, average length of stay, customer complaints, or number of re-admissions. This was not unexpected as it is generally recognised that quality initiatives have not had the impact that many advocates predicted [Blumenthal et al., 1998]. The Thai hospitals' lack of success may be linked to barriers that the hospitals reported to TQM implementation. Some hospitals reported that it was too expensive, did not have support of key personnel, or had found that information was either not available or too difficult to obtain. These are consistent with the problems that hospitals in other surveys had reported [Barsness et al. 1993a; Shortell et al., 1995a; Ross et al., 1996]. However, it may not be solely due to poor implementation. It may reflect the difficult financial circumstances that the hospitals were operating under. It may also be that the pre-defined answer categories did not capture where quality has improved.

One interesting aspect was the hospitals reporting the adoption of both administrative and clinical TQM initiatives. The implementation of TQM in hospitals has tended to be restricted to administrative functions, and its lack of impact on clinical functions has been seen as a weakness [Shortell et al., 1995b]. Interestingly, nursing and allied health staff as well as administrative staff were most active in adopting TQM into clinical practice within the Thai hospitals. In comparison, medical

officers were reported as not participating to any great extent. Involving physicians has been recognised as a major challenge for TQM [Blumenthal et al., 1998]. This is partly due to hospitals not conforming to the hierarchical organisational structure (in which top management have control over their workforce) that is assumed by the standard TQM approach. As Arndt and Bigelow [1995] discuss in detail, physicians have a considerable degree of autonomy both in their work and how much they wish to be involved in hospital management. Yet TQM does not provide for such important employees to operate outside it, and this fact is likely to compromise the implementation of TQM within hospitals.

The limited use that hospitals make of the "quality cost" concept is another feature of this survey that is consistent with other studies [Bigelow and Arndt, 1995; Ross et al., 1996]. The figures showed that few hospitals collected data on this aspect of quality, and reported various reasons why quality costs could not be determined, such as problems creating parallel accounting systems, complexity of services delivered, and lack of trained personnel. However, many respondents seem not to understand the concept. Responses to the quality cost questions showed various inconsistencies. For example, although only five hospitals indicated that they measured quality cost, 11 stated that the hospital produced reports on quality costs. Other "quality cost" questions were not answered by over 50 per cent of the respondents, by far the worst among all questions in terms of non-response.

The final aspect of the questionnaire focussed on which employees were involvement in the hospital's decision making. Another key principle of TQM is a multi-disciplinary team approach to decision making [Thornber, 1992], and it has

been reported as being a feature of TQM-effective hospitals in NSW [Bartlett et al., 1997b]. This survey found that the Thai hospitals involved various staff groups in different levels of decisions. The regularity of their involvement could vary, but it is generally recognised that an employee's involvement will depend on their work situations, and will generally depend upon the economic, strategic and policy making issues being tackled [Lansbury et al., 1988]. In addition, service partners were regularly involved in all committee work. From this, it seems that the responding hospitals are attempting to create the necessary multi-disciplinary framework for the effective participation of stakeholders, the employees and staff.

### *Limitations*

The survey results do depend on the current state of knowledge and experience of the hospital management. The management will only be able to answer questions that are considered relevant, based on their background knowledge, work experience, and the feeling of comfort in answering questions about quality management. To reduce the impact of some of these factors, the researcher made a phone call and sent a formal letter to all CEOs to explain the study.

It should be noted that inherent in the Thai hospital management system, the CEO of a hospital is changed every four years. Some of the questions required quite time specific knowledge that might predate the CEO's appointment. However, the other senior managers and middle management of the hospitals remains stable so, if the communication within the hospitals is sufficient the questions could still be answered. However, this could introduce variability between hospitals depending on

the level of communication within the hospital. As the self-administration survey relied on the corporate knowledge and the responsible of the CEO, the letter recommended that the survey was to be completed by the CEO of each hospital to minimise the variability of the responses due to this factor. The responses indicated that the majority of respondents were representatives of the management but not uniquely the CEO so corporate knowledge is likely to be reflected in the answers. However, the responses to the surveys are assumed to be variable and hence descriptive in nature.

Another limitation of the survey relates to the number of the hospitals represented. Non-responding hospitals were not followed up to determine how they differed in strategic management from the respondents but there is no indication that they did.







## **Chapter 6**

### **Case Studies**

#### **6.1 Introduction**

The aim of the case studies was to explore what quality processes have become integrated and adapted into the management practices of four Thai Public Hospitals which joined the Hospital Accreditation Program in 1997 and, further, how these have been affected by the economic downturn. These four public hospitals were selected because they are run by the Ministry of Public Health and hence their management structure and source of finance are the same. Differences between them in the area of quality management must therefore be the result of factors other than management structure and finance. Two of these hospitals are likely to be accredited by the end of 2000, given the stage they are at in the accreditation process, one is fully accredited and the other is part way through the accreditation process. The hospitals are matched for size (bed numbers range from 650 to 785 for the two bigger hospitals and from 160 to 180 for the two smaller ones), but they are in different areas of Thailand. The hospitals have been given the pseudonyms City Hospital, Rural Hospital, Country Hospital and Regional Hospital. The characteristics of each are described below. It will be noted that the length of time each has had quality programs in place varies from 3 to 8 years (see Table 6.1). Each hospital has a similar turnover of their Chief Executive Officer (**CEO**) every four years

Eight managers were interviewed in each hospital; the CEO/Director, the Deputy CEO/Deputy Director of Medical Services, the

Deputy CEO/Deputy Director of Administration, the Director of Nursing, the Director/Head of the Departments of Medicine, Surgery, Obstetrics and Gynaecology and the Director of the Division of Finance and Accounting. The Director of the Division of Finance and Accounting has authority in his/her division but is under the control of Deputy CEO of Administration. The interviews were designed to access the perspective of a group of selected managers, both clinical and non-clinical professionals, as to how they are maintaining quality services in a climate of economic uncertainty.

The purpose of the interviews was to capture the richness of experience of the four participating hospitals and hence to further illuminate the issues raised in the study questions, which could not be explored through survey methodologies alone. Although it is not possible to make generalisations from these interviews, which

Table 6.1 Selected Characteristics of Case Study Hospitals

<b>Hospital</b>	<b>Bedsizes</b>	<b>Quality Programs Length of time in place (years)</b>	<b>CEOs: term of employment (years)</b>	<b>Middle managers: employment and mobility</b>
City Hospital	650	5	4	Some move to senior positions in other organisations
Regional Hospital	757	3	4	Local people: most do not move
Country Hospital	160	4	4	Local people: most do not move
Rural Hospital	180	8	4	Hospital contracts (various conditions)

would require a larger, probability-based sample, the results will be discussed in the context of the available literature. The chapter begins with a description of the study hospitals.

## **6.2 Description of the study hospitals**

Thailand's hospital system comprises a mix of public and private hospitals. Public hospitals are the responsibility of the Government, and almost all are owned and operated by non-profit organisations. Private hospitals are owned and operated by either for-profit or non-profit organisations. Of the thirty-five hospitals which joined the Hospital Accreditation Program in 1997, 23 are in the public system and 12 are in the private system.

It was decided to choose public hospitals administered by the Ministry of Public Health as case studies, primarily because these hospitals, unlike those in the private sector, have the same source for their budget and are likely have been more effected by the economic downturn than those in the private sector. Further, in private hospitals, the management structures differ from each other, but in all public hospitals, the management structure is the same across the country. Differences between these public hospitals in their responses to the economic climate are likely to be the result of individual management decisions rather than the way management is organised or the extent of budgetary restraint experienced by each.

The four public hospitals which participated in the interviews are administered by two departments of the Ministry of Public Health. In total, four departments of the Ministry are involved in public hospital administration. Hospitals are allocated to a particular department based on the number of beds and types of services provided (for more detail, see Appendix 1). One of the four hospitals is run by the Department of Medical Services in the Ministry of Public Health and the other three are run by the

Division of Provincial Hospitals, under the Department of the Permanent Secretary of Public Health.

In this research, the terms City Hospital and Regional Hospital are used for the two larger hospitals. They have a similar bedsize and provide similar types of services, but their location differs and they are controlled by different departments of the Ministry. The terms Country Hospital and Rural Hospital are used for the two smaller hospitals. They are both considered to be medium general hospitals, similar in bedsize and the major types of services provided, but their location differs. Both are under the control of the same department.

#### *City Hospital*

City Hospital, which has 650 beds, is controlled by the Department of Medical Services, the Ministry of Public Health. The aims of service are to provide tertiary care and some primary and secondary care to the community where the hospital is located.

The major tertiary care services of hospitals like City Hospital are similar to those provided by the public regional hospitals. In fact, City Hospital acts as the regional hospital for its population area. However, specialist services differ between regional and city hospitals. Which specialist services are offered by which hospital depends on the policies of the Department of Medical Services, the individual hospital's policies and its resources.

Hospitals like City Hospital are located in the suburb of a big city or a capital city. They serve populations of more than 50,000. This one has an expressway nearby and hence provides services such as major accident and

emergency, major surgery, neurosurgery and all investigations and therapies requiring 24-hour supportive care. It has highly specialised clinical personnel and equipment.

City Hospital has spent the last five years implementing a range of quality programs. These include organisation development (**OD**), quality assurance (**QA**), continuous quality improvement (**CQI**), total quality improvement (**TQM**), and excellence services behaviour (**ESB**)<sup>1</sup>. The reason for this proliferation of quality programs and models in City Hospital was because it has been the pilot hospital for the Ministry of Public Health Ministry as the Ministry attempted to establish a quality regime in public hospitals. At the time of the interviews, they were implementing the Hospital Accreditation Program which follows the TQM model, though without using the term itself. One of the hospital's goals is to be accredited and it is part way through the process to achieve this.

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<sup>1</sup> **Excellence services behaviour (ESB)** is the program which was implemented in some Thai hospitals that wanted to change their culture from provider oriented to customer oriented. This program monitors staff attitudes to their work and analyses the strengths and weaknesses of their behaviour. Then it uses the group process to support the notion that individual behaviour can be changed and work problems solved to improve services.

### *Regional Hospital*

Regional Hospital, which has 757 beds, is controlled by the Division of Provincial Hospitals in the Department of the Permanent Secretary of Public Health, Ministry of Public Health. As with City Hospital, the aims of service are to provide tertiary care and some primary and secondary care. The major services are medicine, surgery, obstetrics-gynaecology, paediatrics, ophthalmology, ear, nose & throat, orthopaedics, urology and neurosurgery. Which specialist treatments a regional hospital provides depend on the hospital's policies, resources and the needs of the regional population.

Regional hospitals are located in the big provinces of each area of the country such as the northern part, southern part, etc. Regional hospitals service patients who are referred from a general hospital or a community hospital, where the treatment required cannot be delivered. Each regional hospital serves a group of general and community hospitals. They serve populations of more than 50,000 who live in the countryside. This Regional Hospital also provides community health services for minority ethnic groups and provides specialist care to solve their particular health problems such as toxic goitre.

Regional Hospital has been implementing quality programs for the last three years. These were based on the same models as those in City Hospital. Most of its middle clinical managers, such as the directors of departments, are local people. The hospital's future plans depend upon government policy; it is required to maintain quality tertiary care services for the regional area. At the time of the study, it was preparing to downsize staff.



### *Country Hospital*

Country Hospital, which is a medium-sized general hospital of 160 beds, is controlled by the Division of Provincial Hospitals in the Department of the Permanent Secretary of Public Health, the Ministry of Public Health. Its role is to provide tertiary care and also some secondary and primary care to the local community. Country Hospital provides general tertiary care such as medical-surgical treatment, obstetrics and gynaecology, paediatrics and community preventive medicine. A bigger general hospital of 200 beds or more would provide more specialist services.

Country hospitals are located in the district area of a medium-sized province, with a population around 50,000 who are mainly farmers. Country hospitals provide minor surgery and a restricted range of major emergency and surgical treatment for the local community.

Country Hospital has been involved in the implementation of quality programs for four years. These programs were the same as for the two hospitals just described apart from TQM. Country Hospital was fully accredited in 1999. The middle managers, such as the directors of departments, are mostly local people. The hospital's future plan depends on government policy.

### *Rural Hospital*

Rural Hospital, which is a medium-sized general hospital of 180 beds, is controlled by the Division of Provincial Hospitals in the Department of the Permanent Secretary of Public Health, Ministry of Public Health. Like Country Hospital, its role is to provide tertiary care and also some secondary and primary care to its local community. While it does not provide the variety of specialist services that a bigger general hospital would, Rural Hospital does provide general tertiary care such as medical-surgical, obstetrics and gynaecology, paediatrics and community preventive medicine, and the hospital has an accident and emergency department. It also provides some specialist services such as computerised tomography, ultrasound, ophthalmology and emergency medicine which not all medium general hospitals have.

Rural Hospital is located in the subdivision of a medium province with an expressway nearby. The population of this sub division is around 50,000 who are mainly agricultural workers. Rural Hospital has a Hospital Advisory Committee which helps the hospital to collaborate with the community in the provision of appropriate hospital services. For example, Rural Hospital provides specialist care to solve particular local health problems such as insecticide poisoning.

Rural Hospital has been implementing the same quality programs as the other hospitals for eight years, at the instigation of its CEO. Rural Hospital had the quality of its services approved by the Social Security Office more than five years ago.

### **6.3 Analysis of Interview Data**

The interviews were audio-taped. All tape recordings were transcribed verbatim and a content analysis undertaken. As suggested by Denis et al. [1995], key statements in the interviews were listed and grouped into categories reflecting areas of interest (the context, process and impact of quality programs, accreditation and the economic downturn). Frequencies were constructed to assist interpretation. Where appropriate, comparisons were made between the answers of managers at different hospitals and managers at different levels within the hospitals.

### **6.3.1 Anonymity and Confidentiality**

Confidentiality is a difficult issue when undertaking a small number of case studies in a limited, known population. To protect the privacy of participants, the information received by the researcher has been treated with the utmost care. The interviews were conducted in private and the audio-tapes and transcripts have been kept secure. Each hospital has been given a pseudonym based on its geographic location and participants are referred to only by their positions.

## **6.4 Findings**

In this section, each question is discussed in turn (see Appendix 7 for the interview schedule in English and Thai). The findings are then discussed in the light of the relevant literature.

#### 6.4.1 Initiation of Quality Programs

The first group of questions asked about the quality management system in place in each hospital. The first question asked who initiated the quality programs in each hospital and there was a high degree of consensus about the answer (see Table 6.2). Of the thirty-two managers interviewed, twenty-eight (87.5%) stated that the CEO of the hospital was the initiator. Twenty of these managers (71%) only mentioned the CEO, while another included both the present and the former CEO. Two others (7%) stated that both the CEO and the Ministry of Public Health were initiators. Four (14%) nominated not only the CEO but also the management team. One (a director of a Department of Medicine) mentioned both the CEO and the Nursing Department.

Table 6.2 Who initiated the Quality Programs?

Initiator (Position/Department)	Number of Responses (%)	
CEO	18	(72%)
CEO & Ministry of Public Health	2	(8%)
CEO & Management Team	4	(16%)
CEO & Nursing Department	1	(4%)
(Total CEO)	25	(78%)
Ministry of Public Health	2	(6%)
Management Team	1	(3%)
Unknown	4	(13%)
Total	32	(100%)

Of the four managers who did not nominate the CEO, two stated that quality programs were initiated by the Ministry of Public Health. One manager said it was the management team as a whole and the fourth (a Director of a Finance and Accounting Division) said that he did not know

the initiator, only that it was his job, in the Finance and Accounting Division, to implement hospital policies.

#### 6.4.2 Precipitating Factors

The second question asked why were quality programs initiated and what were the precipitating factors. Many of thirty-two managers interviewed gave more than one reason. These have been grouped into two categories; economic and political pressures, and social pressures (see Table 6.3). Three main reasons appear under the economic and political pressures category. These are the economic downturn, the policies of the Ministry of Public Health and the need to restructure, and the competition between public and private hospitals. These factors were mentioned by 18 managers. The social pressure category groups together factors such as pressure from the community, the need to improve the hospital's reputation and services, and interest from the CEO and other staff.

Table 6.3 Precipitating Factors for the Initiation of Quality Programs

Precipitating Factors	Number of responses (%)
Economic and Political Pressures:	
Economic downturn	6 (19%)
Policy of Ministry of Public Health	6 (19%)
Competition between public and private hospitals	6 (19%)
Total	18 (56%)
Social pressures:	
Pressure from community	8 (25%)
Need to improve reputation & services	11 (34%)
Interest from CEO & staff	11 (34%)
Total	30 (94%)

Note: the managers gave more than one response.

Of the thirty-two managers interviewed, thirty (94%) stated that social pressures of various types were important catalysts in the introduction of quality programs. Firstly, there was pressure from the community which was mentioned by eight (25%) managers. One of the pressures from the community was the demand for safe and quality services from patients and their families.

‘At present, patients and their families expect that the hospital will provide safe and good quality services . . . and there is a great increase in patient demand to receive safe services.’  
Director of Nursing , Regional Hospital.

“ปัจจุบันผู้ป่วยและครอบครัวคาดหวังว่า โรงพยาบาลจะให้บริการที่ปลอดภัยและมีคุณภาพ ซึ่งเป็นความต้องการและคาดหวังของผู้ป่วยที่เพิ่มสูงขึ้นในการได้รับบริการการรักษาพยาบาลที่ปลอดภัยจากโรงพยาบาล ”  
หัวหน้าฝ่ายการพยาบาล โรงพยาบาลเขต

Eleven of the thirty-two managers (34%) pointed out that their hospital had to improve its reputation and services.

‘In the past, the hospital was a medium-sized community hospital, and it was reduced to a small community hospital because it did not provide efficient services to the community. After this incident, all the staff decided that it is essential to improve quality to become a medium community hospital again. From this experience, staff became motivated to improve services to have a good reputation in the community’.  
Deputy CEO of Medical Services, Country Hospital.

“ในอดีตโรงพยาบาลเป็นโรงพยาบาลชุมชนขนาดกลาง และถูกยุบเป็นโรงพยาบาลขนาดเล็ก เนื่องจากการให้บริการรักษาพยาบาลที่ไม่เกิดประสิทธิผลในชุมชน ภายหลังจากเหตุการณ์นี้เกิดขึ้น เจ้าหน้าที่ทุกคนตัดสินใจและตระหนักเห็นความสำคัญในการพัฒนาคุณภาพบริการเพื่อยกระดับเป็นโรงพยาบาลชุมชนขนาดกลาง จากเหตุการณ์ที่เกิดขึ้นในอดีตเป็นสิ่งที่กระตุ้นให้เจ้าหน้าที่ของโรงพยาบาลพัฒนาคุณภาพบริการเพื่อเป็นที่ยอมรับและสร้างชื่อเสียงในชุมชน ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลชนบท

‘When quality programs were introduced, the hospital improved the standard of patient care. The hospital has a good reputation and is trusted by the local community’.

Deputy CEO of Administration, City Hospital.

“เมื่อโรงพยาบาลเริ่มมีโครงการพัฒนาคุณภาพเกิดขึ้น  
การรักษาพยาบาลมีมาตรฐานดีขึ้น โรงพยาบาลมีชื่อเสียง  
และได้รับการยอมรับจากชุมชน.”

รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

Eleven managers (34 %) mentioned factors from within the organisation as a reason why the hospital initiated quality programs, specifically that the CEO and other managers were interested in quality improvement and the staff supported the CEO’s policies.

The other main category is economic and political pressures which eighteen managers (56%) mentioned. Six (19%) said that when Thailand experienced its economic downturn, the hospital felt the pressure because it had to reduce costs and increase efficiency.

‘The impact of the economic downturn was that the hospital had to utilise resources efficiently. The hospital had to restructure to provide services which are efficient and effective’.

Deputy CEO of Administration, City Hospital.

“ผลกระทบเมื่อเกิดภาวะวิกฤตทางเศรษฐกิจ คือ โรงพยาบาลจะต้อง  
ใช้ประโยชน์จากทรัพยากรที่มีอยู่ให้เกิดประสิทธิภาพ โรงพยาบาลจะ  
ต้องมีการปรับเปลี่ยนการให้บริการรักษาพยาบาลที่เกิดประสิทธิภาพ  
และประสิทธิภาพ.”

รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

Six of thirty-two managers (19%) stated that another pressure is the Ministry of Public Health’s policies and the need to restructure the organisation as a result of those policies. This includes the introduction of the Hospital Accreditation Program. These managers all expressed support

for the policies and for the accreditation program, which all four hospital are in the process of joining.

Six managers (19%) stated that competition between public and private hospitals is a major reason why public hospitals have to improve their services by introducing quality programs.

The responses to this question show that the hospital managers are aware of pressures from a number of areas, social, economic and political. As a result of these pressures, hospital management see that they have to improve and maintain the quality of services.

Social pressures have arisen for various reasons, but are generally related to the improvements in education and technology within Thailand. This has led to a dynamic society, which has changed substantially even in the last ten years. Thai people are more likely now to be concerned that they receive quality services responsive to their needs. The main reason for the economic and political pressure has been the economic crisis. Since 1997 and the economic downturn, the government has had to restructure all public organisations to be more efficient. The Hospital Accreditation Program introduced in the 8<sup>th</sup> National Health Plan to approve the quality of hospital services was one strategy designed to achieve this [Ministry of Public Health,1996a].

#### **6.4.3 Choosing a Quality Model**

The third question asked did the hospital follow a particular model or theory of quality and why or why not. While five managers said that they had no idea because they are ‘followers’(ลูกน้องหรือผู้อยู่ใต้บังคับบัญชา) (one of



them explaining that he had worked in the organisation only for two years), overwhelmingly the interviewees said that their hospitals did not follow a particular model or theory. Twenty-two of the thirty-two managers (69%) stated that this was because Thai culture, society and environment differed from Japan or the west, from where most models originated. Further, each organisation had a different culture and there were also differences between the attitudes, behaviour and knowledge of the staff.

‘Our hospital did not follow any particular quality theory or model of quality because the CEO and management team decided after discussion that a particular model or theory may not be suitable to implement into the organisation. Thus, the management team applied some quality concepts which were appropriate and suitable for this organisation’s culture and for Thai society’  
CEO, Country Hospital.

“โรงพยาบาลไม่ได้ดำเนินการตามต้นแบบ หรือทฤษฎีคุณภาพของใคร เนื่องจากผู้อำนวยการโรงพยาบาลและผู้บริหารได้ปรึกษา และเห็นว่าทฤษฎีหรือต้นแบบหนึ่งแบบใด ไม่เหมาะสมที่จะใส่ในหน่วยงาน ดังนั้นคณะผู้บริหารจึงได้ประยุกต์แนวความคิดการพัฒนาคุณภาพที่เหมาะสมสำหรับวัฒนธรรมขององค์กรและสังคมไทย”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลชนบท

‘When the hospital decided to improve services, the CEO and management team studied quality concepts and applied some quality tools and theories which were suitable for our organisation and staff. We (the CEO and management team) could not follow any particular theory or tool because our organisation is different from other organisations and from Japan or western countries. The knowledge of our staff varies’  
CEO, Rural Hospital.

“เมื่อโรงพยาบาลตกลงที่จะพัฒนาคุณภาพบริการ ผู้อำนวยการและคณะผู้บริหารได้ศึกษาแนวความคิดการพัฒนาคุณภาพ และได้ประยุกต์ทฤษฎีและเครื่องมือที่เหมาะสมกับหน่วยงานและเจ้าหน้าที่ซึ่งคณะผู้บริหารเห็นว่าไม่สามารถทฤษฎี หรือเครื่องมือการพัฒนาคุณภาพ อันหนึ่งอันใด เนื่องจากองค์กรมีความแตกต่างกันและแตกต่างจาก ญี่ปุ่นและตะวันตก รวมทั้งความรู้ของบุคลากรต่างกัน”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลท้องถิ่น

‘The culture of our organisation differs from that of other organisations, and the community’s culture is dynamic. Although,

some quality theories were successfully implemented in western countries, none were suitable for our organisation. We (the CEO and management team) had to apply and integrate quality theories which were suitable and appropriate for our organisation, and for the Thai community’

Deputy CEO of Medical Services, City Hospital.

“วัฒนธรรมขององค์กรเราแตกต่างจากวัฒนธรรมองค์กรอื่น และวัฒนธรรมของชุมชนมีการเคลื่อนไหวอย่างไม่หยุดนิ่ง แม้ว่าประเทศทางตะวันตกจะประสบความสำเร็จโดยใช้ทฤษฎี คุณภาพ สำหรับเรา (ผู้อำนวยการและทีมบริหาร) ได้ประยุกต์ ใช้และผสมผสานทฤษฎีคุณภาพหลายทฤษฎีให้เหมาะสมกับ องค์กรและสังคมไทย ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลเมือง

Only two of thirty-three managers mentioned that their hospital followed Total Quality Management concepts to improve and maintain services. These two managers said that their hospitals’ philosophy is client centred which is one of the principles of TQM [Evans and Lindsay, 1999].

Three of the thirty-two managers stated that their hospital followed the concept of Continuous Quality Improvement (CQI). The terms Continuous Quality Improvement, Organisation Quality Improvement and Total Quality Management refer basically to the same principle [Al-Assaf and Schmele, 1993]. From this viewpoint, it may be said that five of the thirty-two managers considered that they followed the same model, though they gave it different names. One of the three managers who mentioned CQI (the CEO of City Hospital) also stated that the Deming management method was followed by his organisation, because it was considered flexible and appropriate. His was the only reference to Deming.

The opinions of these managers showed a high degree of consensus. Over two thirds, (69%) stated that there is not a particular model or theory which the Thai public hospitals followed. From their perspective, managers

have to adapt the quality model or theory which is considered appropriate to the culture of the organisation and to Thai society. They appear to be unaware of the western origins of the quality model used in the current hospital accreditation documents.

#### **6.4.4 Participation**

The fourth question asked about who had participated in setting up the quality program. While two managers said that they had no idea, sixteen of the thirty-two managers interviewed (50%) stated that the quality program in their hospital was set up by the CEO. Seven managers (22%), including six from City Hospital mentioned that the management team or a group of managers launched the quality program at the managers' meeting.

Five managers (16%), three of whom were from Regional Hospital, said that the front line departments such as Out-Patients, Admissions and Nursing were the first to participate in implementing a quality program. The managers stated that these departments are in close contact with patients. They had experienced patients complaining about hospital services and, as a result, these staff in particular were very concerned to improve their services and patients' satisfaction. One Country Hospital manager stated that the Director of the Pharmacy Division participated in setting up the quality program because the patients had complained about the waiting time of the services and he wanted to improve that.

‘The Nursing Division was the pilot unit of our hospital which implemented the quality program. The Nursing Division and myself agreed strongly about improving services, to meet patients' satisfaction and support the hospital's philosophy. Therefore, we (the Nursing Division and myself) participated in setting up the quality program into the Nursing Unit’  
CEO, Regional Hospital.

“ฝ่ายการพยาบาล ได้เป็นหน่วยงานนำร่องของโรงพยาบาลที่ใช้  
โปรแกรมพัฒนาคุณภาพบริการ ซึ่งทุกคนในฝ่ายบริการพยาบาล  
รวมทั้งตัวข้าพเจ้า มีความตั้งใจจริงที่จะพัฒนาคุณภาพบริการเพื่อ  
ให้ผู้รับบริการเกิดความพึงพอใจและเป็นการสนับสนุนปรัชญาของ  
องค์กร ทุกคนในฝ่ายการพยาบาลรวมทั้งข้าพเจ้าจึงเริ่มในการนำ  
โปรแกรมพัฒนาคุณภาพไปใช้หน่วยงานพยาบาล”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลเขต

‘The Out-Patient Department (OPD), the Pharmacy, and the  
Admissions Unit are the front line which services patients. These  
areas had experience of patients who were not satisfied with  
hospital services. The staff of OPD, Pharmacy, and the Admissions  
Unit established the quality program and put it into practice.’  
CEO, City Hospital.

“หน่วยงานผู้ป่วยนอก หน่วยงานเภสัชกรรม หน่วยงานบริหาร  
และหน่วยงานบริการแนวหน้าของโรงพยาบาลเป็นหน่วยงานที่มี  
ประสบการณ์จากความไม่พึงพอใจของผู้ป่วย ในการได้รับบริการ จากโรงพยาบาล  
บุคลากรของหน่วยงานทั้ง 4 ดังกล่าวข้างต้นมี  
การนำโปรแกรมพัฒนาคุณภาพบริการมาใช้ในบริการ ”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลเมือง

Two managers (6%), both from Country Hospital, mentioned that  
there was a Quality Improvement and Training Services Committee which  
was responsible for setting up the quality program and choosing the method  
to use. This committee has to monitor, train, consult and evaluate services in  
every unit of the hospital. Every month, it has to report the progress  
achieved to the managers’ committee.

The managers’ answers to this question show that the CEO of the  
hospital is considered to be the most important initiator of quality programs.  
Nonetheless, other middle-level managers with authority are also involved  
in establishing these programs, as are the front line staff who are the first  
contact patients have with the hospital. All these groups of people are the  
key personnel.

#### **6.4.5 Supporting and Opposing the Quality Process**

The fifth question (parts 5a and 5b) asked who supported and who opposed the quality process. The interviewees gave more than one answer to each part of the question. The first part of this question showed a high degree of consensus. More than half (62%) said that almost all staff, the CEO and managers supported the implementation of the quality process.

