

*Full Length Research Paper*

# **Delivering quality service to in- and out-patients in a South African public hospital**

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**The evaluation of public healthcare is important for customers, healthcare providers and society. Understanding the determinants of healthcare satisfaction will lead to improvement of healthcare quality in developing countries. In this study in-patient and out-patients' expectations, perceptions and satisfaction with the responsiveness provided by a public healthcare provider in South Africa is measured by using an adapted version of SERVQUAL (service quality). The major findings were that all patients demand excellent responsive levels but none of these were met, resulting in dissatisfaction. Overall patients were least satisfied with reasonable waiting time for the dispensing of medication as well as reasonable waiting time for treatment. The findings of this study could be used to guide public hospitals in general to render healthcare programs that are more patient-centered and to increase their efficiency in a context of scarce resources.**

**Key words:** Service quality, public healthcare, responsiveness, in- and out-patients.

## **INTRODUCTION**

Services are becoming an increasingly important element of national economies and it is crucial to appreciate the distinguishing qualities of services and resulting management implications with specific focus on healthcare services. Public healthcare organisations all over the world are increasingly concerned about their insufficient financial resources and their ability to meet social obligations (Ramani, 2004:212). Increasing financial aid alone will not improve healthcare systems, but drastic restructuring with sound government and management principles need to be implemented. The organizational structures of public healthcare providers must facilitate the delivery of a responsive and flexible healthcare system that is people centered with the interest of the public, patients and clients guiding the decision making at all levels (Downey-Ennis and Harrington, 2002:316). In reaction to patients' and other role-player's increasing expectations regarding the quality of healthcare, this industry should implement more business-like practices (Robinson and Lefort, 2000:112). Healthcare organisations

in developed (Willcocks and Conway, 2000:310) as well as developing countries (Andaleeb, 2001:1360; Raghavan-Gilbert, Phillips and Gilbert, 1998:792) seem to realize that marketing principles and concepts could and should be embraced.

The delivery of quality healthcare services and the integration thereof in healthcare policies are concerns in various health organisations across the world (James, 2005). In the past decade in particular, patient satisfaction has become an important performance measure and outcome of healthcare services (Sohail, 2003; Zineldin, 2006; Akter, Hani and Upal, 2008). Researching healthcare service quality is vital to ensure a high quality of care and patient satisfaction and to maximise the benefits of scarce resources, although this research results are still limited in South Africa (Wouters, Heunis, van Rensburg and Meulemans, 2008). Determining the factors associated with patients' satisfaction is thus critical for public healthcare providers in order to understand what is valued by patients, how the quality of care is perceived by the patients and to know where, when and how service changes and improvements could be made. This article reviews the relevant literature on service marketing in public healthcare, service quality in public healthcare followed by a discussion of the research

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methodology applied to determine the service quality delivered in a government - controlled hospital in South Africa. The main results of this study are summarised and relevant management implications are highlighted.

### **SERVICE MARKETING IN PUBLIC HEALTHCARE**

There are various definitions of what constitutes a service. Contemporary definitions agree that a service in itself delivers no tangible output, although it may facilitate the production of tangible products (Palmer, 2008). Armstrong and Kotler (2003) define a service as any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Services are also described as "deeds, performances or efforts that cannot be physical possessed (Lamb, Hair, McDaniel, Boshoff and Terblanche, 2004). Services have unique features that differentiate it from goods namely: intangibility, inseparability, heterogeneity and perishability (Parasuraman, Zeithaml and Berry, 1985; Palmer 2008). Kotler, Armstrong, Wong and Saunders (2008) stresses that a company must consider and "cash in" on these special service characteristics (that includes the SERVQUAL constructs) when designing marketing programs. Smart services businesses, just like manufacturing businesses use marketing to position themselves or their brands more strongly in chosen markets. Kotler and Andreasen (1996) points out that each of the service characteristics poses a special problem for the management of service offerings and should be converted into challenges when designing the final service offerings. For example, one has to bear in mind that the intangibility of services results in high risk and difficulty for consumers to evaluate the quality causing them to rely on personnel information sources, physical evidence and price rather than the core service. Service organisations in return may react to this (in their marketing efforts) by focussing on physical evidence (thus making the intangible, tangible) and service quality (Palmer, 2008). The physical evidence for example may include focussing on "atmospherics", meaning the way the service providers are dressed, could be utilized to create a favourable image of the company in the minds of the customers. This causes a helpful tool in the marketing process. Service providers in the public healthcare sector should also understand the strategic- and management implications as a result of how to deal with these characteristics. Service marketers can also make their companies efforts tangible by leaving behind a concrete sign of their efforts (Kotler and Andreasen, 1996). In the case of public hospitals the good work of the staff members (e.g. successful medical procedures) could be displayed in the media (e.g. community newspapers) in order to create loyalty amongst the community members. This in return eases the task of the marketers.

