

A study of waiting time in AHC (Apollo Health Checks) Department, Indraprastha Apollo Hospitals, New Delhi

¹Dr. Alka Srivastava (Research Guide) and ²Monika (Research Scholar)

¹Assistant Professor, Jodhpur National University, Jodhpur

²Jodhpur National University, Jodhpur

alkashusri@gmail.com xyz3249@gmail.com

Abstract—

Objective: The main objective of the study is to measure waiting time in AHC (Apollo Health Check) department and suggest methods or procedures to reduce it.

Materials and methods: The present cross sectional study was conducted among 50 patients visited in hospital Health Checks department. Questionnaire used for analysis.

Results: A high percentage (90%) of patients is satisfied with the Billing & registration section of the AHC department. A significant percentage (92%) of patients is satisfied with the Sample Collection section of the AHC department. (98%) of patients is satisfied with the radiology department.

Conclusion: According to the patient's opinion, the study showed the management of the Indraprastha Apollo Hospitals tried its level best to satisfy their clients or patients by providing adequate facilities. However further improvements and as per suggestions will yield better results. The efficiency of a department or hospital is very much dependent on the ability to satisfy the patients' overall needs.

Keywords: Patient's satisfaction, Registration & Billing Services, Radiology services.

I. INTRODUCTION

IN most Indian hospitals, patients need to wait for hours before doctors could see them. The situation would be especially worse for the elderly who have to queue up, even when they are not well.

With the increasing emphasis on quality health care, waiting time in hospital (dissatisfaction of patient) has been suggested as criteria for measuring the quality care provided by the hospital.

Long waiting time in any hospital is considered as an indicator of poor quality and needs improvement. Managing waiting lines create a great dilemma for managers seeking to improve the return on investment of their operations. On the one hand, customers dislike waiting intensely. If they feel they are waiting too long at hospital for service, they will either leave the line prematurely or not return to hospital the next time they need service. This will reduce customer demand and eventually revenue and profit. Furthermore, longer waiting times increase costs because longer waiting times equal more customers in a building. Hence, it will

need more space for the customers to wait in, which increases rent.

On the other hand, managers primarily reduce waiting times by increasing capacity, which is itself quite expensive and will reduce profit. Finding a waiting time that customers find acceptable while keeping utilization reasonably high is thus of critical operational importance but relatively un-intuitive, for it turns out that average waiting times can be quite long even when capacity is significantly greater than demand.

Solutions for the waiting time problems are specific to a hospital to another. Considering this, to eradicate problems arising because of long waiting time, the foremost requirement is to analyze the areas where patients wait for long. An effort was made to determine the patient's satisfaction level over the waiting time visiting the AHC (Apollo Health Checks) department of the Indraprastha Apollo Hospital, New Delhi.

The purpose of this survey is to get feedback from patients, regarding the waiting time during the Health Checkup procedures. Analyzing the feedbacks given by them, which can be helpful for the betterment of the service by the AHC department of the hospital, will find out to the concerned authority for necessary action.

It was interesting to conduct survey in Indraprastha Apollo Hospital, New Delhi. The authorities of the AHC department as well as the hospital welcome my effort to carry out the survey in hospital premises and they also cooperate me whole nearly during the study of survey.

II. HOSPITAL PROFILE



Indraprastha Apollo Hospitals, New Delhi is the First Hospital in India to be Internationally Accredited by Joint

Commission International (JCI). It is the third super specialty tertiary care hospital of the Apollo Hospitals Group. It is one of the best multi-speciality tertiary acute care hospitals with over 700 beds in India and the most sought after destination in SAARC region for healthcare delivery.

In 2011, the hospital got JCI re-accredited consecutively the third time making it the first hospital to do so in the Country. Without doubt the hospital has been an industry leader in Healthcare Quality and Patient Safety.

The hospital boasts of 50 super-specialties and some of the world's best specialties in each medical discipline. Besides, specialized facilities like Multi Organ Transplant Unit make Indraprastha Apollo Hospitals not just the capital's, but the nation's pride.

