Service Quality Measurement in Healthcare Sector in India

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Abstract

Healthcare industry is one of the most challenging industries in India with projected revenue of US$ 30 billion; it constitutes 5.2% of India's GDP. The Indian health industry has had a growth of over 12% p.a. in the past four years and is expected to grow at 15% per annum to US$78.6, reaching 6.1% of GDP and employing 9 million people by 2012. The private sector plays a significant role by contributing 4.3% of GDP and 80% share of healthcare provision. However, there is deficit with respect to access, affordability, efficiency, quality and effectiveness, in spite of the high spending on overall private and public health.

In order to be comparable with the healthcare parameters of other developing countries, India's healthcare sector faces many challenges. For example, to reach a ratio of two beds per 1000 population by 2025, an additional 177 billion beds will be required which will need a total investment of US$86 billion. There is an acute shortage of doctors, nurses, technicians and healthcare administrators and an additional 0.7 million doctors are needed to reach a doctor population ratio of 1:1000 by 2025. This paper concentrate on

1. To study Need and Scope of Service Quality in Healthcare sector.
2. To present the Role of Government in Healthcare management.
3. To analyze Service Quality in Hospitals.

Introduction

Health is one of the fundamental human rights which has been accepted in the Indian Constitution. Although Article 21 of the Constitution requires the State to ensure the health and

nutritional well being of all people, the federal Government has a substantial technical and financial role in the sector.

Hospitals are the backbone of the healthcare delivery system. Hospital care in India until the early 1980s, were run by Government hospitals and those managed by charitable associations. In the mid 80's, the healthcare sector was recognized as an industry. In the year 1991 Government of India initiated economic reforms. However post liberalization, the sector attracted private capital and fresh investment that took place in setting-up hospitals and smaller nursing homes. Large corporate groups and charitable organizations brought private finance and these resources were invested in modern equipments and technologies and in developing health infrastructure. This helped in augmenting the availability of super-specialty services across the country. Corporate groups such as Apollo Hospitals group, Care Health Foundation, Wockhardt group of hospitals, Fortis Healthcare, Max India paved the way for corporate organization structure for hospitals and have successfully developed a chain of multi-specialty private hospitals. Private sector entry in India has opened many doors for medical and paramedical manpower, medical equipment, information technology in health services, BPO, telemedicine and medical and health tourism. There is 20% increase over the previous year with an estimated 100,000 health tourists visiting India.

Govt. of India launched the National Rural Health Mission (NRHM) in 2005. Its endeavor is to provide quality healthcare for all and increase the expenditure on healthcare from 0.9% to 2-3% of GDP by 2012. The Union budget 2010–2011 has the countervailing duty of 4% on all medical equipments, with full exemption from special additional duty and Uniform/concessional basic duty of 5% for all medical appliances. This budget focus is on rural healthcare, with the fund allocations rising to a whopping Rs.22300 crore (Rs. 223 billion/$4.82 billion) from Rs.19534 crore during the previous fiscal year. This rise is keeping up the growing needs of the rising healthcare industry of the country. Convergence of National Rural Employment Guarantee Act with wider Health Insurance coverage for BPL families through Rashtriya Swasthya Bima Yojana.

Commenting on the union budget 2010-2011 Rajen Padukone, CEO of Manipal Hospital, says "Relaxation of FDI norms may see more international players coming into India in the healthcare sector. Added to it, rationalization of duties on medical equipment can make imports cheaper and can significantly lower healthcare costs in the country."

Andhra Pradesh state Government has enhanced its budget for qualitative health services keeping its focus on rapid growth in health service delivery system. A budget provision of Rs.925 crore has been made for Aarogyasri Health insurance scheme run by Government of Andhra Pradesh for BPL families) and Rs.4295 crore allocated for Medical & Health department for the year 2010-11.

Table 1 Revenue expenditure on Health and Family welfare at Central level by Govt. of India and Medical, Public health and Family welfare at State level by Govt. of Andhra Pradesh.