A further challenge for managers and service providers in public healthcare arises from the fact that these services are provided by public originations. The application of marketing to public services is unique and challenging compared to services in the private sector (Palmer, 2008). In the public sector the choice of the buyers and sellers is much more limited. In public healthcare, patients will only receive treatment at the hospital where they are designated. Furthermore, public healthcare organisations at various levels serve specific areas and needs as determined by the policy of the South African government. The aim of the public sector is not to earn a profit for services provided and it does not operate within narrow internal financial goals, however its goals are more diverse with various external stakeholders. Public managers have relatively limited discretion regarding the standards and ways of service delivery based on legislation and policies of the government. In South Africa, quality public service delivery is the focus of the White Paper on the Transformation of Public Services (Republic of South Africa, 1995) and it is guided by the Batho Pele (a Sotho word meaning "People First") principle. This philosophy serves as guide for public service delivery in South Africa and demands that patients should be at the centre of healthcare service delivery that is capable of equally satisfying the healthcare needs of all South Africans. Continuous evaluation of the quality delivered by public healthcare organisations in South Africa is therefore essential to ensure that the policies of government is effectively and efficiently implemented (Arries and Newman, 2008).

### **SERVICE QUALITY IN PUBLIC HEALTHCARE**

Grönroos (1984) was the first who attempted to define and explain service quality and differentiated between the process of delivery (functional quality), which relates to the perceived quality and the actual output of the service (technical quality), which relates to objective quality. Technical quality in healthcare refers to the accuracy of diagnosis and procedures and functional quality refers to the manner of delivery of healthcare. Sohail (2003) is of the opinion that service quality is primarily shaped by functional quality, because patients often find it difficult to assess the technical quality. Service quality, unlike product quality, is more abstract and elusive because of the features unique to services and is therefore difficult to evaluate and measure. Evaluating the quality of service can be complicated due to the following reasons (Lamb et al., 2004). Firstly, services have fewer search qualities that can easily be assessed before a use or purchase. Healthcare is characterised by high involvement of consumers due to the higher risk in terms of outcomes, yet it requires the complete involvement of these customers during the service production and delivery process (Palmer, 2008). This implies that the quality of

the process and outcome is of equal importance. Secondly, services tend to exhibit more experience qualities that can only be assessed after use, such as the quality of medical consultation and treatment resulting in better health. Lastly, services tend to exhibit more credence qualities that consumers may have difficulty assessing, even after the purchase, because they may not have the necessary knowledge or experience. For instance, even after undergoing surgery, a patient may be unable to assess whether the quality of service received was satisfactory.

Quality within healthcare service delivery refers to services that meet set standards, implying excellence, and satisfy the needs of both consumers and healthcare practitioners in a way that adds significant meaning to both parties' healthcare experiences (Arries and Newman, 2008). Zineldin (2006) advocates that quality healthcare should be regarded as the right of all patients and ought to be the responsibility of all the staff within healthcare organisations. Internationally, healthcare quality is still a concern for various healthcare stakeholders (e.g. decision makers and patients) as reflected by the various studies recently published (Sohail, 2003; Zineldin, 2006; Akter, Hani and Upal, 2008). The most popular model of service quality is SERVQUAL (service quality), a set of 22 structured and paired questions designed to assess customers' expectations of service provision and customers' perceptions of what was actually delivered. This instrument is structured in five dimensions, namely: Tangibles, Reliability, Responsiveness, Assurance, Empathy: (Parasuraman et al., 1985). SERVQUAL is widely used by academics and practitioners to measure service quality including numerous studies on service quality in healthcare (Akter, Hani and Upal, 2008; Sohail, 2003). Zineldin (2006) explored how patients in Egypt and Jordan evaluate the quality of healthcare and comment that health quality models applied in the West are not necessarily applicable in developing countries. This study consequently identified the health attributes found to be appropriate for hospitals in Egypt and Jordan. Two existing models, namely the technical/functional and SERVQUAL quality models, were adopted to develop a new five quality (5Q) model for healthcare. It includes technical, functional infrastructure, interaction and atmosphere qualities and services. This study measured patients' satisfaction with the quality of service delivered at a number of public and private hospitals in Egypt and Jordan. Akter, Hani and Upal, (2008) assessed the service quality and satisfaction in suburban public hospitals in Bangladesh. They adopted and applied SERVQUAL to measure the difference between patients' expectation and perception of delivered service on the following dimensions of service quality: responsiveness, assurance, communication, discipline (adherence to rules and regulations) and baksheesh (additional compensation). It was found that the majority of suburban public hospitals do not meet the patients'

expectations on all these dimensions resulting in dissatisfaction.

