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Measuring quality performance between public and private hospitals in Malaysia
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Abstract

Purpose – This study aims to measure quality performance of the Malaysian hospitals based on eight items, namely, progress of quality management, medical service cost, reduce errors in medical services, patient waiting time, reduce waste in processes, patient complaint, employee job satisfaction and patient satisfaction. Mainly, it identifies difference or conformance between public and private hospitals on quality performance.

Design/methodology/approach – This study distributed 1,007 self-administered survey questionnaires to the hospital staff (i.e. doctors, nurses, pharmacists and medical laboratory technologists), resulting in 438 useful responses (43.5 per cent response rate). Research data were analysed based on descriptive analysis and independent samples' *t*-tests using SPSS version 23.

Findings – The findings of this study indicate that there are significant differences between public and private hospital staff on progress of quality improvement process, patient satisfaction and cost of the medical services. Private hospital staff believed that their hospital's quality management process and patient satisfaction has been improved over the past years compared to public hospital. However, private hospital staff does not perceive their medical service cost has been reduced over the past years compared to public hospital.

Research limitations/implications – This research focused solely on quality performance of the Malaysian health sector and, thus, the results might not be applicable to other countries.

Originality/value – Present research findings provide guidelines for enhancing quality performance in Malaysian public and private healthcare sectors and other countries.

Keywords Malaysia, Quality performance, Private hospital, Public hospital

Paper type Research paper

Introduction

Healthcare is a service industry with unique characteristics. In healthcare, customers are the immediate patients followed by their families and quite possibly their friends, as the outcome of the healthcare service potentially affects all their lives. An error or a mistake in this field can be devastating to individuals and groups alike, as lives and quality of life are at risk (MacDonald, 2013). In 1999, the Institute of Medicine published a report "To Err is Human: Building a Safer Health System", which estimated that up to 98,000 people die annually in the USA due to medical errors (Hunt, 2002). However, a new report published in the *Journal of Patient Safety* reveals that each year 210,000-400,000 patients die because of preventable

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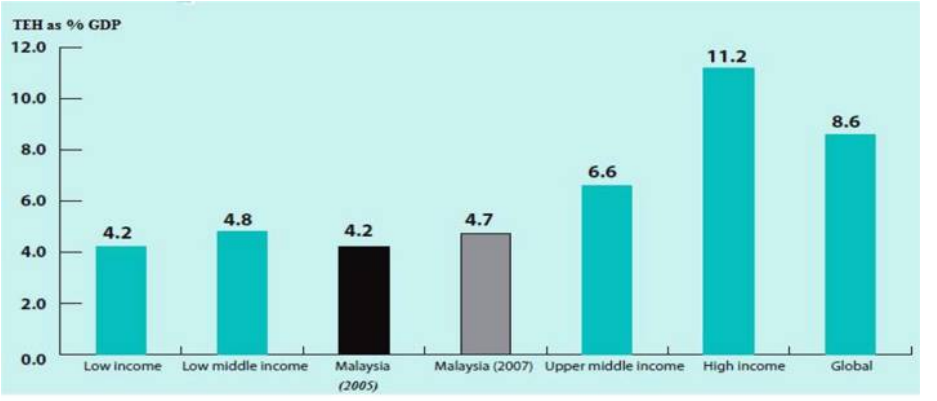
adverse events (PAEs) in US hospitals (Allen, 2013). Those figures would make such medical errors the third leading cause of death in America behind heart disease, which is the first, and cancer, which is the second, according to the Centre for Disease Control and Prevention (American Data Network, 2013).

According to Gurses and Carayon (2007), healthcare has serious patient safety and quality problems and is in need of fundamental change. Healthcare processes are poorly designed and characterised by unnecessary duplication of services and long waiting times and delays for the patients (Chaudhury *et al.*, 2006; Rashid, 2007). Costs are exploding and waste is one of the reasons to increase expenditures in healthcare services. Due to these problems, the healthcare organisations are facing difficulties to meet their patients' desire for quality services. To overcome the medical patient safety and quality problems, healthcare organisations need to continuously improve their quality performance towards patient satisfaction (Heuvel *et al.*, 2006). This study measures quality performance between public and private hospitals in Malaysia. The aim of this study is to identify the difference or conformance between public and private hospitals in Malaysia.

