



STUDY OF THE QUALITY ASSURANCE IN CARDIAC DEPARTMENT SERVICES

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ABSTRACT

The aim of this study was to develop a graphical method of risk-stratified outcome To study the scope of the Cathlab & Cardiothoracic Operation theater. To study and asses the Quality Assurance Programmed with indicators in hospitals. To recommend measures to improve the quality in case non-compliance and partial compliance is found in some parameters. To provide multi-specialty and super specialty health care services undergone roof. To provide health care based on modern technology and expertise at a cost-ensuring valve for money. To provide a delightful ambience and excellent medical care with a human touch by integrated teamwork and quality systems with monitoring and feedback. To carry out continuous up gradation of technology and human resource development activities in a congenial and safe environment. To be an environment friendly and ecologically conscious organization Cardiac disease diagnostics and treatment services are commensurate to the services provided by hospital. To recommend measures to improve the quality in case non-compliance and partial compliance is found in some parameters. To recommend measures to improve the quality in case non-compliance and partial compliance is found in some parameters.

KEYWORDS: *Cardiac Diagnostic, Treatment Services, patient records, Intensive Cardiac Care Unit.*



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INTRODUCTION

S.Palaniandimudaliar charitable trust was started in 1975 by sir s.p.sambandam in 1976 a small clinic offering only outpatient services was started by 1997 this clinic evolved in to the SPMM Hospital has 100 beds and offers the entire range of specialty services to the public. Thiru.Sri.S.P.Sambandam Mudaliar, is one of the most well known textile industrialist in Salem. As a result of his strenuous effort, he initiated, "S.Palaniandi Mudaliar charitable trust" four decades ago in memory of his father Sri.S.Palaniandi Mudaliar with financial recourses from his own Sambandam Group of Companies and family support. Since then, he has been a force to help poor people across Salem city in a multitude of ways¹. In and around Salem, Sri.Sambandam Mudaliar was credited for helping over lakhs & lakhs of poor people through medical treatment. However Salem is not only part of the world that has only benefited from Sri.Sambandam philanthropy. He has helped tens of thousands of poor people in nearby places such as Attur, Chinnasalem, Kallakurichi, Harur, Dharmapuri, Namakkal district etc. Sri.Sambandam Mudaliar was embodied with the good human values of integrity, generosity, compassion and qualities of self-confidence, wisdom, bravery and spirit. His commitment to poor people is through a multiplicity of outreach camps that seek to touch poor people, who are the 'poorest of the poor' which are the testament to him as an individual. While, Sri.Sambandam Mudaliar was the visionary behind the trust, Sri.S.Devarajan – His elder son is its backbone. He is like the sun who cares for and nurtures the life and future of and thousands of poor people with his benevolence through his "Sambandam Group of Companies"².

About SPMM Cardiac Department Services

Cardiac department services have an important role in the provision of delivery of care. Assessing the Quality of Cardiac Department Service using quality indicators or performance measures requires a systematic, transparent, and consistent approach to collect and analyse data. A comprehensive approach would address all stages of the Cardiac department service total diagnosis & treatments process, with a focus on the areas considered most likely to have important consequences on patient care and health outcomes. Quality indicator data should be collected over time to identify, correct, and continuously monitor problems and improve performance and patient safety by identifying and implementing effective interventions and for the purpose of increased consistency and standardization of key processes among cardiac department services³.

Activities of Infection Control Team in SPMM Hospital

The hospital has an infection control team, which coordinates implementation of all infection prevention and control activities. The team is responsible for day-to-day functioning of infection control program. Periodical training of all category staff about Infection Control Protocols and Policies. Establish standard operational procedures for Infection Control practices. Introduce new policies and protocols on the method of disinfection and sterilization. Maintain and implement

biomedical waste management protocols. Regular monitoring of engineering department and water supply system. Supervision of biomedical waste management activities⁴.