Two of the recent studies on service quality in the healthcare sector in South Africa include those by Wouters, Heunis, van Rensburg and Meulemans (2008) and Arries and Newman (2008). Wouters, et al. (2008) evaluates patient satisfaction with antiretroviral services at primary healthcare facilities in South Africa in a longitudinal study. In this study, high levels of patient satisfaction were found despite the limited human resources available. Arries and Newman (2008) conducted qualitative research to explore out-patients' experiences of the quality of services delivered at a public hospital in Gauteng. It was found that outpatients reported positive experiences with the medical staff, specifically the doctors, while they had negative experiences with the lack of service orientation of (especially the nursing staff), unethical situations, and frustrating inter-personal relationship difficulties. The study for this paper was not a qualitative study similar to that of Arries and Newman (2008). Quantitative methodology was applied by interviewing in-patients as well as out-patients at a training hospital in Gauteng. The questionnaire used in this study also differentiate clearly between services provided by doctors, nurses as well as non-medical staff in order to evaluate the performance of every group as experienced by the patients. SERVQUAL was used in the study to measure in- and out-patients' expectations, perceived performance and satisfaction with the responsiveness provided by a large public hospital in Gauteng.

## HYPOTHESIS

Three primary hypotheses are tested namely:

### Hypothesis 1

Ho1: There exist no significant differences between in-patients and out-patients regarding their expectations of the hospital's responsiveness construct.

If the Ho hypothesis is accepted then it can be assumed that equality exists amongst in-patients and out-patients and that all patients expect the same level of treatment with regards to responsiveness. On the other hand, if the Ho hypothesis is rejected it is assumed that in- and out-patients inequality exists in terms of their expectations.

### Hypothesis 2

Ho2: There exist no significant differences between inpatients and out-patients regarding the perceived performance of the hospital in terms of responsiveness.

If the  $H_0$  hypothesis is accepted then it can be assumed that equality exists amongst in-patients and out-patients and that all patients perceived the performance of the hospital on the same level regarding the responsiveness of the hospital. On the other hand, if the  $H_0$  hypothesis is rejected it is assumed that in-patients and out-patient inequality exists in terms of the perceived performance of the hospitals services.

### Hypothesis 3

$H_03$ : There exist no significant differences between in-patients and out-patients' satisfaction levels with regard to the hospital's responsiveness respectively.

If the  $H_0$  hypothesis is accepted then it implies that the expectations of patients are met, leading to a feeling of satisfaction. On the other hand, if the  $H_0$  hypothesis is rejected, then it is assumed that patients' expectations are not met and this may lead to a feeling of dissatisfaction. The null hypothesis is tested at a 0.05 significance level.

### PURPOSE AND OBJECTIVES OF THE RESEARCH

The purpose of this paper is to examine responsiveness as a determinant of service quality in a government-controlled hospital in South Africa. The objectives of this study are twofold namely:

- To determine if equality exists between in-patients and out-patients for the service responsiveness provided to patients in a government-controlled hospital in South Africa (perceived performance).
- To determine whether the expectations of in-patients and out-patients are met (satisfactory) terms of how hospital staff responds to their needs in terms of the responsiveness variables.

In-patients refer to patients admitted to the hospital and out-patients refer to patients who receive medical consultation and/or treatment without being admitted. The service responsiveness content under investigation includes the following constructs: Prompt service during registration/admission; reasonable waiting time for treatment; reasonable waiting time for the dispensing of medication; responsiveness to complaints; speediness of services by medical staff; proper explanation of hospital procedure (what to do and where). The most outstanding items will however be discussed.

### RESEARCH METHODOLOGY

The research methodology that was followed for this investigation is consequently explained. The data analysis illustrates the levels of importance, perceived performance and consequently satisfaction (dissatisfaction) of one of the dimensions of the service quality

dimensions for in-patients and out-patients of the hospital namely, responsiveness.

The SPSS version 17.0 statistical package was utilised to analyse the data. For this analysis the Kolmogorov-Smirnov Test was employed based on the assumption that if the significant values exceeded 0.5, normality could not be assumed and the researchers had to rely on employing non-parametric analysis techniques. As normality could not be assumed after applying the Kolmogorov - Smirnov Test the researchers employed the Kruskal Wallis test to test the null hypothesis and the alternative hypothesis that there exists no significant difference between the levels of importance and satisfaction between the two groups (in-and out-patients) respectively and that there exists significant differences between the groups of patients.

