To Study Turnaround time and to identify bottlenecks in the OPD that causes higher Turnaround Time

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment for the award of

the degree of Master of Business

Administration (MBA)

in

Hospital and Health Management

by

Ms. Niti Tyagi

Under the Supervision and Guidance of

Dr. Goutam Sadhu

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **To Study Turnaround time and to identify bottlenecks in the OPD that causes higher Turnaround Time** is the verifiable documentation of my original study efforts. I certify that it has not been applied for a degree or diploma from any other university or institution. Information that was taken from other people's published or unpublished work has been properly acknowledged in the text.

Niti Tyagi
Niti Tyagi

CERTIFICATE

Rajiv Gandhi Cancer Institute and Research Centre

HR/22 **24/06/2022**

TO WHOMSOEVER IT MAY CONCERN

We are glad to inform you that **Ms. Niti Tyagi** from **IIHMR University, Jaipur** has completed her internship at **Rajiv Gandhi Cancer Institute and Research Centre, Delhi** from **11th April 2022 to 24th June 2022.**

She has worked on a project titled **'Gaps in the Present Operational Mechanisms'.** This project aims to improve Patient Satisfaction and Patient Delight. As part of the project, she covered time taken in Admission & Discharge, waiting time at registration Counter, OPDs, Pharmacy, Day Care, investigations and reports, response to Nursing Call Bells, and time spent by doctors in Consultation.

We found her extremely inquisitive and hardworking. She was very much interested to learn the functions of our core division and also willing to put her best efforts and get into the depth of the subject to understand in better.

We wish her all the best for her future endeavor.

Rekha Sharma
Manager -HR

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Manager
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CERTIFICATE

This is to certify that dissertation title **To Study Turnaround time and to identify bottlenecks in the OPD that causes higher Turnaround Time** is a record of the research work undertaken by Niti Tyagi in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Faculty Guide
IIHMR University, Jaipur

Date

School Dean
IIHMR University, Jaipur

Date

Contents

I. ACKNOWLEDGEMENT

I am grateful to my Mentor **Dr. Goutam Sadhu** (Faculty Mentor, IIHMR University) for providing me all facilities and encouragement for successful completion of this work. I am thankful to him for guiding me at every step towards the successful completion of my project work.

I am indebted to my Industry guide **Mrs. Rekha Sharma (**HR manager) I express my gratitude to her for her support and constant encouragement throughout my work

I am grateful to my father, mother, brother, and friends for all the love they have showered on me, even now their encouraging voice and cherishing smile is diving me to meet the requirements and accomplish the gratitude to all those who have helped me directly and indirectly.

I also want to thank all my coworkers for helping to make this work a reality.

II. LIST OF FIGURES

III. ABBREVIATIONS

RGCI & RC: Rajiv Gandhi Cancer Institute & Research Centre
OPD: Outpatient Department
IPD: In Patient Department
TAT: Turn Around Time
IAU: Initial Assessment Unit
OT: Operation Theatre
GDA: Ground Duty Assistant
ED: Emergency Department

IV. ABSTRACT

Background:

Turnaround time TAT is defined as the time taken to complete or fulfill a request. Outpatient Department OPD is the first point of contact in the hospitals where patients visit and get them registered to avail consultation, Investigation, and other available facilities. A crucial and frequently employed metric for assessing the quality of medical care is patient satisfaction. Patient satisfaction has an impact on clinical outcomes, patient retention, and medical malpractice lawsuits. It affects the timely, effective, and patient-centered delivery of high-quality healthcare. Thus, patient satisfaction serves as a stand-in yet is nonetheless a very reliable indicator of how well hospitals and doctors are doing.

The study is carried out to find the bottlenecks in the present operational mechanism specifically focusing on OPD. Since OPD is the busiest department in any of the hospital and the process involves in registering the process must be smooth to promote patient delight and patient satisfaction.