Thirteen of the thirty-two managers (40%) stated that almost all staff supported the quality process because the hospital and the patients would benefit from it, because of reduced costs and reduced need to repeat work, reduced complaints from patients and increased benefits to staff, the organisation and community. These managers said that almost all staff agreed that the quality process would improve services.

Seven managers (22%), both clinical and non-clinical across the hospitals, said that the CEO and/or the managers supported the quality process because they needed to improve services and they were committed to this improvement.

Six managers (19%), including three clinical managers at Country Hospital and the Deputy CEO of Medical Services and the Deputy CEO of Administration at Rural Hospital, mentioned that every unit supported the quality process because it was the policy of the CEO that the hospital will improve services.

Five managers (16%) across the hospitals said that the professional front line personnel such as nurses, physicians and pharmacists supported the quality process because these professionals are the first people who meet the patients in the hospital. Four (13%) non-clinical managers, in the same division but across the hospitals, had no idea who supported or opposed the

quality process because they are not involved with patient services, but are directly under the control of the top manager.

The second part of the question asked who opposed the quality process. However, managers preferred not to use the word ‘oppose’ (ในความคิดของข้าพเจ้าคือไม่มีใครที่ ไม่เห็นด้วย หรือคัดค้าน) in their answer, but rather spoke about those who were ‘uninterested’ (บุคลากรบางคนไม่ให้ความสนใจการใช้กระบวนการพัฒนาคุณภาพ) in the quality process or who were ‘cautious’ (บุคลากรบางคนมีความระมัดระวังรอบคอบ ที่จะแสดงความคิดเห็น ไม่เห็นด้วย ในเรื่องกระบวนการพัฒนาคุณภาพ). This is because it is inappropriate in Thai culture to refer to people ‘opposing’, especially in organisations where it is important to show respect to those in authority (e.g. the CEO) by following their wishes, even though subordinates may disagree with them. This is not to say that opposition does not occur, but that other ways must be found to express or discuss it.

The managers said that there were some staff who had a different opinion but they would not show their resistance (เป็นการยากที่จะบ่งชี้ว่าใครต่อต้าน ชัดขวาง) directly to the managers. Nine managers (28%), both clinical and non-clinical across the hospitals, claimed that they did not know who or which unit opposed the quality process in their hospitals, because it was established through the organisation and everyone participated.

‘When the hospital implemented the quality process, everyone in the hospital participated. In my thinking, nobody opposed it or did not show interest.’

Deputy CEO of Medical Services, Country Hospital.

“เมื่อโรงพยาบาลใช้กระบวนการพัฒนาคุณภาพทุกคนในโรงพยาบาลเข้ามีส่วนร่วม ซึ่งในความคิดของข้าพเจ้า ไม่มีใครคัดค้าน หรือไม่ให้ความสนใจ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลชนบท

‘It was difficult to point that who or which unit opposed the quality program because every unit responded to implement the quality process.’

Director of Obstetrics and Gynaecology, Regional Hospital.

“เป็นการยากที่จะบ่งชี้ว่าใครหรือหน่วยงานใด คัดค้านโปรแกรม พัฒนาคุณภาพ เพราะทุกหน่วยงานให้การตอบรับในการใช้กระบวนการ พัฒนาคุณภาพ ”  
หัวหน้ากลุ่มงานสูติ-นรีเวช โรงพยาบาลเขต

Ten managers (32%), both clinical and non-clinical, indicated that some staff experienced a range of difficulties when the quality program was first introduced and this led to some resistance. For example, the introduction involved spending time in meetings and clinical staff were taken away from patient care. They felt this was not useful. For units which were short-staffed, it was an added burden. Some groups of doctors felt they had been excluded from the decision to initiate the program. As a result, they did not feel that they owned the program. Finally, some professional groups felt that they were already providing services which were of a high standard, including undertaking audits, and they did not perceive the need for quality improvement. According to the managers, this resistance was successfully overcome by making sure these groups were included more directly in the quality process and its implementation.

‘Some clinical and non-clinical staff were cautious about the quality process because they thought it wasn’t useful for their work, and that their work was already of a high standard.’

Director of Nursing Country Hospital.

“บุคลากรบางคนในหน่วยงานที่ให้การรักษายาบาล และไม่ได้ให้การรักษายาบาล มีความจำกัดและระมัดระวังแสดงความคิดเห็นเรื่องกระบวนการพัฒนาคุณภาพ เพราะเขาเหล่านั้นคิดว่ามันไม่มีประโยชน์สำหรับงานที่เขาทำอยู่และงานที่ทำอยู่มีมาตรฐานสูงอยู่แล้ว”

หัวหน้ากลุ่มงานพยาบาล โรงพยาบาลชนบท

‘Some groups of staff weren’t interested in implementing the quality process because they were not involved in its initiation from the beginning.’

Director of Internal Medicine, Regional Hospital.

“บุคลากรบางกลุ่มที่ไม่ให้ความสนใจที่จะใช้กระบวนการพัฒนา คุณภาพ  
เพราะเขาไม่มีส่วนร่วมในการริเริ่มตั้งแต่ต้น”  
หัวหน้ากลุ่มงานอายุรกรรม โรงพยาบาลเขต

Lower level staff such as cleaners and security officers also had difficulties in accepting the necessity for a quality program. However, the interviews showed that good communication, employee education and involvement were important in decreasing resistance. Seven managers (22%), in different hospitals and departments, stated that when the quality program was first established, some non-clinical staff were uninterested or uncertain because of a lack of communication about how to introduce these concepts into the organisation. Another reason for their resistance was their lack of knowledge and skills. The managers said that when all the staff had a clear idea about quality concepts and some knowledge about the quality process, they collaborated and supported its introduction.

#### **6.4.6 Maintaining Quality Programs**

Question six asked about the maintenance of quality programs. By far the most common method of maintaining these programs was to have a dedicated quality committee and a number of teams organised into a centre or division. There are three models although the differences between two of



them was small. City Hospital and Country Hospital each have a Quality Centre, though they differ in some details, and Regional Hospital has a Quality Improvement and Training Technical Division. In contrast, Rural Hospital has given the responsibility of quality programs to its heads of department committee and has not set up a separate entity to manage them (see **Diagrams 1 and 2**).

The Quality Centre is a new organisation in both City and Country Hospitals. They are each directed by the boards of the hospital and have a chairperson, a management committee and quality teams. The chair of the Quality Centre in Country Hospital is the CEO but at the City Hospital it is the Deputy CEO of Medical Services. Both hospitals have two teams in their Centres which are responsible for the implementation and maintenance of quality services. One is the lead or implementation team which initially implemented the program at the department or unit level. In City Hospital, the members of this team are the managers of the departments. In Country Hospital, they are managers and some senior staff. The second team is the coaching team which monitors, coaches and assists the maintenance of the quality program throughout the hospital. When staff in a particular unit need help, the coaching team will be called. It is also involved in quality training for staff. The members of this team are drawn from different units.

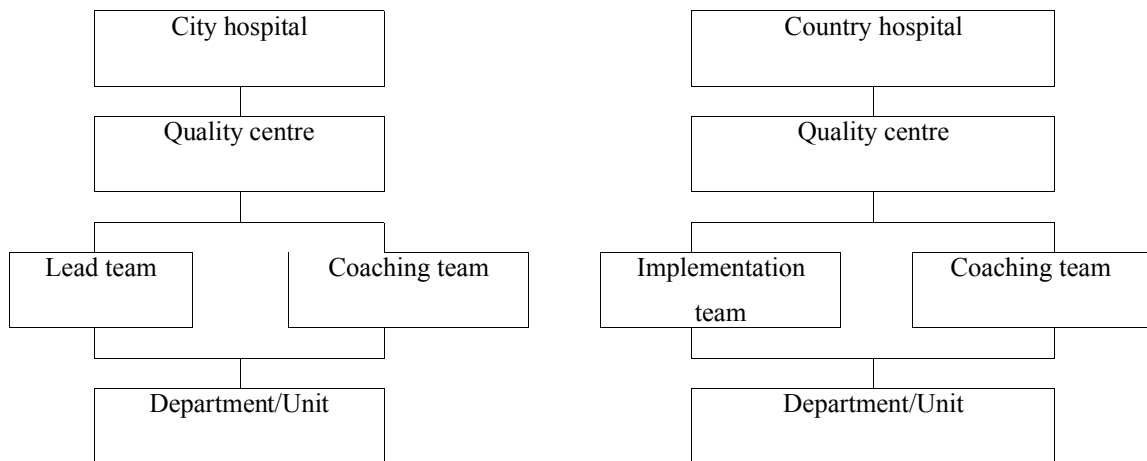


Diagram 1 Management structure for quality maintenance: City and Country hospitals

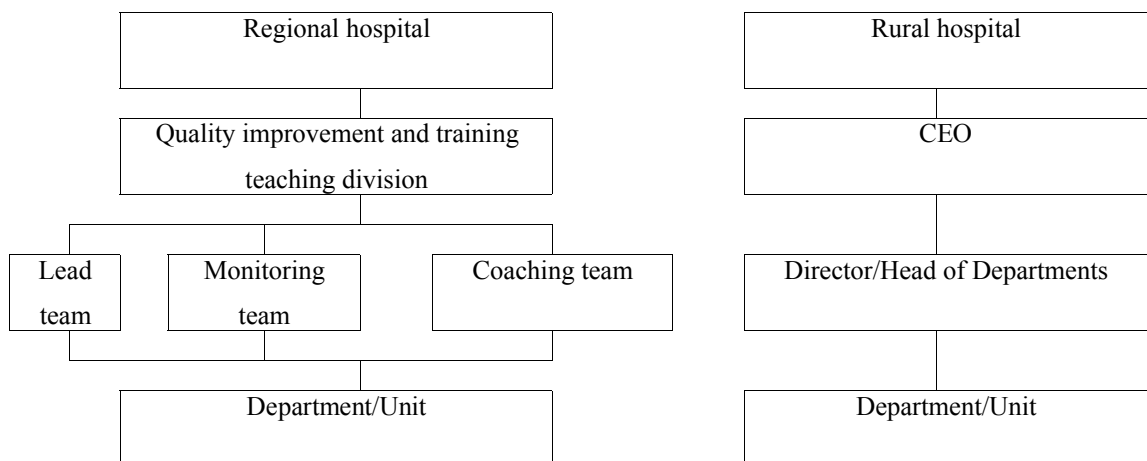


Diagram 2 Management structure for quality maintenance: Regional and Rural hospitals

Both City and Country Hospitals have three steps in the evaluation of services to ensure quality. Firstly, every unit has to evaluate themselves using a self-assessment process which follows standard guidelines. Secondly, after the unit has carried out its self-assessment, the cross-unit quality team evaluates and audits the unit's services. Finally, the results of

the audit are reviewed and approved by the Centres' quality committees using guidelines developed by the hospital. These guidelines are broadly similar to the standards used by the Hospital Accreditation Program. In Country Hospital, every unit has to report on its self-assessment to the implementation team every three months. The coaching team from the Quality Centre audits each unit every four months. City Hospital has no set time frame for the audit. In each institution, the quality committee is drawn from different units.

The Regional Hospital already had an existing Quality Improvement and Training Technical Division as part of its management structure. This Division is responsible for the maintenance of quality programs and staff training. The way this is done is similar to the quality centres described above, but the teams are structured slightly differently and the line of control is different. Rather than having the CEO or another manager take on the chair of the quality entity as part of their duties, as is the case in City and Country Hospitals, the Quality Improvement and Training Technical Division at Regional Hospital has a separate director dedicated to the quality role. The director, who is a physician, controls three teams. The first is the lead team which, in common with similar teams in City and Country Hospitals, initially implemented the quality program. The second is the monitoring team and the third is the coaching team. The evaluation of quality services in Regional Hospital has the same three steps as the other two hospitals.

Rural Hospital is different from the three hospitals described above, as it has no entity dedicated solely to implementing and maintaining quality programs. It has fallen to the directors or heads of departments or divisions

to implement quality practices into their units and to monitor their staff. Rural Hospital has two steps for the evaluation of services. The first step is an audit of each unit by its head. Then, the quality committee of the hospital, which is essentially the heads of department wearing their quality hats, uses the hospital's standards to evaluate and approve the services of each unit.

All three hospitals have had training about the quality program for all staff. Each quality division or centre has to develop a long-range plan and an annual operational plan. These quality plans then become part of the hospital's strategic plan. Only in Country Hospital did all managers mention that the first step in every unit was an evaluation of services by self-assessment.

#### **6.4.7 Advantages of Quality Programs**

Question seven asked has the implementation of quality programs been advantageous and, if so, in what way. Twenty-one (66%) of the thirty-two managers said that there were a lot of advantages for their organisations. Many mentioned more than one. These have been grouped into two categories; advantages for the hospital's external environment (see Table 6.4) and the impact on the internal organisation of the hospital (see Table 6.5).

Table 6.4 The Advantages of Initiating Quality Programs for the hospital's external environment

<b>Advantages</b>	<b>Number of responses (%)</b>
Increase in patient numbers and satisfaction	21 (66%)
Improvement of reputation and services	20 (63%)
Increase in community trust	9 (25%)

Note: the managers gave more than one response

There were three main advantages for the hospital's external environment. Firstly, patients were more satisfied with the hospital's services, complaints decreased and the number of patient services increased rapidly. All eight managers in City Hospital mentioned this. Twenty managers (63%) mentioned that the great advantage of implementing quality program was that the hospital improved its reputation and services to the public. Nine (28%) managers across hospitals mentioned that another advantage of implementing quality programs was that there was an increase in the community's trust.

The implementation of quality programs also had an impact on the hospitals' internal social organisation (see Table 6.5). Many of thirty-two managers talked about more than one advantage for their hospital in this area. The three main advantages they mentioned are: staff improved their practices in order to meet quality standards, the hospital improved the workplace environment, and patient services were improved.

Table 6.5      Impact of Quality Programs on Internal Environment

Impact	Number of responses (%)
Staff improved practices to meet quality standards	23 (72%)
Hospital improved the workplace environment	19 (59%)
Hospital improved the quality of services	18 (56%)

Note: the managers gave more than one response.

The 23 managers that said their staff improved their practices included the four CEOs and four Directors of Obstetrics and Gynaecology

Department in each of the hospitals. Overall, the managers stated that the number of errors of practice decreased, and conflict at work decreased because staff had to follow protocols and standards guidelines. Staff improved their skills and knowledge in order to improve and maintain quality services.

Nineteen (59%) managers mentioned that since the hospital implemented its quality program, the workplace environment has improved. Staff were fulfilled in their work, the managers delegated their authority to staff at lower levels, staff coordinated patient services and worked together as a team and generally supported the hospital's attempt to improve services. Each of the four CEOs had the same viewpoint.

‘When the hospital implemented quality programs, there was an improvement in the work environment. Staff were more satisfied in their jobs and in carrying out their work.’

Deputy CEO of Administration, City Hospital.

“เมื่อโรงพยาบาลใช้โปรแกรมคุณภาพสิ่งแวดล้อมในการทำงาน มีการพัฒนาและเปลี่ยนแปลง บุคลากรพึงพอใจในการทำงานเพื่อให้ บรรลุเป้าหมาย ”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

Eighteen (56%) managers said that since the quality program was implemented their hospital has improved its services. Among these, all eight managers interviewed at City Hospital had the same opinion.

#### **6.4.8 Problems with implementation**

When the quality programs were first introduced, some problems were encountered. Many of the managers interviewed identified more than one barrier. The three main barriers identified were: increasing workloads and spending more time in meetings, lack of knowledge and skills in quality

concepts and the new quality system, and other barriers to change. All four CEOs had the same opinion that the managers had to spend time to remove these barriers. Other managers mentioned that it took time to disseminate quality concepts, knowledge about the quality system and the benefit to all staff which would come from implementing a quality program. Staff tended to think that only the managers would benefit from it. It was not easy for the managers to restructure the old way of working into a new quality system, because the staff were used to working in the old way.

Fifteen (47%) managers, including all the Directors of Medicine and Directors of Surgery, said that at the beginning of the implementation of the quality program, staff were unhappy because it increased their workload and the hospital was already short-staffed.

‘At the beginning of the implementation of the quality program, some staff were unhappy about it because it increased their workload and paper work, and our department was short-staffed.’  
Director of Internal Medicine, Country Hospital.

“ระยะเริ่มต้นของการใช้โปรแกรมคุณภาพ บุคลากรบางคนไม่มีความสุขในเรื่องนี้  
เนื่องจากการเพิ่มปริมาณงาน และระบบรายงานเป็น ลายลักษณ์อักษร  
ประกอบกับที่แผนกขาดแคลนบุคลากร”  
หัวหน้ากลุ่มงานอายุรกรรม โรงพยาบาลเมือง

‘When the quality program was first implemented, staff spent more time in meetings, and our workload and paper work increased.’  
Director of Financial Division, Rural Hospital.

“ระยะแรกของการใช้โปรแกรมคุณภาพ บุคลากรใช้เวลาในการประชุม  
และปริมาณงานตลอดจนระบบรายงานเป็นลายลักษณ์อักษรเพิ่มขึ้น”  
หัวหน้าแผนกการเงิน โรงพยาบาลท้องถิ่น

Eleven (34%) managers mentioned that the other problem was lack of knowledge and skills in quality concepts and about the quality system. This problem took time for the managers to work through.

‘At the beginning of the implementation of the quality program, some staff did not understand the concept of quality, and were confused about using quality tools and measurements, to improve services. Managers had to take time to establish knowledge about quality concepts and the quality system in all staff.’  
Deputy CEO of Medical Services, City Hospital.

“ระยะแรกของการใช้โปรแกรมคุณภาพ บุคลากรบางคนไม่เข้าใจแนวคิดคุณภาพและสับสนในการใช้เครื่องมือ วิธีการนำไปสู่คุณภาพ เพื่อ พัฒนาบริการ ผู้บริหารต้องใช้เวลาในการอธิบายและทำความเข้าใจ เรื่องแนวคิดและระบบคุณภาพแก่บุคลากรทุกคน ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลเมือง

Ten (31%) managers, including the four CEOs, stated that managers had to remove barriers preventing staff utilising the new system. Staff did not want to change from the old system that they were used to working with. Managers had to communicate with staff about quality concepts, about why the hospital had to implement a quality program and also about the benefits for staff.

‘At the beginning of the implementation of the quality program, there was a barrier which prevented staff from changing from their old system of work to the new quality system. Staff thought that only managers would benefit from the quality program. It took time for managers to eliminate this attitude.’  
Deputy CEO of Administration, Country Hospital.

“ระยะเริ่มต้นการใช้โปรแกรมคุณภาพ มีอุปสรรคในการดำเนินงาน เพราะบุคลากรไม่เห็นด้วยในการเปลี่ยนแปลงระบบการทำงานจากระบบเก่าไปสู่ระบบใหม่คือระบบคุณภาพ เนื่องจากบุคลากรคิดว่าผู้บริหารจะได้รับประโยชน์เพียงฝ่ายเดียว จากเรื่องนี้ผู้บริหารต้องใช้เวลาในการเปลี่ยนทัศนคติเรื่องนี้กับบุคลากร”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลชนบท

Fifteen (47%) managers across the hospitals agreed that problems encountered in implementing the quality program were increased workloads and more time spent in meetings. These issues were only discussed by clinicians because these were the managers more involved in patient services.



#### **6.4.9 Why join the Hospital Accreditation Program?**

The eighth question asked why the manager's hospital joined the Hospital Accreditation Program. The interviewees gave three main reasons, but half mentioned both the first and second reasons described below. Firstly, it was seen as important to join the program voluntarily and to support the policy of the Ministry of Public Health. Secondly, the hospital wanted the quality of its services to be certified by the Hospital Accreditation-Thailand (HA-Thailand), the only organisation which approves healthcare standards in Thailand. The final reason given by the managers was that it was a policy decision of the CEO to join the program.

Fourteen of twenty-eight managers (50%) said that their hospitals wanted their standards of service approved by HA-Thailand and this approval would be a guarantee that the hospital is providing quality services to the public. These managers included each of the four CEOs and the four Deputy CEOs of Medical Services. Country Hospital, which was accredited in 1999, found increased acceptance by the public following accreditation.

‘If our hospital’s standards of service are approved by HA-Thailand, the public will trust that they are receiving quality services.’  
Deputy CEO of Medical Services, Rural Hospital.

“ถ้ามาตรฐานบริการโรงพยาบาล ได้รับการรับรองจากสถาบันพัฒนา  
และรับรองคุณภาพโรงพยาบาลประชาชนจะเชื่อถือในคุณภาพบริการ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลทองถิ่น

The Hospital Accreditation Policy was introduced by the government in the 8<sup>th</sup> National Health Plan (1997-2001). All hospitals were affected by this policy, but its effect on quality was not immediate as the accreditation program was implemented gradually. Fourteen managers (50%), twelve of

whom came from the two bigger hospitals, said that their hospitals volunteered to join the program in the first batch. Nine (32%) managers said that their hospital joined the Hospital Accreditation Program because it was the policy of the CEO. None of the managers from City Hospital mentioned this reason.

#### **6.4.10 Impact of the Accreditation Program**

Question nine asked how taking part in the accreditation program impacted on the hospital. Impacts were found to be both positive and negative (see Table 6.6). Many of thirty-two managers talked about more than one impact on their hospital.

Table 6.6 Impact of the Accreditation Program

Positive impact	Number of responses (%)
Culture of hospital and behaviour of staff changed to provide and maintain quality services	21 (75%)
Services of patients and community become more efficient and effective	18 (64%)
Patients satisfied in services and the numbers of patient increased rapidly	13 (46%)

Negative impact	Number of responses (%)
Workload and staff paperwork increased	17 (61%)
Staff had a lot of pressure to meet the criteria of Hospital Accreditation Guidelines	15 (54%)

Note: the managers gave more than one response.

The three main positive impacts were: the culture of the organisation and the behaviour of the staff changed in the course of improving services; hospital services became efficient and effective; patient satisfaction with hospital services increased and the reputation of the hospital rose.

Twenty-one (75%) managers said that when the Hospital Accreditation Program was established in their organisation, the culture of the hospital and the behaviour of the staff changed as the focus shifted to the provision and maintenance of quality services. Each of the four CEOs and all the managers from Country Hospital said this. To implement quality improvement and meet the criteria laid down by the Hospital Accreditation Guidelines, staff changed their attitudes, becoming client-centred and working as a team

‘Staff changed their attitude to their work, working as a team and monitoring themselves to improve services, when the Hospital Accreditation Program was introduced into the hospital.’  
CEO, City Hospital.

“บุคลากรมีการเปลี่ยนแปลงทัศนคติในการทำงานมีการทำงานเป็นทีมและมีการกระตุ้นตนเองในการพัฒนาบริการ เมื่อโรงพยาบาลเริ่มโครงการ การรับรองมาตรฐาน ”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลเมือง

Eighteen (64%) managers mentioned that since the hospital introduced the Hospital Accreditation Program, services to the patients and community have become more efficient and effective. Each of the four CEOs and Deputy CEOs of Medical Services, and three Deputy CEOs of Administration said this.

Thirteen (46%) managers, including the four CEOs and three of the four Deputy CEOs of Medical Services, said that the introduction of the Accreditation Program resulted in the public holding the hospital in higher regard. Patient satisfaction rose and the use of services by patients increased rapidly.

‘When the hospital joined the Hospital Accreditation Program, and improved the quality of services, the number of services and the number of patients satisfied with services increased rapidly.’  
CEO, Rural Hospital.

“เมื่อโรงพยาบาลเข้าร่วมโครงการรับรองมาตรฐานโรงพยาบาล บริการมีการพัฒนาคุณภาพ จำนวนของบริการ และความพึงพอใจของผู้รับบริการเพิ่มขึ้นอย่างรวดเร็ว ”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลท้องถิ่น

There were negative as well as positive impacts from taking part in the Hospital Accreditation Program. Although the hospitals gained some benefits from the Hospital Accreditation Program, their staff have had to work hard to achieve them. More than half of the managers (17, 61%) mentioned that both staff workload and staff paperwork have increased.

These managers included seven from Rural Hospital, and each of the Directors of the four Financial Divisions.

‘Services are required to be documented, so staff have more paper work as part of their jobs.’  
Director of Internal Medicine, Rural Hospital.

“การให้บริการจะต้องมีการจดบันทึก ดังนั้นการเขียนรายงานจะเป็นส่วนหนึ่งที่เพิ่มขึ้นในการปฏิบัติงานของบุคลากร ”  
หัวหน้ากลุ่มงานอายุรกรรม โรงพยาบาลทองถิ่น

Fifteen (54%) managers, six from the two bigger hospitals, mentioned that their staff had a lot of pressure in their work as a result of joining the Hospital Accreditation Program. These pressures include: improving the quality of services to meet the criteria of the Hospital Accreditation Guidelines and, although short-staffed, dealing with increased paper work and a higher patient load.

‘When the hospital implemented the Hospital Accreditation Program, some staff experienced stress because they had to push their work to achieve the criteria of the accreditation system in a limited time.’  
Director of Internal Medicine, Regional Hospital.

“เมื่อโรงพยาบาลเข้าร่วมโครงการการรับรองมาตรฐาน บุคลากรบางคนเกิดความเครียดในการทำงาน เพื่อให้บรรลุเกณฑ์ของระบบการรับรองมาตรฐานในระยะเวลาที่จำกัด”  
หัวหน้ากลุ่มงานอายุรกรรม โรงพยาบาลเขต

‘There was a lot of pressure to push all staff, to improve the quality of services and meet the accreditation criteria.’  
Deputy CEO of Administration, City Hospital.

“บุคลากรเกิดแรงกดดันหลายอย่างในการพัฒนาบริการ เพื่อบรรลุเกณฑ์ของระบบการรับรองมาตรฐาน ”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

#### **6.4.11 Effect of the Economic Downturn**

Question ten asked in what ways the hospital had been affected by the economic downturn. According to the managers' answers, the economic downturn had affected both clinical and administrative services in a number of respects (see Table 6.7). The three main issues in clinical services were: the level of patient demand increased, clinical services were forced to improve standards of efficiency, but service quality was to be maintained. Cost containment was a new experience for the managers of public hospitals. As government reports show, since 1998, hospital budgets have decreased in real terms by 16 per cent [Tangcharoensatien et al., 1998]. The economic downturn also resulted in the introduction of a policy of using drugs manufactured in Thailand, as a means of conserving foreign exchange.

Table 6.7 Effects of the Economic Downturn

Effects	Number of responses (%)
No external training for staff (first year)	32 (100%)
Construction budget constrained	28 (88%)
Staff numbers frozen at current levels	28 (88%)
Number of patient services increased	28 (88%)
Policy of using locally manufactured drugs	16 (50%)
Hospital expenditure decreased	11 (34%)

Note: the managers gave more than one response.

Twenty-eight (88%) managers, both clinical and non-clinical, said that the number of patient services increased rapidly in public hospitals since 1997, but staff numbers remained the same. With the economic downturn, some patients could not afford the services of private hospitals so

they used the public hospitals which were provided at a reasonable cost for them. There were also changes in the social security system which impacted on the public hospitals. More low-income households and the unemployed became eligible for low cost services in public hospitals.

‘When the economic downturn occurred, a lot of patients used the services of this hospital. As some patients could not afford the private hospital that they had used previously.’  
Deputy CEO of Administration, Country Hospital.

“เมื่อเกิดภาวะวิกฤตทางเศรษฐกิจ มีผู้มาใช้บริการของโรงพยาบาลเป็นจำนวนมากเนื่องจากผู้รับบริการบางคนไม่สามารถใช้โรงพยาบาลเอกชนดังเคยได้ ”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลชนบท

Sixteen managers (50%), all physicians, said that, since the economic downturn, government policy has directed public hospitals to use drugs produced in-country. According to Tangcharoensatien et al. [1998], the floating of the Thai Baht after 1997 also affected the price of local drugs, because of the increase in the costs of imported ingredients. The government also attempted to contain costs and reduce the number of drugs used in public hospitals by creating an Essential Drug List (which restricted what drugs could be prescribed) and by joint purchasing drugs for entire provinces.

It is accepted, however, that some treatments require the use of drugs which cannot be produced in Thailand. Nonetheless, some physician-managers indicated that the Ministry’s policy had altered prescribing regimes.

‘At the beginning of the economic downturn our physicians had some pressure on the ability to treat their patients, because there was a policy from the government to use local drugs in medical treatment. In the mean time, we have to maintain our standards of

efficient patient care. Under the previous hospital policy, our staff were able to use a wider variety of drugs.’

Deputy CEO of Medical Services, Country Hospital.

“ในระยะที่เริ่มเกิดภาวะวิกฤตทางเศรษฐกิจ เกิดแรงกดดันบางอย่างกับแพทย์ในเรื่องการรักษาพยาบาล เพราะรัฐบาลมีนโยบายให้ใช้ยาที่ผลิตในประเทศและตามบัญชียาหลักในการรักษาพยาบาลและต้องรักษาระดับมาตรฐานคุณภาพการรักษาอย่างมีประสิทธิภาพ ซึ่งในอดีตบุคลากรเหล่านี้เคยใช้ยาในแผนการรักษาได้อย่างกว้างขวาง ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลชนบท

There were administrative as well as clinical effects on the hospital as a result of the economic downturn. Budgets for construction and equipment were constrained, although City Hospital had some loans from overseas for medical equipment obtained before the economic downturn occurred. Before 1997, the Ministry of Public Health allowed hospitals under its control to join a special project which gave them access to overseas loans to buy equipment. These loans were guaranteed by the Ministry [Ungkasuvapala, 1998].