It continues to provide comprehensive and compassionate care for patients, utilizing a multidisciplinary team approach. It is providing patients with early diagnosis and the most advanced medical and surgical techniques available in the world to treat them. It has established an outstanding reputation for its healthcare services.

III. AHC (APOLLO HEALTH CHECKS) DEPARTMENT

AHC (APOLLO HEALTH CHECKS) department is one of the important departments of the Indraprastha Apollo Hospitals, New Delhi. The APOLLO HEALTH CHECKS offered by the hospital is a comprehensive check up that screens each organ closely to detect even the smallest symptom that could be an indication of a major disease. In addition, the check also identifies the reason for minor ailments, which are constant irritants. It also serves as a personal medical record for future reference.

Apollo Health Checks are all inclusive health screening programs that offer various tests under one roof. Special care has been taken while designing these packages. Since every individual and age group has different health needs, specific packages have been designed to meet them.

Objective

- Waiting time analysis in AHC (**Apollo Health Check**) department and suggest methods or procedures to reduce it.
- Study of waiting time in AHC department in the following areas:
 - ✓ **Registration & Billing**
 - ✓ **Sample Collection**
 - ✓ **Radiology** **X-ray,** **Ultrasound,**
 - Mammography, Cardiac Assessment, PFT**
 - ✓ **Consultation Time**

Scope

In this study other aspects like physical facilities, staffing pattern, OPD design pattern, policy and procedure are not covered.

Location of the study: The study is carried out in the AHC department of the Indraprastha Apollo Hospitals, New Delhi.

Sample Selection: Random purposive sampling technique was adopted for the selection of sample. Patients coming for health checkup in the AHC department were considered as respondents of the study. Samples of minimum 50 patients were taken.

The data collected on waiting time in treating patients in AHC (Apollo Health Check) department is presented in this section. The collected data includes patients' satisfaction level in waiting time starting from registration and billing to final review by the consultants and final handover received by the patients from the AHC department. The data has been expressed in five different satisfaction levels for each and every test or consultation during the health check procedures.

The analysis of waiting time for all sections of the AHC department of the Indraprastha Apollo Hospitals is presented from Table-1 to Table-10.

Table-1: Satisfaction level for waiting time in Registration and Billing

Total No of Patient: 50

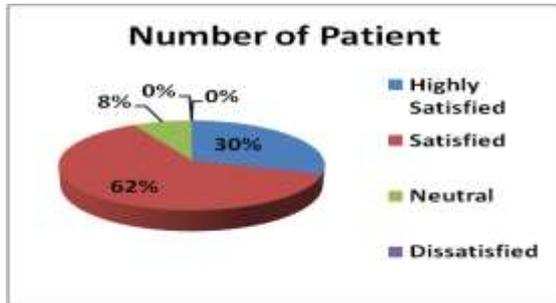
Satisfaction Level	Number of Patient	% of Patient
Highly Satisfied	30	60%
Satisfied	15	30%
Neutral	3	6%
Dissatisfied	2	4%
Highly Dissatisfied	0	0%

The above data presents the statistical information of the patients with the **Registration and Billing** section of the AHC department, which is the starting point of any Health Check Packages.

Interpretation: The above response clearly shows that service at reception, registration and billing were perceived as highly satisfactory among 60% of the patients. Another 30% of the patients are satisfied with the registration and billing section. 6% of the patients have neutral opinion with the waiting time at registration and billing section. However, a small section of 4% of the patients shows dissatisfaction with the waiting time of the registration & billing section. No single patient has shown highly dissatisfaction with the service of the registration and billing of the AHC department.

Table-2: Satisfaction level for waiting time in Sample Collection

Satisfaction Level	Number of Patient
Highly Satisfied	30%
Satisfied	62%
Neutral	8%
Dissatisfied	0
Highly Dissatisfied	0



The above data presents the statistical information of the patients with the **Sample Collection** section of the AHC department.