About Cardiac Department Diagnostic & Treatment Room

Service to patient can only be improved if diagnostic rooms are seen as inclusive isolation and non-isolation. The patient's surgical journey is often complex and involves crossing of many boundaries. We, as the health care personnel, must learn to see things from the patient's perspective. It is this understanding and care that is going to bring about satisfaction to the patients throughout their stay in the hospital. This, in turn, will assure future patient inflow for the hospital. For any hospital which delivers tertiary level care to the patients, operation theatres and its premises form one of the most important and sensitive area. It is important because this area caters to performance of complex procedures and surgeries which play a singularly pivotal role in the medical management of many of the patients. It is sensitive because the gamut of intricate processes and protocols it handles to maintain the operation theater functional to the optimum standards and produce excellent surgical outcomes. During the study, the focus areas were Cardiac department services and diagnostic & treatment Room of Tertiary care Hospital. The study was on the Quality assurance at these two revenue generating areas of hospital. The concept includes the assessment or evaluation of the quality indicators set for these two departments. Hence this study is proposed in consultation of the Guide with respect to the following Aim and Objectives⁵.

Objectives

- The scope of cardiac disease diagnostics and treatment services are commensurate to the services provided by hospital.
- To study the cardiology guidelines on patient safety & American Heart Association act regulations followed by a hospital.
- To study the Critical Diagnostics results are intimated immediately to the concerned personnel redefining cardiac care through innovative technologies and dedicated Human touch.
- To study the importance of cardiac department.
- To study the facilities of cardiology department.
- To study the customer satisfaction in the Cardiology department.
- To recommend measures to improve the quality in case non-compliance and partial compliance is found in some parameters.

MATERIALS AND METHODS

First of all, Retrospective (Record based) study was undertaken. Various patient records, nurses' records, case sheets were reviewed for the purpose of study. All the parameters were then numerically evaluated by seeing the compliance level of the Cardiac Disease Diagnostics & Treatment Services. In the next stage prospective (observational) study was done for 20 days to study the written manual of respective departments,

location, physical facilities, manpower, workload, equipment's, patient flow, and overall functioning. Then a checklist based on set Standards, consisting of parameters was developed in consultation with the guide. Parameters were broadly grouped into various categories to check the quality⁶. After preparation of the checklist, Quality Assurance Programme in cardiac department diagnostics & treatment services following Diagnostic Rooms was evaluated. For this, assistance and discussion with Senior Residents, Doctors, Nursing staff, group IV staff, Technician, Dietician, Hospital Attendants, Sanitary Attendants and patient's attendants was done. Also during the project a systematic random samples were interviewed using predesigned questionnaire for analysing patient satisfaction and feedback. In the next part of study, Gaps were identified on the basis of the checklist and Justification was given

for non-compliance and measures for improvement in Cardiac Department and Cardiac Diagnostic & Treatment Rooms was recommended based on the checklist⁷. All this detailed study was carried out in Cardiac Department Services and Diagnostic & Treatment Room at Tertiary care Hospital over a period of four & half month during the period of JUNE to OCT 2016.

In Some of the Objectives

- ❖ Thorough data analysis for each indicator was done.
- ❖ Analysis was done considering 3 headings i.e. calculation, documentation and process by which compliance was calculated for each.
- ❖ Weight age given was as follows

CALCULATION	33%
DOCUMENTATION	33%
PROCESS	33%

By calculating above mentioned three considerations compliance was drawn. Remaining 1% was added either to compliance or non-compliance, whichever was higher. The hospital ensures smooth functioning of outpatient department, round the clock availability of efficient reception staff backed by centralized computer system. An instant access to all patient data and information for evolutions and follow-up is available. Experienced cardiologists and cardiac surgeons are at disposal of the patients and they give top priority to the interest of patients and their families. The institute has a spacious and climate controlled waiting area for patients and their relatives. The entire hospital staff tries to meet the needs of the outpatients⁸.

Patient Satisfaction Questionnaire

Ten questions were framed; all of them were designed to be easily understandable and easy to answer. Regarding the language barrier, since the questionnaire was not designed in the local language (Tamil), every question was explained in the desired language. A factor such as friendliness of the staff along-with Doctors was considered. Emphasis on waiting time was also given as to solve the issue of patient waiting. Lastly an open ended question regarding the overall experience in the hospital with respect to the same or any other facility was kept to enable the respondent give a more spontaneous and qualitative assessment about hospital services. Surveyors consisted of me and my project partner. The surveyors would meet the nurse on duty, explain and reassure that purpose of the study is to constructively estimate the quality of services and to understand how they can be improved. If the patient was unable to participate, the surveyor would look for the attendant who has been with the patient regularly. In case of minors like children, the mother or such other attendant who has been with the patient most of the time were sought for. Each respondent was reassured that the study is designed to improve the quality of services in hospitals, privacy and confidentiality with be

maintained and that only statistical information with be used. The last question in the questionnaire has both closed and an open ended component to record special remarks made by the respondent⁹.