The Deputy CEOs of Administration and Medical Services at the Country Hospital said that at the beginning of the year when the economic downturn began, their budget from the government was delayed for six months. This put pressure on the CEO and the Deputy CEOs of Administration and Medical Services who had to maintain the cash flow of the hospital. The managers also had to try to reduce the fear and insecurity of staff who were worried that they would not be paid.

Twenty-eight (88%) managers said that their hospital’s construction budget was constrained. These managers included the four CEO, the Deputy CEOs of Administration and Medical Services, and all the clinical managers of the four hospitals.



Every manager said that, at the beginning of the economic downturn the government introduced a policy not to give permission to any government staff to train or be educated at any external organisation or overseas. The hospitals could provide only in-service training and education about quality programs for staff. This policy was relaxed after the first year. Hospitals were also still able to use donations from patients for this purpose if they wanted to.

‘From 1997 to 1998 the government had policies not allowing the government staff to be trained or educated at an external organisation. Our hospital had to change its training and education programs from external ones to in-service training programs.’  
Director of Surgery, City Hospital.

“ตั้งแต่ปี 2540 ถึง 2541 รัฐบาลมีนโยบายไม่ให้มีการศึกษาฝึกอบรม  
ภายนอกหน่วยงาน ดังนั้นโรงพยาบาลจึงต้องเปลี่ยนเป็นจัดการศึกษา  
และฝึกอบรมภายในโรงพยาบาล”

หัวหน้ากลุ่มงานศัลยกรรม โรงพยาบาลเมือง

Three of the CEOs and all of the Deputy CEOs of Medical Services and Administration (11, 34%) said that, since the economic downturn, their hospitals had reduced expenditure. They had cut some costs such as paid overtime and had downsized services which attracted fewer patients. The CEO of Regional Hospital was in a different situation to the other three. Prior to the economic downturn, Regional Hospital had already been experiencing financial difficulties and one of the first actions of the CEO on gaining her position was to institute sound financial management practices and cost containment measures. As a result, when the economic downturn occurred, Regional Hospital already had in place the policies which the other CEOs were then forced to adopt by the government.

‘When I became the CEO of this hospital, the first priority was to economise on costs and to utilise in the best way the limited budget we had, until the hospital’s financial status improved. Our hospital experienced this before Thailand had its economic downturn. When Thailand experienced economic uncertainty and the government pushed its policy of budgetary constraint on the public hospitals, it wasn’t too difficult for our staff to support it.’

CEO, Regional Hospital.

“ก่อนที่ข้าพเจ้าจะเป็นผู้อำนวยการโรงพยาบาลนี้ โรงพยาบาลนี้มีปัญหาทางการเงิน เมื่อข้าพเจ้าเป็นผู้อำนวยการโรงพยาบาลนี้ นโยบายที่สำคัญอันดับแรกคือการประหยัดค่าใช้จ่าย แล้วใช้ทรัพยากรที่มีอยู่ภายใต้งบประมาณที่จำกัดจนกระทั่งถึงสภาวะการเงินดีขึ้น โรงพยาบาลจึงมีประสบการณ์นี้ก่อนที่ประเทศไทยจะเกิดภาวะวิกฤต ทางเศรษฐกิจ เมื่อรัฐบาลผลักดันนโยบายให้โรงพยาบาลของรัฐใช้จ่ายอย่างประหยัด จึงไม่เป็นการยากที่บุคลากรของเราจะสนับสนุน นโยบายนี้”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลเขต

Twenty-eight (88%) managers, the four CEOs, all Deputy CEOs of Medical Services and Administrator and all the managers of clinical services, said that staff numbers at their hospital remained the same since the economic downturn but government policy was to decrease staff in public hospitals over time.

‘Since the economic downturn, our hospital has had to prepare to downsize staff numbers and yet maintain the quality of services. As the government has policies to economise on hospital budgets.’  
Deputy CEO of Medical Services, City Hospital.

“เมื่อเกิดภาวะทางเศรษฐกิจโรงพยาบาลเตรียมจะลดอัตราบุคลากรลง และการรักษาคุณภาพบริการเนื่องจากรัฐบาลมีนโยบายให้โรงพยาบาลประหยัดงบประมาณ ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลเมือง

‘Since the economic downturn, the number of nursing staff has stayed the same but in the future the trend will be to downsize staff. At the same time, the hospital has to provide quality services. This is government policy which the hospital supports.’  
Director of Nursing, Regional Hospital.

“เมื่อเกิดภาวะวิกฤตทางเศรษฐกิจ จำนวนบุคลากรพยาบาลคงที่และในอนาคตจะลดลง ขณะเดียวกันโรงพยาบาลต้องรักษาคุณภาพบริการ สิ่งเหล่านี้โรงพยาบาลจะต้องสนับสนุนเพราะเป็นนโยบายของรัฐบาล ”  
หัวหน้ากลุ่มงานพยาบาล โรงพยาบาลเขต

#### 6.4.12 The Future of Quality Programs

Question eleven asked how the managers see the future for quality programs in their hospital. Since each hospital has been affected differently by the implementation of quality programs, and this in turn affected how the managers saw the future for such programs, the findings from this questions are presented on a hospital by hospital basis and in Table 6.8.

Table 6.8 The Future for Quality Programs (by number of managers' responses).

	<b>City Hospital</b>	<b>Regional Hospital</b>	<b>Country Hospital</b>	<b>Rural Hospital</b>	<b>Total</b>
• All programs should be approved by an external body.	6 (17%)	2 (6%)	4 (13%)	1 (3%)	13 (41%)
• Programs should allow community participation	0	6 (17%)	0	4 (13%)	10 (31%)
• Programs should respond to social and economic changes	4 (13%)	4 (13%)	0	0	8 (26%)
• Programs should be more appropriate for clinical services	0	2 (6%)	2 (6%)	3 (9%)	7 (22%)
• Programs should be involved in community health services	0	0	5 (16%)	0	5 (16%)
• Programs should lead to continuous improvement	0	5 (16%)	0	0	5 (16%)
• Quality concepts in programs should be clarified	4 (13%)	0	0	0	4 (13%)

Note: the managers gave more than one answer.\

#### *City Hospital*

At present, the Hospital Accreditation Program is the only quality program in health care which is approved by a public organisation. At City

Hospital, six managers considered that any hospital quality program should be formally approved by a public organisation.

‘Our hospital established many quality programs and it improved the quality of its services, but the community did not know because these programs did not have some public organisation to formally approve and rubber stamp them. The Hospital Accreditation Program is the only one in health care which is approved by a public organisation, and gives a certificate of quality to the organisation which is accredited.’  
Deputy CEO of Administration, City Hospital.

“โรงพยาบาลใช้โปรแกรมและโครงการคุณภาพหลายโปรแกรมหลายโครงการ เพื่อพัฒนาคุณภาพบริการแก่ประชาชน และชุมชนไม่ทราบ เนื่องจากโปรแกรมเหล่านี้ ไม่มีการรับรองและยอมรับอย่างเป็นทางการจากองค์กรจากรัฐ โครงการรับรองมาตรฐานโรงพยาบาลเป็นองค์กรเดียวในระบบบริการสุขภาพที่มีการรับรองโดยองค์กรสาธารณะ และให้ประกาศนียบัตรรับรองคุณภาพแก่หน่วยงานที่ผ่านการรับรอง มาตรฐาน ”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

Four managers, both clinical and non- clinical, though not the CEO, considered that quality programs should be responsive to changes in society and the economy.

While all managers of City Hospital mentioned that quality programs had been appropriately implemented and measures were in place to maintain the quality of services, four said they thought quality concepts should be clarified, so that the future direction of quality programs would be clear to all. The hospital had implemented so many programs that some staff had been confused by the use of different quality models. This was resolved to some extent when the hospital decided to join the Hospital Accreditation Program.

#### *Regional Hospital*

As with City Hospital, six Regional Hospital managers mentioned that quality programs should be responsive to the changes in the economy. These managers also said that quality programs should be concerned with community participation in hospital services.

Five managers said that they hoped quality programs would change the culture of the organisation into one supporting continuous quality improvement. Previously, the implementation of quality programs had changed the hospital step by step.

Two managers, the Directors of Medicine and Surgery, said that they hoped quality programs would become more appropriate for their work. In their opinion, the measurement of quality was complicated in clinical services.

### *Country Hospital*

Five Country Hospital managers mentioned that quality programs should be concerned with community participation in hospital services and they hope this will happen in the future.

‘The managers want to see quality programs concerned with community participation in hospital services. At present, programs are only concerned with maintaining the quality of services in the hospital and don’t involve the community.’  
Deputy CEO of Medical Services, Country Hospital.

“ผู้บริหารต้องการเห็นโครงการ/โปรแกรมคุณภาพ ตระหนักในเรื่อง  
ชุมชนเข้าร่วมในบริการโรงพยาบาล ปัจจุบันโครงการ/โปรแกรม คุณภาพ  
ตระหนักแต่เรื่องการรักษาคุณภาพบริการในโรงพยาบาล  
ซึ่งไม่มีเรื่องของการมีส่วนร่วมของชุมชน ”  
รองผู้อำนวยการฝ่ายการแพทย์ โรงพยาบาลชนบท

Two managers of clinical services said that they hope to see quality programs extend to community services. At present, there are no quality

programs which integrate hospital services with services available through the community health services.

Five managers shared the same views as the six managers of City Hospital who mentioned that all quality programs should be formally approved by a public organisation. Unlike the Hospital Accreditation Program, other quality programs like QA, CQI and TQM have no formal accreditation body.

Two managers said that they wanted to see quality programs become more effective in clinical practice. These managers thought that some quality tools are not appropriate for use in clinical services.

All the managers hoped that the quality program would shift the organisation's culture from being provider centred to being customer centred and embrace continuous quality improvement. This would benefit the hospital.

### *Rural Hospital*

Four managers had similar views to the managers in the City Hospital, stating that quality programs should be concerned with the integration of community participation in hospital services. Three clinical managers had the same opinion as the two clinical managers of Country Hospital, who mentioned that they wanted to see quality programs be more effective in clinical practice. These managers also said that some quality tools are not appropriate for clinical services.

As with the five Country Hospital managers and the six City Hospital managers, two of the Rural Hospital managers thought that all quality programs should be formally approved by a public organisation.

### 6.4.13 The Future of the Hospital Accreditation Program

Question twelve asked how the managers see the future for the Hospital Accreditation Program (see Table 6.9). Interestingly, the managers expressed a number of criticisms about the present operation of the Hospital Accreditation Program, including the way the standards for accreditation were written in the program guidelines, the composition of the team of surveyors who carried out the accreditation program and the fact that little assistance was given to hospitals to enable them to prepare for the program. As previously discussed, the thirty-five hospitals initially taking part in the Hospital Accreditation Program were volunteers and this fact may have increased their sense of grievance that not enough assistance was available.

Table 6.9 Criticism of the Current Hospital Accreditation Program (by number of managers' responses).

	<b>City Hospital</b>	<b>Regional Hospital</b>	<b>Country Hospital</b>	<b>Rural Hospital</b>	<b>Total Responses</b>
Criticism about lack of clarity of HAC guidelines	3 (9%)	1 (3%)	4 (13%)	5 (16%)	13 (41%)
Criticism about suitability of HAC for all hospital types	1 (3%)	4 (13%)	3 (9%)	3 (9%)	11 (34%)
Criticism about survey process and choice of surveyors	0	0	3 (9%)	1 (3%)	4 (13%)

Thirteen (41%) of the managers, both clinical and non-clinical, were critical of the ambiguous descriptions of the standards contained in the Hospital Accreditation guidelines. They felt that they should be more specific and more clearly expressed, so that there could be only one interpretation when putting the standards into practice. At the same time, the standards should be flexible enough to be used in facilities of vastly

differing role and location. The criteria should be written in so that they could be applied more effectively in individual situations.

‘We had to be explicit in terms of the standards when putting the HA guidelines into practice. Sometimes, we were uncertain how to interpret the meaning of the terms in the standards, as they are written in the guidelines.’

Deputy CEO of Administration, Country Hospital.

“เราต้องการให้ความกระจ่างในเรื่องความหมายของมาตรฐานในคู่มือของเกณฑ์และมาตรฐานโรงพยาบาลเพื่อนำไปสู่การปฏิบัติ บางครั้งเราไม่แน่ใจในการแปลความหมายในเรื่องมาตรฐานที่มีอยู่ในคู่มือ”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลชนบท

‘Some expressions in the standards were ambiguous statements which could be interpreted in a variety of ways depending on the individual situation.’

Deputy CEO of Administration, City Hospital.

“บางความหมายของมาตรฐานมีความคลุมเครือ ซึ่งสามารถแปลได้  
อย่างกว้างขวางขึ้นอยู่กับแต่ละสถานการณ์ของแต่ละคน”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลเมือง

Eleven managers (34%) across the four hospitals were of the opinion that the Hospital Accreditation Program should be applicable in all Thai hospitals. Indeed, this was the intention stated in the 8th National Health Plan, but perhaps these managers feel the intention is not being fully operationalised.

Four managers (13%) in the two small hospitals, three from Country Hospital and one from Rural Hospital, said that the Hospital Accreditation Program should have clear concepts which allow the surveyors to carry out the accreditation process appropriately. There should be more than one team of surveyors and members on each team should come from facilities of a similar type and/or size to the one being surveyed.



‘The Hospital Accreditation Program is a new system for the surveyors. We learnt from experience that the concepts for surveyors should be clear.’  
CEO, Country Hospital.

“โครงการรับรองมาตรฐานเป็นเรื่องใหม่สำหรับผู้ประเมิน เราได้รับ ประสบการณ์  
และแนวคิดของผู้ประเมินควรชัดเจน ”  
ผู้อำนวยการโรงพยาบาล โรงพยาบาลเขต

‘There should be more than one team of surveyors and on each team there should be a person who comes from a facility of a similar type and/or size to the organisation which is being surveyed.’  
Deputy CEO of Administration, Country Hospital.

“ทีมผู้ประเมินควรมีมากกว่า 1 ทีมลง ในแต่ละทีมควรมีบุคคลที่มี  
ประสบการณ์หรือมาจากองค์กรที่มีศักยภาพ หรือประเภทหรือขนาด เดียวกัน  
หรือใกล้เคียง/คล้ายคลึงกับองค์กรที่ขอรับการประเมิน”  
รองผู้อำนวยการฝ่ายบริหาร โรงพยาบาลชนบท

Both Directors of Obstetrics and Gynaecology in City and Country Hospitals said that the Hospital Accreditation Program should be more concerned with the education of staff, explaining the Hospital Accreditation Program process to various groups, assisting facilities in developing the hospital’s plan for accreditation and advising on specific problem areas in the hospitals which joined the Hospital Accreditation Program voluntarily. The CEO of Country Hospital said that the Hospital Accreditation Program should be more concerned with public relations throughout the country.

Only two managers, the Directors of Surgery in City and Rural Hospitals, directly addressed the question and considered the future, though not of the Program itself. In their opinion, the Hospital Accreditation Program should not be concerned only with quality improvement in hospital services but also with the participation of the hospital in the delivery of community health services.

## **6.5 Discussion**

Although many of the managers interviewed expressed support for the government's response to the economic downturn, question ten showed that it had had a significant impact on public hospitals. Budgets were cut at a time when patients numbers were increasing as a result of declining incomes and higher unemployment. There were notable effects on training opportunities, staff numbers and drug supplies. This occurred at the same time as the government was introducing the Hospital Accreditation Program, which itself was altering the culture and practices of public hospitals. These four hospitals, which had all volunteered to enter the program at the pilot stage, had begun to prepare for this prior to the economic downturn by implementing quality management practices. This was in response to a number of internal and external pressures, including the policy of the Ministry of Public Health. Consequently, they were able to use their new quality system to increase efficiency and cut costs but, as far as the managers were concerned, they were able to maintain the quality of services. Nonetheless, there were many uncertainties for hospital staff, notably job security. Increased workloads, fewer resources and decreased training opportunities were common experiences.

Twenty-eight of the 32 managers interviewed nominated the CEO as the initiator of quality programs. A hierarchical respect for the leader may be seen as a Thai cultural trait but, as the management literature shows, the role of the CEO is always crucial for the successful implementation of quality programs, no matter what the country [Chan et al.,1997; Gustafson et al., 1995; Huq et al., 2000; Zabada et al., 1998]. Crosby [1979] argued that the role of managers as exemplars is important, and having an executive

management committee devoted to continuous quality improvement also helps [Al-Assaf et al., 1993]. All four hospitals have a dedicated quality committee of some type, which directed quality teams, though the organisational structure was slightly different in the case of the Rural Hospital compared to the other three.

Overwhelmingly, the answers to question eight showed that initially there were some problems with program implementation which the managers had to solve. This was despite the commitment of the CEO to the process. These problems included the length of time staff had to spend in meetings when they were already short-staffed. From the managers' perspective, however, the benefits to the hospital outweighed the difficulties involved in setting up the program. Unfortunately, this study was unable to include the staff perspective.

There were some interesting answers to question eleven, which had focussed on the future of the Hospital Accreditation Program. The answers showed there are still some concerns by clinical managers about the appropriateness of the quality programs for clinical services. This may represent some lingering problems for doctors who, as answers to question five indicate, were apprehensive about the implementation of quality programs in the first place and felt that they had not been consulted. They were also of the opinion that they were already providing a quality service. The literature indicates that clinician resistance to the implementation of quality programs is common [Sanders, 1997]. Within health care organisations there exists various powerful occupational subcultures of professionals. Studies have found that these subcultures, especially the most powerful of these (physicians) feel that they already doing a quality job in

health care delivery and are too busy to be involved in quality programs [Zabada et al., 1998]. Lack of physician involvement can lead to the implementation failure of quality programs [Chan et al., 1997] and is recognised as a major challenge for TQM [Blumenthal et al., 1998].

Unfortunately, this study was not able to check these findings with the clinicians, nor with other non-managerial staff. It should be noted, too, that it is inappropriate in Thai culture for staff to openly oppose their senior managers, even if they disagree with the managers' decisions. When discussing this issue, the managers used other, less confrontational phrases to imply dissent.

The answers to question three, which asked if the hospitals followed a particular quality model, were revealing. Two thirds of the managers interviewed replied in the negative and gave as their reason that such models were inappropriate for the Thai situation. This would appear to contradict the managers' experience with quality programs which varied from three to eight years depending on the hospital. All such programs have as their basis models derived from the west or from Japan, and the present Hospital Accreditation Program uses TQM as its foundation although not explicitly. One potential explanation of this anomaly is that, in times of rapid change, people value stability and continuity more, hence the insistence on the (traditional) 'Thai way'. These managers had been exposed to several different quality programs and, while they considered that it was both useful and necessary to implement these to improve services and efficiency, especially in the difficult times after 1997, they were also aware that implementation had led to an increased workload and some dissension from the more powerful professional groups.

The answers to question nine showed that large changes occurred in the hospitals when the Accreditation Program was implemented. From the managers' perspective, many of these changes were positive ones, altering the culture of the hospital and work practices, and increasing efficiency and effectiveness, with the result that the reputation of the hospitals rose among their local communities. This led to increased use of services by patients and higher levels of patient satisfaction. In an environment where hospital managers are concerned with competition and market share, such positive changes indicate that the decision to join the Accreditation Program as an early volunteer was the right one for these organisations. However, there were negative impacts too. Managers recognised that the process of meeting the Accreditation Guidelines placed severe strain on staff who had to do 'more with less'. Staff numbers remained the same, but patient numbers were increasing. Administration tasks were also increased due to the requirement to document activities and show that the accreditation criteria were being met. There are indications that the time frame to achieve accreditation was tight and this also added to staff stress

There appear to be some problems associated with the articulation of quality concepts in the Hospital Accreditation Program guidelines. A lack of clarity impacts on the implementation of the Program and the conduct of the accreditation survey. It hampers the surveyors and potentially calls their work into question. The answers to question three, also demonstrated some confusion among the staff of individual hospitals about what quality actually means and how it may be achieved, which may be the result of the plethora of different models which have been trialled in the hospitals in recent times. The confusion persists because the Hospital Accreditation Program, the

latest model, is not clear either. These issues will need to be addressed before the Hospital Accreditation Program is extended to all Thai hospitals.

While no manager expressed the view that the Hospital Accreditation Program had no future, they are clearly concerned about some of its present shortcomings. Some managers, in answer to question eleven, thought that there should be more than one accreditation body and that there should be greater freedom for hospitals to use the quality programs that suited them and to have those programs accredited. There are substantial benefits to them of accreditation by an external body, particularly in terms of greater legitimacy among their client groups which could translate into more fee-paying patients. It will be interesting to see whether the government continues with one body, with some improvements to the system, or allows others to emerge. At present, the costs of the Accreditation Program are borne by the individual hospitals.

The desire for other public bodies to accredit quality programs is a challenge to the current supremacy of the Hospital Accreditation Program. It may be a reaction to the exposure to many different programs over a comparatively short period of time, with some resulting confusion among staff, and perhaps managers, about quality concepts and their meaning. Implementing different programs would also have had resource implications for the hospitals and perhaps there is some resentment at having to implement yet another program to gain hospital accreditation at the behest of the government, even if these hospitals are volunteers and even if they see the benefit of accreditation itself.

The other main finding of question eleven is the wish of some managers to include community health services within the range of the

hospitals' quality programs. This would promote the ability of hospitals to offer continuity of care, but may also extend the influence of the hospital. The other community issue mentioned is the inclusion of community participation in hospital services. Managers of the two big hospitals were explicit in their comments that quality programs should be flexible and able to respond to changes in society and the economy, an important issue in a time of rapid change.

There are, however, few discernible differences between these four hospitals in their implementation of quality programs, their responses to the economic downturn and their attitudes to the Hospital Accreditation Program, despite their differences in size, services and location. Similarly, there were few differences between the different grades of managerial staff with the exception of the financial managers who, not being involved in clinical services, sometimes had a different perspective or lacked experience of the issues discussed.

## **6.6 Conclusion**

The purpose of these interviews was to explore, from the perspective of thirty-two managers, the experiences of four public hospitals which had joined the Hospital Accreditation Program in 1997, the year Thailand's economic downturn also began. The interviews were focussed on the implementation of quality programs, the effects of economic uncertainty and the managers' views about the accreditation process itself.

The interviews confirmed the findings of the literature from other, mainly western, countries where quality programs of various types have been implemented. Firstly, the CEOs' commitment to the implementation of

quality programs is crucial for success, although Thai government policy as outlined in the 8<sup>th</sup> National Health Policy was also an important element. Nonetheless, program implementation was not without its problems and critics. Staff workloads increased as the implementation required increased paperwork and meetings. At the same time, more patients were brought into the public system at a time when more staff could not be employed. As other literature has found, professional groups, particularly doctors, can be alienated by the process and need to feel they 'own' it.

The advantages of quality programs in general, and Hospital Accreditation Program in particular, were improved efficiency and effectiveness of services and enhanced public reputation, even as the public hospitals were affected by the economic downturn. The budget restrictions were a new experience for management as, up until that time, budgets had been increasing annually as Thailand's economy boomed.

The managers did not accept uncritically the present Hospital Accreditation Program, although they acknowledged its necessity. Indeed, the thrust of their views was that the program should be broadened to allow more choice for hospitals and also that the process itself needed to be reviewed to increase transparency and accountability. Clarity of quality concepts, and lack of knowledge about them, also appeared to be a continuing problem.

From the perspective of these managers, it may be said that quality programs have been a useful tool to assist them to ride out difficult times. This is despite some confusion about quality concepts and quality models, which may be a reflection of the sheer number of different programs the managers have had to implement over a comparatively short time. A desire



for some stability and continuity is evident in their emphasis on a specific Thai way of doing things, including respect for their CEO. On the one hand, they are willing to implement programs which will profoundly change hospital culture and ways of work, but on the other, they are clear that they want this to be done in a way which is appropriate for them.



## **Chapter 7**

### **Strategic Plans**

#### **7.1 Introduction**

While improvements in hospital performance primarily arise from changes in the process of care (for example, by reducing medical errors), an ad hoc approach to implementing quality initiatives is unlikely to produce large improvements in a hospital's overall performance. Quality initiatives need to be supported by systematic planning activities, so that resources are available, and the initiatives are consistent with a hospital's strategic vision [Shortell et al., 1995b].

The importance of strategic planning to achieving quality improvements is widely accepted. It is generally recognised that senior management need to create a culture that fosters a total quality approach [Powell, 1995], a culture that has a customer-focus and a long term perspective [Deming, 1986]. In addition, the degree to which a quality approach is incorporated into an organisation's strategic planning is a key element of the Malcom Baldrige Quality award as well as the European Foundation for Quality Management award [Juran and Godfrey, 1999].

The strategic planning activities of the 35 hospitals in the Hospital Accreditation-Thailand (**HA-Thai**) were examined to some extent in the earlier chapters. Information was reported on the perspectives of employees, collected either as responses to survey questionnaire or to interview questions (see Chapter 5 and 6). Nonetheless, the questionnaire and interviews were primarily oriented towards operational aspects of quality

programs. In addition, it is possible that the respondents' views did not reflect accurately the hospital's formal position. Therefore, it was decided to supplement the information these provided on strategic planning by examining the product of such activity, the hospital's strategic plan.

The value of a strategic plan for this study is that it is a formal document stating a hospital's core values and strategic direction. It should also contain specific goals and objectives, and describe strategies to achieve these goals (see below). The executive level of management has prime responsibility for the development of a hospital's plan, and so the plans should reflect the commitment of senior management to implementing quality programs throughout their hospital.

Another reason to focus on strategic planning activities is uncertainty about its effectiveness in circumstances of environmental turbulence. Some authors suggest that having a formal strategic plan allows (hospital) managers to adjust their directions more easily [Harrell et al., 1987; Desai et al., 1987; Files, 1983; Smith, 1987]. Other literature suggests that agencies might adopt strategic plans to assist with achieving an agreement to maintain the organisation's priority areas during times of fiscal stress [Levine, 1980; Caiden, 1990]. However, Mitroff and Pearson [1993] state that strategic planning may not be the first step for an organisation which faces a crisis, because the organisation may lack the skills, resources or commitment to make key decision which produce a good plan. Strategic planning may also reduce a hospital's flexibility and ability to react to changing conditions [Bruton et al., 1995].

## **7.2 A brief overview of strategic planning within hospitals**

Strategic planning has been a common feature of private businesses as a means to define long-term business goals, and actions by which an organisation would try to attain them. Before the widespread introduction of quality management, strategic plans focused primarily on financial performance [DeFeo, 1999]. Since then, strategic plans have adopted a broader approach that allows for including a customer focus, and strategies for quality improvement.

Since 1980, hospitals in various developed countries have begun to embrace strategic planning as a response to changes in their operating environments [Jarasuriya and Sim, 1998]. In the US, the removal of Federal planning legislation, and increasing pressure on budgets, produced a competitive environment for hospitals that placed a premium on marketing and strategic positioning [Speigel et al., 1993]. Strategic planning was also widespread in Canadian Hospitals by the late 1980s, with one survey reporting that, in 1988, 73% had either written or were preparing one [Denis et al., 1991]. The response was lower in Australia, with a survey in 1994-5 reporting only 53% of hospitals had a strategic plan [Jarasuriya and Sim, 1998]. It should be noted that the Thai government requires public hospitals to have a strategic plan which is used in the approval process of the hospitals' budget. A strategic plan is also a requirement of the HA-Thai [Health System Research Institute, 1997].

Theoretical distinctions are often drawn between various types of long-term planning [Bryson, 1988; Bruton et al. 1995; Eagar et al., 1997]. For example, strategic plans are often seen as emphasizing shifts in direction, and considering a range of possible futures, instead of a single

(most likely) future - a characteristic of a long-range plan. A criticism of empirical research on strategic planning in hospitals is that such distinctions are not always made clear [Bruton et al. 1995], although there is no clear evidence of the benefit that would follow from drawing such distinctions. Also, it is unclear to what extent such distinctions are applicable to plans produced within the Thailand hospital sector. Of more importance are the possible differences between private and public hospitals [Eagar et al., 1997]. In the public sector, hospital activity is constrained by capped recurrent budgets, and national policies. In the private sector, planning is closely related to marketing, and there is also no regional or national level of planning. Also, prices in the private sector are determined by negotiations with private health insurers. Income can be more variable and so risk management is of greater importance.

Nonetheless, despite debate about the scope of plans, and the many techniques available to support strategic planning [Spiegel and Hyman, 1993; Eagar et al., 1997], there is general agreement about the broad contents of a strategic plan [Berry, 1994; Bruton et al. 1995; Jarasuriya and Sim, 1998; DeFeo, 1999]. It is this that provides the basis of the document analysis, and also reduces the potential importance of differences in the type of plan produced by Thai hospitals. A strategic plan should contain a mission statement that outlines the hospital's philosophy and vision. This should then be translated into more explicit goals or objectives, with these being accompanied by specific strategies. These elements should be supported by an analysis of both the external and internal environments of the hospital.

### **7.3 Method**

The thirty-five hospitals that joined the HA-Thai in 1997 were asked to send their current strategic plan to the investigator. These were the same hospitals that were asked to contribute their financial plans and were asked to participate in the survey, both of which are described earlier. A letter of introduction and a request for the strategic plan or planning documents that related to the period 1997-2000 were sent to the Chief Executive Officer (CEO's) and/or Directors of each hospital. An information sheet was included which explained the purpose of the study and assured the hospitals about the confidential nature of the study. The investigator expected to receive the strategic plans from the CEO's/or Directors within 7-14 days time. If a hospital had not replied, then the investigator either phoned or sent them a reminder letter. After a final round of checks, a thank you letter was sent to all thirty-five hospitals.