An overview of public and private healthcare sectors in Malaysia

In Malaysia, healthcare services are principally provided by the ministry of health Malaysia (MOH). Besides the MOH, other ministries provide healthcare services such as the ministry of education (through its university hospitals) and the ministry of defence (through its army hospitals). Nevertheless, these ministries offer only limited healthcare services to its patients. According to a report by the economic transformation programme (ETP), the Malaysian government spends approximately 5 per cent of gross domestic product (GDP) to provide healthcare services to the people, which is more than regional peers (e.g. Indonesia and Thailand) and other developing countries (e.g. Bangladesh, Pakistan and Sri Lanka). However, in 2005, total expenditure on health (TEH) in Malaysia was only 4.2 per cent of GDP and increased only 0.5 per cent of GDP in 2007 (Malaysia National Health Accounts, 2007; MOH, 2012), which is less than lower and upper middle-income countries (Figure 1).

Currently, the Malaysian healthcare industry contributes RM15 billion to the gross national income (GNI) and 4.7 per cent of the Malaysian GDP is dedicated towards the



Source: MOH (2012)

Figure 1.
TEH as percentage of GDP in Malaysia

healthcare sector (MOH, 2012). Out of the 4.7 per cent of GDP, 2.1 per cent is allocated for public healthcare and the remaining 2.6 per cent for private healthcare sector (MOH, 2012). The main objectives of this spending are to increase health awareness, improve healthy lifestyle activities, establish a comprehensive healthcare system for the citizens and empower the community to plan individual wellness programmes through efficiency and effectiveness of the healthcare delivery system (MOH, 2012). From 2000 to 2003, public healthcare sector spending was higher than the private healthcare sector, but in 2004, it reversed the spending ratio and currently private healthcare spending is higher than the public healthcare sector (Figure 2). In 2004, the private healthcare sector started to focus on medical tourism where the hospitals increase their expenditure to attract more patients out of the country.

Even though Malaysian tourism has improved at a reasonable level of quality performance over the years, but it remains behind its two neighbouring countries of Thailand and Singapore in terms of international patient services. According to the UN ESCAP (2009) report, only 400,000 international patients were treated in Malaysia in 2005, whereas 1,250,000 and 370,000 patients were treated in Thailand and Singapore, respectively. In 2008, international patients spent US$725.8 million on medical services in Singapore, whereas US$90.5 million in Malaysia (Leng, 2010; NaRanong and NaRanong, 2011). Generally, Singapore competes globally rather than on a regional basis, and the country focuses on quality and value-added services which are quite different from the approaches in Malaysia and Thailand (Herberholz and Supakankunti, 2013). However, for the past couple of years, the Malaysian healthcare sectors (both public and private) have been improved by increasing expenditure with quality and value-added services towards patient satisfaction (MOH, 2007).

Both public and private healthcare sectors are expanding and bear a high potential for further growth. Currently, there are 137 public hospitals in Malaysia with 37,393 beds. These public hospitals are open for everyone as subsidised by the Malaysian government, with a majority of the citizens receiving healthcare service from the public hospitals (MOH, 2012; Brandt and Lim, 2012). On the other hand, the Malaysian private sector has 217 hospitals with 13,186 beds. Besides these 217 private hospitals, 22 hospitals are maternity homes, 12 hospitals are nursing homes and three hospitals are private hospices (MOH, 2012). These private hospitals run on a commercial basis and targeting the well-off (Brandt and Lim, 2011).

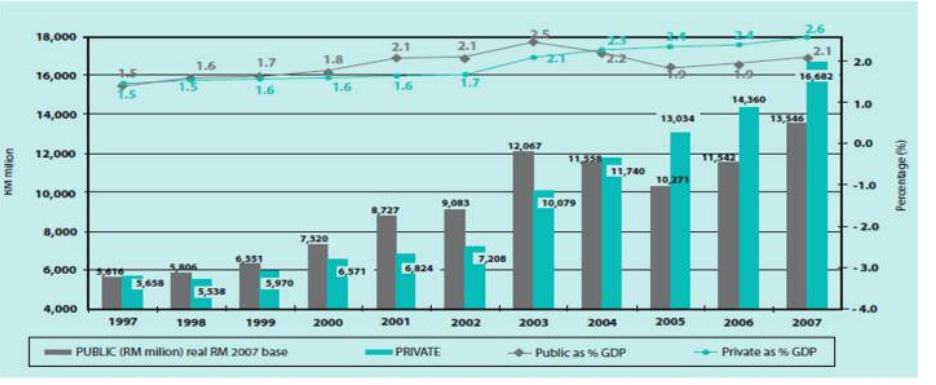


Figure 2.
Expenditure on Malaysian healthcare in public and private sector, 1997-2007 (RM values)