Tools Of Data Collection

- Observations
- Interviews with staff
- Internal Audits with the help of checklists
- Documents from Hospital
- Data collection from the departments of the hospital
- Questionnaire completed by Staffs
- Assistance and discussion by Guide and Co-Guide

Limitation Of The Study

Discussion with Senior Residents, Doctors, Nursing staff, group IV staff, Technician, Dietician, Hospital Attendants, Sanitary Attendants and patient's attendants was done informally. Structured questionnaires or interviews for each could have been used for the discussion for the purpose of study. This could have led to better analysis. Study was done for shorter duration. Quality assurance requires in-depth analysis of various processes; hence the study would have given more beneficial results if it was undertaken for longer duration, may be for 4 months¹⁰.

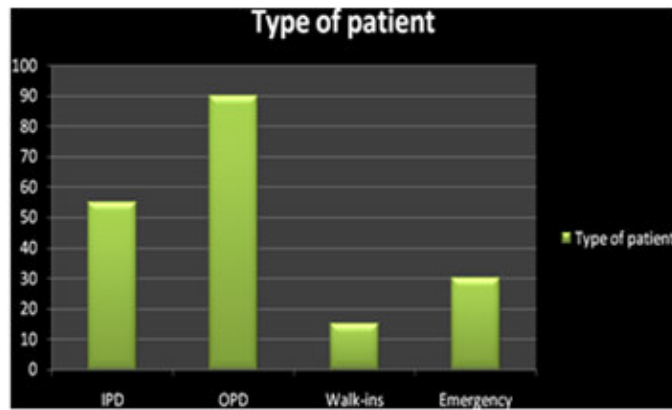
RESULTS

Factors considered for the formulation of Questionnaire¹¹

Type of patient

This factor plays an important role in deciding the area from which the hospital is generating maximum revenue from its patients. It also gives an idea to where the hospital shall concentrate more to self-improve¹².

Graph 1
Type of patient verses departments



From the above chart it can be noted that (From a total sample size of 190):

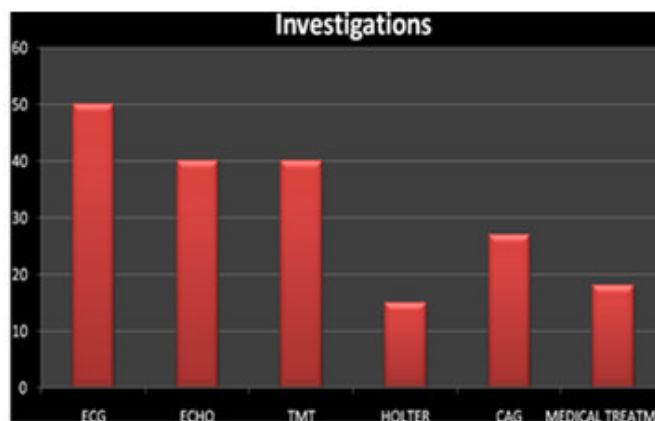
- 90 patients are from OPD
- 55 each from IPD and 15 Walk-ins and
- 30 from Emergency department

Hence it can be seen that the no of patients coming from OPD are more in number.

Investigations

This point helps us to organize the services which the patients want the most and the one we should concentrate on.

Graph 2
Investigation verses departments



From the above chart it can be noted that (From a total sample size of 190):

- 50 for ECG
- 40 for ECHO
- 40 for TMT
- 15 for HOLTER MONITOR
- 27 for ANGIOGRAM
- 18 each for others medical treatment.

Hence it can be seen that the no of patients coming for ECG are more compared to other investigations in the recorded sample size.

Experience while reaching the hospital through telephone

The ease with which a patient can communicate (reach) the desired personnel via telephone are directly proportional to the efficiency of the staff. A missed call may result in an indirect loss of revenue which the hospital could have captured¹³.