Interpretation: The above response clearly shows that a significant 92% of the patients are satisfied with the sample collection section. 30% of the patients show highly satisfied and another 62% of the patients show satisfaction with the service of the sample collection. However a small section of 8% of the patients shows neutral opinion with the waiting time in Sample Collection. No patient has showed neither dissatisfaction nor highly dissatisfaction with the waiting time in Sample Collection.

Table-3: Satisfaction level for waiting time in Radiology (X-Ray)

Satisfaction Level	Number of Patient
Highly Satisfied	82%
Satisfied	16%
Neutral	2%
Dissatisfied	0
Highly Dissatisfied	0

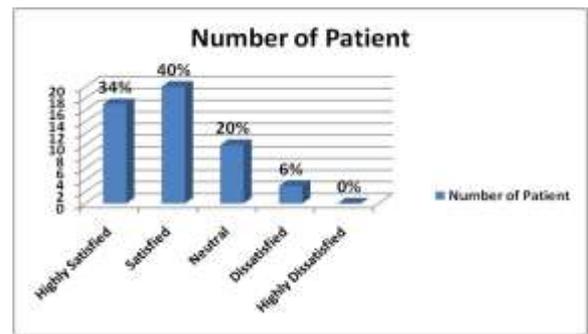
The above data presents the statistical information of the patients with the Radiology (X-Ray) section of the AHC department.

Interpretation: From the above response, it clearly shows that a significant 98% of the patients are satisfied with the service of the radiology (X-Ray) section of the AHC department. 82% of the patients show highly satisfaction and

another 16% of the patients show satisfaction with the service of radiology – X Ray department. However a small section of 2% of the patients shows neutral opinion with the service. No single patient has shown either dissatisfaction or highly dissatisfaction with the waiting time of the X-ray section.

Table-4: Satisfaction level for waiting time in Radiology (Ultrasound)

Satisfaction Level	Number of Patient
Highly Satisfied	34%
Satisfied	40%
Neutral	20%
Dissatisfied	6%
Highly Dissatisfied	0



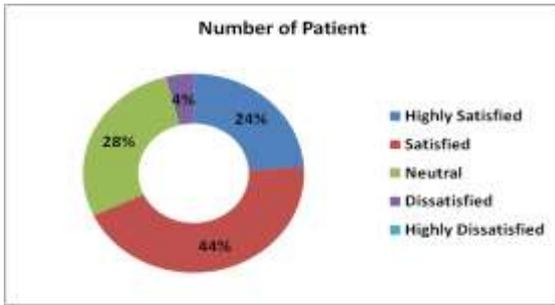
The above data presents the statistical information of the patients with the **radiology (ultrasound)** section of the AHC department.

Interpretation: From the above response, it clearly shows that 34 % of the patients are highly satisfied and another 40% of the patients are satisfied with the service of the radiology (ultrasound) section of the AHC department.

Another 20% of the patients have shown neutral opinion with the waiting time of the ultrasound section of the AHC department. Only 6% of the patients show dissatisfaction with the waiting time of the ultrasound. No patient has shown highly dissatisfaction with the service of radiology - ultrasound section.

Table-5: Satisfaction level for waiting time in Radiology (Mammography)

Satisfaction Level	Number of Patient
Highly Satisfied	24%
Satisfied	44%
Neutral	28%
Dissatisfied	4%
Highly Dissatisfied	0

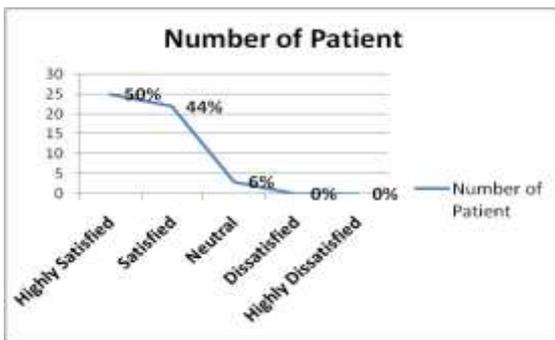


The above data presents the statistical information of the patients with the **radiology (mammography)** section of the AHC department.