Year wise Health Budget	**Union Budget ***	**State Budget ****
2006-2007	Actual Rs. 10,567.85 crore	Actual Rs. 1,853.93 crore
2007-2008	Actual Rs. 13,951.00 crore	Actual Rs. 2,439.06 crore
2008-2009	Actual Rs. 16505.95 crore	Actual Rs. 2,894.79 crore
2009-2010	Actual Rs. 19,554.09 crore	Actual Rs. 3,239.43 crore
2010-2011	Revised Rs. 23,300.00 crore	Revised Rs. 4,307.75 crore
2011-2012	Budget Rs. 26,897.00 crore	Budget Rs. 5,021.75 crore

* Revenue expenditure on Health and Family welfare

**Revenue expenditure on Medical, Public health and Family welfare

Table 2 Sample for the study

Sl.No.	**Type**	**Total No.**
1.	Government owned hospital having bed strength 500 and above – NTR Health University General Hospital, Vijayawada	1
2.	Privately owned hospitals having bed strength 500 and above – Pinnamaneni Siddhartha Medical College Hospital, Chinaoutapalli.	1

3.	Government owned hospitals having bed strength 100 and above - Government District Hospital, Machilipatnam.	1
4.	Privately owned hospitals having bed strength 100 and above - Dr. Ramesh Cardiac and Multispecialty Hospital, Vijayawada	1
5.	Government owned Hospitals having bed strength 50 to 100 - Area Hospital, Nuzvid	1
6 & 7.	Privately owned hospitals having bed strength 50 to 100 - Prasanth Hospital, Vijayawada - M.J. Naidu Hospital, Vijayawada	2
8.	Trust owned hospitals having bed strength 50 to 100 - Gifford Memorial Hospital, Nuzvid	1
9.	Government owned hospitals having bed strength 30 to 50 - Community Health Centre (C.H.C), Jaggaiahpeta	1
10.	Privately owned hospitals having bed strength 30 to 50 - Latha Super Specialty Hospital, Vijayawada	1

Role of the Government in Healthcare Management

Table 3 Estimated number of deaths in India from chronic diseases

Cause of Death	**2005**	**2015**
Diabetes	1,75,000	2,36,000
Chronic Respiratory Diseases	6,74,000	8,64,000
Cancer	8,26,000	10,69,000
Cardiovascular Diseases	29,89,000	34,65,000
Total (all causes)	1,03,62,000	1,09,49,000

Health services in various European countries have borrowed elements of reform from one another but have maintained their basic forms; with tax funded systems in UK, Scandinavia, Spain, Italy, Portugal and Greece, Switzerland, Austria and Benelux countries. The Countries of central and south central Europe developed hybrid solutions based on a combination of employment based insurance, tax funding and private insurance. All European health systems operate with in financial limits and control the services of health providers through cost and quality defined contracts. In both tax and social insurance systems there is a division between

agencies commissioning and funding health and care and the providers of the services. Social insurance agencies have been subject to reform and competition as in the case of Netherlands and Germany. This has resulted in far fewer social insurance agencies competing on the basis of the quality and cost effectiveness of the services offered. Local health commissioning agencies in tax funded systems do not compete but offer services matched to local needs. This often involves partnerships with other agencies to tackle the poverty and social exclusion of local groups.

While governments delegate health commissioning and provision to local agencies, has gained the health suppliers to exhibit that the services they tender are useful and are sustained by proof based drug. With regard to the prioritization of these health services most of the nations tagged along Norway and Netherlands which are known for paying the highest priority to services that can be shown to the cost effective and cost efficient. Where patients can reasonably be the expected to bear personal responsibility for services this is further reflected in co-payments ex: to a little extent it's associated to the smoking ailments and duty enhancement healing.

Most of the European health systems have challenged to lay down client charges at a stage that will give self-assurance in the majority cost effective use of services. This promotes the users to use it for telephone triage and advisory services for self care. On the other hand it persuades patients seek early discharge based on low level co-payment.

Healthcare in India

India is a Democratic Republic consisting of 28 States and 7 Union Territories (directly administered by the Central Government). According to the Constitution of India, state governments have jurisdiction over public health, sanitation and hospitals while the Central Government is responsible for medical education. State and Central Governments have concurrent jurisdiction over food and drug administration, and family welfare. Even though

health is the responsibility of the states, under the Constitution, the Central Government has been financing the national disease control, family welfare and reproductive and also the programmes that are related to child health. Each state therefore, has developed its own system of Health care delivery, independent of the Central Government.