Objectives:

1. To analyze the Time motion study at OPD.
2. To perform the gap analysis of the department.
3. To provide ways to overcome challenges causing gaps in the process flow.

Methodology:

This Study is Descriptive, Cross sectional & Quantitative study which is conducted in OPD Department of RGCI & RC. The study Population Chooses for this study is the cancer patient visiting OPD of RGCI & RC for the treatment. For the study purpose a standard checklist is prepared to enter the time taken in each process or department until patients exit from the hospital.

Result:

By the end of the study, it is concluded that maximum waiting time calculated is for Consultation (**0:52:20**) & minimum is at the OPD counter (**00:11:42**) which are common for all the patients.

After consultation, once the patient is referred to their respective department, the maximum waiting time observed is for PAC(**1hr:54mins:40secs**). As fewer number of patients visited this department comparatively, so this is the Outlier according to the study.

1. INTRODUCTION:

A hospital area dedicated to the treatment of outpatients who come to the hospital for diagnosis and treatment but do not require a bed or overnight care is known as an outpatient department (OPD). [1] OPD of RGCI & RC is purely dedicated to cancer patients only. The outpatient department is the most essential support system in terms of monetary support and successes. “The time between when the patient enters the outpatient department and when the patient actually exits the OPD," as the interval between when a patient joins the outpatient department and when the patient quits the OPD has been described.

In most hospital outpatient departments, patients must wait an excessive amount of time for medical treatment or advice from skilled healthcare personnel. Patients are dissatisfied with the length of time they had wait in the hospital. Long waits in an OPD have a negative impact on a hospital's ability to recruit patients in a well-managed healthcare institution.

For a new and expanding company It is difficult to provide marketing services to people who are dissatisfied with the slower process and higher waiting time. A well-functioning outpatient department (OPD) of a hospital is certainly vital due to the significant number of ambulant patients in most places. Because outpatient services are less expensive than inpatient services. There are various quality assurance indicators in hospitals. One of the most important quality assurance indicators for patients in outpatient departments is "waiting time." As a result, long OPD lines are challenging to a hospital's overall efficiency.

2. LITERATURE REVIEW

#	Tile and year of publication	Authors	Findings
1	Turnaround Time (TAT): Difference in Concept for Laboratory and Clinician 2012	Gurmeet Singh & Hara P. Pati	TAT is a crucial criterion for the laboratory and the hospital when evaluating the laboratory service, according to the study's findings. For all test kinds or settings, a single definition of TAT is insufficient.
2	Laboratory Turnaround time 2007	Robert C. Hawkins	The Study analyzed the challenges faced by a famous laboratory and researcher tried to find all the factors responsible for the delay in the flow process and gave measures and ways to improve the efficiency of the laboratory.
3	Five Year follow-up of routine outpatient test turnaround time: a College of American Pathologists Q-Probes study. 2003	P. Valenstien, M. Walsh	The study tool was a descriptive cross-sectional one in which 118 laboratories prospectively recorded the turnaround time from collection to verification for 952 CBMs, 8832 thyroid tests, etc. and the study concluded that the turnaround time was found to be essential to know the challenges behind the delay in the workflow and thus got the way to deal with them and to increase the efficiency and proficiency of the laboratories
4	Patient Satisfaction 2010	Bhanu Prakash	Patient satisfaction is an important and widely used indicator of health-care quality. Patient