### The sample framework, measuring instrument and data collection and analysis

A service satisfaction survey was conducted in 2007 amongst patients treated at a provincial hospital in Gauteng, South Africa. The perceived performance of the hospital by its patients was tested regarding pre-identified service quality aspects related to healthcare. A total of 448 patients (205 in- and 242 out-patients) were personally interviewed during the research. Although an attempt was made to select the patients randomly it was not always possible due to patients that were not able and/or willing to complete the questionnaires. In such cases substitutes were selected to overcome the problem of non-responses.

The expectations and perceptions of in-patients and out-patients regarding the hospital's responsiveness services is reported in this paper. The two dimensions (expectations and perceived performance) represent a mirror-image of each other. A five-point Likert type scale was used to measure the levels of perceived performance of the hospital as well as the expectation levels of the patients. Respondents were asked to indicate their evaluation on the scales in which 1 = Very important (Excellent) and 5 = Not important at all (Not good at all).

A total of 6 items were used to measure the responsiveness related variables as offered by the hospital. An item analysis was carried out to test the validity and the reliability of the questionnaire and an overall Cronbach coefficient Alpha of 0.91254 and 0.9163 were measured for expectations and performance respectively. Data was captured by a trained assistant and analysed using the SPSS version 17 statistical package. Data was analysed after grouping the list of 53 pre-identified service related variables into five service related groupings. Only the responsiveness dimension was utilized and adapted for the purpose of the study and were analysed for this paper.

### FINDINGS OF THE STUDY

The service responsiveness content under investigation includes the following constructs: prompt service during registration/admission; reasonable waiting time for treatment; reasonable waiting time for the dispensing of medication; responsiveness to complaints; speediness of services by medical staff; proper explanation of hospital procedure (what to do and where).

The patients reported fairly high expectations on all the responsiveness variables (Table 1). This clearly signals that all patients demand excellent responsive levels. The two most important issues (in terms of their expectations) for patients in general were: Proper explanation of

**Table 1.** Test for differences with regard to expectations on responsiveness constructs.

Responsiveness:	n	In-patients		Out-patients		Total patients		Sig. p value
		Mean	Std.	Mean	Std.	Mean	Std.	
Prompt service during registration/admission V 36	448	1.93	1.11	1.71	0.97	1.832	1.05	0.022
Reasonable waiting time for treatment V 37	448	1.96	1.17	1.82	1.07	1.95	1.12	0.198
Reasonable waiting time for receiving medicine V 38	448	1.82	1.13	1.9	1.17	1.854	1.15	0.422
Responsiveness to complaints V 39	448	2.07	1.54	2.27	1.47	2.166	1.50	0.031
Speediness of services by medical staff V 40	448	1.89	1.3	1.75	1.05	1.832	1.2	0.029
Proper explaining of hospital procedure (what to do and where to go)	448	1.9	1.12	1.7	1.04	1.811	1.1	0.022

\*Significant on 0.95 level, Std = standard deviation.

**Table 2.** Test for significant differences with regard to perceived performance on responsiveness constructs.

Responsiveness:	n	In-patients		Out-patients		Total patients		Sig.
		Mean	Std.	Mean	Std.	Mean	Std.	
Prompt service during registration/admission V 89	448	2.58	1.36	2.7	1.3	2.633	1.33	0.185
Reasonable waiting time for treatment V 90	448	2.68	1.36	2.93	1.4	2.85	1.39	0.054
Reasonable waiting time for receiving medicine V 91	448	2.5	1.37	3.12	1.51	2.794	1.47	0.001
Responsiveness to complaints V 92	448	2.67	1.54	3.37	1.63	2.986	1.62	0.001
Speediness of services by medical staff V 93	448	2.48	1.33	2.46	1.22	2.472	1.29	0.824
Proper explaining of hospital procedure (what to do and where to go)	448	2.39	1.23	2.4	1.3	2.391	1.26	0.74

\*Significant on 0.95 level, Std = standard deviation.

hospital procedure (what to do and where to go) and speediness of services by medical staff. Interesting to note is that the perceived performance of the hospitals' services (Table 2) was in the same sequence, implying that satisfaction was met in terms of the rank. However, if the mean is used as an indication, then satisfaction was not met as the means of expectations were lower than the perceived performance. In-patients' expectations of the two most preferred variables were significantly higher compared to those of out-patients. The overall least preferred variable in the responsiveness category was responsiveness to complaints. Significant differences were measured between in-patients and out-patients with out-patients rating it significantly less important than in-patients.