Graph 3
Experience



From the above chart it can be noted that (From a total sample size of 190):

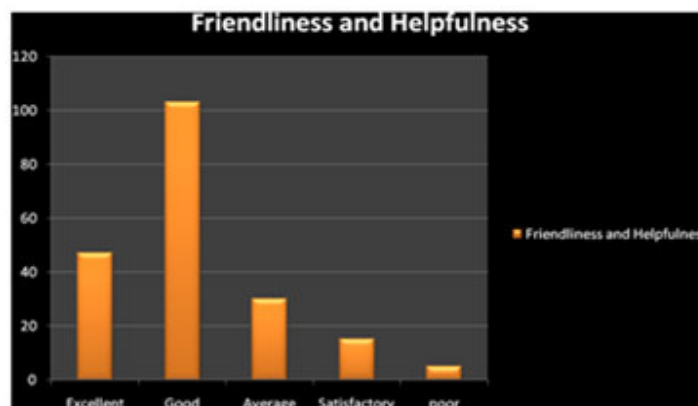
- 98 patients had Good experience
- 32 had an average experience
- 15 had a satisfying
- 38 had an excellent and
- 7 patients had a poor experience

Hence it can be seen that majority of patients had a good experience.

Friendliness and helpfulness of the staff

A staff will be friendly and helpful only if he/she is motivated. Motivated staffs is the main revenue generator of the Hospital¹⁴.

Graph 4
Friendliness and helpfulness



From the above chart it can be noted that (From a total sample size of 190):

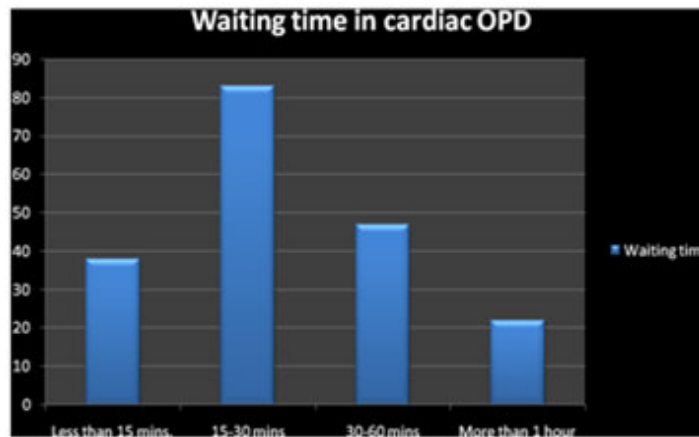
- 103 patients stated that it was good
- 47 stated it to be excellent
- 30 stated it to be average
- 15 and 5 for satisfactory and poor respectively

Hence it can be seen that majority of the patients stated it to be good with respect to the behaviour of the staff.

Waiting time

It shows the level to which the facility is organized and the promptness of service¹⁵.

Graph 5
Waiting time



From the above chart it can be noted that (From a total sample size of 190):

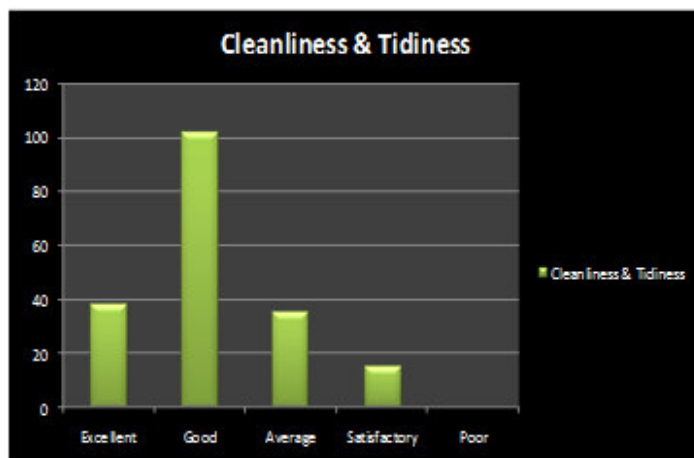
- 83 patients had to wait for 15-30 minutes
- 38 had to wait for <15 minutes
- 47 for 30-60 minutes and
- 22 patients had to wait for >1 Hour

Hence it can be seen that majority of patients had to wait for 15-30 minutes.