In India, public spending on healthcare is low compared to the developed countries, having declined from 1.3% of GDP in 1990 to 0.9% of GDP in 1999. The Government, in its National Health Policy, 2002 (NHP 2002), is targeting an increase of healthcare expenditure to 6% of GDP by 2010, with 2% of GDP being funded by public health investment. Today public spending on health is a mere 1% of GDP calculated in India Budget 2011-2012. Public spending on health care as per the World Health Organization recommends should be at least 5%. The government over the last six years has not been able to move towards its own target of 3% of GDP for health. The share of the Central government in public spending for health is a mere 0.25% of GDP when as per the UPA target it should be 40% of 3% of GDP that is 1.2% of GDP or Rs. 86,400 crore at today's prices.

The official governing bodies of the health system at the national level consist of (a) The Ministry of Health and family Welfare (b) The Directorate General of Health Services and (c) The Central Council of Health and Family welfare. At the state level the healthcare administration comprises (a) State Ministry of Health (b) State Health Directorate and District Medical and Health Officer (DMHO) at District level.

Table 4 Public Health System in India

	NATIONAL LEVEL Ministry of Health and Family Welfare	
	STATE & U.T.S. Department of Health Family Welfare	
	Apex Hospital	
	DISTRICTS District Hospital	
RURAL AREAS		**URBAN AREAS**
Community Health Centre		Hospital
Primary Health Centre		Dispensary

Sub-centre	
Village Health Guides and trained Dias	

At the Central Level

The Central responsibility consists mainly of policy making, planning, guiding, assisting, evaluating and coordinating the work of the State Health Ministers, so that health services cover every part of the country and know state lags behind for want of these services.

At the State Level

Historically, the first mile stone in State Health Administration was the year 1919, when the states obtained autonomy, under the Montague – Chelmsford reforms from the Central government in matters of public health. The Government of India act 1935 gave further autonomy to the states. The position has largely remained the same even after the new constitution of India came into force in 1950. The state is ultimate Authority responsible for all the health services operating within its jurisdiction. At present there are 28 states in India with each state having its own health administration. In all the states the management sector comprises the State Ministry of Health and a Directorate of Health.

At the District Level

The principal unit of administration in India is the district under a Collector. Within each district again, there are six types of administrative areas

- Sub – divisions.
- Tehsils (Talukas).
- Community Developments Blocks.
- Municipalities and Corporations.
- Villages.
- Panchayats.