#### *Analysis*

The submitted documents were analysed in two ways. First, the contents of the documents were assessed against a set of criteria that rated the strategic nature of the plans. Second, the documents were examined to identify and code any material on quality issues that they contained.

The criteria used to analyse the strategic quality of each hospital's planning documents were drawn from a survey of strategic plans from Australian hospitals undertaken by Jayasuriya and Sim [1998]. These authors used four attributes to measure the strategic nature of a document, the attributes being initially proposed by Bryson [1988]. These were:

1. the extent to which the document contained a clear statement of the organisation's mission;
2. whether the plan contained an assessment of both internal and external environments;
3. whether the plan contained strategic goals and objectives; and
4. whether the plan contained specific strategies to achieve the organisation's goals and objectives.

The scales used to rate each of the attributes are presented in Table 7.1, and were also drawn from the survey by Jayasuriya and Sim. The allocated score was recorded, together with the coded quote, on a scoring sheet.

Table 7.1 General characteristics of the strategic plan.

Specific objectives	X	1	2
1. The plan contains a clear mission statement.	N	S	Cl
2. The plan contains evidence of external/ internal analysis.	o	o	ear
3. The plan delineates the organisation's goals and objectives.		m	ly
4. The plan identifies strategies to achieve these goals or objectives		e	

The clarity of the mission statement was judged according to whether it contained the following components (based on the work of Pearce and David [1987]): identifies customers and markets, indicates principal services delivered by the hospital, specifies the geographical area in which the hospital operates, identifies the hospital's philosophy, and specifies the hospital's desired public image [Jayasuriya and Sim, 1998].

The same process was used to analysis the quality management content of the planning documents. The criteria used to rate the documents were based on the validated questionnaire used in the survey component of



this study (see chapter 5). There was some overlap with the four criteria used to rate the extent to which the document reflected a strategic outlook but this was not unexpected given that the implementation of a quality improvement approach is supposed to extend throughout an organisation. Again, a scoring sheet was created on which extracted quotes were written to support/document the score allocated for that item and that hospital. The criteria are listed in Table 7.2. Each criterion was scored using the scale that was used to rate the general characteristics of the document: an X if no evidence was found, 1 for some indication, and 2 if clear evidence was identified.

#### **7.4 Results**

Nine of the thirty-five hospitals responded with planning documents. The characteristics of the responding, and non-responding hospitals are presented in Table 7.3. Data on the hospital characteristics was derived from combining the information contained in the received planning documents with information gained from the survey that was described in Chapter 5. The majority of responding hospitals were public hospitals run by the Ministry of Public Health. The other two were private facilities. Seven of the number were classified as large (with respect to bed size).

Table 7.2 Quality management aspects of the strategic plan.

Issue	Dimension in strategic plan	Question in survey
General	The extent to which the document includes quality in mission statement	B1, B2, B3
General	The extent to which the document includes quality in goals or objectives	B1, B2, B3
General	The extent to which the document includes quality in strategies or targets	B1, B2, B3
Environment	External reporting and comparisons	B6, B7, B8, B17, B18
Environment	Commitment to consult the local community	D22, D23, D24, D25, D26, D27
Environment	Commitment to involve service partners in decision making	D9, D10, D11, D12
Quality initiatives	The implementation of quality programs and overcoming barriers	B26, B27, B28, B29
Education	Commitment to training programs for groups of employees	B19, B20, B21, B22, B23, B24
Total approach	Commitment to involve particular employee groups in decisions about quality	B12, B13
Customer focus	Commitment to involve customers in decision making	D1, D2, D3, D4, D5, D6, D7, D8
Performance measurement	Data collected (structural, process or outcome) on (consumer or/and staff) using (survey, continuous or ad-hoc)	D13, D14, D15, D16
Performance measurement	How are the collected data used?	D17, D18, D19, D20, D21
Performance measurement	Does the document define targets in terms of quality costs?	C16, C15
Specific techniques	Mentions the notion of quality cost and operationalises in terms of what components	C2, C3, C4, C6, C7, C8, C9, C10

Table 7.3 Characteristics of responding and non-responding hospitals

	Class		Bed Size		Accredited		Region	
Hospital	P u b l i c	P r i v a t e	S m a l l ( < 2 1 8 )	L a r g e ( > 2 1 8 )	Ful ly	P a r t i a l ly	B a n g k o k	No t- Ba ng ko k
Participating	7	2	2	7	8	1	2	7
Non-response to strategic plan request but response to survey	13	6	12	7	16	3	4	15
Other non-responders	3	4	3	4	1	6	4	3

Total	23	12	17	18	25	10	10	25
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Each hospital sent only one planning document. Some hospitals provided only an extract of a larger plan. Six hospitals provided a table that summarised the contents of the plan (all but one appeared to be from an existing document and not produced to comply with the request for information), while one other provided material arranged in a flow-chart. The general characteristics of the documents themselves are presented in Table 7.4.

Table 7.4: Characteristics of documents supplied by the responding hospitals

Hospital	Material	Year plan issued	Time-span of plan
A	Table	1998	3 years
B	Table	1998	5 years
C	Table	1998	5 years
D	Table	1998	3 years
E	Flowchart	1997	3 years
F	Table	1997	5 years
G	Table	1997	3 years
H	Text	1998	3 years
I	Text	1998	3 years

Unfortunately, the nine planning documents did not indicate the hospitals' perception of the type of plan they were submitting (for example, a strategic or long-range plan). The investigator's impression was that some documents may not have been a strategic plan, although all had a long term perspective as indicated by their time-frames. However, as the plans were

presented in response to the request for a strategic plan, they have all been treated as such.

The general characteristics of a strategic plan are presented in Table 7.5. As the number of hospitals is small, general characteristics of size and public versus private status are not presented in these results.

Table 7.5 General strategic planning characteristics of the documents reviewed.

Hospital	Mission statement	Environment analysis	Goals and objectives	Strategies
A	2	X	2	2
B	X	X	2	X
C	1	X	X	2
D	2	X	2	2
E	2	2	2	2
F	X	X	2	2
G	X	X	X	2
H	2	2	X	2
I	2	2	2	2

Five of the nine hospitals had a recognised mission statement that was clearly identifiable. One example is

‘the hospital services are to provide quality services to all people in the areas of curative care, health prevention, health promotion and rehabilitation’

“รพ. จัดบริการที่มีคุณภาพด้านการรักษาพยาบาล การป้องกันโรค การส่งเสริมสุขภาพและการฟื้นฟูสภาพแก่ประชาชนทุกคนในบริเวณ/ชุมชน”.

However, several documents did not include a mission statement for the hospital. Moreover, six of the nine hospitals did not present a formal analyses of their internal and external environment and how this influenced hospital planning. Of the ones that did, this was often stated in terms of the economic crisis they were facing such as

‘because of a limited budget at this time it is a difficult situation to improve patient services’

“ในระยะเวลาที่ รพ. ได้รับงบประมาณอย่างจำกัด จึงเป็นการยากที่จะพัฒนาคุณภาพในการให้บริการผู้ป่วย”.

The majority of hospital did state their objectives or goals explicitly.

Some of these were very outcome focussed, such as

‘to reduce by 35% the low-weight births within the population over a five year period compared to the previous year’

“รพ. จัดโปรแกรมการป้องกันและส่งเสริมคุณภาพแก่กลุ่มหญิงตั้งครรภ์เพื่อลดอัตราทารกน้ำหนักน้อยให้ได้ 35% จากอัตราเดิมในปีที่ผ่านมาภายในระยะเวลา 5 ปี”.

or

‘to increase by 25% the number of contracts covered by the Social Security Scheme within the next five year period’

“จำนวนผู้ประกันตนจะเพิ่มมากขึ้นกว่าปีก่อน ในการเลือกใช้บริการของ รพ. จะเพิ่มอัตราส่วนของการตลาด 25% ของการประกันสังคมภายใน 5 ปี ในชุมชนที่รพ. ตั้งอยู่”.

One of the objective statements seemed to relate explicitly to the economic crisis

‘due to the economic situation, the hospital will cut costs by 10 per cent over the next three years’

“โรงพยาบาลวางแผนตัดงบประมาณที่ไม่จำเป็น 10% ภายใน 3 ปีข้างหน้า เนื่องจากภาวะวิกฤตทางเศรษฐกิจ”.

Three documents included strategies although the objectives they were linked to were not stated. In the other plans, the strategies related to explicit objectives. For example, the strategy that went with the objective of reducing costs by 10 per cent was

‘the hospital has a project to buy less or utilise resources more efficiently to achieve a 10% reduction in costs of these resources’

“โรงพยาบาลตัดงบประมาณโดยใช้มาตรการประหยัดตัดค่าใช้จ่ายที่ไม่จำเป็นออก 10% ภายใน 3 ปี”.

Most of the strategies related to quality program issues and will be discussed later.

There were noticeable differences in the planning perspectives of the public and private hospitals. The seven public hospitals had similar planning documents which emphasised the expansion and development of their budget. Two private hospitals had planning documents which emphasised profitability and the alternative use of resources. It seems that all the public hospitals presented their planning documents to provide a justification for resource requests, funding from government as well as to support the government’s policies. The primary focus of the plans from the two private hospitals appeared to be profitability and marketing penetration.

The results for the evaluation for aspects of quality management of the documents received is presented in Table 7.6.

In general, most hospitals (6 out of the 9) mentioned quality (to different degrees) in their mission, objectives and or strategies. Quite a number of these are phrased in terms of:

- ‘getting accredited by ISO9002’ “ได้รับการรับรองโดย ISO 9002”;
- ‘to provide services according to professional standards’  
“จัดบริการให้สอดคล้องกับมาตรฐานวิชาชีพ”;
- ‘to improve quality services to meet patient needs’  
“ปรับปรุงคุณภาพบริการตามความต้องการของผู้รับบริการ”.

Table 7.6 Quality management aspects of the documents reviewed.

Issue	Dimension	Score		
		X	1	2
General	The extent to which the document includes quality in mission statement	3	6	0
General	The extent to which the document includes quality in goals or objectives	2	7	0
General	The extent to which the document includes quality in strategies or targets	2	7	0
Environment	External reporting and comparisons	6	3	0
Environment	Commitment to consult the local community	9	0	0
Environment	Commitment to involve service partners in decision making	9	0	0
Quality initiatives	The implementation of quality programs and overcoming barriers	2	7	0
Education	Commitment to training programs for groups of employees	2	5	2
Total approach	Commitment to involve particular employee groups in decisions about quality	8	1	0
Customer focus	Commitment to involve customers in decision making	9	0	0
Performance measurement	Data collected (structural, process or outcome) on (consumer or/and staff) using (survey, continuous or ad-hoc)	5	4	0
Performance measurement	How are the data used	4	1	4
Performance measurement	Defines targets in terms of quality costs	9	0	0
Specific techniques	Mentions the notion of quality cost and operationalises in terms of what components	9	0	0

Against the environment criteria, all the submitted documents rated poorly, with none of the issues being mentioned. No hospital sought to use external comparisons of performance (though three hospitals mentioned something vaguely similar, they did not state so clearly), and there was no evidence of a commitment to consult the local community or the service partners of the hospitals.

Most hospitals (7 of 9) mentioned issues related to the implementation of quality programs and overcoming barriers. Of these, six restricted this to a statement about joining the hospital accreditation system or ISO9002. Two hospitals referred to quality programs in terms of the training of staff to improve skills and knowledge

‘the hospital provides quality training programs to improve staff’s skills and knowledge’

“รพ. จัดโปรแกรมการศึกษาและการฝึกอบรมเพื่อพัฒนาทักษะและเพิ่มพูนความรู้แก่บุคลากร”

and

‘to improve quality services in every unit, all staff require training and education in quality programs every year’

“ปรับปรุงคุณภาพบริการทุกหน่วยงาน บุคลากรต้องได้รับการศึกษาฝึกอบรมโปรแกรมคุณภาพทุกปี”.

It is clear that training was to be maintained despite the climate of economic crisis that the hospitals were facing at the time these strategic plans were developed. Of the nine hospitals, five mentioned training of staff in some form such as



‘provide quality programs for staff to improve their quality services’

“การจัดโปรแกรมคุณภาพแก่บุคลากรเพื่อปรับปรุงคุณภาพในการให้บริการ”

or

‘provide some programs to improve staff’s knowledge and skills’

“การจัดบางโปรแกรมเพื่อเพิ่มพูนทักษะและความรู้แก่บุคลากร”

A planning document from one hospital contained the statement

‘the employees formulate the standard operating procedures together and use these in practice’

“บุคลากรกำหนดวิธีการและเกณฑ์มาตรฐานในการปฏิบัติงานร่วมกัน และใช้ในการปฏิบัติงาน”.

This was interpreted as an indication that the employees are involved in decision making processes about quality. No similar statements were found in any of the other documents. None of the submitted documents indicated that the hospital intended to involve the customers in any decision making process.

The adoption of quantitative monitoring schemes are an integral part of continuous quality improvement, and the documents were expected to describe, at least in general terms, what schemes had been or were to be implemented. The documents from four of the nine hospitals mentioned various data collection processes. Three of these were patient/consumer surveys to assess satisfaction with care or community need. Two hospitals also surveyed staff to assess training needs. However, only two hospitals were explicit in how they would use the data, and their statements were

vague, the data being used ‘to improve quality’ “เพื่อปรับปรุงคุณภาพ”. Interestingly, one hospital plan that did not explicitly state that it would survey patients or how it would use such data including the following objective ‘to meet patient satisfaction by 85%’ “เพื่อตอบสนองความต้องการของผู้รับบริการร้อยละ 85”.

None of the hospitals either explicitly defined targets in terms of quality costs or mention quality cost anywhere in the documents.

## **7.5 Discussion**

The generalisability of the results of this study is limited by the small sample size. It should be recognised that the results are not necessarily representative for even the 35 hospitals that joined the HA-Thai in 1997. The survey results from chapter 5 indicate that 16 hospitals had strategic plans, and so the nine supplied documents represent a response rate of roughly 56 per cent. However, the results give an impression of what is likely to be in most of them, at least for public hospitals as their documents showed a remarkably similar presentation format. A more severe limitation is that the documents from most hospitals did not seem complete. Only two submitted documents conformed to the normative structure one would have expected from a strategic plan in countries like Australia. Three documents lacked mission statements, while another three lacked goals. However, comparing these results with the survey reported in Chapter 5 suggests that the full plan of hospital F included a mission statement, while the full plan of hospital H included goals and objectives.

Few documents contained the expected internal/external environmental analyses but it is possible that these were not provided as the analyses are potentially confidential in nature. It is therefore possible that the hospitals did undertake these analyses and just did not submit them for this investigation. Yet, the consequences of some of these evaluations would be expected to carry through into the objectives and strategies and this did not appear to be the case. If so, the plans would resemble long-range planning documents rather than strategic planning [Bruton et al. 1995]. The possibility of public hospitals tending to produce long range plans but to call them strategic plans due to the new emphasis on strategic planning has been noted elsewhere [Jayasuriya and Sim, 1998].

As noted in the introduction, the exact nature of the plans was not the primary focus of this chapter. The plans were surveyed for their quality content, and thereby assess the commitment of hospital senior management to continuous quality improvement. Another issue was the extent to which hospitals used strategic planning to help them through the economic crisis. In terms of this last issue, it is interesting that all plans stemmed from 1997 or after. This demonstrates that senior management in the nine hospitals who supplied documents felt that it was worth putting effort into changing their strategic plans. Moreover, several contained objectives that were directly related to the crisis. But this perspective was clearly not shared by all hospitals within the HA-Thai program. The survey results in chapter 5 suggest that only sixteen had a strategic plan.

In terms of senior management commitment to quality, the results reveal a fair difference between the hospitals. All hospitals make some mention of quality in their plans, but it is quite weak for several hospitals.

Their quality commitment in terms of quality objectives and quality initiatives was general (the minimum overall score was 3 of 28). The plans of other hospitals were more explicit (the highest overall score was 11). Of particular note was the level of commitment to training, a key component of quality improvement [Deming, 1986]. This is striking given the economic crisis that Thailand and these hospitals were facing. A weak commitment to quality improvement would be expected to result in training cuts because it is difficult to quantify its direct effect on providing care. All but two hospitals mentioned training programs, although it is unclear from these documents whether there are more or less of them than there were before the crisis.

Another frequently occurring quality initiative was to apply for ISO9002. Adopting this quality standard is another flag indicating a strong quality focus. This is because the ISO9002 accreditation scheme emphasises clear and extensive documentation and its implementation might be expected to increase administrative costs therefore. In a period of economic hardship, such a move is unlikely to have been taken lightly.

The other aspect of the results that is quite striking is what the plans do not contain. None of the plans seem to reflect a complete “customer focus” as demonstrated by a lack of involvement of employees in decision making and a lack of commitment to consult with the local community. This does not mean that hospital management do not seek to involve customers or staff, nor that they do not see the value of communication. It does raise questions about its perceived relative importance as a strategy that would facilitate quality improvement. Poor communication has been recognised as a factor in producing poor quality [Deming, 1986; Juran, 1999].

Another aspect of quality improvement was not mentioned in any plan was the use of quality costs. This is understandable because applying this technique to service organisations is not easy [Evans and Lindsay, 1999]. A more surprising omission was the possibility of hospitals using external comparisons (benchmarking). Various accreditation systems have embraced the idea of developing comparative indicators, although development has been incremental [Scrivens, 1999] and comparing performance is a major focus worldwide [OECD, 2001]. This does not necessarily mean hospitals do not undertake such comparisons, but it does not seem to be of strategic importance. It is possible that, for public hospitals, these comparisons are conducted by the Thailand Ministry of Public Health in their overall monitoring of the health care system and therefore not the direct concern of the hospitals themselves. Also, for the two private hospitals in our sample, this lack of interest may be due to external comparisons requiring hospitals to provide economically sensitive information.

The study suffers from various limitations. That the response rate was less than ideal has already been mentioned. Another technical weakness was the lack of an independent re-assessment of the original (Thai) documents. In these type of document analyses studies, it is customary to have two independent readers with a third person to adjudicate when disagreements arise. Unfortunately, this study did not have access to an independent expert who could check the original documents in Thai, to confirm the interpretation and choice of quotes. However, the Thai translations of the quotes were also presented in this chapter to allow some independent evaluation.

The study approach also has limitations. It was assumed that strategic plans reflect the commitment of the hospital to quality improvement. This assumes an instrumental view of planning activities. It is possible, though, that the documents were produced not to support hospital activity, but to satisfy regulatory requirements or the political demands of stakeholders [Bruton et al., 1995; Jayasuriya and Sim, 1998]. Clearly, the analysis of the planning documentation cannot distinguish between these options. This is an important consideration for future research studies, because survey questionnaires and interviews with the managers could provide more comprehensive data about the strategic plan, strategic behaviour and the planning process in the hospitals.

## **Chapter 8**

### **Discussion and Conclusion**

#### **8.1 Introduction**

This study explored the strategies that hospital managers used to maintain the quality of their services during the economic downturn in Thailand. The study was restricted to the 35 hospitals, both public and private, which voluntarily joined the Hospital Accreditation Program-Thailand (**HA-Thai**) in 1997. The study focused on these hospitals as they were likely to have implemented a range of quality improvement techniques, as set out in the 8<sup>th</sup> National Health Plan (1997-2000) [Ministry of Public Health, 1996a].

This was a mixed method study. It was felt that using various methods to investigate the implementation of total quality management (**TQM**) would provide a greater understanding of how successfully they had been implemented. A survey of all hospitals provided an overall picture of TQM implementation, while interviews with key management staff in four hospitals provided more in-depth knowledge about their experiences.

In this chapter, each study question is considered in turn, and the major findings are presented and discussed. The chapter then discusses recurring themes and the implications of the findings for health management. This is followed by a review of the strengths and limitations of the research, and some recommendations for further research.

## **8.2**

### **Specific study questions**

#### **8.2.1 What quality programs are currently in place in Thai hospitals which have joined the HA-Thai program?**

From this study, it seems that a variety of quality programs have been implemented in these 35 Thai hospitals. It appeared that most hospitals recognized the HA-Thai system as being based on Total Quality Management principles. Many of the programs the hospitals have in place were consistent with components of TQM such as regular contact with various customer groups, surveying of customers, training programs and the use of various communication channels. But the interviews in chapter six highlighted that there may be some uncertainty about TQM and the guidelines imposed by HA-Thai. The study found that some managers and staff are confused about quality concepts and about the principles behind the quality programs (Chapter 6). The analyses of the strategic plans (Chapter 7) revealed that many hospitals do see improving quality as important but often they refer to ISO9002 as a reference, less often the HA-Thai. No hospital referred to TQM.

It is possible that this confusion has arisen because different divisions of the Ministry of Public Health were responsible for introducing quality concepts, and did not consistently clarify the principles of quality before the programs were implemented. This view is supported by the answers in the interviews (Chapter 6) where lack of clarity and more appropriate guidelines were asked for.

#### **8.2.2 What strategies have managers' put in place to ensure the**



**continuing quality of their hospital services in a climate of economic uncertainty?**

This study question splits into two parts: a) what are the strategies put in place to ensure continuing quality of the hospital services; and b) what are the strategies specifically related to the climate of economic uncertainty.

*Strategies to ensure quality services*

The survey of hospitals suggests that hospitals have adopted a wide range of strategies to ensure the quality of their services. These include structural changes such as the introduction of a quality centre, formal communication and training strategies, and specific aims such as having processes/departments accredited by ISO9002. There was also some monitoring of customer views and a few hospitals compared their performance to other hospitals. Unfortunately, the surveyed hospitals did not provide much information about the quality data they collected, and how it was used. The notion of quality cost seems not to be used.

The interviews (Chapter 6) found that the responsibility for quality programs could be delegated to managers at different organisational levels, although all did include senior management. Three of the four hospitals had a quality management committee, directed by their board and chaired by the Chief Executive Officer (CEO) or Deputy CEO of Medical Services. In addition, each had a Quality Centre (a new introduction for two of the hospitals) from which cross-functional teams implemented and monitored quality programs. The system differed in the fourth case study hospital. Here, the CEO established policy directly with the physicians who were departmental and divisional heads. The quality committee in this case was

formed by all the heads and had an audit function.

The literature dealing with the transformation of organisational cultures for quality improvement shows that a quality council, or similar, is frequently set up by members of an executive committee to plan, encourage, and implement the quality process [Dawson et al., 1995; Al-Assaf et al., 1993; Coffey et al., 1992]. The type of quality mechanism is dependent on the style of leadership. Most leaders prefer to have the involvement and participation of their managers, which is consistent with the TQM principle of integrating quality into all parts of an organisation [Deming, 1986].

A common quality strategy across hospitals was the use of training programs (Chapter 5). Budgets for these programs were maintained through the economic crisis, although it is unclear how much budgets were changed as they were not consistently specified in the financial plans (Chapter 4). Interviewed managers reported the government imposed restrictions on training during the economic downturn (Chapter 6). However, most strategic plans (Chapter 7) did recognize training as a prime strategy to improve knowledge and thereby the quality of the services.

Another common strategy was communication of quality issues throughout the hospital. The findings from all study methods highlighted the importance of communication as a strategy, though it was least visible in the strategic planning documents. From the survey (Chapter 5), it appears that most relevant groups were being informed about quality issues but that maybe there was an over use of meetings and an inefficient or under-utilisation of more permanent communication methods such as performance reports or newsletter.

### *Strategies in light of the economic crisis*

The strategies put in place by the hospitals to ensure the quality of services during the economic crisis consisted of some imposed by the central government (such as limits on the use of imported drugs) and others implemented by the hospital. Some hospitals stated either in their strategic plan (Chapter 7) or in the interviews (Chapter 6) that joining the HA-Thai had been a useful strategy to improve competitive edge and thus cope with the consequences of the economic uncertainty. This seems inconsistent with the survey results (Chapter 5). In these, none of the respondents reported quality programs had produced savings or reduced lengths of stay. The reason for this may be the difference between past experience and what hospitals expect quality programs to achieve in the future once initial barriers are overcome.

The financial plans (Chapter 4) were not overly useful in identifying strategies due to the inconsistencies in the presentation of the cost information. But there was some indication that international loans had been used to lessen the impact of the economic crisis on the hospitals.

Given the constraints of the economic crisis, it was expected that some hospitals might attempt to measure quality cost. The survey (Chapter 5) did not indicate this and the strategic plans (Chapter 7) contained no mention of quality costing to monitor the targeted reduction of costs. This is consistent with other studies [Bigelow and Arndt, 1995; Ross et al., 1996].

### **8.2.3 What are the implications of budget constraints for quality management?**

It is slightly disappointing that there are conflicting results on how the budget constraints affected quality programs. From the financial plans

(Chapter 4), it isn't clear that the constraints were severe but it is likely that this information was not accurate. From the strategic plans (Chapter 7), it seems that the constraints did not diminished the quality outlook of hospitals. Most stressed the importance of improving quality and proposed specific strategies to achieve this. The survey also suggested quality programs were being maintained (Chapter 5). But the information gathered from the interviews (Chapter 6) suggests the implications were quite severe.

In the first year of the downturn, there were no external training programs for staff. Another aspect that was that public hospitals were expected to use the local drug manufacturers and the introduction of the National Essential Drug List essentially dictated change in practice that was more based on budget than quality considerations. Also, the budget for construction and equipment was delayed and staff numbers were frozen. In addition, the introduction of quality programs appeared to be associated with an increase in workload, for example, because of greater documentation requirements. Thus, a staff freeze could potentially have had negative implications for maintaining quality programs. The freeze on equipment replacement may also have had some impact on quality care but this was not directly linked by interviews to maintaining quality management.

#### **8.2.4 How do hospital managers at different levels view and address these constraints?**

The perception of the managers was only measured during the interviews (Chapter 6). Therefore, the findings may not be representative of all 35 hospitals as it covered staff from only four hospitals.

The managers emphasised those constraints which most effected themselves: CEOs focussed on efficiency and cost effectiveness; non-clinical managers stressed budgetary issues, including delays in capital works; and clinical managers were concerned about work pressures, the limitations on drug use, and the freeze on the number of clinical staff, especially nurses. However, all managers were uncomfortable with the limitation on external training at the beginning of the economic downturn.

#### **8.2.5 How do the managers perceive and understand the hospital accreditation system?**

The results related to this study question again comes predominantly from the interviews (Chapter 6). The managers that were interviewed felt that the Hospital Accreditation guidelines lack clarity. They also felt that the Hospital Accreditation Program should be suitable for all hospital types, including community hospitals and psychiatric hospitals, reflecting some sense of limitation in the hospital operation types reflected in the accreditation program. A very specific perception was that there were problems with the survey process, particularly the choice of surveyors and their training, was questioned. However, the overall view was that national accreditation was required and that the current process was a step in the right direction.

### **8.3 Common themes**

The previous analyses and discussion of the findings focussed on the situation of Thailand, the implementation of quality management in the 35 Thai hospitals and the economic crisis in particular. In this section, the

results are discussed in relation to the quality management literature so that common themes are highlighted. The themes are organised into the following sections:

- 1 Strategic planning
- 2 Training and education
- 3 Communication and broad involvement of staff
- 4 Customer focus
- 5 Performance monitoring
- 6 Quality costing
- 7 Barriers
- 8 Professional relationships

### **8.3.1 Strategic planning**

It has been recognised that strategic planning is a crucial component in quality management of any organisation including hospitals [DeFeo, 1999]. Probably for that reason, the Thai Ministry of Public Health requires all its hospitals to have strategic plans. It was therefore surprising to find that 12 of 28 hospitals who responded to the survey said they did not have a strategic plan. Those without a plan were evenly distributed among private and public hospitals. In addition, most of the documents received did not seem to be complete strategic planning documents. This does not mean the hospitals do not produce comprehensive strategic plans. Hospitals may believe these documents were not public documents, which is understandable if they contain economic information.

For the hospitals that provided documents, the degree to which quality was mentioned varied. All hospitals mentioned quality in their plans, but it is

quite weak in some cases. Quality objectives and quality initiatives were often general with only some plans containing explicit strategies. However, there was a high commitment to training, and several hospitals aimed to apply for ISO 9002 accreditation. Both these flag a strong quality commitment as both increase costs without an obvious benefit. It also counteracts the impression of low commitment suggested by the limited material provided.

The documents do raise questions about how quality was perceived at a strategic level. The plans appeared not to reflect a strong “customer focus” nor emphasise communication. Yet, both factors are recognised as important to improving quality [Deming, 1986; Juran, 1999]. Another aspect of quality improvement not mentioned in any plan was the use of quality costs.

### **8.3.2 Training and education**

Training and education are key components of TQM, being a major route to quality improvements [Deming, 1986; Evans and Lindsay, 1999]. Many advocate that training has to be conducted on an on-going bases and has to be directed at all groups in the organisation. Others have argued that training that is targeted can also be effective as it saves money, time and avoids training people who then do not use it [Boerstler et al., 1996].

The survey of hospitals found that most hospitals offered training to all categories of staff, though nurses, allied and administrative staff received more than medical staff and hotel staff. The training of nursing and administrative staff coincided with the staff groups who were most involved in implementing quality programs. This may indicate a targeted approach, which is understandable given the economic situation. It has been generally

recognized that the training and education are important to be achieve a successful implementation of a quality program into an organization [Evans and Lindsay, 1999]. A study of continuous quality improvement among American and Canadian healthcare executives found that specific quality education and training could decrease the resistance of the employees to CQI, especially among physicians [Chan et al., 1997].