Cleanliness and Tidiness

The performance of the House-keeping staff towards the Department and in turn towards the Hospital¹⁶.

Graph 6
Cleanliness and tidiness



From the above chart it can be noted that (From a total sample size of 190):

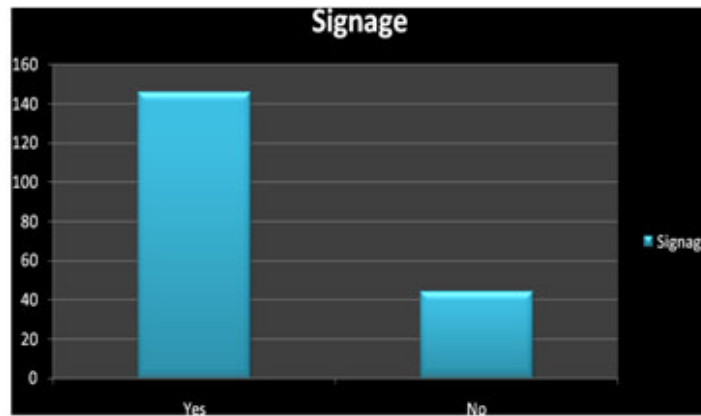
- 102 patients stated it to be good
- 35 of them stated it to be average
- 38 as excellent and
- 15 as satisfactory

Hence it can be seen that maximum number of patients had good experience in terms of cleanliness and tidiness.

Display of “easy to understand” signage

Easy to understand signage is an issue in various organizations. Therefore, in a Hospital where time is an important part of treatment, finding the way to any specific department in a medical emergency is crucial¹⁷.

Graph 7
Signage



From the above chart it can be noted that (From a total sample size of 190):

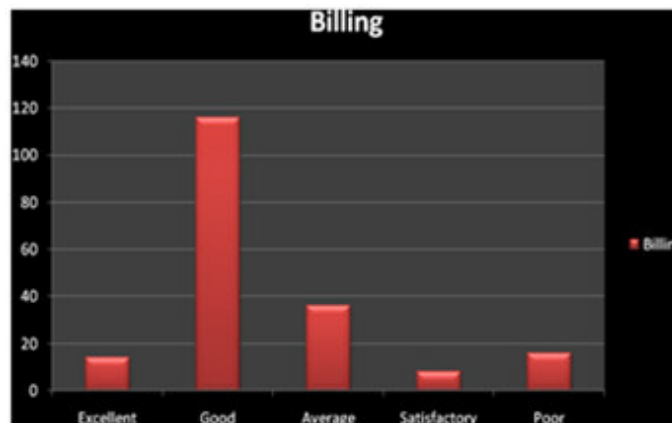
- 146 patients understood it completely and
- 44 of them did not

Hence we can conclude that the signage displayed was easily understandable with a few numbers of misunderstandings.

Billing facility

The ease with which a person can pay his/her dues during discharge and while using any service of the hospital shows the consistency of concern towards the patient till the time he leaves the organization¹⁸.

Graph 8
Billing facility



From the above chart it can be noted that (From a total sample size of 250):

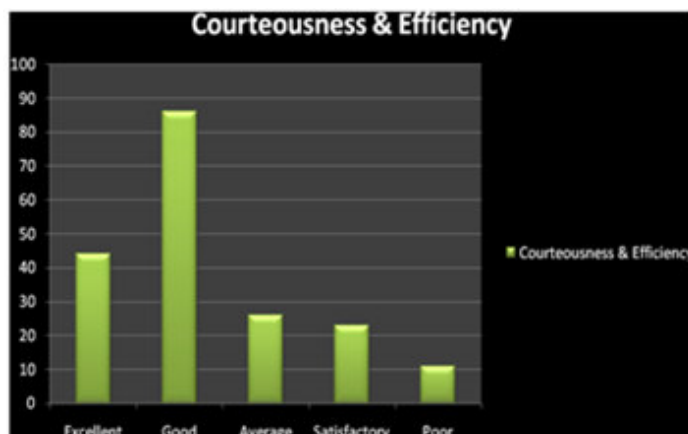
- 116 patients stated it to be good
- 36 of them stated it to be average
- 16 as poor and
- 14 as excellent
- 8 as satisfactory

Hence we can see that the overall experience of the billing department is good.