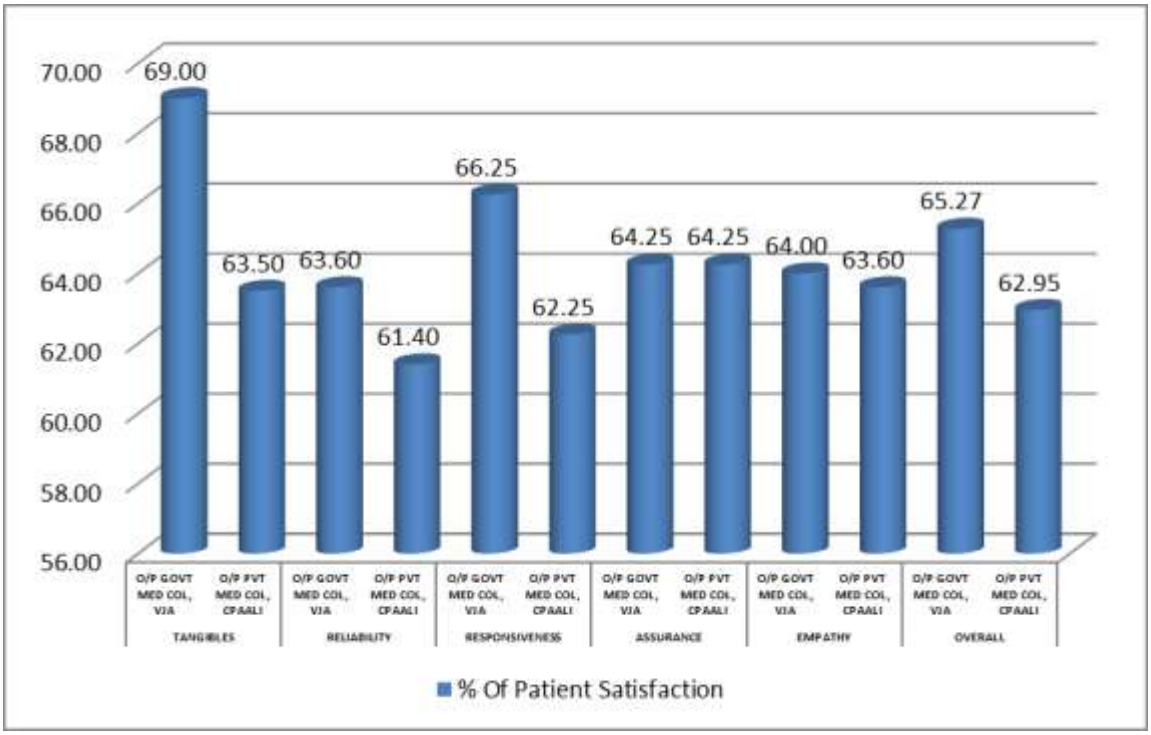
Most districts in India are divided into two or more sub-divisions, each in-charge of an Assistant Collector or Sub-Collector. Each division is again divided into tehsils (taluks), in-charge of a Tehsildar. A tehsil usually comprises from 200 to 600 villages. Community Development Block is a unit of rural planning and development, and comprises approximately 100 villages and about 80000 to 120000 population, in-charge of a Block Development Officer. Municipal Boards – in areas with population ranging between 10000 and 2 lakhs, Municipal chairman is the in-charge of Municipal Boards and Mayor is the in-charge of corporations with population above 2 lakhs and above. Finally there are the village panchayats, which are institutions of rural local self government.

Table 5 Out-patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above

SATISFACTORY LEVELS	Tangibles	Reliability	Responsiveness	Assurance	Empathy	**Overall**
Government Hospital	69.00	63.60	66.25	64.25	64.00	**65.27**
Private Hospital	63.50	61.40	62.25	64.25	63.60	**62.95**

The above details are also shown in the following graph.

Graph 1 Out-patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above



The above table and graph represent satisfactory levels of service quality of out-patients' services of NTR Health University General Hospital, Vijayawada and Private Medical College Hospital, Chinaoutapalli. Patients of NTR Health University General Hospital are more satisfied with 65.27% to 22 attributes of service quality against 62.95% in case of Private Medical College Hospital.

On observation the researchers found that NTR Health University General Hospital is creating more awareness among public by displaying placards and conducting specialized medical camps with the help of private hospitals being suggested by Government. It is also found that the NTR Health University General Hospital is offering all specialized medical services including cardiology, neurology, urology, nephrology, pulmonology, gastroenterology in OPD services supported by all diagnostic services having skilled and experienced medical and paramedical staff. On the other side, Private Medical College hospital management is not showing much interest on public awareness towards health and diseases at least by displaying statements, boards, disturbing pamphlets as it wants their premises neat, clean and good looking.

OPD services are offered only in mornings and evenings, as all the time specialized doctors are not available except OPD timings, due to the reason hospital does not stand on promises to do something by certain time and in the absence of doctors concerned staff feel free and show full of activity to patients.