### **8.3.3 Communication and broad staff involvement**

One of the keys of successful quality improvement is communication and staff involvement [Evans and Lindsay, 1999]. One of the major aims of good communication is to facilitate the broad involvement and commitment of staff [Chan et al., 1997]. The survey and interviews suggested that the Thai hospitals had attempted to implement both TQM principles, although there were a number of areas where communication within the organisation could be improved.

The survey (Chapter 5) found that various staff categories were involved in various types of decision and eighty per cent of the survey respondents said they communicated their TQM practices internally. Patients views also seemed to be taken into account to some extent. Yet, TQM was implemented by senior and middle management in the hospitals, and the interviews (Chapter 6) indicated that the CEO was an important instigator, whose strategies were then supported by the other managers. Some of the managers interviewed stated that some staff expressed their resistance to the implementation of quality programs. It is inappropriate in Thai culture for people in any organization to oppose the wishes of those to whom they owe



respect, such as the CEO, but the managers were aware that not all staff agreed with the introduction of quality programs.

A case study of a health care organization's readiness for a total quality management program showed that the perceptions of management and employees are important to the success of a TQM effort [Brenda et al., 1995].

#### **8.3.4 Customer focus**

A customer focus is one of the core concepts of quality management because customers play an important role in the definition of quality [Deming, 1986; Juran, 1999]. As such, it was not surprising that the survey (Chapter 5), the interviews (Chapter 6) and the strategic plans (Chapter 7) demonstrated the Thai hospitals had some degree of customer focus.

The survey provided most information about the level of customer involvement and assessment of their opinion. It showed that patients are represented in various organisational structures at most hospitals. There was also quite widespread assessment of patient satisfaction. This was mostly collected through surveys. In the interviews (Chapter 6), customer-focus came through as a driver of quality programs, and here the role of customer complaints was emphasised. In the strategic plans, a customer focus was noticeable but less precisely described. It appeared in a vague way in mission statements ('quality services to all people') and in a few of the hospitals' objectives ('meet patient satisfaction by 85%').

#### **8.3.5 Performance monitoring**

Another characteristic of total quality management is the use of statistical analysis to monitor performance and the collection of accurate data to support this [Deming, 1986; Juran, 1999]. This approach supports the improvement of quality in contrast to the older approach of quality assurance which was based on inspection.

The hospitals' strategic plans showed limited evidence of hospitals using statistical methods to improve general performance but the survey indicated that many hospitals collect data related to quality. These were collected from either patients or staff (or both). However, it was less clear how the information was used, and it seems not to have stimulated quality improvement. The survey respondents did not think that their quality initiatives had delivered significant improvements in performance.

Only eight hospitals reported benchmarking their services. This may reflect the difficulty of benchmarking hospital services. It is necessary to ensure differences among patients are taken into account and this can be a barrier to benchmarking [Yurk et al., 2001].

### **8.3.6 Quality cost**

A striking feature in the responses to the survey (Chapter 5) was the lack of quality cost monitoring. One of the assumptions behind TQM is that improvements in quality bring more benefits than they cost [Crosby, 1979]. Nonetheless, measuring the cost of quality is an important measure of how well a quality system works [Evans and Lindsay, 1999].

The reasons given by the hospitals for not measuring quality cost indicate a limited understanding or knowledge about the concept as well as limited access to information that would support it. The inconsistencies in the

financial plans provide some supporting evidence for this. In general, these did not provide much insight into the financial operation of the hospitals. However, the limited use of the "quality cost" concept by the hospitals is consistent with other studies [Bigelow and Arndt, 1995; Ross et al., 1996].

### **8.3.7 Barriers to implementing quality management**

The literature contains many examples of barriers to quality management within hospitals [Shortell et al., 1995b; Chan et al., 1997; Zabada et al., 1998]. These include organisational cultures that are bureaucratic and resist change and employee empowerment, lack of senior management commitment, lack of skills and knowledge of TQM, resistance from clinical staff, especially physicians.

The barriers reported by the surveyed Thai hospitals are consistent with previous studies. The hospitals reported that it was too expensive, did not have support of key personnel, or had found that information was either not available or too difficult to obtain. While these may reflect poor implementation, it is also likely to reflect the difficult financial circumstances that the hospitals were operating under. The interviewed managers (Chapter 6) stated that the implementation of the quality programs had created extra administrative work. Staff did not understand why it was necessary and this, together with the increase in patient demand due to the economic crisis, did not improve their co-operation.

The findings of both the survey (Chapter 5) and the interviews (Chapter 6) indicate that staff knowledge about quality programs was deficient in a number of respects: knowledge about quality concepts and models; knowledge about quality costs; and knowledge about the process of

formulating strategic plans. The survey also indicated that there was a perception of increased expense and that necessary information was hard to get. However, the managers recognised that it would take time to remove such resistance by emphasising the benefit of the implemented quality programs. The managers realised the role of communication, education and training to get all employees involvement and to be successful in the continuous quality improvement in hospital services.

### **8.3.8 Professional/managerial relationships**

The need to involve clinical staff in quality management initiatives, especially physicians, is seen as an important factor for success [Shortell et al., 1995b; Blumenthal et al., 1998]. Doctors who are involved in governance may not only improve communication among other doctors, but also build trust by assuring clinical staff that, professional values and goals are represented in the policy [Shortell, 1991]. Doctors who are involved from the beginning, and who are educated about the ideas behind quality improvement, influence the successful implementation of programs overall and are more likely to integrate quality improvement principles into their clinical practice [Shortell et al., 1995b; Boerstler et al., 1996; Weiner et al., 1997; Zabada et al., 1998]. A recurrent problem, though, is that physicians do not tend to see quality management as important, and securing their involvement tends to be difficult. Moreover, the professional standards and skills of doctors give them power and autonomy [Mintzberg, 1995]. A hospital does not conform to the assumed TQM model of hierarchical control [Arndt and Bigelow, 1995] and physicians involvement in TQM initiatives has to be negotiated.

The findings of this study indicate that doctor resistance to the implementation of quality programs was an issue for the Thai hospitals. In the interviews (Chapter 6), there is a perception that doctors involved in clinical duties (less so for doctors in management positions) felt no ownership of the program and believed that they already provided high quality services. They were more concerned with any limitations on their clinical practice and with staff freezes. This finding is also interesting in the light of the observation in the survey (Chapter 5) that training programs were less often aimed at medical officers (and allied health staff) than other clinical staff such as nurses. Training is recognised to be an important tool for increasing the involvement of staff in quality management programs [Boerstler et al., 1996] and it was interesting that nursing staff, who had received more training, were more active in quality initiatives.

#### **8.4 Lessons for quality management in Thai hospitals**

The study suggests several lessons for developing quality management in Thai hospitals. First, there are several ways in which the HA-Thai accreditation program might be improved. In response to the concerns of hospital managers, its quality concepts need to be made clearer. The difficulty in analysing the financial plans also highlight the need for clearer reporting guidelines. The HA-Thai program could also assist hospitals improve the quality components in their strategic plans

Second, hospitals should be encouraged to collect and analyse more comprehensive quality data. The use of statistical tools and clinical indicators to monitor performance did not seem particularly widespread. This may be due to a lack of statistical skills, and the availability of

resources. It may also be due to limitations with current information systems. If so, the government would need to take responsibility for coordinating these developments, to ensure data compatibility. The HA-Thai program could also play a role in the development of clinical indicators and performance measures.

## **8.5 Strengths and limitations of the study**

This was an exploratory study into the adoption of quality management in a sample of Thai hospitals. The topic had received little attention previously. Consequently, it provides valuable baseline data which can be used in further studies. However, the hospitals taking part were all early volunteers to the Hospital Accreditation Program and because of this may not be similar to other Thai hospitals. It cannot be assumed that the findings of the study are generalisable to the Thai hospital population as a whole.

A strength of the research was its use of different methods to assess the state of quality service management in these volunteer hospitals. The use of a validated but adapted survey instrument enabled the collection of a wide range of information. Its weakness was that it did not contain many open questions, and there may be more culturally appropriate ways of assessing the opinions of those concerned. Sending the survey to the CEOs is also likely to mean the results reflect the opinion of the upper level of management, which may not be the same as other staff. But there did not seem to be an alternative, and it is an approach used by other studies [Chan et al., 1997].

The interviews give greater insight into the perceptions among the staff of the hospitals and allowed for more flexibility in the assessment of the actual

process the development of the quality services went through. The results are inherently limited in their generalisability though. The document analyses allowed for a study of the non-prompted presentation of strategies and plans the management presented in light of the attempts to improve the quality of services (given that they joined the HA-Thai) and the economic crisis. As such the documents give potentially the best indication of what the managers themselves think of as important. However, the documents can be hampered by political, strategic, cultural and educational issues such as the need to protect the hospital from competition and lack of formalised training in financial or strategic management.

## **8.6 Suggestions for further research**

This study was conducted shortly after the creation of the Thailand Hospital Accreditation Scheme. The Hospital Accreditation Program was still in its pilot phase and had yet to be evaluated. The implementation of quality management programs had not been widespread among Thai hospitals and clinicians and managers had not developed much experience using quality concepts. In addition, the country had experienced an economic crisis which had burdened hospitals in many ways. Most notably, there had been a shift in patient demand from private to public hospitals, and all hospitals were forced to make changes due to budget constraints and changes in access to the availability of drugs. All these factors created a unique context.

The conditions within Thailand have changed since this study. It would be useful, therefore, to undertake further studies:

- to investigate the success of current quality initiatives being implemented by Thai hospitals; and

- to investigate how the Thai Hospital Accreditation program has evolved.

This study had focused on the hospitals that were first to join the Thai Hospital Accreditation program. Since this study, these hospitals would have considerable more experience. Other hospitals would have joined more recently, and might be as inexperienced as the initial hospitals when they were surveyed for this study. Including both in a future study would allow the two to be compared and contrasted.

## **8.7 Conclusion**

The purpose of this study was to explore the strategies that hospital managers used to maintain quality within their HA-Thai accredited hospital in a time of economic uncertainty. The study investigated managers' views about the hospital accreditation program, and its role in quality management. The overall finding was that the program was a valuable tool that assisted managers to improve the quality of services. These hospitals were early volunteers to the Hospital Accreditation Program and their managers were convinced that accreditation by an external body was required to ensure the reputation of their organisation in the community. The managers did not view it uncritically, however, but considered that it needed to be reviewed to increase transparency and accountability.

Overall, despite the constraints, and the difficulties which flowed from them (notably increased work pressures for staff), these Thai hospital managers appear to have been successful in maintaining a commitment to quality management. Each of the hospitals where managers were interviewed had a centre or department that oversaw the implementation and maintenance of their quality programs. Convinced of the long term benefits,



they worked through the difficulties of implementation, including some staff dissatisfaction with the increased workload. They were also committed to training programs within the organisation and were perturbed when these were curtailed at the beginning of the downturn.

Some areas of quality management were less developed than others (e.g. strategic planning, quality costing and inter-organisation communication), but the managers remained committed to improving quality, and to the need of having their organisation accredited. The Thai respect for leadership, and a strong sense that there is a special Thai way of doing things, appear to be important factors in their success.

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## **Appendix 1**

### **The Thai Health Care System**

#### **The provincial system**

Thailand is broken up into 73 provinces based on geographical area and population. Each province has a Provincial Governor. The Provincial Governor is responsible for the safety, equality, health care delivery and housing needs of the people who live in the province. The Governor administers and supervises each district and its officers, and all government employees who work in that province. The Provincial Governor is directly responsible to the Ministry of the Interior.

#### **Health care administration**

The Ministry of Public Health and the Ministry of the Interior have collaborative roles in implementing the provincial health care system, although it is controlled and administered by the Provincial Governor. The Ministry of Public Health provides services, resources and health professionals to all provincial health care organizations.

In each province, provincial Public Health Officers act as delegates of the national health policy from the Ministry of Public Health to the directors of regional hospitals and medical centres, general hospital and all chiefs of health centres in that province. The directors of regional hospitals and medical centres, the general hospitals and the community hospitals are administered and supervised by the provincial Public Health Officers. The

District Health Officers and chiefs of health centres are administered by the District Officers.

The provincial Public Health Officers have to ensure that hospitals and health offices provide an integrated health service from primary through to tertiary care around the provincial communities. The provincial health plan and the national health plan are expected to serve the communities' needs. The provincial Public Health Officer has to supervise and co-operate with hospitals and health offices to provide services and facilities for the health care system in each province and also co-operate with other provinces which are located nearby.

### **Patient services**

A provincial health plan has been developed to address the health problems/concerns in each province. These plans are integrated with the national health plan and implemented throughout the regional hospitals and medical centres, the general hospitals, district health offices and health centres.

The health centres are located in villages around the rural areas of Thailand. These centres provide primary care, but there are no doctors. There is a chief who has a Diploma in Public Health. This person runs and controls each centre. Health centres have one registered nurse and other allied health personal, such as a midwife, who is not a registered nurse. The numbers of staff at these centres depend on the size of the population of the village.

The district or sub district health offices are centrally located among a number of health centres. Even though these offices are larger than the health centres, there are no doctors. The District Health Officer has a Bachelor/Diploma in Public Health and the office has one or two registered nurses and other allied health people such as midwifery and health promotion personnel. The District Health Officer controls these centres, and the number of staff depends the size of the population served. The centres and their administrators are directly responsible to the District Officer, who oversees the regulations for the delivery of care.

The health centres and district health offices provide primary care in the villages. If a patient needs more complex treatment than can be given by these institutions, they will be referred to a nearby community hospitals.

The community hospitals are centrally located in communities. This is the first place that a patient will see a doctor. These hospitals range in size from 10 to 120 beds. They provide secondary care, including minor operations in small hospitals and major operations in larger ones.

The regional hospitals, medical centres and general hospitals are located in the centres of each province. These hospitals have from 120 to 700 beds depending on population and location. Most of the patients who are admitted to these hospitals are referred from community hospitals, because the treatment required cannot be delivered there. Typically the treatment is tertiary care, such as nuclear medicine, but it also includes primary care for the local population. The hospital directors, who are responsible to the Provincial Health Office, are in charge of the delivery of services.

## **Funding**

Funding and resources for provincial health care organizations are provided from the Ministry of Public Health, which has the legal power to control, supervise and distribute its hospitals around Thailand. The provincial public health office, hospitals, district health offices and health centres have to submit an annual financial reports to the Office of the Permanent Secretary. It is a system of financial control designed by the Office of the Permanent Secretary This Office has the authority to audit at anytime, which may impact on the finances of provincial hospitals

## **Personnel**

Doctors in either general or specialist practice, or in some cases a combination of both, are responsible for a high proportion of all hospital services. Eighty per cent or 13,971 of the doctors in Thailand are salaried employees of government organisations but, although numbers have not been documented, many of these doctors also work in better paid private practices for fee-for-service. Twenty per cent (3,364) of doctors work only in private practice on a fee-for-service basis or are salaried employees of non-government organisations such as churches and charities (Bureau of Health Policy and Planning Report, 1998).

Other health professionals' services are provided in both public and private sectors. The percentage of professional health workers in the public sector is higher than in the private sector. For example the public to private ratio of dentists is approximately 79.8%:13.9% (2941:741), for pharmacists it is approximately 69%: 31% (4223:1889) and registered nurses approximately 86%:34% (48,268:7679) [Ministry of Public Health, 1998].

Health professionals are an important factor in Thailand's health care system because without them the system would collapse.

### **Patient flows**

All Thai people are provided with health care by the Ministry of Public Health. It is not necessary for patients to visit a general practitioner before they visit a specialist. Health care consumers can choose the various providers and organizations which are convenient and they can pay or be subsidised by the government. There are people who are not part of the health care system because they have not sought services from the system. These people may have diseases that have not as yet manifested symptoms and may die without having contact with the health care system.

### **Hospital services**

Hospitals provide medical, nursing, accident and emergency services, acute-care, inpatient and outpatient services, and short and long term stay. Nursing homes are included as hospitals and also cater for short and long-term stay including, but not exclusively, aged and chronically ill patients. Whereas hospitals may be public (and therefore non-profit) or private (operating either for profit or on a non-profit basis), all nursing homes are operated by private organisations for profit.

### **General hospitals**

The Thai general hospital system is a mix of public and private

sector institutions. Almost all Thai public hospitals have to ask for permission from the Thai cabinet to operate their services. Most are financed and controlled by the government, although there is a significant share of the market provided by the non-government (private) sector, in the shape of voluntary non-profit making hospitals, frequently operated by philanthropic foundations. There are also private profit-making hospitals. Most private hospitals have to apply for a license on bed size and operation of their service from the Medical Registration Division, located in the Department of the Office of the Permanent Secretary for Public Health, Ministry of Public Health.

Whether the hospitals are public or government, the government is involved in their direct provision and operation. Public hospitals are involved in eighty-one per cent of total healthcare delivery for Thai people around the country. The Ministry of Public Health provides approximately ninety per cent of public hospitals. The Ministry runs the 708 community hospitals, the 75 general hospitals, and the 17 regional hospitals and medical centres [Ministry of Public Health, 1996a:101].

There are four divisions which control government hospitals run by the Ministry of Public Health, namely, the Department of the Permanent Undersecretary of Public Health, the Department of Medical Services, the Department of Mental Health and the Department of Communicable Disease Control (see Figure 1.1).

- The Department of the Permanent Secretary of Public Health has two divisions namely, the Division of Provincial Hospitals and the Division of Public Health Provinces. The Division of Provincial Hospitals runs the general hospitals, and the regional hospitals and medical centers,



which are located in the provinces throughout Thailand. These hospitals have between 150-900 beds, depending on the population of the area served by the hospital and on the range of services offered by the hospital. Almost all of these hospitals offer tertiary care. The Division of Public Health Provinces runs community hospitals. These hospitals have between 10-120 beds, depending on the population of the area served by a hospital. Almost all of these hospitals provide both primary and secondary care and also co-operate with the community health centres.

- The Department of Medical Services runs specialised hospitals and hospitals for special groups of people, such as children's hospitals and a hospital for monks.
- The Department of Mental Health runs and supports the psychiatric hospitals and centres around the country.
- The Department of Communicable Disease Control runs and supports all the institutions concerned with communicable diseases, such as the Central Chest Hospital and Bamrasnaradura Hospital.

There are other public hospitals which are run by other government sectors such as the medical schools, run by the Ministry of University Affairs, and the military hospitals (Royal Thai Army, Royal Thai Air-Force and Royal Thai Navy).

The government has the right to operate its hospitals, relying on tradition, public image, persuasion and awareness of the perception of services which are available. To oversee this, the government has a watchdog division, which supervises its hospitals to ensure that its instructions are carried out effectively and efficiently. Private hospitals have to comply with the rules and regulations/guidelines set down by the Ministry

of Public Health. These rules and regulations/guidelines cover a range of services such as the bed size, the medical staff and appeal procedures and the standard for services.

### **Hospital organization**

Public hospitals in Thailand are characterised by universal coverage and 'free' in-patient and out-patient care for the poor or for the people who can not effort the cost. The majority of public hospitals are run the Ministry of Public Health. To provide quality services and operate integrated health services the organisation scheme of the hospital will be demonstrated roles, its administration, task performance and framework broadly established by top management.

In regional hospitals, medical centres and general hospitals, the highest level of management is the Director (see Figures 1.2 and 1.3), who is appointed by the Permanent Secretary of Public Health. These Directors are permanent government employees and have considerable power in their organisations. The director of the hospital has a four year term. Two deputies assist them, namely, the Deputy Director of Medical Services, who is a medical person, and the Deputy Director of Administration, who is a non-clinical professional. The Deputy Director of Medical Services supervises all the clinical departments. The Deputy Director of Administration supervises all non-clinical departments. Naturally, they are expected to coordinate their work. Most heads of clinical departments are medical staff. The deputies and all heads of departments or divisions are appointed by the director of the hospital. Departments and divisions usually have delegated executive power and can initiate and implement policies

which do not affect other departments or divisions. Each department is responsible for the co-ordination of its services with other departments.

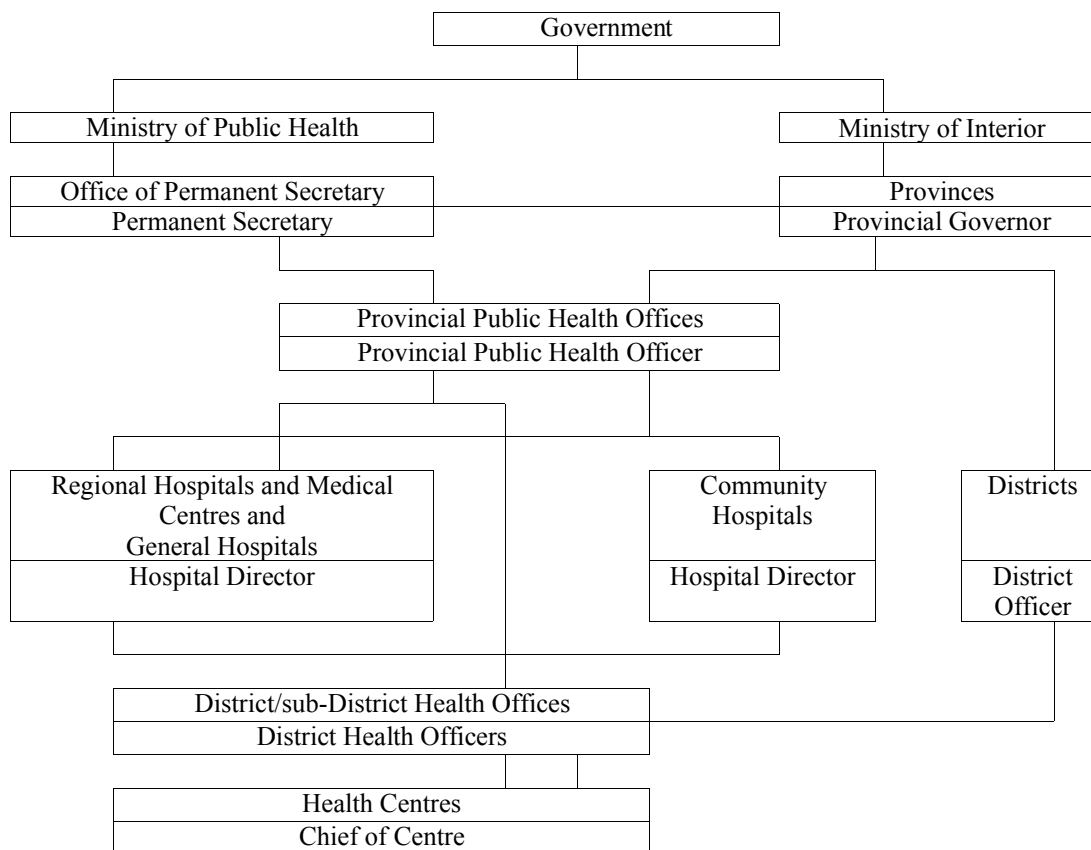


Figure A1.1 Organisational Structure of Provincial Health Administration

Legend:

\_\_\_\_\_ Line of administration  
 \_\_\_\_\_ Line of supervision and co-operation

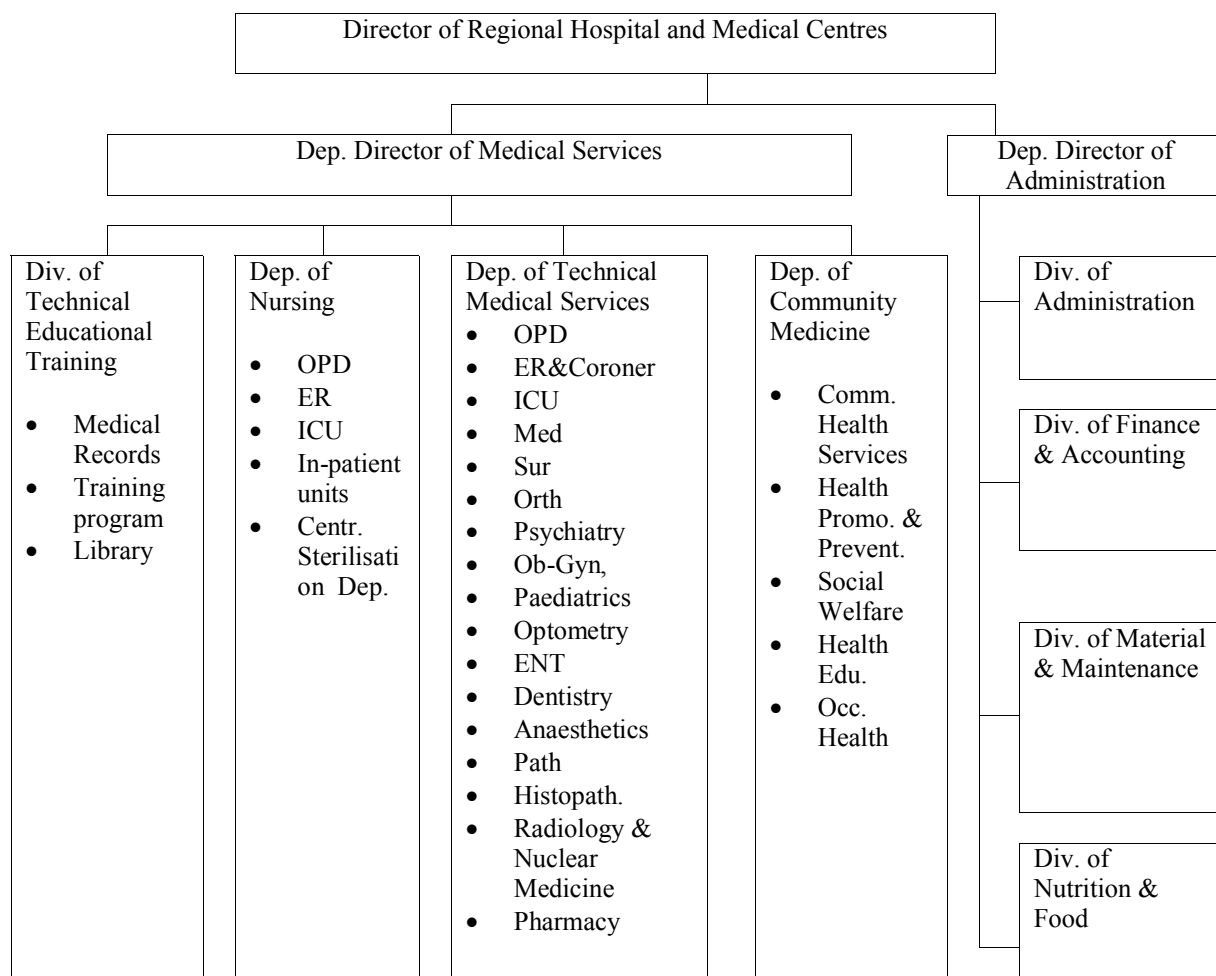


Figure A1.2 Regional Hospitals and Medical Centres

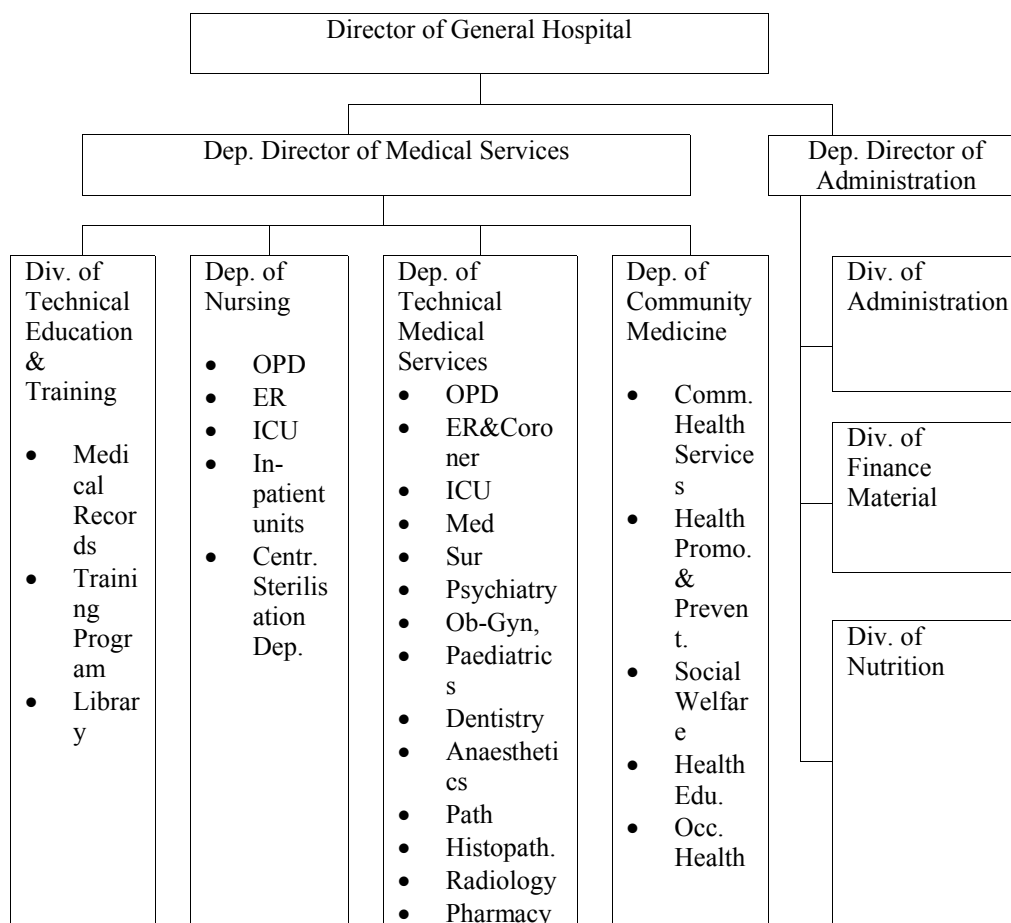


Figure A1.3 General Hospital. More specialised cases are referred to the Regional Hospital

## **Appendix 2**

### **Hospital Standards**

There are five sections in the hospital standards. The accreditation process evaluates the participating organization's client care, in accordance with these five sections. These standards focus on processes and outcomes, which give organizations an effective way of assessing how they are performing in the health care field.