Courteousness and efficiency displayed by the staff including doctors

Doctors are the face of the hospital. Their efficiency and behaviour will influence the patient's mind to spread the word or to come back to the hospital.

Graph 9
Courteousness and efficiency



From the above chart it can be noted that (From a total sample size of 190):

- 86 patients stated it to be good
- 44 as excellent
- 23, 26 and 11 as satisfactory, average and poor respectively

Hence the courteousness & Efficiency of the staff proved to be good to majority of the patients.

DISCUSSION

After analysis and comparison of available cardiac department services with hospital services it has been observed that the services provided by the hospital are commensurate to the services provided by the Cardiology Department services with a scope of incorporating new facilities. After cross studying, hospital compliance with requirements of American heart association and European Society of Cardiology act for Cardiology Department services the hospital was found with 100% compliance in it. The process of intimating critical diagnostic results immediately to the concerned personnel when monitored was found appropriate with 100% compliance according to NABH standards. The study to monitor the percentage of cardiac disease diagnostic & treatment services was found appropriate with 100% compliance. The study to monitor the percentage of cardiac surgical post care services was found appropriate with 100% compliance. The numbers of patients coming from OPD were more in number. The numbers of patients coming for ECG were more compared to other investigations in the recorded sample size. Majority of patients had a good experience while reaching the hospital through telephone. The patients stated it to be good with respect to friendliness & helpfulness and overall behavior of the staff. Waiting area was too crowded with long waiting hours. Under-staffing at reception counter of Cardiology Department services. Staff at reception counter was overburdened with work. Proper staff management. An adequate staff was appointed in typing of report section. Maximum number of patients had good experience in terms of cleanliness and tidiness. The signage displayed was easily understandable. The overall experience of the billing department is good for patients coming to cardiac department services. The indicators of quality assurance programme in diagnostic room were found in 100% compliance with their processing part with minor

errors found in documentation and calculation of a few indicators resulting in non-compliance.

CONCLUSION

Hospital as a healthcare provider faces many challenges where it has to incorporate a large number of human resources and their duties to successfully deliver care to their patients. A hospital as a health care institution which is always challenged to provide the best quality of care that their patients need, quality health care is an important aspect of health care which should attempt to provide the best possible care. Thus the Quality Assurance Programme of Cardiac Disease Diagnostic & Treatment services should always be improved and maintained at highest level along with patient's valuable feedback. This study results is an indicative rather than definitive. The major finding suggests that the hospital manager should identify and emphasize the relevant dimensions and positive attributes so as to increase the standards of quality assurance with limited resources in order to achieve highest possible results. Conclusively, it significantly showed the relationship between the quality parameters set by Hospital and the service flow (operations) of these two units; along with data flow, data recording and other aspects of timeliness and quality of services delivered which helped to increase the overall Quality and status of the Hospital.

Future aspects of your research

The work at present shows quality and service of S.Palaniandimudaliar charitable trust. with this experience I have a scope to do research on world class hospitals enables to provide high quality medical services creates an ability to develop or modify the clinical medical standards and specifications.

CONFLICT OF INTEREST

Conflict of interest declared none.