Interpretation: From the above response, it clearly shows that 68% of the patients are satisfied with the service of the radiology (mammography) of the AHC department. 24% of the patients show highly satisfied and another 44% of the patients show satisfied with the radiology (mammography). Another 28% of the patients have shown neutral opinion with the service of the mammography. Only 4% of the patients show dissatisfaction with the service. No patient has shown highly dissatisfaction with the service of the radiology (mammography).

Table-6: Satisfaction level for waiting time in ECG

Satisfaction Level	Number of Patient
Highly Satisfied	50%
Satisfied	44%
Neutral	6%
Dissatisfied	0
Highly Dissatisfied	0

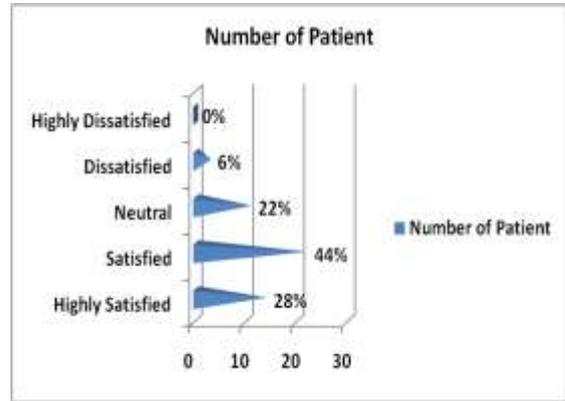


The above data presents the statistical information of the patients with the **ECG** section of the AHC department.

Interpretation: From the above response, it clearly shows that 50% of the patients are highly satisfied with the service of the ECG section of the AHC department. Another 44% of the patients show satisfaction with the service. However, 6% of the patients have shown neutral opinion with the service. No single patient has shown either dissatisfied or highly dissatisfied with the service.

Table-7: Satisfaction level for waiting time in TMT

Satisfaction Level	Number of Patient
Highly Satisfied	28%
Satisfied	44%
Neutral	22%
Dissatisfied	6%
Highly Dissatisfied	0

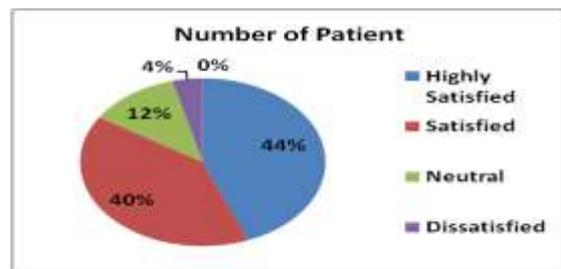


The above data presents the statistical information of the patients with the **TMT** section of the AHC department.

Interpretation: From the above response, it clearly shows that 72% of the patients are satisfied with the service of the TMT section of the AHC department. 28% of the patients show highly satisfied and another 44% show satisfied with the service of the cardiology (TMT section). Another 22% of the patients have shown neutral opinion with the waiting time in TMT. Only 6% of the patients show dissatisfaction with the service of the TMT section of the AHC department. However no patient has shown highly dissatisfaction with the service.

Table-8: Satisfaction level for waiting time in ECHO

Satisfaction Level	Number of Patient
Highly Satisfied	44%
Satisfied	40%
Neutral	12%
Dissatisfied	4%
Highly Dissatisfied	0

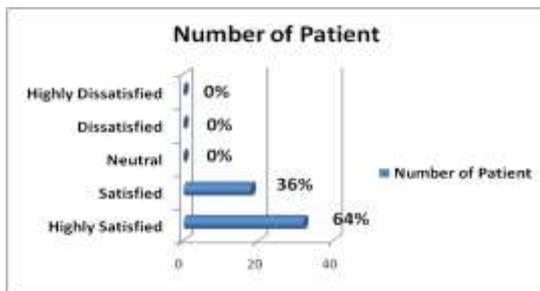


The above data presents the statistical information of the patients with the **ECHO** section of the AHC department.