**Section one:** Leadership and Management; includes patients' rights, ethics, governance and management. The standards and criteria in this section are interrelated with all the other sections. Some of these standards are specific to the responsibilities of the hospital board or management. The main points are:

- The governing body and managers have overall responsibility to ensure the organization provides quality services.
- The organization's policies and procedures should address patients/customers rights and responsibilities, as well as professional codes of ethics to provide a basis for resolving any ethical issues.

**Section two:** General Standards; includes the mission statement and policies of the organisation. The standards and criteria in the General

Standards are the values inherent in the organization's mission statement and policies which ensure continuous improvement in services. The main points are:

- The leaders of the organization should establish a mission statement, goals and policies to ensure continuous quality improvement.
- They should motivate and empower staff to excel in continuous quality improvement.

**Section three:** Management Organization; includes environmental health and safety, human resources, infection control, information management, medical services and nursing services. Some of the standards and criteria in the Management Organization section are interrelated with other sections. The main points are:

- It is the responsibility of all staff to keep patients/customers and staff safe and to ensure equipment and the environment support safe practice.
- To ensure the organization is staffed to fulfil its role and achieve its values and goals.
- To ensure every person who work in the organization takes responsibility to prevent and minimise infection in every aspect of their work.
- To ensure that information management meets the organization's internal and external needs.

- To ensure doctors and nurses provide a comprehensive assessment identifying patient's/customer's needs for the delivery of care.

**Section four:** Clinical Services; includes ambulatory and emergency services, anaesthetics, blood services, critical care, health education, in-patient services, out-patient services, neonatal (newborn) services, obstetrics, theatres, pathology, radiotherapy, rehabilitation and social welfare. The main point in the Clinical Services section is to provide a high standard of clinical care to the patients/customers which the organisation serves.

**Section five:** Supporting Services; includes administration, central sterilizing supplies department, library and linen services.

The main points are:

- To support all the services need of other departments.
- To provide quality services and quality improvement activities.



Please see print copy for Appendix 3

Please see print copy for Appendix 4

Please see print copy for Appendix 5

**Table App6.1 Continuous variables from survey**

Question no.			Class		Bedsize		Accreditation Process		Region		Missing
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
	Total no. of	28	20	8	14	14	24	4	6	22	
A7	Total number of licensed beds										0
	Mean		397.30	230.70	150.20	549.10	380.60	185.30	333.30	354.10	
	SD		263.60	136.20	60.20	185.60	250.30	22.03	211.30	256.60	
	t-test			0.00		0.00		-0.20		0.00	
	p-value			1.00		1.00		0.84		1.00	
A8	The average annual occupancy rate (%)										2
	Mean		85.10	56.28	66.81	87.87	78.22	80.00	58.40	81.85	
	SD		19.05	13.18	20.72	17.76	22.71	10.00	18.91	20.21	
	t-test			0.00		0.00		-0.25		0.00	
	p-value			0.99		0.99		0.80		0.99	
A9	The average number of bed days										1
	Mean		11.68	12.62	11.76	12.14	12.47	8.66	12.83	11.71	
	SD		3.77	3.77	3.70	3.88	3.77	1.52	2.63	3.72	
	t-test			0.00		0.00		-0.09		0.00	
	p-value			0.99		0.99		0.92		0.99	
A11	Total annual expenditure (million Bhat)										16
	Mean		210.00	453.60	97.50	444.50	294.10	155.50	1036.00	201.45	
	SD		252.00	504.30	65.33	391.80	352.40	148.40	0.00	226.20	
	t-test			0.00		0.00		0.00		0.00	
	p-value			1.00		1.00		1.00		1.00	
A6	Total no. of full time senior managers										3
	Mean		8.31	7.83	6.30	10.25	8.33	9.00	8.75	8.09	
	SD		8.30	4.30	3.54	9.94	7.95	4.58	3.30	8.06	
	t-test			0.00		0.00		-1.41		0.00	
	p-value			1.00		1.00		0.88		1.00	
	Total no. of part time senior managers										27
	Mean		0.00	48.00	48.00	0.00	48.00	0.00	48.00	0.00	
	SD		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	t-test										
	p-value										
	Total no. of full time middle managers										4
	Mean		31.70	26.60	20.30	42.40	32.70	23.60	31.70	30.20	
	SD		30.70	16.00	10.10	36.50	29.50	3.21	15.50	27.60	
	t-test			0.00		0.00		-0.19		0.00	
	p-value			0.99		0.99		0.84		0.99	
	Total no. of full time medical officers										2
	Mean		51.30	22.10	12.60	74.30	48.20	21.00	37.60	44.90	
	SD		67.40	17.60	7.60	72.30	63.50	8.50	24.50	65.40	
	t-test			0.00		0.00		-0.12		0.00	
	p-value			1.00		1.00		0.90		1.00	
	Total no. of part time medical officers										18
	Mean		3.75	77.60	42.20	54.00	51.70	37.00	99.50	13.80	
	SD		2.50	92.40	35.20	112.30	88.80	-	111.10	15.50	
	t-test			0.00		0.00		-0.08		0.00	
	p-value			1.00		1.00		0.93		1.00	

Question no.		Class		Bedsize		Accreditation Process		Region		Missing	
		Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok		
	Total no. of full time nurses	Mean	299.20	61.10	76.90	421.00	275.10	84.60	173.70	255.00	3
		SD	206.30	48.90	59.10	152.40	209.60	72.20	169.60	215.40	
		t-test		0.00		0.00		-0.22		0.00	
		p-value		1.00		1.00		0.82		1.00	
	Total no. of part time nurses	Mean	23.66	50.50	39.33	37.00	46.25	29.50	50.00	34.60	21
		SD	14.04	15.30	21.60	0.00	18.31	28.90	18.38	20.37	
		t-test		0.00		0.00		-0.22		0.00	
		p-value		1.00		1.00		0.83		1.00	
	Total no. of full time allied health staff	Mean	87.00	13.30	16.75	120.40	75.66	22.50	19.50	78.40	4
		SD	107.60	7.89	12.46	118.90	103.10	20.50	9.32	105.10	
		t-test		0.00		0.00		-0.22		0.00	
		p-value		1.00		1.00		0.83		1.00	
	Total no. of part time allied health staff	Mean	17.33	0.00	17.33	0.00	17.33	0.00	27.00	12.50	26
		SD	9.50	0.00	9.50	0.00	9.50	0.00	0.00	0.00	
		t-test									
		p-value									
	Total no. of full time admin. staff	Mean	64.00	115.20	66.90	79.72	71.63	106.00	165.50	64.10	6
		SD	82.00	109.80	82.61	94.83	88.06	127.20	79.90	83.90	
		t-test		0.00		0.00		-0.85		0.00	
		p-value		1.00		1.00		0.93		1.00	
	Total no. of part time admin. staff	Mean	48.00	0.00	48.00	0.00	48.00	0.00	48.00	0.00	27
		SD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
		t-test									
		p-value									
	Total no. of part time other staff	Mean	463.00	0.00	359.00	489.80	493.30	197.00	997.00	404.40	18
		SD	301.00	0.00	229.10	324.20	303.40	0.00	0.00	249.90	
		t-test				0.00		0.00		0.00	
		p-value				1.00		1.00		1.00	

**Table App6.2 Discrete Variables resulting from Survey**

Item	Question no.		Class		Bedsizes		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Total no. of hospitals	20	8	14	14	24	4	6	22	28
1.1	B4	Has your hospital implemented TQM practices?									
		Yes	17	5	10	12	19	3	4	18	22
		No	3	3	4	2	5	1	2	4	6
		Missing									0
		Chi-sq	1.71		0.84		0.76		0.64		
		df	1		1		1		1		
		p value	0.19		0.35		0.38		0.42		
	B5	When did your hospital introduce TQM (approx.)?									
		1997-99	7	5	7	5	10	2	3	9	12
		1996-97	7	2	3	6	7	2	1	8	9
		Before 1995	6	1	4	3	7	0	2	5	7
		Missing									0
1.2	B11	Are your hospital policies in relation to TQM communicated throughout the hospital?									
		Yes	17	6	9	14	20	3	5	18	23
		No	0	1	1	0	0	1	1	0	1
		Missing									4
		Chi-sq	2.53		1.46		0.15		3.13		
		df	1		1		1		1		
		p value	0.11		0.22		0.67		0.08		
	D8	How are these decisions conveyed to members of staff and how often?									
		1 Distribution of written policy									
		Not at all	6	1	4	3	5	2	0	7	7
		From time to time	5	6	6	5	10	1	5	6	11
		Very regularly	7	1	2	6	7	1	1	7	8
		Missing									2
		Chi-sq	6.04		2.09		1.55		5.80		
		df	2		2		2		3		
		p value	0.19		0.35		0.81		0.21		
		2 Via formal word of mouth:									
		Not at all	5	1	4	2	4	2	0	6	6
		From time to time	5	5	4	6	9	1	5	5	10
		Very regularly	8	2	4	6	9	1	1	9	10
		Missing									2
		Chi-sq	5.21		1.32		2.90		7.08		
		df	2		2		2		2		
		p value	0.26		0.51		0.57		0.13		
		3 Via informal word of mouth:									
		Not at all	4	2	5	1	3	3	1	5	6
		From time to time	4	3	4	3	6	1	2	5	7
		Very regularly	10	2	5	7	12	0	2	10	12
		Missing									3
		Chi-sq	3.45		7.89		9.69		2.14		
		df	2		2		3		2		
		p value	0.48		0.19		0.46		0.71		
		4 Newsletter:									
		Not at all	8	0	4	4	7	1	0	8	8

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		From time to time	3	4	5	2	5	2	2	5	7
		Very regularly	8	4	5	7	11	1	4	8	12
		Missing									1
		Chi-sq	8.31		2.58		3.19		6.11		
		df	2		2		2		2		
		p value	0.81		0.27		0.52		0.19		
		5 Performance report:									
		Not at all	7	0	3	4	6	1	0	7	7
		From time to time	5	4	4	5	8	1	3	6	9
		Very regularly	6	3	4	5	7	2	2	7	9
		Missing									3
		Chi-sq	6.53		0.00		6.29		3.12		
		df	2		2		2		2		
		p value	0.16		0.99		0.17		0.53		
		6 In other ways:									
1.3	B12	Not at all	0	0	0	0	0	0	0	0	0
		From time to time	0	0	0	0	0	0	0	0	0
		Very regularly	1	0	1	0	1	0	0	0	1
		Missing									27
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
		To what extent has group XXX implemented TQM?									
		1 Senior mangement									
		Not at all	3	0	0	3	3	0	0	3	3
		Moderately	2	1	1	2	3	0	1	2	3
		Very substantially	13	6	10	9	16	3	5	14	19
		Missing									3
		Chi-sq	1.33		1.25		1.08		1.15		
		df	2		2		2		2		
		p value	0.51		0.23		0.58		0.56		
		2 Middle management									
		Not at all	1	0	0	1	1	0	0	1	1
		Moderately	3	4	4	3	7	0	3	4	7
		Very substantially	14	3	10	7	14	3	3	14	17
		Missing									3
		Chi-sq	4.24		4.52		1.60		2.06		
		df	2		2		2		2		
		p value	0.12		0.21		0.45		0.36		
		3 Medical officer									
		Not at all	9	4	5	8	13	0	3	10	13
		Moderately	6	3	3	6	8	1	3	6	9
		Very substantially	3	0	3	0	1	2	0	3	3
		Missing									3
		Chi-sq	1.34		0.11		10.20		1.38		
		df	2		1		2		2		
		p value	0.51		0.73		0.01		0.50		
		4 Nurses									
		Not at all	1	1	1	1	2	0	1	1	2
		Moderately	5	4	6	3	6	3	2	7	9
		Very substantially	11	3	8	6	11	3	3	11	14
		Missing									3
		Chi-sq	1.89		0.97		1.08		0.38		
		df	1		2		1		1		
		p value	0.16		0.63		0.29		0.60		
		5 Allied health staff									
		Not at all	1	1	1	1	2	0	1	1	2
		Moderately	5	4	5	4	9	0	3	6	9
		Very substantially	12	2	5	9	11	3	2	12	14
		Missing									3
		Chi-sq	2.99		3.48		2.68		1.89		
		df	2		2		2		2		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		p value	0.22		0.17		0.26		0.39		
		6 Administrative staff									
		Not at all	2	2	2	2	4	0	2	2	4
		Moderately	4	1	0	5	5	0	2	3	5
		Very substantially	2	0	1	1	2	0	0	2	2
		Missing									17
		Chi-sq	1.93		1.89		0.00		1.50		
		df	2		2				2		
		p value	0.38		0.45				0.47		
	B13	How frequent does group XXX report on quality?									
		1 Senior mangement									
		Not at all	4	2	4	2	5	1	2	4	6
		Only occasionally	0	0	0	0	0	0	0	0	0
		From time to time	6	4	5	5	10	0	3	7	10
		Very regularly	7	2	5	4	6	3	2	7	9
		Missing									3
		Chi-sq	1.65		2.79		6.06		0.84		
		df	3		3		3		3		
		p value	0.64		0.42		0.19		0.83		
		2 Middle management									
		Not at all	5	1	4	2	5	1	1	5	6
		Only occasionally	0	0	0	0	0	0	0	0	0
		From time to time	10	2	3	9	12	0	2	10	12
		Very regularly	6	1	5	2	4	3	1	6	7
		Missing									3
		Chi-sq	8.51		5.20		8.76		4.58		
		df	3		3		3		3		
		p value	0.03		0.15		0.03		0.20		
		3 Medical officers									
		Not at all	12	4	5	11	12	4	1	15	16
		Only occasionally	9	0	0	0	0	0	0	0	0
		From time to time	5	2	4	3	5	2	2	5	7
		Very regularly	1	1	2	0	1	1	0	2	2
		Missing									3
		Chi-sq	0.55		4.17		6.73		0.72		
		df	3		3		3		3		
		p value	0.90		0.24		0.08		0.86		
		4 Nurses									
		Not at all	3	1	2	2	3	1	1	3	4
		Only occasionally	1	0	0	1	1	0	1	0	1
		From time to time	6	4	4	6	10	0	4	6	10
		Very regularly	9	1	5	5	7	3	1	9	10
		Missing									3
		Chi-sq	2.67		0.24		5.11		2.52		
		df	2		2		2		2		
		p value	0.26		0.88		0.07		0.28		
		5 Allied health staff									
		Not at all	7	2	2	7	9	0	2	7	9
		Only occasionally	0	1	1	0	1	0	1	0	1
		From time to time	9	3	6	6	10	2	3	9	12
		Very regularly	2	1	2	1	2	1	0	3	3
		Missing									3
		Chi-sq	2.81		3.86		2.90		4.13		
		df	3		3		3		3		
		p value	0.42		0.28		0.40		0.24		
		6 Administrative staff									
		Not at all	10	2	6	6	11	1	2	10	12
		Only occasionally	0	1	0	1	1	0	1	0	1
		From time to time	8	1	4	5	7	2	2	7	9
		Very regularly	3	0	2	1	2	1	0	3	3
		Missing									3



Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almos	Partly	Bangkok	Not-Bangkok	
		Chi-sq	4.05		2.45		3.95		4.13		27
		df	3		3		3		3		
		p value	0.25		0.48		0.26		0.24		
		7 Other staff									
		Not at all	1	0	1	0	0	0	0	1	
		Only occasionally	0	0	0	0	0	0	0	0	
		From time to time	0	0	0	0	0	0	0	0	
		Very regularly	0	0	0	0	0	0	0	0	
		Missing									
		Chi-sq	0		0		0		0		
		df	0		0		0		0		
		p value	0		0		0		0		
		B25	Have external consultants been employed to assist with TQM practices?								
	Yes	13	3	6	10	14	2	3	13		
	No	5	4	5	4	8	1	2	7		
			Missing								
			Chi-sq	1.89		0.76		0.01		0.43	
			df	1		1		1		1	
			p value	0.17		0.38		0.92		0.84	
1.4	B26	At this stage of your TQM practice, how would you best describe your hospital's implementation of TQM?									444
		An adjunct to management practices	9	2	6	5	9	2	1	10	
		A fully integrated approach to mangement	5	4	2	7	9	0	4	5	
		Both an adjunct and a fully integrated approach	4	0	2	2	3	1	0	4	
		Missing									
		Chi-sq	3.42		3.40		2.18		5.01		
		df	2		2		2		2		
		p value	0.18		0.14		0.33		0.08		
1.5	C1	Hospitals implementing TQM system experience changes in their operational outcomes. What has your hospital's experience been?									14805
		1 Total end cost									
		Increased	12	2	4	10	11	3	4	10	
		Moderate change	6	2	6	2	7	1	2	6	
		Decreased	0	0	0	0	0	0	0	0	
		Missing									
		Chi-sq	0.32		0.20		0.70		4.68		
		df	2		1		2		2		
		p value	0.95		0.65		0.81		0.19		
		2 Customer complaints									
		Increased	4	1	1	4	5	1	1	5	
		Moderate change	14	3	11	6	15	2	3	14	
		Decreased	0	0	0	0	0	0	0	0	
		Missing									
		Chi-sq	7.87		0.62		3.89		1.44		
		df	2		2		2		2		
		p value	0.09		0.73		0.42		0.83		
		3 Average bed days									
		Increased	6	4	9	1	8	2	1	9	
		Moderate change	8	2	1	9	8	2	1	9	
		Decreased	0	0	0	0	0	0	0	0	
		Missing									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Chi-sq	5.95		0.00		4.52		8.69		
		df	2		1		2		2		
		p value	0.20		1.00		0.34		0.06		
		4 Re-admissions									
		Increased	3	3	2	4	4	2	2	4	6
		Moderate change	12	3	11	4	12	3	4	11	15
		Decreased	0	0	0	0	0	0	0	0	0
		Missing									7
		Chi-sq	2.62		2.46		4.66		3.69		
		df	2		2		2		2		
		p value	0.62		0.29		0.32		0.44		
	B27	Are there barriers within your hospital to implementing TQM?									
		Yes	13	6	7	12	18	1	5	14	19
		No	4	0	3	1	2	2	0	4	4
		Missing									5
	B28	Chi-sq	1.70		1.95		5.83		1.34		
		df	1		1		1		1		
		p value	0.19		0.16		0.01		0.84		
		What barriers currently exist which impedes the implementation of TQM practice in your hospital?									
	B29	1 Is too expensive to introduce	8	4	9	3	11	1	3	9	12
		2 Lack of support from key groups and employees, lack of knowledge and skills, lack of monitoring and customers do not need the quality improved.	12	3	3	12	13	2	3	12	15
		3 No apparent benefits	0	0	0	0	0	0	0	0	0
		Missing									1
	B29	Chi-sq	0.72		10.71		0.11		0.56		
		df	1		1		1		1		
		p value	0.69		0.01		0.73		0.76		
		Information which you require to extend the use of TQM practices in your hospital is:									
	B29	Readily available	3	0	2	1	2	1	0	3	3
		Not available	9	6	8	7	13	2	5	10	15
		Too difficult to obtain	2	1	1	2	3	0	1	2	3
		Too complicated	2	1	2	1	2	1	1	2	3
	B29	Not applicable to our hospital	0	0	0	0	0	0	0	0	0
		Other	0	1	0	1	1	0	0	1	1
		Missing									2
		Chi-sq	4.31		5.61		2.43		3.46		
	B21	df	5		4		5		5		
		p value	0.50		0.34		0.77		0.62		
		Does your hospital have a quality training program?									
		Yes	18	7	11	14	22	3	6	19	25
	B21	No	0	0	0	0	0	0	0	0	0
		Missing									3
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
	B22	Who is responsible for conducting the quality training program?									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		External consultants	1	1	1	1	2	0	1	1	2
		Internal staff	8	4	5	7	11	1	2	10	12
		Other	0	0	0	0	0	0	0	0	0
		External and internal	7	2	5	4	7	2	2	7	9
		Internal and other	1	0	0	1	1	0	1	0	1
		External and internal and other	1	0	0	1	1	0	0	1	1
		Missing									3
		Chi-sq	1.57		2.11		1.58		4.59		
		df	4		4		4		4		
		p value	0.81		0.75		0.81		0.33		
	B23	For whom are the quality programs offered?									
		1 Senior management									
		Yes	12	3	7	8	12	3	2	13	15
		No	6	4	4	6	10	0	3	7	10
		Missing									3
		Chi-sq	1.19		0.18		2.27		0.85		
		df	1		1		1		1		
		p value	0.28		0.74		0.13		0.36		
		2 Middle management									
		Yes	17	5	9	13	19	3	5	17	22
		No	1	2	2	1	3	0	0	3	3
		Missing									3
		Chi-sq	2.52		0.71		0.47		1.04		
		df	1		1		1		1		
		p value	0.11		0.39		0.49		0.30		
		3 Medical officers									
		Yes	16	3	8	11	16	3	3	16	19
		No	2	4	3	3	6	0	2	4	6
		Missing									3
		Chi-sq	5.86		0.11		1.08		0.88		
		df	1		1		1		1		
		p value	0.02		0.73		0.29		0.35		
		4 Nurses									
		Yes	18	7	11	14	22	3	5	20	25
		No	0	0	0	0	0	0	0	0	0
		Missing									3
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
		5 Allied health staff									
		Yes	18	6	10	14	21	3	4	20	24
		No	1	0	1	0	1	0	1	0	1
		Missing									3
		Chi-sq	2.68		1.32		0.14		4.17		
		df	1		1		1		1		
		p value	0.10		0.25		0.70		0.04		
		6 Administrative staff									
		Yes	17	6	9	14	21	2	4	19	23
		No	1	1	2	0	1	1	1	1	2
		Missing									3
		Chi-sq	0.52		2.76		2.98		1.22		
		df	1		1		1		1		
		p value	0.47		0.09		0.09		0.03		
		7 Hotel staff									
		Yes	6	1	3	4	6	1	2	5	7
		No	10	6	8	8	14	2	3	13	16
		Missing									3
		Chi-sq	1.24		0.10		0.01		0.28		
		df	1		1		1		1		
		p value	0.27		0.75		0.90		0.59		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
	B24	How often does your hospital offer quality training programs? 1 Ongoing basis									
		Yes	3	0	1	2	3	0	0	3	3
		No	15	7	10	12	19	3	6	16	22
		Missing									3
		Chi-sq	1.33		0.15		0.47		1.08		
		df	1		1		1		1		
		p value	0.25		0.69		0.50		0.30		
		2 At introduction to organisation only									
		Yes	2	1	0	3	3	0	1	2	3
		No	16	6	11	11	19	3	5	17	22
		Missing									3
		Chi-sq	0.05		2.67		0.47		0.16		
		df	1		1		1		1		
		p value	0.82		0.10		0.50		0.69		
		3 Regularly									
		Yes	9	4	6	7	11	2	3	10	13
		No	9	3	5	7	11	1	3	9	12
		Missing									3
		Chi-sq	0.01		0.05		0.03		0.01		
		df	1		1		1		1		
		p value	0.75		0.82		0.59		0.91		
		4 Occasional basis									
		Yes	10	2	5	7	11	1	2	10	12
		No	8	5	6	7	11	2	4	9	13
		Missing									3
		Chi-sq	1.47		0.05		0.29		0.68		
		df	1		1		1		1		
		p value	0.23		0.82		0.59		0.40		
	B19	Does your hospital have a budget for quality training?									
		Yes	18	7	11	14	22	3	6	19	25
		No	0	0	0	0	0	0	0	0	0
		Missing									3
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
	B20	What % of your total budget is allocated for quality training?									
		0-1%	5	2	2	5	6	1	2	5	7
		1-2%	3	1	1	3	4	0	2	2	4
		3-4%	2	0	2	0	1	1	0	2	2
		5% or more	6	1	3	4	6	1	0	7	7
		Missing									8
		Chi-sq	1.02		3.78		2.03		4.82		
		df	3		3		3		3		
		p value	0.79		0.25		0.45		0.18		
2.1	B1	Does your hospital have a strategic plan?									
		Yes	13	3	8	8	13	3	3	13	16
		No	7	5	6	6	11	1	3	9	12
		Missing									0
		Chi-sq	1.77		0.00		0.61		0.16		
		df	1		1		1		1		
		p value	0.18		1.00		0.44		1.00		
2.2	B2	Does the strategic plan address quality?									
		Yes	13	3	8	8	13	3	3	13	16
		No	5	1	1	5	6	0	1	5	6

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
2.3	B3	Missing									6
		Chi-sq	1.33		2.06		1.30		0.01		
		df	1		1		1		1		
		p value	0.18		0.15		0.25		1.00		
		In what way does this strategic plan address quality?									
		1. Broad statements of intent.									
		Yes	12	3	7	8	12	3	3	12	15
		No	2	0	1	1	2	0	0	2	2
		Missing									11
		Chi-sq	0.49		0.00		0.49		0.49		
		df	1		1		1		1		
		p value	0.49		0.92		0.49		0.49		
3.1	C2	2. Specific goals									
		Yes	10	3	5	8	11	2	2	11	13
		No	4	0	3	1	3	1	1	3	4
		Missing									11
		Chi-sq	1.12		1.63		0.19		0.19		
		df	1		1		1		1		
		p value	0.29		0.20		0.66		0.66		
		3. Specific targets									
		Yes	12	2	6	8	12	2	3	11	14
		No	2	1	2	1	2	1	0	3	3
		Missing									11
		Chi-sq	0.62		0.56		0.62		0.78		
		df	1		1		1		1		
		p value	0.43		0.45		0.43		0.38		
	C3	Is there any reference to the cost of quality in your strategic plan?									
		Yes	9	1	5	5	8	2	0	10	10
		No	10	4	5	9	13	1	4	10	14
		Missing									4
		Chi-sq	1.22		0.49		0.88		3.42		
		df	1		1		1		1		
		p value	0.26		0.48		0.34		0.06		
		Is there a quality cost manual in your hospital?									
		Separate section on quality cost	7	1	5	3	7	1	1	7	8
		Separate quality cost manual	6	1	3	6	6	1	0	7	7
		Missing									11
		Chi-sq	0.01		3.61		0.01		0.98		
		df	1		1		1		0		
		p value	0.91		0.05		0.91		0.33		
	C4	Does your hospital measure quality cost?									
		Yes	4	1	3	2	4	1	1	4	5
		No	14	5	8	11	17	2	3	16	19
		Missing									4
	C5	Chi-sq	0.08		0.51		0.33		0.05		
		df	1		1		1		1		
		p value	0.77		0.47		0.57		0.82		
		What are the reasons for not measuring quality cost?									
		1 Problem with creating parallel register for collecting quality cost from existing information system									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Yes	5	2	1	6	7	0	2	5	7
		No	2	0	0	2	2	0	1	1	2
		Missing									19
		Chi-sq	0.74		0.32		0.00		0.32		
		df	1		1				1		
		p value	0.39		0.57				0.57		
		2 Complexity of service delivery.									
		Yes	2	0	0	2	2	0	0	2	2
		No	5	2	1	6	7	0	3	4	7
		Missing									19
		Chi-sq	0.73		0.32		0.00		0.29		
		df	1		1				1		
		p value	0.39		0.57				0.26		
		3 Not aware of the concept of quality cost.									
		Yes	3	0	0	3	3	0	0	3	3
		No	4	2	1	5	6	0	3	3	6
		Missing									19
		Chi-sq	1.29		0.56		0.00		2.25		
		df	1		1				1		
		p value	0.26		0.45				0.13		
		4 Lack of support for collecting quality cost.									
		Yes	1	1	0	2	2	0	1	1	2
		No	6	1	1	6	7	0	2	5	7
		Missing									19
		Chi-sq	1.15		0.32		0.00		0.32		
		df	1		1				1		
		p value	0.28		0.57				0.57		
	C6	Does your hospital produce quality cost reports?									
		Yes	8	3	6	5	10	1	2	9	11
		No	11	3	5	9	12	2	3	11	14
		Missing									3
		Chi-sq	0.11		0.88		0.15		0.41		
		df	1		1		1		1		
		p value	0.73		0.34		0.69		0.84		
	C7	When did your hospital start producing quality cost reports?									
		1 year ago	2	2	1	3	4	0	1	3	4
		2 years ago	2	0	0	2	2	0	0	2	2
		3 years ago	1	0	0	1	1	0	0	1	1
		4 years ago	1	0	1	0	0	1	0	1	1
		Missing									20
		Chi-sq	2.67		4.00		8.00		1.14		
		df	3		3		3		3		
		p value	0.45		0.26		0.05		0.77		
	C8	What are the main measures used for quality cost in your hospital?									
		Total cost	7	1	3	5	7	1	1	7	8
		Other	1	1	2	0	2	0	1	1	2
		Total cost and other	1	0	0	1	1	0	0	1	1
		Missing									17
		Chi-sq	1.75		3.48		0.41		1.75		
		df	2		2		2		2		
		p value	0.45		0.17		0.81		0.41		
	C9	Does your hospital categorise its quality cost into any of the following?									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almos	Partly	Bangkok	Not-Bangkok	
		1. Prevention cost									
		Yes	5	2	3	4	7	0	2	5	7
		No	4	0	1	3	4	0	0	4	4
		Missing									17
		Chi-sq	1.39		0.35		0.00		1.39		
		df	1		1				1		
		p value	0.23		0.55				0.23		
		2. Appraisal cost									
		Yes	7	2	5	4	8	1	2	7	9
		No	3	0	0	3	3	0	0	3	3
		Missing									16
		Chi-sq	0.80		2.85		0.36		0.80		
		df	1		1		1		1		
		p value	0.37		0.91		0.54		0.37		
		3. Failure cost									
		Yes	9	3	6	6	11	1	2	10	12
	No	3	0	0	3	3	0	0	3	3	
	Missing									13	
	Chi-sq	0.93		2.50		0.26		0.57			
	df	1		1		1		1			
	p value	0.33		0.11		0.65		0.44			
	4. Other cost										
	Yes	5	1	2	4	6	0	1	5	6	
	No	4	0	0	4	4	0	0	4	4	
Missing									18		
Chi-sq	0.74		1.66		0.00		0.74				
df	1		1				1				
p value	0.38		0.19				0.38				
C10		How are costs calculated for each of the components of quality cost?									
		1 Prevention cost									
		Actual	2	1	2	1	3	0	0	3	3
		Estimate	3	0	2	1	3	0	0	3	3
		Both	5	0	1	4	5	0	2	3	5
		Missing									18
		Chi-sq	1.58		2.39		0.00		2.90		
		df	2		2				2		
		p value	0.45		0.32				0.23		
		2 Appraisal cost									
		Actual	3	2	4	1	4	1	1	4	5
		Estimate	2	0	1	1	2	0	0	2	2
		Both	4	1	1	4	5	0	1	4	5
		Missing									16
		Chi-sq	1.33		3.60		1.52		0.48		
		df	2		2		2		2		
		p value	0.51		0.16		0.46		0.78		
		3 Failure cost									
Actual	3	1	2	2	4	0	0	4	4		
Estimate	4	0	2	2	3	1	0	4	4		
Both	4	2	2	4	6	0	2	4	6		
Missing									14		
Chi-sq	1.62		0.08		2.69		3.11				
df	2		2		2		2				
p value	0.44		0.82		0.16		0.21				
4 Other cost											
Actual	2	0	0	2	2	0	0	2	2		
Estimate	1	0	1	0	1	0	0	1	1		
Both	3	2	2	3	5	0	2	3	5		
Missing									20		
Chi-sq	1.60		2.88		0.00		1.60				
df	2		2				2				
p value	0.44		0.23				0.44				