Source: MOH (2012)

In the tenth Malaysia Plan (2011-2015), the government prepared the budget ceiling of RM180 billion, as compared to a budget ceiling of RM230 billion in the ninth Malaysia Plan (2006-2010) (MOH, 2012). Out of RM180 billion, the government allocated a sum of RM15 billion as private funding initiatives (PFI)[1] to enhance healthcare facilities in the private sector to ensure quality healthcare services and equipment, increase supply of medicines, develop human resources, intensify research and development activities, as well as building more hospitals, clinics and quarters (MOH, 2012). In addition to these programmes, the government is trying to focus on health wellness promotion, prevention of disease and illness, nutrition improvements and community and family health development through efficient and effective healthcare services (MOH, 2012).

Presently, many Malaysian public and private hospitals are using various types of quality improvement certifications and accreditations, such as the ISO 9001:2008, Malaysian society for quality of health (MSQH) accreditation and joint commission international (JCI), to meet their customer expectations through quality healthcare performance. These quality improvement standards and accreditations help the healthcare organisations to ensure patient safety by providing a safe environment in line with professional and ethical practices (Boon and Ting, 2010).

Literature review

Quality performance and its effect on service organisations

Quality performance is defined by many authors in different ways. Storey and Sisson (1993) defined quality performance as an interconnecting set of policies and practices which focus on enhanced achievement of organisational goals through individual performance. Fowler (1990) defined quality performance as organisational work to achieve the best possible outcomes though continuous improvement. The author also mentioned that quality performance is a system or technique and is the totality of organisational activities of managers and employees to conform to customer wants and desires.

Fletcher (1993) stated that quality performance is an approach to create a vision of the purpose and aims of the organisation to understand and help each individual employee of the organisation and recognise their contribution enhance the quality performance towards customer satisfaction. According to Adam *et al.* (1997), quality performance is one of the major aspects for achieving organisational goals, and it is also one of the key fundamental elements for business success through improving quality services towards greater customer satisfaction.

Apart from the above definitions of quality performance, the quality performance can be measured by customer retention rates and the cost of losing a customer. It would be easy for the organisational managers to allocate the exact amount of resources needed to retain their customers, if accounting manager or financial expert can measure the possible or exact cost for losing a customer (Lai and Cheng, 2005). According to Reichheld and Sasser (1990), the organisation can increase their profit by approximately hundred per cent, if they can manage by retaining five per cent more of their customers. This is because retaining customers will generate more profits for the organisation when they stay for a long time with the same organisation. To retain more customers, the service organisations must understand their customer desires and expectations clearly, and they need to conform to their customer's wishes through quality services. To meet the customer wants and desires, the organisation needs to create a dynamic business environment and focus on continual quality improvement through quality performance (Adam *et al.*, 1997).

According to Modarress and Ansari (1990), quality performance can be achieved in the service organisation through measuring, monitoring the quality process of the service as

well as enhancing the performance of the employees who are dealing with customers. To achieve organisational performance, Chen *et al.* (1997) suggested that organisational managers and employees should have knowledge of overall service processing systems, rather than expertise in an isolated department. Authors also suggested that the quality manager of the service organisation should have a wide range of knowledge not only in his service area, but also in other related areas, such as marketing, supply chain management and customer relationship and logistics.

Quality performance in healthcare

The quality performance of healthcare systems has been a major concern of hospitals for many years. Many hospitals have recently introduced quality techniques (i.e. PDCA, 5S, Kaizen, control charts and root cause analysis) in the healthcare systems to achieve high-quality performance towards greater patient satisfaction (Hughes, 2008). There exists an extensive literature on healthcare performance, and recent debates have emerged on how to measure quality performance of the hospital to attain patient satisfaction and loyalty. To measure quality performance, the hospital management needs to clearly define the performance outcomes of a healthcare system that can be judged and quantified against quality improvement (Varkey *et al.*, 2007). The rationale for measuring quality performance is the belief that good performance always reflects good-quality practice and competition among the healthcare organisations, which motivates them to enhance their quality performance towards patient satisfaction (Hughes, 2008).