Interpretation: From the above response, it clearly shows that 84% of the patients (44% - highly satisfied & 40% - satisfied) are satisfied with the service of the ECHO section of the AHC department. Only 4% of the patients show dissatisfaction with the service. Another 12% of the patients have shown neutral opinion with the service. No patient has shown highly dissatisfied with the service.

Table-9: Satisfaction level for waiting time in PFT

Satisfaction Level	Number of Patient
Highly Satisfied	36%
Satisfied	64%
Neutral	0
Dissatisfied	0
Highly Dissatisfied	0

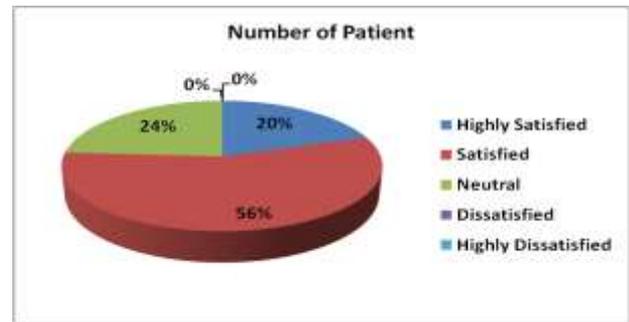


The above data presents the statistical information of the patients with the PFT section of the AHC department

Interpretation: From the above response, it clearly shows that a cent percent of the patients are satisfied with the service of the PFT. No single patient has shown neutral opinion or dissatisfaction with the service of the PFT in the AHC department.

Table-10: Satisfaction level for waiting time in Collecting the Final Report & Summary

Satisfaction Level	Number of Patient
Highly Satisfied	20%
Satisfied	56%
Neutral	24%
Dissatisfied	0
Highly Dissatisfied	0



The above data presents the statistical information of the patients with the Collection of final report & summary.

Interpretation: From the above reference, it clearly shows that 20% of the patients are highly satisfied with the service of collecting the final report & summary. Another 56% of the patients are satisfied with the service of collecting the final report & summary. And 24% of the patients show neutral opinion with the service. No patient has shown either dissatisfied or highly dissatisfied with the service.

Results

The survey was done to determine the patient satisfaction level for the waiting time during the Health checkup procedure in the AHC department of the Indraprastha Apollo Hospitals. The sample was collected from 50 patients, who visited the AHC department for Health Checkup. According to the personal data of the patient. During the survey it was interesting to note that the waiting time for hospital services is an important satisfaction of patient.

A high percentage (90%) of patients is satisfied with the Billing & registration section of the AHC department. A significant percentage (92%) of patients is satisfied with the Sample Collection section of the AHC department. (98%) of patients is satisfied with the radiology (X-Ray) section of the AHC department .A significant percentage (74%) is satisfied with the radiology (ultrasound) section. 20% of the patients show neutral opinion and another 6% of the patients show dissatisfaction with the service. 68% of the patients show satisfaction with the radiology (mammography) section of the AHC department. Another 28% of the patients show neutral opinion with the service. Only 4% shows dissatisfaction with the service.

Recommendation

This survey is mainly carried out to know the patients' satisfaction level for waiting time in the AHC department as well as to suggest ways to improve their satisfaction level by reducing the waiting time.

The recommendations arrived at after thorough analysis of the data obtained is as follows:

As the data of the survey reflects 6% of the patients are dissatisfied with waiting time in the radiology (ultrasound) section, an improvement is required to improve the satisfaction level by reducing the waiting time. The data shows 4% of the patients dissatisfied with waiting time in

the radiology (mammography) section, an attention needs to be paid and necessary measures should be taken to improve the satisfaction level of the patients.

IV. CONCLUSION

In this survey, an effort has been made to analyze the various aspects of the patient's services of AHC department as services could contribute toward patients' satisfaction. An analytical study was conducted in the AHC department of the Indraprastha Apollo Hospitals to check the satisfaction level of the patients related to waiting times.

The management of the Indraprastha Apollo Hospitals tried its level best to satisfy their clients or patients by providing adequate facilities. However further improvements and as per suggestions will yield better results.