Table 6 ANOVA between Out-patients' perception towards Service Quality – Hospitals having bed strength 500 and above

ANOVA TEST						
		N	Mean	Std. Deviation	F	Sig.
TANGIBLES	Government Hospital	20	13.8000	4.4909	0.514	0.478
	Private Hospital	20	12.7000	5.1921		
	Total	40	13.2500	4.8238		
RELIABILITY	Government Hospital	20	15.9000	5.4086	0.087	0.769
	Private Hospital	20	15.3500	6.3185		
	Total	40	15.6250	5.8120		
RESPONSIVENESS	Government Hospital	20	13.2500	4.7114	0.278	0.601
	Private Hospital	20	12.4500	4.8826		
	Total	40	12.8500	4.7531		
ASSURANCE	Government Hospital	20	12.8500	4.5338	0.000	1.000
	Private Hospital	20	12.8500	4.8043		
	Total	40	12.8500	4.6107		
EMPATHY	Government Hospital	20	16.0000	5.5630	0.004	0.952
	Private Hospital	20	15.9000	4.8330		
	Total	40	15.9500	5.1438		
OVERALL	Government Hospital	20	71.8000	23.5810	0.107	0.745
	Private Hospital	20	69.2500	25.6163		
	Total	40	70.5250	24.3363		

F Table value (1, 38, 0.05) = 4.08. The above ANOVA Table discloses P value is >0.05 i.e. level of significance is found to be not significant at 95 percent confidence level. This shows that there is no significant difference in service quality in the mean variance among the responses given by out-patients of NTR Health University General Hospital & Private Medical College Hospital, because the overall ANOVA value of out-patients is 0.745.

Table 7 ANOVA between In-patients' perception towards Service Quality – Hospitals having bed strength 500 and above

ANOVA TEST						
		N	Mean	Std. Deviation	F	Sig.
TANGIBLES	Government Hospital	20	13.7500	4.5983	0.553	0.462
	Private Hospital	20	12.6000	5.1647		
	Total	40	13.1750	4.8616		
RELIABILITY	Government Hospital	20	15.8000	5.0325	0.145	0.705
	Private Hospital	20	15.1000	6.4962		
	Total	40	15.4500	5.7466		
RESPONSIVENESS	Government Hospital	20	12.4000	4.2723	0.043	0.837
	Private Hospital	20	12.1000	4.8764		
	Total	40	12.2500	4.5277		
ASSURANCE	Government Hospital	20	13.6000	4.1600	0.297	0.589
	Private Hospital	20	12.8000	5.0845		
	Total	40	13.2000	4.6032		
EMPATHY	Government Hospital	20	16.2500	4.1533	0.238	0.629
	Private Hospital	20	15.5000	5.4820		
	Total	40	15.8750	4.8155		
OVERALL	Government Hospital	20	71.8000	21.4663	0.232	0.633
	Private Hospital	20	68.1000	26.8051		
	Total	40	69.9500	24.0426		

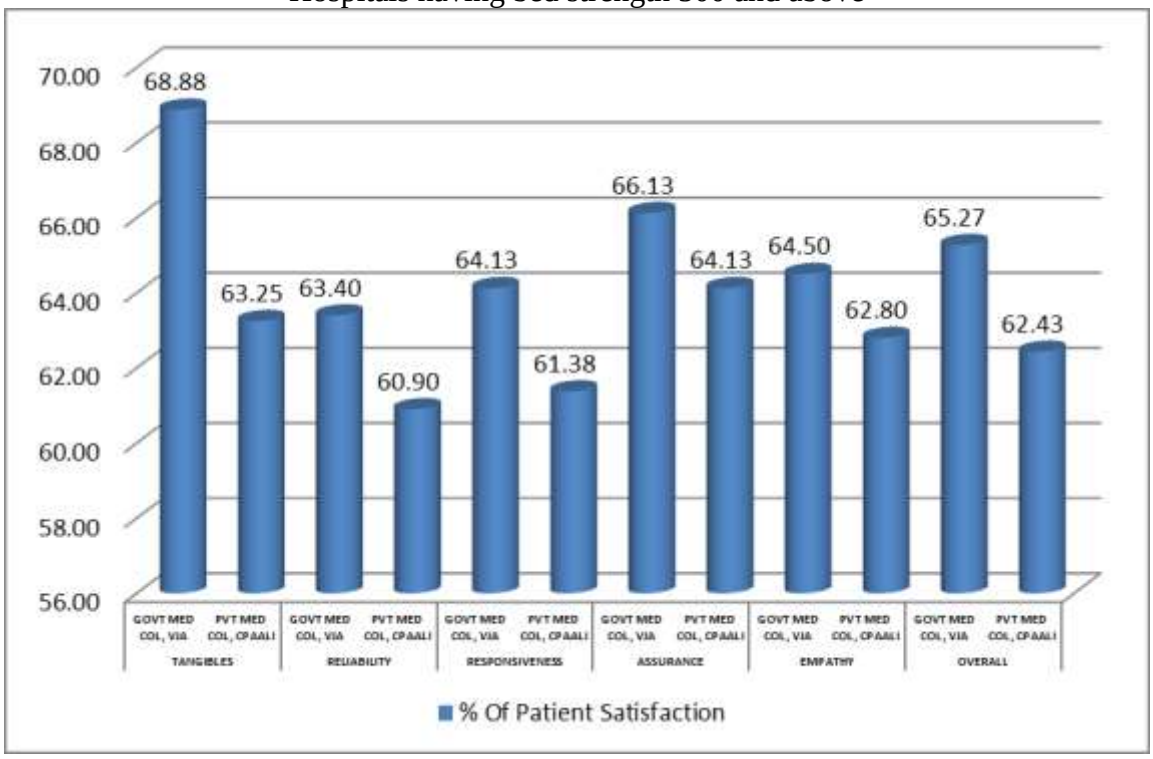
F Table value (1, 38, 0.05) = 4.08. The above ANOVA Table discloses P value is >0.05 i.e. level of significance is found to be not significant at 95 percent confidence level. This shows that there is no significant difference in service quality in the mean variance among the responses given by in-patients of NTR Health University General Hospital & Private Medical College Hospital because the overall ANOVA value of in-patients is 0.633.