However, it is very difficult to measure quality performance in healthcare organisations due to the complexity of healthcare delivering service systems, unpredictable nature of healthcare, occupational differences, interdependence among hospital staff (i.e. doctors, nurse and administrative staff) and systems (Ferlie *et al.*, 2005). One of the difficult tasks to measure healthcare performance is the attribution variability associated with high-level cognitive reasoning, problem-solving, flexible decision-making and experiential knowledge (Lee *et al.*, 1999). Another difficult task of the measurement of healthcare systems is whether a near-miss could have caused harm or an adverse event was a rare aberration (McGlynn and Asch, 1998).

According to Gift and Mosel (1994), measurement of quality performance can enhance the progress of quality improvement in healthcare services by using external benchmarks. In healthcare services, benchmarking is defined as the continual and collaborative discipline of assessing and comparing the outcomes of key work processes that helps the healthcare organisation to evaluate internal and external performance. There are five essential elements required to improve quality performance of the healthcare organisations, such as developing and clarifying an understanding of the healthcare problems, fostering and sustaining a culture of change and patient safety, continuous monitoring of performance and reporting of findings to sustain the change, testing change strategies for better performance and involving key stakeholders of the healthcare organisation (Harrington, 2007; Macinati, 2008).

Methodology

The present study used a self-administered survey questionnaire for data collection. The research questionnaire measured quality performance of the hospital based on eight items, namely, progress of quality management, medical service cost, reduce errors in medical services, patient waiting time, reduce waste in processes, patient complaint, employee job satisfaction and patient satisfaction. These items were adopted from papers by Gowen *et al.* (2012) and Antony and Kumar (2012). This study collected data from 16 public and private hospitals in Peninsular Malaysia. The respondents of the study included only doctors, nurses, pharmacists and medical laboratory technologists. The research data were collected

from four different regions in Peninsular Malaysia, namely, Central region (Kuala Lumpur and Selangor), Northern region (Penang, Kedah and Perak), Southern region (Johor Baru and Melaka) and Eastern region (Pahang). In this study, 1,007 questionnaires were distributed to respondents who are working in a Malaysian hospital. Four hundred and thirty-eight responses were received (43.5 per cent response rate). Research data were analysed based on descriptive analysis and independent samples' *t*-tests undertaken using SPSS version 23.

Data analysis

Perception on quality performance in healthcare

This section presents the preliminary analysis of the collected data. The analysis covers calculating the mean and standard deviation scores (based on a 5-point Likert scale: 1 = strongly disagree; 3 = neutral; and 5 = strongly agree) for all measured items of quality performance construct in the questionnaire. Table I illustrates mean and standard deviation values for eight items of quality performance. Based on the descriptive analysis, it was observed that the highest mean was 4.011 (Item 1), whereas the lowest mean was 3.217 (Item 2). On the other hand, the lowest standard deviation was 0.671 (Item 1), whereas the highest standard deviation was 1.089 (Item 2). The results of the descriptive analysis indicate that the majority items of the quality performance mean values were more than the midpoint of the scale (mean = 3.717, standard deviation = 0.649). This suggests that the majority of the respondents agreed with the positive statement of the quality performance of the Malaysian hospitals. This is because Malaysian hospitals' employees believed that their hospitals ' quality management process has been improved (mean = 4.011), medical errors in the medical services have been reduced (mean = 3.851) and also patient waiting time gradually reduced over the past years (mean = 3.785). The respondents (hospital staff) also believed that their job satisfaction level has been increased (mean = 3.705) and patient satisfaction level of their hospital has been increase over the past few years (mean = 3.886). However, Malaysian hospitals employees believed that the cost of the medical services have not been reduced over the past few years (mean = 3.217). This is because the modern medical technology, drugs/medicines and other medical related equipment's are still expensive for the hospital to provide low cost service to the patients.

Comparison analysis between public and private hospitals on quality performance

The present study investigates between public and private hospital on quality performance. This study analysed eight items of quality performance based on independent samples' *t*-test. The results of the independent sample *t*-tests indicate that there are significant

Item no.	Variable item	Mean	SD
QP1	Hospital's quality management process has been improved	4.0114	0.67132
QP2	The cost of medical services have been reduced	3.2169	1.08915
QP3	The severity errors of medical services have been reduced	3.8516	0.73387
QP4	The patient waiting time (meet with medical personnel) has been reduced	3.7854	0.75912
QP5	Waste in processes have been reduced	3.6804	0.76725
QP6	Number of patient complaints has been decreased	3.5913	0.89730
QP7	The employee job satisfaction of our hospital has been increased	3.7055	0.84902
QP8	Patient satisfaction with the quality services has been increased	3.8858	0.75680
Overall		3.717	0.64912