The efficiency of a department or hospital is very much dependent on the ability to satisfy the patients' overall needs.

References

- [1] Aaron H. Serious and Unstable Condition: Financing America's Health Care. Washington, DC: Brookings Institution; 1991.
- [2] Baker LC. Measuring competition in health care markets. Services Research. 2001; Vol. 36(No. 1, Part II):223-251. [PMC free article]
- [3] Brook RH, Koscoff J. Competition and quality. Health Affairs. 1988 Summer: 150- 161.
- [4] Chassin MR. Health Affairs. 1997. May/June, Assessing strategies for quality improvement; pp. 151-161.
- [5] Dimatteo MR, DiNicola DD. Achieving Patient Compliance: The Psychology of the Medical Practitioner's Role. New York, NY: Pergamon Press; 1983.
- [6] Donabedian A. The Definition of Quality and Approaches to Its Assessment. Vol. I. Chicago, IL: Health Administration Press; 1980. Explorations in Quality Assessment and Monitoring.
- [7] Enthoven AC. Why managed care has failed to contain health costs. Health Affairs. 1993; Vol. 12(No. 3):27-43.
- [8] Enthoven AC, Vorhaus C. A vision of quality in health care delivery. Health Affairs. 1997; Vol. 16(No. 3):44-57.
- [9] Farley DE. Hospital Studies Program, DHHS Publication No. (PHS) 85-3353. US Department of Health of Health and Human Services, National Center for Health Services Research and Health Care Technology Assessment; 1985. Competition among hospitals: market structure and its relation to utilization, costs, and financial position. Research note.
- [10] Fleming ST. The relationship between quality and cost: pure and simple? Inquiry. 1992; Vol. 28:29-38.
- [11] Flood AB, Shortell SM, Scott WR. Organizational performance: managing for efficiency and effectiveness. In: Shortell SM, Kaluzny AD, editors. Health Management. Albany, NY: Delmar Publishers; 1994.
- [12] Folland S, Goodman AC, Stano M. The Economics of Health and Health Care. New York, NY: Macmillan Publishing Company; 1993.
- [13] Fox PD, Heinen L, Steele RL. Determinants of HMO Success. Ann Arbor, Michigan, IL: Health Administration Press Perspectives; 1987.
- [14] Institute of Medicine. (2003). Health professions education: A bridge to quality. Washington, D.C.: National Academies Press
- [15] Jun M, Peterson RT, Zsidisin GA. The identification and measurement of quality dimensions in health care: Focus group interview results. Health Care Manage Rev. 1998; 23:81-96.
- [16] Lohr K. Medicare: A Strategy for Quality Assurance, Vol. I. Washington, DC:National Academy Press; 1991.
- [17] Padma P Rajendran C, Sai LP. A conceptual framework of service quality in Healthcare: Perspectives of Indian patients and their attendants. Benchmarking: An International Journal. 2009;16:157-91. doi: 10.1108/14635770910948213.
- [18] Schuster MA, McGlynn EA, Brook RH. How good is the quality of health care in the United States? Milbank Q. 1988;76:517-64. doi: 10.1111/1468-0009.00105.
- [19] Shahidzadeh-Mahani A, Omidvari S, Baradaran HR, Azin SA. Factors affecting quality of care in family planning clinics: A study from Iran. Int J Qual Health Care. 2008; 20:284-90. doi: 10.1093/intqhc/mzn016.
- [20] Stewart MA. (1995). Effective physician-patient communication and health outcomes: A review. Canadian Medical Association Journal. 152:1423-1433.
- [21] Stewart M, Brown J, Donner A, et al. (2000). The impact of patient-centered care on outcomes. J Fam Pract.;49:805-807.

Web links:

- [22] <http://www.globalhealthaction.net/index.php/gha/article/view/26243>
- [23] <http://bmjopen.bmj.com/content/4/9/e005055.full>
- [24] <http://www.patientcare.va.gov/>
- [25] <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1705904/>
- [26] <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1705904/>