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
	C11	On average, how long does it take to prepare your current quality cost report?									
		0.25 hours	1	0	1	0	1	0	0	1	1
		3.00 hours	1	0	0	1	1	0	0	1	1
		4.00 hours	0	1	1	0	1	0	0	1	1
		6.00 hours	2	0	1	1	1	1	0	2	2
		12.00 hours	1	0	1	0	1	0	0	1	1
		Missing									22
		Chi-sq	6.00		3.75		2.40		0.00		
		df	4		4		4				
		p value	0.19		0.44		0.66				
	C12	Who produces the quality cost report in your hospital?									
		Management Accountant	0	1	0	1	1	0	1	0	1
		Quality Manager	1	0	1	0	1	0	0	1	1
		Financial Accountant	3	0	1	2	3	0	0	3	3
		Other	3	1	2	2	4	0	0	4	4
		Management accountant & quality manager	1	1	1	1	2	0	1	2	2
		Management & financial accountants	2	0	1	1	1	1	0	2	2
		Missing									15
		Chi-sq	5.95		2.24		5.95		9.15		
		df	5		5		5		5		
		p value	0.31		0.81		0.31		0.10		
	C13	How often does the hospital produce quality cost reports?									
		Weekly	1	0	0	1	1	0	0	1	1
		Monthly	0	1	0	1	1	0	1	0	1
		Quarterly	3	0	2	1	2	1	1	2	3
		Annually	2	2	2	2	4	0	1	3	4
		Other	2	0	1	1	2	0	0	2	2
		Weekly and annually	1	1	1	1	1	1	1	1	2
		Missing									15
		Chi-sq	1.19		2.55		13.00		1.29		
		df	3		3		3		3		
		p value	0.75		0.46		0.01		0.73		
	C15	The quality cost data report in your hospital is prepared as the following:									
		In management report	10	3	6	7	12	1	2	11	13
		Separate quality report	1	0	0	1	1	0	1	0	1
		Missing									14
		Chi-sq	0.29		0.80		0.83		0.17		
3.2	B9	Who is responsible for monitoring the overall implementation of TQM?									
		Division	4	0	3	1	4	0	1	3	4
		Committee	12	5	6	11	14	3	4	13	17
		Manager	2	1	1	2	3	0	1	2	3
		Missing									4
		Chi-sq	1.62		2.19		1.41		0.13		
		df	2		2		2		2		
		p value	0.45		0.33		0.49		0.93		
	B10	How frequently is this reported?									
		Monthly	6	3	3	6	8	1	2	7	9
		Quarterly	2	1	2	1	2	1	1	2	3
		Semi-Annually	1	0	0	1	1	0	0	1	1



Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Annually	4	0	1	3	4	0	0	4	4
		Other	3	2	2	3	5	0	2	3	5
		Missing									6
		Chi-sq	2.50		2.04		3.17		2.51		
		df	4		4		4		4		
		p value	0.64		0.72		0.52		0.64		
	B14	How does your hospital measure quality?									
		1 Patient survey									
		Yes	16	7	10	13	20	3	5	18	23
		No	2	0	1	1	2	0	0	2	2
		Missing									3
		Chi-sq	0.84		0.03		0.30		0.54		
		df	1		1		1		1		
		p value	0.36		0.85		0.59		0.46		
		2 Staff survey									
		Yes	13	6	8	11	16	3	5	14	19
		No	5	1	3	3	6	0	0	6	6
		Missing									3
		Chi-sq	0.50		0.11		1.07		1.97		
		df	1		1		1		1		
		p value	0.48		0.73		0.29		0.29		
		3 Meeting predetermined standards									
		Yes	11	3	4	10	12	2	2	12	14
		No	6	4	6	4	10	0	3	7	10
		Missing									3
		Chi-sq	0.97		2.37		1.56		0.87		
		df	1		1		1		1		
		p value	0.32		0.12		0.28		0.35		
		4 Monitoring customer complaints.									
		Yes	16	5	9	12	19	2	5	16	21
		No	2	2	2	2	3	1	0	4	4
		Missing									3
		Chi-sq	1.14		0.07		0.76		1.19		
		df	1		1		1		1		
		p value	0.29		0.79		0.38		0.28		
		5 Benchmarking									
		Yes	6	2	4	4	6	2	3	5	8
		No	12	5	7	10	16	1	2	15	17
		Missing									3
		Chi-sq	0.05		0.17		0.76		1.19		
		df	1		1		1		1		
		p value	0.81		0.67		0.38		0.28		
3.3	B15	Does your hospital make use of the data collected on quality?									
		Yes	16	7	11	12	20	3	6	17	23
		No	1	0	0	1	1	0	0	1	1
		Missing									4
		Chi-sq	0.43		0.88		0.15		0.35		
		df	1		1		1		1		
		p value	0.51		0.34		0.69		0.56		
	B16	In what area is quality data used?									
		1 Service improvement									
		Yes	12	6	9	9	15	3	5	13	18
		No	5	1	2	4	6	0	1	5	6
		Missing									4
		Chi-sq	0.65		0.53		1.13		0.29		
		df	1		1		1		1		
		p value	0.43		0.47		0.28		0.58		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		2 System improvement.									
		Yes	15	7	10	12	19	3	6	16	22
		No	2	0	1	1	2	0	0	2	2
		Missing									4
		Chi-sq	0.89		0.01		0.31		0.72		
		df	1		1		1		1		
		p value	0.34		0.92		0.57		0.39		
		3 Strategic quality planning									
		Yes	9	3	5	7	11	1	3	9	12
		No	8	4	6	6	10	2	3	9	12
		Missing									4
		Chi-sq	0.20		0.16		0.38		0.01		
		df	1		1		1		1		
		p value	0.45		0.68		0.53		1.00		
		4 Performance improvement.									
		Yes	17	7	11	13	21	3	6	18	24
		No	0	0	0	0	0	0	0	0	0
		Missing									4
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
	C14	Is quality cost data used for the following purposes?									
		1. Budget planning									
		Yes	7	2	4	5	8	1	2	7	9
		No	3	1	2	2	4	0	0	4	4
		Missing									15
		Chi-sq	0.48		1.37		0.48		1.05		
		df	1		2		1		1		
		p value	0.78		0.53		0.78		0.59		
		2. Service improvement									
		Yes	7	1	4	4	7	1	1	7	8
		No	3	2	2	3	5	0	1	4	5
		Missing									15
		Chi-sq	1.31		0.12		0.67		0.13		
		df	1		1		1		1		
		p value	0.25		0.72		0.41		0.75		
		3. System improvement									
		Yes	6	2	4	4	7	1	2	6	8
		No	4	1	2	3	5	0	0	5	5
		Missing									15
		Chi-sq	0.43		0.12		0.67		1.47		
		df	1		1		1		1		
		p value	0.83		0.72		0.41		0.24		
		4. Strategic quality planning									
		Yes	7	1	3	5	7	1	1	7	8
		No	3	2	3	2	5	0	1	4	5
		Missing									15
		Chi-sq	1.31		0.62		0.67		0.13		
		df	1		1		1		1		
		p value	0.25		0.42		0.41		0.71		
		5. Supplier's performance improvement									
		Yes	8	1	4	5	8	1	1	8	9
		No	2	2	2	2	4	0	1	3	4
		Missing									15
		Chi-sq	2.31		0.03		0.48		0.41		
		df	1		1		1		1		
		p value	0.12		0.85		0.48		0.52		
		6. Other									
		Yes	3	0	0	3	3	0	0	3	3

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		No	6	3	6	3	8	1	2	7	9
		Missing									16
		Chi-sq	4.00		4.50		0.56		1.20		
		df	1		1		1		1		
		p value	0.13		0.15		0.76		0.56		
	C16	Does your hospital have any of the following specific targets related to quality costs?									
		a Reducing re-admissions									
		Yes	6	0	3	3	5	1	0	6	6
		No	11	4	6	9	13	2	3	12	15
		Missing									7
		Chi-sq	1.97		0.17		0.03		1.40		
		df	1		1		1		1		
		p value	0.16		0.67		0.84		0.23		
		b Reducing total costs									
		Yes	10	2	7	5	9	3	1	11	12
		No	7	3	4	6	10	0	3	7	10
		Missing									6
		Chi-sq	1.12		2.16		2.28		2.39		
		df	1		1		1		1		
		p value	0.57		0.33		0.23		0.30		
		c Reducing customer complaints									
		Yes	11	1	7	5	10	2	1	11	12
		No	6	4	3	7	9	1	3	7	10
		Missing									6
		Chi-sq	3.11		1.76		0.20		1.72		
		df	1		1		1		1		
		p value	0.07		0.18		0.65		0.19		
		d Reducing average bed days									
		Yes	3	1	3	1	4	0	1	3	4
		No	14	4	7	11	15	3	3	15	18
		Missing									6
		Chi-sq	0.14		1.72		0.77		0.15		
		df	1		1		1		1		
		p value	0.95		0.19		0.38		0.69		
		e Other									
		Yes	2	2	2	2	3	1	1	3	4
		No	13	3	7	9	14	2	3	13	16
		Missing									8
		Chi-sq	1.66		0.05		0.39		0.07		
		df	1		1		1		1		
		p value	0.19		0.82		0.53		0.70		
3.4	B6	Does your hospital report on TQM to any external bodies?									
		Yes	9	2	3	8	10	1	2	9	11
		No	9	5	8	6	12	2	4	10	14
		Missing									3
		Chi-sq	0.94		2.23		0.16		0.37		
		df	1		1		1		1		
		p value	0.33		0.13		0.69		0.55		
	B7	To which external bodies does your hospital report?									
		Ministry of Public Health (PH)	2	0	1	1	1	1	0	2	2
		Other government organisation (oGO)	2	1	0	3	3	0	2	1	3
		Non government organisation (NGO)	0	1	1	0	1	0	0	1	1
		Other	0	0	0	0	0	0	0	0	0

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		PH and other	1	0	0	1	1	0	0	1	1
		PH and oGO and NGO	3	0	1	2	3	0	0	3	3
		Missing									18
		Chi-sq	5.83		4.44		4.44		5.83		
		df	4		4		4		4		
		p value	0.21		0.34		0.38		0.18		
	B8	How frequently does external reporting occur (only the Ministry of Public Health)?									
		Monthly	1	0	0	1	1	0	0	1	1
		Quarterly	1	0	0	1	1	0	0	1	1
		Semi-Annually	2	0	0	2	2	0	1	1	2
		Annually	3	0	0	3	3	0	0	3	3
		Missing									21
		Chi-sq	0.00		0.00		0.00		2.91		
		df							3		
		p value							0.40		
	B17	Does your hospital compare performance in quality with other hospitals?									
		Yes	12	4	8	8	13	3	4	12	16
		No	6	3	4	5	9	0	2	7	9
		Missing									3
		Chi-sq	0.19		0.07		1.19		0.02		
		df	1		1		1		1		
		p value	0.66		0.79		0.17		0.88		
	B18	How does your hospital compare its quality performance with other hospitals?									
		Informally	10	5	7	8	13	2	4	11	15
		Formally	2	0	1	1	1	1	0	2	2
		Reports	1	0	0	0	0	0	0	0	0
		Otherwise	0	0	1	0	1	0	0	1	1
		Informally and otherwise	0	1	0	1	1	0	1	0	1
		Formally and with reports	1	0	0	1	1	0	0	1	1
		All of the above	1	0	0	1	1	0	0	1	1
		Missing									7
		Chi-sq	4.66		3.71		2.76		4.83		
		df	5		5		5		5		
		p value	0.05		0.59		0.73		0.43		
4.1	D1	The senior managements involvement in the following decision making area is:									
		a Policy									
		Not at all	1	0	0	1	1	0	0	1	1
		From time to time	7	1	3	5	8	0	1	7	8
		Very regularly	11	6	9	8	14	3	5	12	17
		Missing									2
		Chi-sq	1.82		1.43		0.13		0.02		
		df	1		1		1		1		
		p value	0.40		0.49		0.71		0.90		
		b Resources allocation									
		Not at all	0	0	0	0	0	0	0	0	0
		From time to time	4	1	3	2	4	1	1	4	5
		Very regularly	5	7	10	12	19	3	5	17	22
		Missing									1
		Chi-sq	0.27		0.34		0.13		0.02		
		df	1		1		1		1		
		p value	0.60		0.55		0.71		0.90		
		c Recruitment									
		Not at all	1	0	0	1	1	0	0	1	1

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		From time to time	7	3	5	5	10	0	2	8	10
		Very regularly	11	5	8	8	12	4	4	12	16
		Missing									1
		Chi-sq	0.44		2.03		3.23		0.39		
		df	2		2		2		2		
		p value	0.80		0.56		0.20		0.83		
		d Quality improvement									
		Not at all	2	0	0	2	2	0	0	2	2
		From time to time	6	1	1	6	7	0	1	6	7
		Very regularly	11	7	12	6	14	4	5	13	18
		Missing									1
		Chi-sq	2.38		5.01		2.35		1.15		
		df	2		2		2		2		
		p value	0.31		0.04		0.31		0.56		
		e Practice (clinical)									
		Not at all	1	0	0	1	1	0	0	1	1
		From time to time	7	2	2	7	9	0	2	7	9
		Very regularly	11	6	11	6	13	4	4	13	17
		Missing									1
		Chi-sq	0.92		5.21		2.76		0.30		
		df	2		2		2		2		
		p value	0.63		0.07		0.25		0.86		
	D2	The middle managements involvement in the following decision making area is:									
		a Policy									
		Not at all	6	1	3	4	6	1	1	6	7
		From time to time	5	3	5	3	7	1	1	7	8
		Very regularly	8	4	5	7	10	2	4	8	12
		Missing									1
		Chi-sq	1.11		0.94		0.07		1.55		
		df	2		2		2		2		
		p value	0.58		0.62		0.97		0.46		
		b Resources allocation									
		Not at all	1	2	1	2	3	0	2	1	3
		From time to time	8	2	5	5	8	2	1	9	10
		Very regularly	10	4	7	7	12	2	3	11	14
		Missing									1
		Chi-sq	0.03		2.30		1.00		1.41		
		df	2		2		2		2		
		p value	0.99		0.50		0.61		0.50		
		c Recruitment									
		Not at all	1	2	1	2	3	0	2	1	3
		From time to time	11	2	6	7	11	2	1	12	13
		Very regularly	7	4	6	5	9	2	3	8	11
		Missing									1
		Chi-sq	3.48		4.54		0.63		5.18		
		df	2		2		2		2		
		p value	0.18		0.33		0.73		0.08		
		d Quality improvement									
		Not at all	1	1	0	2	2	0	1	1	2
		From time to time	5	2	3	4	6	1	1	6	7
		Very regularly	13	5	10	8	15	3	4	14	18
		Missing									1
		Chi-sq	0.43		3.40		0.40		1.15		
		df	2		2		2		2		
		p value	0.80		0.17		0.82		0.56		
		e Practice (clinical)									
		Not at all	1	0	0	1	1	0	0	1	1
		From time to time	4	2	3	3	5	1	1	5	6
		Very regularly	13	6	10	9	16	3	5	14	19
		Missing									2
		Chi-sq	0.47		2.06		0.19		0.55		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
	D3	df	2		2		2		2		
		p value	0.79		0.55		0.91		0.76		
		The other employees involvement in the following decision making area is:									
		a Policy									
		Not at all	5	3	4	4	8	0	3	5	8
		From time to time	9	2	6	5	9	2	0	11	11
		Very regularly	5	3	3	5	6	2	3	5	8
		Missing									1
		Chi-sq	1.17		0.47		2.15		5.30		
		df	2		2		2		2		
		p value	0.56		0.78		0.34		0.07		
		b Resources allocation									
		Not at all	6	4	4	6	9	1	3	7	10
		From time to time	8	1	5	4	8	1	0	9	9
		Very regularly	5	3	4	4	6	2	3	5	8
		Missing									1
		Chi-sq	2.23		0.05		0.94		4.00		
		df	2		2		2		2		
		p value	0.33		0.97		0.63		0.14		
		c Recruitment									
		Not at all	6	2	4	4	8	0	1	7	8
		From time to time	8	3	5	6	10	1	2	9	11
		Very regularly	5	3	4	4	5	3	3	5	8
		Missing									1
		Chi-sq	0.35		1.17		4.94		1.62		
		df	2		2		2		2		
		p value	0.84		0.57		0.09		0.44		
		d Quality improvement									
		Not at all	2	2	1	3	4	0	2	2	4
		From time to time	5	2	4	3	6	1	1	6	7
		Very regularly	12	4	8	8	13	3	3	13	16
		Missing									1
		Chi-sq	0.96		1.10		0.89		2.15		
		df	2		2		2		2		
		p value	0.62		0.57		0.64		0.34		
		e Practice (clinical)									
		Not at all	1	1	1	1	2	0	1	1	2
		From time to time	4	2	3	3	5	1	1	5	6
		Very regularly	14	5	8	11	17	2	4	15	19
		Missing									1
		Chi-sq	0.62		2.00		0.46		2.41		
		df	2		2		2		2		
		p value	0.73		0.15		0.80		0.30		
	D4	How are decisions made in relation to each of these decision-making areas?									
		1. Formal meeting									
		Yes	18	7	13	12	21	4	5	20	25
		No	1	1	0	2	2	0	1	1	2
		Missing									1
		Chi-sq	0.43		2.00		0.37		0.96		
		df	1		1		1		1		
		p value	0.51		0.15		0.54		0.32		
		2. Consultation									
		Yes	14	6	11	9	16	4	4	16	20
		No	5	2	2	5	7	0	2	5	7
		Missing									1
		Chi-sq	0.00		1.45		1.64		0.22		
		df	1		1		1		1		
		p value	0.94		0.22		0.20		0.63		
		3. Survey									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Yes	9	2	6	5	9	2	2	9	11
		No	10	6	7	9	14	2	4	12	16
		Missing									1
		Chi-sq	1.88		1.12		0.29		0.56		
		df	1		1		1		1		
		p value	0.38		0.57		0.86		0.75		
		4. Other									
		Yes	1	0	0	1	1	0	0	1	1
		No	18	8	13	13	22	4	6	20	26
		Missing									1
		Chi-sq	0.43		0.96		0.18		0.29		
		df	1		1		1		1		
		p value	0.58		0.32		0.67		0.58		
	D5	Senior management's involvement in the decision making process regarding									
		a. Policy									
		1. Formal meeting	11	5	5	11	13	3	3	13	16
		2. Consultation	2	1	2	1	2	1	1	2	3
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	5	2	5	2	5	2	3	4	7
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	0	1	1	0	0	1	1	0	1
		Missing									1
		Chi-sq	2.53		4.44		1.69		4.18		
		df	3		3		3		3		
		p value	0.46		0.21		0.63		0.24		
		b. Resource allocation									
		1. Formal meeting	11	5	7	9	15	1	4	12	16
		2. Consultation	2	1	1	2	2	1	1	2	3
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	5	2	4	3	6	1	1	6	7
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1
		Missing									1
		Chi-sq	0.46		1.69		7.49		0.82		
		df	3		3		3		3		
		p value	0.92		0.63		0.05		0.84		
		c. Recruitment									
		1. Formal meeting	10	2	4	8	12	0	3	9	12
		2. Consultation	3	4	4	3	6	1	2	5	7
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	5	1	3	3	4	2	1	5	6
		5. 1 and 3	0	1	1	0	0	1	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	1	1	1	2	0	1	1	2
		Missing									1
		Chi-sq	8.38		2.64		10.69		2.82		
		df	4		4		4		4		
		p value	0.07		0.61		0.03		0.58		
		d. Quality improvement									
		1. Formal meeting	5	4	3	6	9	0	4	5	9
		2. Consultation	2	2	1	3	3	1	1	3	4
		3. Survey	2	0	2	0	2	0	0	2	2
		4. 1 and 2	5	0	2	3	4	1	0	5	5
		5. 1 and 3	0	1	1	0	0	1	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	4	1	3	2	4	1	1	4	5
		Missing									2
		Chi-sq	7.11		5.27		7.98		4.75		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almos	Partly	Bangkok	Not-Bangkok	
		df	5		5		5		5		
		p value	0.21		0.38		0.15		0.44		
		e. Clinical practice									
		1. Formal meeting	4	3	2	5	7	0	3	4	7
		2. Consultation	6	2	4	4	6	2	1	7	8
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	5	1	3	3	5	1	0	6	6
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	1	1	0	1	0	1	0	1
		7. 1 and 2 and 3	4	1	3	2	4	1	1	4	5
		Missing									1
		Chi-sq	3.75		2.45		2.17		7.39		
	df	4		4		4		4			
	p value	0.44		0.65		0.70		0.11			
	D6	Middle management's involvement in the decision making process regarding XXXX takes the form of:									
		a. Policy									
		1. Formal meeting	13	2	6	9	14	1	2	13	15
		2. Consultation	1	3	3	1	2	2	1	3	4
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	4	1	1	4	5	0	1	4	5
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	1	1	0	1	0	1	0	1
		7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1
		Missing									2
		Chi-sq	9.31		5.27		11.14		4.86		
		df	4		4		4		4		
		p value	0.05		0.26		0.02		0.32		
		b. Resource allocation									
1. Formal meeting		9	1	6	4	9	1	1	9	10	
2. Consultation		3	5	5	3	6	2	3	5	8	
3. Survey		0	0	0	0	0	0	0	0	0	
4. 1 and 2		6	1	3	4	7	0	1	6	7	
5. 1 and 3		0	0	0	0	0	0	0	0	0	
6. 2 and 3		0	0	0	0	0	0	0	0	0	
7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1		
Missing									2		
Chi-sq	7.53		3.10		7.56		2.61				
df	3		3		3		3				
p value	0.05		0.37		0.05		0.45				
c. Recruitment											
1. Formal meeting	8	2	3	7	9	1	1	9	10		
2. Consultation	5	5	6	4	9	1	4	6	10		
3. Survey	0	0	0	0	0	0	0	0	0		
4. 1 and 2	6	0	3	3	4	2	2	4	6		
5. 1 and 3	0	0	0	0	0	0	0	0	0		
6. 2 and 3	0	0	0	0	0	0	0	0	0		
7. 1 and 2 and 3	0	0	0	0	0	0	0	0	0		
Missing									2		
Chi-sq	5.16		1.85		1.93		4.75				
df	2		2		2		2				
p value	0.07		0.39		0.38		0.09				
d. Quality improvement											
1. Formal meeting	6	2	3	5	8	0	2	6	8		
2. Consultation	2	2	2	2	3	1	1	3	4		
3. Survey	1	0	1	0	1	0	0	1	1		
4. 1 and 2	6	3	4	5	7	2	2	7	9		
5. 1 and 3	0	0	0	0	0	0	0	0	0		
6. 2 and 3	0	0	0	0	0	0	0	0	0		
7. 1 and 2 and 3	4	1	3	2	4	1	1	4	5		
Missing									1		



Item	Question no.		Class		Bedsizes		Accreditation Process		Region		Total	
			Public	Private	30-218	219-785	Fully or Almos	Partly	Bangkok	Not-Bangkok		
		Chi-sq	1.58		1.77		2.39		0.35			
		df	4		2		4		4			
		p value	0.82		0.77		0.66		0.96			
		e. Clinical practice										
		1. Formal meeting	5	3	2	6	8	0	0	8		
		2. Consultation	2	2	3	1	3	1	2	2		
		3. Survey	0	0	0	0	0	0	0	0		
		4. 1 and 2	6	3	4	5	8	1	2	7		
		5. 1 and 3	0	0	0	0	0	0	0	0		
		6. 2 and 3	1	0	1	0	1	0	0	1		
		7. 1 and 2 and 3	5	0	3	2	3	2	0	5		
		Missing									1	
		Chi-sq	3.61		4.20		4.50		2.81			
		df	4		4		4		4			
		p value	0.46		0.36		0.34		0.59			
	D7	Other employee's involvement in the decision making process regarding XXXX takes the form of:										
		a. Policy										
		1. Formal meeting	10	2	7	5	11	1	2	10		12
		2. Consultation	2	4	4	2	4	2	2	4		6
		3. Survey	2	1	0	3	3	0	1	2		3
		4. 1 and 2	1	0	0	1	1	0	0	1		1
		5. 1 and 3	0	0	0	0	0	0	0	0		0
		6. 2 and 3	0	0	0	0	0	0	0	0		0
		7. 1 and 2 and 3	3	0	1	2	2	1	0	3		3
		Missing										3
		Chi-sq	6.81		5.30		3.29		2.08			
		df	4		4		4		4			
		p value	0.14		0.25		0.50		0.72			
		b. Resource allocation										
		1. Formal meeting	5	2	6	1	6	1	2	5		7
		2. Consultation	4	4	4	4	6	2	2	6		8
		3. Survey	1	1	1	1	2	0	1	1		2
		4. 1 and 2	2	0	2	0	2	0	0	2		2
		5. 1 and 3	1	0	1	0	1	0	0	1		1
		6. 2 and 3	0	0	0	0	0	0	0	0		0
		7. 1 and 2 and 3	1	1	1	1	1	1	0	2		2
		Missing										6
		Chi-sq	3.89		7.14		2.79		2.47			
		df	5		5		5		5			
		p value	0.56		0.21		0.73		0.78			
		c. Recruitment										
		1. Formal meeting	5	1	2	4	6	0	2	4		6
		2. Consultation	6	4	6	4	9	1	2	8		10
		3. Survey	1	1	0	2	2	0	1	1		2
		4. 1 and 2	4	1	4	1	2	3	0	5		5
		5. 1 and 3	0	0	0	0	0	0	0	0		0
		6. 2 and 3	0	0	0	0	0	0	0	0		0
		7. 1 and 2 and 3	1	0	0	1	1	0	0	1		1
		Missing										4
		Chi-sq	2.05		5.86		12.42		3.18			
		df	4		4		4		4			
		p value	0.72		0.20		0.01		0.52			
		d. Quality improvement										
		1. Formal meeting	7	2	4	5	8	1	1	8		9
		2. Consultation	1	4	2	3	4	1	3	2		5
		3. Survey	3	0	1	2	3	0	0	3		3
		4. 1 and 2	3	0	1	2	3	0	0	3		3
		5. 1 and 3	0	0	0	0	0	0	0	0		0
		6. 2 and 3	1	0	0	1	1	0	0	1		1
		7. 1 and 2 and 3	4	1	4	1	3	2	1	4		5