REFERENCES

1. S. Palaniandi Mudaliar Charitable Trust was started in 1975 by Sri S.P.Sambandam. In 1976 a small clinic offering only out patient services was started. [internet] 2015[updated 2016 September 15;cited 2017 Jan 15] Available at: <http://www.spmmhospital.com/about-us/>
2. Ventured in 1973, by M/s. S.P.Sambandam, S.P.Ratnam and S.P.Rajendran with 2000 spindles, [internet] 2015[updated 2016 September 15;cited 2017 Jan 15] Available at: <http://www.sambandam.com/page2.html>
3. Cardiothoracic Surgery,[internet] 2015[updated 2016 September 15;cited 2017 Jan 15] Available at: <http://www.spmmhospital.com/services/>
4. Facilities in hospital,[internet] 2015[updated 2016 September 15;cited 2017 Jan 15] Available at: <http://www.spmmhospital.com/facilities/>
5. Cardiac department diagnostic & treatment room ,[internet] 2015[updated 2016 September 15;cited 2017 Jan 15] Available at: <http://www.spmmhospital.com/consultant/>
6. Vahanian A, Alfieri OR, Al-Attar N, Antunes MJ, Bax J, Cormier B, Cribier A, De Jaegere P, Fournial G, Kappetein AP, Kovac J. Transcatheter valve implantation for patients with aortic stenosis: a position statement from the European Association of Cardio-Thoracic Surgery (EACTS) and the European Society of Cardiology (ESC), in collaboration with the European Association of Percutaneous Cardiovascular Interventions (EAPCI). *European Journal of Cardio-Thoracic Surgery*. p.150-55.
7. Wilkin D, Hallam L, Doggett MA. Measures of need and outcome for primary health care. Oxford University Press; 1992. p. 342-56.
8. Hays RD, Davies AR, Ware JE. Scoring the medical outcomes study patient satisfaction questionnaire: PSQ-III. Santa Monica, CA: RAND. 1987. p 569-76.
9. VanLare JM, Conway PH. Value-based purchasing—national programs to move from volume to value. *New England Journal of Medicine*. 2012 Jul 26;367(4):292-5.
10. "Hospital Structure and Functions,[internet] 2014 mar[cited 2015 feb 23];10(1):10-23. Available at: <http://www.psscive.nic.in/pdf/nvqef/healthcare/level2/thb/Healthcare%20THBK%20GDA%20L2-U1.pdf>
11. Melanie Hof, Questionnaire Evaluation with Factor Analysis and Cronbach's Alpha An Example, [internet] 2012 sep [cited 2015 mar 15];45(1):3-8. Available at: <http://www.let.rug.nl/nerbonne/teach/rema-stats-meth-seminar/student-papers/MHof-QuestionnaireEvaluation-2012-Cronbach-FactAnalysis.pdf>
12. Kathy Torpie, Customer service vs. Patient care, [internet] 2014 may[cited 2014 nov 16];67(1):6-7. Available at: <http://pxjournal.org/cgi/viewcontent.cgi?article=1045&context=journal>
13. Patricia L. Harrison, MPH, Pamela A. Hara, BSN, MBA, James E. Pope, MD, Michelle C. Young, BS, and Elizabeth Y. Rula, PhD, The Impact of Postdischarge Telephonic Follow-Up on Hospital Readmissions,[internet] 2009 oct [cited 2011 feb11];14(1):27-32. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3128446/>
14. Patavegar Bilkish N1, Shelke Sangita C2, Adhav Prakash3, Kamble Manjunath S4, A CROSS-SECTIONAL STUDY OF PATIENT'S SATISFACTION TOWARDS SERVICES RECEIVED AT TERTIARY CARE HOSPITAL ON OPD BASIS,[internet] 2012 Apr [cited 2012 june 2];14(1):232-236. Available at: http://njcmindia.org/uploads/3-2_232-2371.pdf
15. Hassan Bukhari, Khaled Albazli, Saud Almaslmani,et,al, Analysis of Waiting Time in Emergency Department of Al-Noor Specialist Hospital, Makkah, Saudi Arabia internet] sep 2014[cited 2014 nov 16];2(1):67-73. Available at: http://file.scirp.org/pdf/OJEM_2014120911314787.pdf
16. Nimnath Withanachchi et.al, A breakthrough for chronic managerial constraints at public hospitals in developing countries,[internet] 2007 sep[cited 2007 nov 6];20(3):168-177. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/09513550710740580>
17. Shiva Thrishul Punyamurthy, Understanding Display Boards: A Semiotic Analysis of Signs in Hyderabad, [internet] 2015 dec [cited 2016 mar 1];6(1):26-31. Available at: http://amity.edu/UserFiles/asco/journal/ISSUE26_4.%20Shiva%20Trisul.pdf
18. Jeremy G. Roberts, John G. Henderson, Larry A. Olive and Daniel Obaka, A Review of Outsourcing of Services in Health Care Organizations, [internet] 2013 jan[cited 2013 may 18];13(1):1-10. Available at: <http://ibimapublishing.com/articles/JOOIM/2013/985197/985197.pdf>
19. Andrew H. Van de Ven, What matters most to patients? Participative provider care and staff courtesy,[internet] 2014 mar[cited 2014 april 1];1(1):131-139. Available at: <http://pxjournal.org/cgi/viewcontent.cgi?article=1016&context=journal>

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