A non-parametric test procedure was used to compare the patients' expectations regarding the responsiveness variables with their perceived performance of the hospital, as experienced by the sample as a whole. The test computes the differences between the mean values of two variables for each case and tests whether the average differs significantly from 0.0. This test could be used as the observations for each variable pair were

made under the same conditions. The aim was to determine whether performance on responsiveness matches the expectations of patients or not (table 3). Significant differences exist between expectations and perceived performance for both in-patients and out-patients on all responsiveness variables. This is an indication that expectations have not been met. The overall smallest deviation between expectations and perceived performance is measured in terms of proper explanation of hospital procedure where in-patients are less dissatisfied with this variable compared to out-patients. This variable was rated first in terms of expectations as well as their perceived performance of the hospitals' services. The overall second smallest deviation between expectations and perceived performance is the speediness of services provided by medical staff. Again, in-patients were less dissatisfied with this service. The variable in this category that was perceived as most dissatisfactory was reasonable waiting time for the dispensing of medicine. Out-patients indicated the highest level of dissatisfaction with regard to this variable. This variable was rated relatively important in terms of expectations.

**Table 3.** Test for significant differences between expectations and perceived performance of responsiveness.

Responsiveness:	In-patients				Out-patients				Total patients		
	Em	Pm	Em - Pm	Sig.	Em	Pm	Em-Pm	Sig.	Em	Pm	Em-Pm
Prompt service during registration/admission V 36-	1.53	2.58	-1.05	0.0001	1.71	2.7	-0.99	0.0001	1.83	2.63	-0.83
Reasonable waiting time for treatment V 37 – 90	1.93	2.68	-0.75	0.0001	1.82	2.93	-1.11	0.0001	1.9	2.8	-0.95
Reasonable waiting time for receiving medicine V 38 – 91	1.96	2.5	-0.54	0.0001	1.9	3.12	-1.22	0.0001	1.85	2.79	-0.946
Responsiveness to complaints V 39 – 92	1.82	2.67	-0.85	0.0001	2.27	3.37	-1.1	0.0001	2.16	2.98	-0.824
Speediness of services by medical staff V 40 – 93	2.07	2.48	-0.41	0.0001	1.75	2.46	-0.71	0.0001	1.83	2.47	-0.642
Proper explaining of hospital procedure (what to do and	1.89	2.39	-0.5	0.0001	1.7	2.4	-0.7	0.0001	1.81	2.39	-0.581

Em = Expectations mean, Pm = Perceived performance mean, Significant on 0.95 level.

### Conclusion and Management Implications

The primary purpose of this paper is to examine responsiveness as a determinant of service quality in a government - controlled hospital in South Africa. The objectives of this study are twofold namely: To determine if equality exists between in-patients and out-patients for the service responsiveness provided to patients in a government-controlled hospital in South Africa (perceived performance); and to determine whether the expectations of in-patients and out-patients are met (satisfaction) terms of how hospital staff responds to their needs in terms of the responsiveness variables.

The results of the investigation hold important implications for future planning and development in the South African healthcare industry, and more specifically at public hospitals. Service managers should take cognisance of the most important service quality issues identified in this investigation. These issues, (in terms of patients' expectations) in general were: Proper explaining of hospital procedure (what to do and where to go) and speediness of services by medical staff. Coincidentally, the order in which they perceived the performance of the hospitals' services was exactly in the same sequence. However, further

measurements confirmed that satisfaction was not met. Consequently, it is important to communicate these findings to the respective individuals or groups that are responsible for satisfying customer needs, in particular at public hospitals.

The importance of these findings lies incontrovertibly therein that they prospectively contribute towards a constructive paradigm shift that espouses the benefits of an improved perception of service delivery, especially, but not necessarily limited to the public health sector.

Based on the findings of this study it can be recommended that the public health sector should consist of investment in, firstly, an analysis of patients' perceptions of the performance of a hospital on an ongoing and formalised basis and secondly, proper staff and management training sessions. With regard to specific outcomes, service managers should be aware of the various gaps in performance in the responsiveness dimension, such as proper explanations of hospital procedure.

In conclusion, the findings of this study clearly identifies important positive and negative perceptions regarding the healthcare services provided by the hospital under examination and substantiate the conclusion that it is imperative the hospital management take the necessary measures to

improve the perceived performance of the hospital. A different approach should be considered and implemented to satisfy the needs of in-patients and out-patients as significant differences exist between the two groups.

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