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Missing									2
		Chi-sq	9.96		3.64		3.80		7.40		
		df	5		5		5		5		
		p value	0.07		0.61		0.57		0.19		
		e. Clinical practice									
		1. Formal meeting	3	3	3	3	5	1	2	4	6
		2. Consultation	1	4	3	2	4	1	3	2	5
		3. Survey	1	0	0	1	1	0	0	1	1
		4. 1 and 2	5	0	2	3	5	0	0	5	5
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	1	0	1	0	1	0	0	1	1
		7. 1 and 2 and 3	5	0	3	2	3	2	0	5	5
		Missing									5
		Chi-sq	12.13		2.56		3.27		8.11		
		df	5		5		5		5		
		p value	0.03		0.76		0.65		0.15		
4.2	D9	Are the service partners represented in the hospital administration?									
		Yes	18	5	11	12	21	2	3	20	23
		No	1	1	1	1	1	1	1	1	2
		Missing									3
		Chi-sq	2.67		0.42		0.44		4.16		
		df	1		1		1		1		
		p value	0.12		0.51		0.50		0.04		
	D10	Please identify the type and extent of the representation of the service providers in:									
		a Hospital management committee									
		Not at all	0	0	0	0	0	0	0	0	0
		From time to time	1	1	0	2	2	0	1	1	2
		Very regularly	4	6	10	10	17	3	5	15	20
		Missing									6
		Chi-sq	0.34		1.83		0.35		0.57		
		df	1		1		1		1		
		p value	0.56		0.17		0.56		0.45		
		b Hospital management sub-committee									
		Not at all	1	1	1	1	1	1	1	1	2
		From time to time	1	1	2	0	2	0	1	1	2
		Very regularly	7	6	3	10	10	3	5	8	13
		Missing									11
		Chi-sq	0.95		4.70		0.31		0.75		
		df	2		2		2		2		
		p value	0.62		0.09		0.86		0.69		
		c Clinical specialty									
		Not at all	1	0	1	0	1	0	0	1	1
		From time to time	1	1	1	1	1	1	0	2	2
		Very regularly	12	4	6	10	14	2	4	12	16
		Missing									9
		Chi-sq	0.95		1.56		2.08		0.95		
		df	2		2		2		2		
		p value	0.62		0.45		0.35		0.62		
		d Quality committee									
		Not at all	1	0	0	1	1	0	0	1	1
		From time to time	2	3	4	1	4	1	2	3	5
		Very regularly	11	4	6	9	13	2	4	11	15
		Missing									7
		Chi-sq	2.40		3.36		2.08		0.95		
		df	2		2		2		2		
		p value	0.30		0.18		0.35		0.62		
		e Administration									

Item	Question no.		Class		Bedsizes		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Not at all	0	0	0	0	0	0	0	0	0
		From time to time	3	1	1	3	3	1	0	4	4
		Very regularly	10	4	6	8	13	1	5	9	14
		Missing									10
		Chi-sq	0.53		0.41		0.53		1.69		
		df	1		1		1		1		
		p value	0.77		0.51		0.77		0.43		
	D11	Are partners informed about policy and service provision?									
		Yes	19	7	12	14	22	4	5	21	26
		No	0	0	0	0	0	0	0	0	0
		Missing									2
		Chi-sq	0.00		0.00		0.00		0.00		
		df									
		p value									
	D12	How are the partners informed and to what extent? a Distribution of written policy									
		Not at all	1	0	0	1	1	0	0	1	1
		From time to time	7	3	7	3	8	2	2	8	10
		Very regularly	10	5	6	9	13	2	4	11	15
		Missing									2
		Chi-sq	0.63		3.20		2.73		1.59		
		df	2		2		2		2		
		p value	0.88		0.20		0.43		0.66		
		b Via formal word of mouth									
		Not at all	0	0	0	0	0	0	0	0	0
		From time to time	8	2	6	4	8	2	3	7	10
		Very regularly	12	4	3	13	14	2	3	13	16
		Missing									2
		Chi-sq	2.16		2.60		6.17		1.73		
		df	2		1		2		2		
		p value	0.53		0.10		0.10		0.63		
		c Via informal word of mouth									
		Not at all	0	1	1	0	0	1	0	1	1
		From time to time	5	3	6	2	6	2	3	5	8
		Very regularly	14	3	5	12	16	1	2	15	17
		Missing									2
		Chi-sq	3.91		9.02		7.49		2.71		
		df	2		3		2		2		
		p value	0.27		0.43		0.58		0.43		
		d Newsletter									
		Not at all	3	0	1	2	3	0	0	3	3
		From time to time	6	5	6	5	9	2	3	8	11
		Very regularly	6	3	4	5	7	2	3	6	9
		Missing									5
		Chi-sq	4.36		0.49		1.16		3.90		
		df	2		2		2		2		
		p value	0.35		0.78		0.88		0.41		
		e Performance reports									
		Not at all	3	1	1	3	4	0	1	3	4
		From time to time	8	4	8	4	10	2	2	10	12
		Very regularly	6	3	3	6	7	2	3	6	9
		Missing									3
		Chi-sq	8.80		0.49		2.50		5.28		
		df	2		2		2		2		
		p value	0.66		0.78		0.64		0.25		
4.3	D13	Are customers involved in decision-making about									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Yes	15	6	10	11	18	3	5	16	21
		No	3	1	1	3	3	1	0	4	4
		Missing									3
		Chi-sq	0.02		0.69		0.28		1.19		
		df	1		1		1		1		
		p value	0.88		0.40		0.59		0.27		
	D14	Rate the involvement of in-patients in the following decision-making areas.									
		a Policy									
		Not at all	10	3	5	8	12	1	3	10	13
		From time to time	5	3	5	3	6	2	3	5	8
		Very regularly	2	1	2	1	3	0	0	3	3
		Missing									4
		Chi-sq	0.53		1.52		0.51		1.69		
		df	2		2		2		2		
		p value	0.77		0.46		0.70		0.43		
		b Resources allocation									
		Not at all	13	3	6	10	14	2	3	13	16
		From time to time	3	3	5	1	5	1	3	3	6
		Very regularly	1	0	0	1	1	0	0	1	1
		Missing									4
		Chi-sq	3.96		5.23		1.21		1.43		
		df	2		2		2		2		
		p value	0.14		0.15		0.54		0.49		
		c Recruitment									
		Not at all	10	5	7	8	13	2	5	10	15
		From time to time	5	2	4	3	5	2	2	5	7
		Very regularly	1	1	1	1	1	1	1	1	2
		Missing									4
		Chi-sq	1.67		0.21		3.58		2.06		
		df	2		2		2		2		
		p value	0.44		0.90		0.17		0.36		
		d Quality improvement									
		Not at all	1	0	1	0	1	0	0	1	1
		From time to time	3	4	3	4	4	3	3	4	7
		Very regularly	13	3	8	8	13	3	3	13	16
		Missing									4
		Chi-sq	2.56		1.14		1.71		3.43		
		df	2		2		2		2		
		p value	0.28		0.56		0.42		0.18		
		e Practice (clinical)									
		Not at all	3	1	1	3	4	0	1	3	4
		From time to time	3	2	3	2	5	0	1	4	5
		Very regularly	11	4	8	7	12	3	4	11	15
		Missing									4
		Chi-sq	0.36		1.26		2.06		2.22		
		df	2		2		2		2		
		p value	0.83		0.53		0.36		0.33		
	D15	Rate the involvement of out-patients in the following decision-making areas.									
		a Policy									
		Not at all	10	4	6	8	11	3	4	10	14
		From time to time	5	2	4	3	6	1	3	4	7
		Very regularly	2	1	2	1	3	0	0	3	3
		Missing									4
		Chi-sq	0.29		0.76		0.49		1.15		
		df	2		2		2		3		
		p value	0.99		0.68		0.78		0.57		
		b Resources allocation									
		Not at all	14	2	7	9	14	2	2	14	16
		From time to time	4	3	5	2	5	2	3	4	7

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Very regularly	1	0	0	1	1	0	0	1	1
		Missing									4
		Chi-sq	3.90		2.53		0.49		1.14		
		df	2		2		2		2		
		p value	0.99		0.28		0.78		0.57		
		c Recruitment									
		Not at all	16	3	9	10	17	2	3	16	19
		From time to time	1	3	3	1	4	0	0	4	4
		Very regularly	1	1	0	1	1	1	0	1	1
		Missing									4
		Chi-sq	1.33		2.05		0.78		0.35		
		df	2		2		2		2		
		p value	0.51		0.35		0.68		0.84		
		d Quality improvement									
		Not at all	1	1	1	1	1	1	1	1	2
		From time to time	2	2	2	2	4	0	1	3	4
		Very regularly	15	3	9	9	15	3	4	14	18
		Missing									4
		Chi-sq	0.47		2.00		1.14		2.07		
		df	2		2		2		2		
		p value	0.79		0.57		0.57		0.36		
		e Practice (clinical)									
		Not at all	3	1	1	3	4	0	1	3	4
		From time to time	4	1	4	1	5	0	0	5	5
		Very regularly	10	5	7	8	12	3	5	10	15
		Missing									4
		Chi-sq	0.36		3.20		2.06		0.08		
		df	2		2		2		2		
		p value	0.83		0.36		0.36		0.96		
D16	Rate the involvement of clients of allied health services in the following decision-making areas.	a Policy									
		Not at all	11	3	5	9	12	2	3	11	14
		From time to time	4	3	5	2	6	1	3	4	7
		Very regularly	2	1	2	1	3	0	0	3	3
		Missing									4
		Chi-sq	1.07		2.76		0.49		2.29		
		df	2		2		2		2		
		p value	0.59		0.25		0.78		0.32		
		b Resources allocation									
		Not at all	13	3	8	8	14	2	4	12	16
		From time to time	2	3	4	1	4	1	1	4	5
		Very regularly	2	1	0	3	3	0	1	2	3
		Missing									5
		Chi-sq	3.17		4.80		0.69		0.18		
		df	2		2		2		2		
		p value	0.21		0.09		0.71		0.92		
		c Recruitment									
		Not at all	13	4	8	9	15	2	5	12	17
		From time to time	2	3	4	1	4	1	1	4	5
		Very regularly	2	0	0	2	2	0	0	2	2
		Missing									4
		Chi-sq	3.39		3.85		0.55		0.91		
		df	2		2		2		2		
		p value	0.18		0.14		0.76		0.64		
		d Quality improvement									
		Not at all	2	2	2	2	4	0	2	2	4
		From time to time	5	2	3	4	7	0	2	5	7
		Very regularly	9	3	7	5	9	3	2	10	12
		Missing									5
		Chi-sq	0.90		3.85		3.16		1.76		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		df	2		2		2		2		
		p value	0.64		0.14		0.21		0.42		
		e Practice (clinical)									
		Not at all	6	2	4	4	8	0	2	6	8
		From time to time	2	2	4	0	4	0	1	3	4
		Very regularly	8	3	4	7	8	3	3	8	11
		Missing									5
		Chi-sq	0.89		0.43		3.76		0.08		
		df	2		2		2		2		
		p value	0.64		0.80		0.15		0.96		
4.4	D17	For the following decision-making areas, what process do you use in relation to in-patients?									
		a Policy									
		1. Formal meeting	7	5	4	8	11	1	4	8	12
		2. Consultation	3	1	2	2	4	0	0	4	4
		3. Survey	1	0	1	0	1	0	0	1	1
		4. 1 and 2	5	0	3	2	4	1	0	5	5
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	2	1	2	1	2	1	1	2	3
		Missing									3
		Chi-sq	3.50		2.54		2.21		4.16		
		df	4		4		4		4		
		p value	0.47		0.63		0.69		0.38		
		b Resources allocation									
		1. Formal meeting	8	3	4	7	10	1	3	8	11
		2. Consultation	2	4	3	3	5	1	2	4	6
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	7	0	3	4	6	1	0	7	7
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	1	0	0	1	1
		Missing									3
		Chi-sq	7.56		1.62		7.85		3.03		
		df	3		3		3		3		
		p value	0.05		0.65		0.04		0.38		
		c Recruitment									
		1. Formal meeting	7	2	3	6	8	1	2	7	9
		2. Consultation	6	5	4	7	10	1	2	9	11
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	4	0	2	2	3	1	0	4	4
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	1	0	0	1	1
		Missing									3
		Chi-sq	3.75		1.75		0.78		1.64		
		df	3		3		3		3		
		p value	0.28		0.62		0.85		0.65		
		d Quality Improvement									
		1. Formal meeting	6	2	2	6	7	1	4	4	8
		2. Consultation	2	3	3	2	5	0	1	4	5
		3. Survey	2	0	2	0	2	0	0	2	2
		4. 1 and 2	5	0	1	4	5	0	0	5	5
		5. 1 and 3	0	1	1	0	0	1	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	4	1	4	1	3	2	1	4	5
		Missing									2
		Chi-sq	8.21		11.21		13.63		3.62		
		df	5		5		5		5		
		p value	0.14		0.04		0.01		0.60		
		e Practice (Clinical)									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		1. Formal meeting	7	3	3	7	9	1	3	7	10
		2. Consultation	2	2	2	2	3	1	1	3	4
		3. Survey	2	0	2	0	2	0	0	2	2
		4. 1 and 2	4	1	3	2	4	1	1	4	5
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	4	1	3	2	3	2	0	5	5
		Missing									2
		Chi-sq	2.11		5.88		6.06		2.50		
		df	4		4		4		4		
		p value	0.71		0.28		0.19		0.64		
	D18	For the following decision-making areas, what process do you use in relation to out-patients? a Policy									
		1. Formal meeting	7	4	5	6	9	2	4	7	11
		2. Consultation	2	2	2	2	3	1	1	3	4
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	8	0	3	5	7	1	0	8	8
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	1	2	0	1	1	1	1	2
		Missing									3
		Chi-sq	4.93		3.00		3.11		3.55		
		df	3		3		3		3		
		p value	0.17		0.39		0.37		0.31		
		b Resource allocation									
		1. Formal meeting	8	3	5	6	9	2	4	7	11
		2. Consultation	2	4	3	3	5	1	2	4	6
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	7	0	3	4	6	1	0	7	7
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1
		Missing									3
		Chi-sq	7.56		1.62		7.85		3.03		
		df	3		3		3		3		
		p value	0.05		0.65		0.04		0.38		
		c Recruitment									
		1. Formal meeting	6	2	3	5	7	1	2	6	8
		2. Consultation	7	5	6	6	9	3	4	8	12
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	3	0	2	1	2	1	0	3	3
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	2	0	1	1	2	0	0	2	2
		Missing									3
		Chi-sq	3.09		0.81		1.53		1.56		
		df	3		3		3		3		
		p value	0.37		0.84		0.66		0.65		
		d Quality improvement									
		1. Formal meeting	6	2	2	6	8	0	3	5	8
		2. Consultation	1	3	3	1	3	1	1	3	4
		3. Survey	3	0	3	0	3	0	0	3	3
		4. 1 and 2	4	0	1	3	4	0	0	4	4
		5. 1 and 3	0	1	1	0	0	1	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	5	1	4	2	4	2	1	5	6
		Missing									2
		Chi-sq	10.32		8.39		12.37		3.73		
		df	5		5		5		5		
		p value	0.06		0.13		0.03		0.58		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		e Practice (clinical									
		1. Formal meeting	7	3	3	7	10	0	3	7	10
		2. Consultation	2	2	2	2	3	1	1	3	4
		3. Survey	1	0	1	0	1	0	0	1	1
		4. 1 and 2	5	1	3	3	5	1	1	5	6
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	4	1	3	2	3	2	0	5	5
		Missing									2
		Chi-sq	1.94		2.66		5.74		2.28		
		df	4		4		4		4		
		p value	0.74		0.61		0.21		0.68		
	D19	For the following decision-making areas, what process do you use in relation to clients of allied health services? a Policy									
		1. Formal meeting	8	3	4	7	10	1	2	9	11
		2. Consultation	1	3	2	2	3	1	2	2	4
		3. Survey	1	0	0	1	1	0	0	1	1
		4. 1 and 2	7	1	4	4	7	1	1	7	9
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1
		Missing									3
		Chi-sq	6.11		2.49		7.68		3.05		
		df	4		4		4		4		
		p value	0.19		0.64		0.10		0.54		
		b Resource allocation									
		1. Formal meeting	7	3	3	7	9	1	3	7	10
		2. Consultation	4	4	5	3	6	2	2	6	8
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	6	0	2	4	6	0	0	6	6
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	0	1	0	1	1
		Missing									3
		Chi-sq	4.66		3.45		7.93		2.50		
		df	3		3		3		3		
		p value	0.19		0.32		0.04		0.47		
		d Recruitment									
		1. Formal meeting	6	3	3	6	8	1	3	6	9
		2. Consultation	6	4	5	5	8	2	2	8	10
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	4	0	2	2	3	1	0	4	4
		5. 1 and 3	1	0	0	1	1	0	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	1	0	1	0	1	0	0	1	1
		Missing									3
		Chi-sq	3.17		2.67		0.88		2.50		
		df	4		4		4		4		
		p value	0.52		0.61		0.92		0.64		
		d Quality improvement									
		1. Formal meeting	5	1	1	5	5	1	2	4	6
		2. Consultation	2	4	3	3	5	1	2	4	6
		3. Survey	2	0	2	0	2	0	0	2	2
		4. 1 and 2	5	0	1	4	5	0	0	5	5
		5. 1 and 3	0	1	1	0	1	0	0	1	1
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	5	1	4	2	4	2	1	5	6
		Missing									2
		Chi-sq	10.75		8.02		12.37		3.46		



Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		df	5		5		5		5		
		p value	0.05		0.15		0.03		0.62		
		e Practice (clinical)									
		1. Formal meeting	7	4	3	8	11	0	4	7	11
		2. Consultation	1	2	2	1	2	1	1	2	3
		3. Survey	0	0	0	0	0	0	0	0	0
		4. 1 and 2	6	0	2	4	6	0	0	6	6
		5. 1 and 3	0	0	0	0	0	0	0	0	0
		6. 2 and 3	0	0	0	0	0	0	0	0	0
		7. 1 and 2 and 3	4	1	4	1	3	2	0	5	5
		Missing									3
		Chi-sq	5.09		4.78		13.02		4.92		
		df	3		3		3		3		
		p value	0.16		0.18		0.01		0.17		
	D20	Are customers informed about hospital policies and services?									
		Yes	15	6	10	12	19	3	4	18	22
		No	3	1	2	2	3	1	2	2	4
		Missing									2
		Chi-sq	0.07		0.02		0.33		1.93		
		df	1		1		1		1		
		p value	0.78		0.86		0.56		0.16		
	D21	How are these policies conveyed to customers? a Distribution of written policy									
		Yes	11	6	8	9	14	3	3	14	17
		No	5	1	3	3	6	0	1	5	6
		Missing									5
		Chi-sq	0.72		0.01		1.21		0.00		
		df	1		1		1		1		
		p value	0.39		0.90		0.27		0.95		
		b Via formal word of mouth									
		Yes	10	4	6	8	13	1	4	10	14
		No	5	3	4	4	6	2	0	8	8
		Missing									6
		Chi-sq	0.18		0.15		1.37		2.79		
		df	1		1		1		1		
		p value	0.66		0.76		0.24		0.09		
		c Via informal word of mouth									
		Yes	14	6	10	10	18	2	4	16	20
		No	2	1	1	2	2	1	0	3	3
		Missing									5
		Chi-sq	0.01		0.29		1.25		0.72		
		df	1		1		1		1		
		p value	0.97		0.59		0.26		0.39		
		d Newsletter									
		Yes	11	3	7	7	13	1	3	11	14
		No	5	4	4	5	7	2	1	8	9
		Missing									5
		Chi-sq	1.37		0.06		1.09		0.40		
		df	1		1		1		1		
		p value	0.02		0.79		0.29		0.52		
		e Performance report									
		Yes	4	1	3	2	4	1	1	4	5
		No	12	6	8	10	16	2	3	15	18
		Missing									5
		Chi-sq	0.32		0.37		0.17		0.03		
		df	1		1		1		1		
		p value	0.56		0.53		0.60		0.86		

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
4.5	D22	Does your hospital use surveys of population groups within the local community to inform your policy and service provision?									
		Yes	11	2	5	8	12	1	2	11	13
		No	6	5	6	5	9	2	2	9	11
		Missing									4
		Chi-sq	2.60		0.62		0.90		0.59		
		df	1		1		1		1		
		p value	0.10		0.43		0.63		0.74		
	D23	What is the source of this information?									
		Internal only	5	2	3	3	6	0	0	6	6
		External only	0	0	0	0	0	0	0	0	0
		Internal & external	7	1	4	4	7	1	2	6	8
		Missing									14
		Chi-sq	0.30		0.00		0.81		1.75		
		df	2		2		2		2		
		p value	1.00		1.00		1.00		0.47		
	D24	How does the hospital use this information to inform its policy and service provision?									
		1. Report made to administration for planning purpose.	3	0	1	2	3	0	0	3	3
		2. Report made to individual units to inform decision and practice.	3	3	4	2	4	2	1	5	6
		3. Other	0	1	0	1	1	0	1	0	1
		4. 1 and 2	12	2	6	8	13	1	3	11	14
		4. 2 and 3	1	1	1	1	1	1	0	2	2
4.6	D25	Does your hospital consult with interest groups in the local community about policy and services provision?									
		Yes	13	3	7	9	13	3	2	14	16
		No	6	4	5	5	9	1	3	7	10
		Missing									2
		Chi-sq	1.41		0.09		0.36		1.22		
		df	1		1		1		1		
		p value	0.23		0.75		0.54		0.27		
	D26	What form does this consultation take?									
		a Interest groups approach the hospital with items to discuss									
		Yes	10	4	6	8	11	3	3	11	14
		No	6	1	4	3	7	0	0	7	7
		Missing									7
		Chi-sq	0.51		0.38		1.75		1.75		
		df	1		1		1		1		
		p value	0.46		0.57		0.18		0.18		
		b The hospital formally approaches the interest group									

Item	Question no.		Class		Bedsize		Accreditation Process		Region		Total
			Public	Private	30-218	219-785	Fully or Almost	Partly	Bangkok	Not-Bangkok	
		Yes	8	3	5	6	10	1	3	8	11
		No	7	2	4	5	8	1	0	9	9
		Missing									8
		Chi-sq	0.06		0.00		0.02		2.88		
		df	1		1		1		1		
		p value	0.79		0.96		0.88		0.08		
		c The hospital approaches the interest groups formally to provide information									
		Yes	12	4	7	9	14	2	3	13	16
		No	3	1	2	2	4	0	0	4	4
		Missing									8
		Chi-sq	0.00		0.05		0.55		8.88		
		df	1		1		1		1		
		p value	1.00		0.82		0.45		0.34		
		d There are informal contacts between interest groups and the hospital									
		Yes	10	3	5	8	11	2	1	12	13
		No	4	2	4	2	6	0	2	4	6
		Missing									9
		Chi-sq	0.22		1.31		1.03		2.03		
		df	1		1		1		1		
		p value	0.63		0.25		0.31		0.15		
	D27	What type of interest groups are represented in the previous questions (D26)?									
		a Women									
		Yes	14	4	7	11	16	2	3	15	18
		No	1	1	2	0	2	0	0	2	2
		Missing									8
		Chi-sq	0.74		2.71		0.24		0.39		
		df	1		1		1		1		
		p value	0.38		0.09		0.61		0.53		
		b Parents of pre-school age									
		Yes	13	4	7	10	15	2	3	14	17
		No	2	1	2	1	3	0	0	3	3
		Missing									8
		Chi-sq	0.13		0.66		0.39		0.62		
		df	1		1		1		1		
		p value	0.78		0.41		0.53		0.43		
		c Workers									
		Yes	14	4	7	11	16	2	3	15	18
		No	1	1	2	0	2	0	0	2	2
		Missing									8
		Chi-sq	0.74		2.71		0.24		0.39		
		df	1		1		1		1		
		p value	0.38		0.09		0.61		0.53		
		d The aged									
		Yes	13	4	7	10	16	1	3	14	17
		No	2	1	2	1	3	0	0	3	3
		Missing									8
		Chi-sq	0.13		0.66		2.00		0.62		
		df	1		1		0		1		
		p value	0.71		0.41		0.04		0.43		
		e Religious groups									
		Yes	9	2	3	8	9	2	1	10	11
		No	5	3	5	3	8	0	2	6	8
		Missing									9
		Chi-sq	0.89		2.35		1.62		0.88		
		df	1		1		1		1		
		p value	0.34		0.12		0.20		0.34		

## **Appendix 7**

### **Interview schedule**

#### **“Managing quality services in accredited Thai hospitals in a climate of economic uncertainty”**

Time of interview: .....

Date: .....

Place: .....

Interview: .....

Interviewee :.....

#### Questions about quality

1. Who initiated the quality programs in this hospital?
2. Why were the hospital initiated (what were the precipitating factors)?
3. Did the hospital follow a particular model or theory of quality? Why/why not?
4. Who participated in setting up the quality programs?
5.    A. Who supported the quality process? Why?  
      B. Who opposed the quality process? Why?
6. How are the following quality programs maintained: \_  
    special personnel/audits/staff education/patient satisfaction?
7. Has implementing quality programs been advantageous? In what ways?  
    Personnel/services/customers
8. Impact on staff/services/patients? Any problems with implementation/maintenance?

Questions about accreditation

9. Why did the hospital join the accreditation program?
10. What are the impacts of participation in the accreditation program on the hospital?

Question about the economic downturn

11. Has the economic downturn affected the hospital? In what ways?  
Clinical  
services/staffing/education/equipments/quality  
programs.

Questions about future directions

12. How do you see the future for quality programs in this hospital?
13. How do you see the future for the hospital accreditation program?

ภายใต้ความผันผวน/แปรปรวนทางเศรษฐกิจ

เวลาที่เริ่มทำการสัมภาษณ์ .....

วันที่/เดือน/ปี .....

สถานที่สัมภาษณ์ .....

ผู้ทำการสัมภาษณ์                      พาณี สีตกะสิน

ผู้ให้การสัมภาษณ์ .....

1. โครงการพัฒนาคุณภาพของโรงพยาบาลท่าน มีการริเริ่มโดยบุคคล/หน่วยงานใด

## ทำไมโรงพยาบาลของท่านจึงมีการริเริ่มการพัฒนาคณภาพ

ข. อะไรคือปัจจัย/สาเหตุส่งเสริมที่ทำให้เกิดโครงการพัฒนา คณภาพ

3. โรงพยาบาลมีรูปแบบเฉพาะหรือใช้ทฤษฎีใดของการพัฒนาคุณภาพหรือไม่

ก. กรณีที่ใช้รูปแบบเฉพาะ/หรือใช้ทฤษฎี ของการพัฒนาคุณภาพ  
ทำไมถึงใช้

ข. กรณีที่ไม่มีหรือไม่ใช่ ทำไม

4. หน่วยงานที่มีส่วนในการเริ่มต้นโครงการพัฒนาคุณภาพคือใคร หรือ  
หน่วยงานใด

5. ก. บุคคล/หน่วยงานที่สนับสนุนและเห็นด้วยในกระบวนการพัฒนา คุณภาพ  
คือใคร/หน่วยงานใด  
ทำไมจึงมีการสนับสนุน

**ข. บุคคลหรือหน่วยงานที่ไม่เห็นด้วย/ไม่สนับสนุน**

## ในกระบวนการพัฒนา

คุณภาพคือใคร/หน่วยงานใด ทำให้จึงไม่เห็นด้วย/ไม่สนับสนุน

6. ท่านมีวิธีการรักษามาตรฐานคุณภาพและโครงการ/โปรแกรมพัฒนาคุณภาพอย่างไรและโดยวิธีใดดังต่อไปนี้

ก. บคลากรที่มีหน้าที่รับผิดชอบด้านนี้โดยตรง

**ข. การตรวจสอบ**

### **ค. การให้ความรู้แก่บุคลากร**

#### **ง. ความพึงพอใจของผู้รับบริการ**

7. การนำเสนอ/การส่งเสริมโครงการ/โปรแกรมพัฒนาคุณภาพเพื่อรักษา  
ระดับบริการมีประโยชน์ต่อโรงพยาบาลในด้านใดบ้าง
  - ก. เกิดผลอย่างไรต่อบุคลากรในหน่วยงาน
  - ข. เกิดผลอย่างไรต่อการให้บริการ
  - ค. เกิดผลอย่างไรต่อผู้รับบริการ
8. ปัญหาหรืออุปสรรคในการนำเสนอ /ส่งเสริมโครงการ/โปรแกรม  
พัฒนาคุณภาพเพื่อรักษาระดับมาตรฐานบริการ มีอะไรบ้าง

#### **คำถามเกี่ยวกับการรับรองมาตรฐาน**

9. เหตุผลที่โรงพยาบาลเข้าร่วมโครงการพัฒนาคุณภาพ  
เพื่อรับรองมาตรฐานคุณภาพโรงพยาบาล คืออะไร
10. การเข้าร่วมโครงการพัฒนาคุณภาพเพื่อรับรองคุณภาพโรงพยาบาล  
มีผลกระทบต่องานอย่างไรบ้าง

#### **คำถามเกี่ยวกับผลกระทบทางเศรษฐกิจกับการรักษาระดับคุณภาพบริการ**

11. โรงพยาบาลได้รับผลกระทบทางด้านเศรษฐกิจหรือไม่ ถ้าได้รับในด้าน  
ต่อไปนี้

#### **ก. บริการการรักษาพยาบาล**

- ข. บุคลากร
- ค. การให้ความรู้แก่บุคลากร
- ง. เครื่องมือ
- จ. โปรแกรม/โครงการ พัฒนาคุณภาพ

#### **คำถามเกี่ยวกับแนวทางในอนาคต**

12.

**ท่านมีความคิดเห็นเกี่ยวกับโครงการพัฒนาคุณภาพของโรงพยาบาลใน**

**อนาคตอย่างไร**

13. ท่านมีความคิดเห็นเกี่ยวกับการรับรองมาตรฐานคุณภาพโรงพยาบาลใน  
อนาคตอย่างไร