Table I. Descriptive statistics for quality performance

Variables	Type of hospital	*N*	Mean	*t*-value	*p*-value
Hospital's quality management process has been improved	Public	187	3.8770	−3.668	0.000
	Private	251	4.1116		
The cost of medical services have been reduced	Public	187	3.3904	2.902	0.004
	Private	251	3.0876		
The severity errors of medical services have been reduced	Public	187	3.8182	−0.822	0.411
	Private	251	3.8765		
The patient waiting time (meet with medical personnel) has been reduced	Public	187	3.7701	−0.365	0.716
	Private	251	3.7968		
Waste in processes have been reduced	Public	187	3.6257	−1.289	0.198
	Private	251	3.7211		
Number of patient complaints has been decreased	Public	187	3.5455	−0.923	0.356
	Private	251	3.6255		
The employee job satisfaction of our hospital has been increased	Public	187	3.6364	−1.473	0.142
	Private	251	3.7570		
Patient satisfaction with the quality services has been increased	Public	187	3.7594	−3.048	0.002
	Private	251	3.9801		

Table II.
Independent samples *t*-test on type of hospital

differences between public and private hospital staff on the three items of quality performance. Table II illustrates that private hospital staff believed that their hospital's quality management process has been improved ($\mu = 4.111$, df = 436 and $p = 0.000$) and patient satisfaction with the quality services has been increased over the past years ($\mu = 3.980$, df = 436 and $p = 0.002$) compared to public hospital staff. However, private hospital staff do not believe that the cost of medical services have been reduced over the past years ($\mu = 3.0876$, df = 436, $p = 0.004$) compared to public hospital in Malaysia.

Conclusions

The findings of the present study show that there are significant differences between public and private hospital staff on quality performance. Private hospital staff perceives their hospital's quality management process and patient satisfaction has been improved over the past years compared to public hospital. However, private hospital staff does not perceive their medical service cost has been reduced over the past years compared to public hospital. Recent studies show that Malaysian private healthcare sector is accused by many patients for being overly concerned with making profit rather than providing quality medical services at reasonable costs (The Star Online, 2010, 2012). Many patients complained that private hospitals are overcharging for medical insurance and give unnecessary medical tests (Rasiah *et al.*, 2011). Apart from the high medical costs, the private hospitals have been rapidly growing over the past few decades, and they are playing an important role in the healthcare industry to provide better medical services to their patients, such as development of specialist hospitals for serious illnesses, continuous improvement in healthcare information technology and private medical insurance for local patients (Teo, 2013; MOH, 2012). Though the private hospitals provide a reasonable level of healthcare service, it needs to ensure the quality of its services is at par with international standards (MOH, 2012).

On the other hand, Malaysian public hospitals are overworked and face difficulty ensuring appropriate appointments between patients and doctors (Ren, 2007). Pillay *et al.* (2011) conducted study on patient satisfaction with waiting times of the public hospitals in Malaysia and they found that on average patients wait for more than two hours to meet with medical personnel for only 15 minutes due to employee attitudes and

delayed work process, heavy workload, management and supervision problems and inadequate facilities. To overcome these quality problems, the policy makers for the both public and private hospitals need to consider five essential aspects to improve the overall performance, such as developing and clarifying an understanding of the healthcare problems, fostering and sustaining a culture of change and patient safety, continuous monitoring of performance and reporting of findings to sustain the change, testing change strategies for better performance and involving key stakeholders of the healthcare organisation (Varkey *et al.*, 2007). In addition, both health sectors can follow some guidelines to improve their quality performance, such as selecting quality projects which are strategically significant for the hospital, providing especial training to the doctors and nurses about the quality tools and applications of the healthcare systems, developing the skills to design and use measures of quality to identify the key performance indicators of the healthcare services, not neglecting those services which are doing little to address quality problems and ensuring quality projects working on complex subjects by following the steps of a structured team working process (Ovretveit, 2000; Field *et al.*, 2014). Once quality performance has improved, the hospitals will be able to fulfil patient needs through better quality services.

Note

1. PFI as part of the tenth Malaysia plan which transfer the financial responsibility and manage capital investment from public sector assets to private sector with lease charges. It also ensures quality of services with return on investment.

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