Table 8 Out & In-Patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above

SATISFACTORY LEVELS	Tangibles	Reliability	Responsiveness	Assurance	Empathy	**Overall**
Government Hospital	68.88	63.40	64.13	66.13	64.50	**65.27**
Private Hospital	63.25	60.90	61.38	64.13	62.80	**62.43**

The above details are also shown in the following graph.

Graph 2 Out & In-Patients' satisfactory levels towards Service Quality – Hospitals having bed strength 500 and above



The above table and graph represent satisfactory levels of service quality of overall patients (O/P & I/P) of NTR Health University General Hospital, Vijayawada and Private Medical College Hospital, Chinaoutapalli. Patients of NTR Health University General Hospital are more satisfied with 65.27% to 22 service quality attributes of SERVQUAL than Private Medical College Hospital with 62.43%.

On observation, researchers found that in NTR Health University General Hospital most of the consultants are available in the day time only to give treatment to OPD patients due to the result specialized procedures and diagnostic tests are conducting during day time. Because of this reason the staff pretends full of activity not even to respond patients' requests in the day time. In absence of administrative staff and concerned doctors during night times, nursing and other staff feel free and do not show much interest to perform regular duties. In Private Medical College hospital, the management is not showing interest towards health and diseases among

public, OPD services are offered in morning and evening times only and the specialist doctors are not available except OPD timings, due to which the hospital is failing to fulfill its promises and to do things by time. Available few consultants have to take care of both out-patients and in-patients due to the reason individual attention is limited to nursing staff only not by the doctors.

Conclusions

Both public and private hospitals attempt to develop their Service Quality to fulfill the needs of the patients. However, public hospitals like many public institutions suffer from low productivity and low Service Quality while the private hospitals make use of this opportunity. The present study results confirms that the demographic factors and socio economic status plays vital role in patients' satisfaction towards Service Quality.

The above philosophy was proved in the present study based on the revealed results of gaps between perceptions and expectations of service quality opined by patients of various category hospitals (i.e. Government, Private and Missionary owned hospitals) and the same philosophy was confirmed once again based on satisfactory levels of patients in respect of SERVQUAL dimensions.

The collective findings of the present study titled "A study on Service Quality measurement in Healthcare sector" highlighted the service gaps between patients' perceptions and expectations of service quality and patients satisfactory levels in different category of hospitals. This study confirms SERVQUAL scale finds short falls in the service quality being offered by the hospitals and based on the results managements may take necessary steps accordingly.

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