			satisfaction has an impact on clinical results, patient retention, and medical malpractice lawsuits. It affects the prompt, effective, and patient-focused delivery of high-quality healthcare. Thus, patient satisfaction serves as a proxied yet incredibly accurate measure of a doctor's and hospital's effectiveness. This article's goal is to explain ways to guarantee patient happiness in dermatology practice.
5	Patient satisfaction with the healthcare system: Assessing the impact of socio-economic and healthcare provision factors 2016	Athanassios Vozikis & Sofia Xesfingi .	Patient satisfaction is strongly positively correlated with public health spending, the number of doctors and nurses on staff, and the patient's age, while private health spending and the number of hospital beds are negatively correlated.
6	Determining factors of patient satisfaction for frequent users of emergency services in a medical center 2004	Wei-Hsiung Hu, Jin-An Huang , Chi-Shiun Lai, Dar-Yu Yang, Wen-Chen Tsai, Rhay-Hung Weng.	The satisfaction with total emergency care among regular ED users was much lower than that of infrequent ED users, making them special. Improved patient satisfaction among frequent ED patients may be attained by controlling perceptions of waiting times and giving discharge instructions.
7	Factors Affecting	Prabodh Risal,	The time needed to correct pre-

	Turnaround Time in the Clinical Laboratory of the Kathmandu University Hospital, Nepal 2019	Rajendra Dev Bhatt and Chandani Shrestha	analytical mistakes made by other departments rather than the laboratory itself was the primary cause of delayed laboratory reports. The cash unit has the highest level of mistake in the entire testing process, making it the main cause of the extended TAT. Nevertheless, the causes of extended TAT may range from hospital to hospital depending on several conditions.
8	Root Cause Analysis (RCA) of Prolonged Laboratory Turnaround Time in a Tertiary Care Set up 2014	Kalyan Khan	This study found that simple administrative procedures would dramatically shorten the TAT and raise the standard of services provided by the central laboratory. These include the installation of sample collection counters in the inpatient and outpatient departments, the use of minor techniques such as printing the location of the laboratory's address on the OPD ticket, the implementation of a single-prick policy, the creation of a separate department for the central laboratory, and the consolidation of administrative control under a single authority.
9	In-depth investigation of turn-around time of full blood count tests requested from a	Leonard Mutema , Nomusa Mashigo , Fungai Musaigwa Zivanai	The intra-lab TAT was within the 3 h internal benchmark, according to the results. The greatest contribution to the overall TAT

	clinical haematology outpatient department in Cape Town, South Africa	Chapanduka	was made by operational stages that were independent of laboratory activities.
10	Wait times, patient satisfaction scores, and the perception of care 2014	Clifford Bleustein, David B Rothschild, Andrew Valen, Eduardas Valatis, Laura Schweitzer, Raleigh Jones	The amount of time a clinical ambulatory patient has wait for a provider's attention has a significant impact on their experience. Longer wait times have a negative impact not only on indicators like likely to refer and satisfaction level with the experience, but also on how patients perceive the information, directions, and overall care provided by doctors and other caregivers.

3. Research Question:

To Study Turnaround time and to identify bottlenecks in the OPD that causes higher Turnaround Time

4. Objective

- To analyze the Time motion study at OPD.
- To perform the gap analysis of the department.
- To provide ways to overcome challenges causing gaps in the process flow.

5. METHODOLOGY

5.1 Study design

The research design is descriptive, cross-sectional, and quantitative.

5.2 Setting Area

It was conducted in Outpatient Department at RGCI & RC, New Delhi

5.3 Study Population

5.3.1. Inclusion criteria: Person who have visited the Outpatient either for consultation, follow-ups etc.

5.3.2 Exclusion criteria: Persons visiting other Departments of the hospital except for the concerned departments.

5.4 Duration of Study-

The duration of the study was from April 10th, 2022- May 25th, 2022

Sample size

For this study, a total sample size of 104 patients were collected over a period of 75 days and reviewed step by step to see where there was scope for advancement and improvement in management.

Sampling technique

Mode of data collection:

For data gathering, a basic Convenient sample method is used. Patients are selected at random as they enter the hospital grounds. The patient or the attendant who accompanies the patient is given a registration form to fill out with information such as Patient Name, Address, Aadhar number, and so on.

Following that info, the collector will accompany the patient and record the time spent in each step as well as the timings.

Statistical method used:

In this study for analysis purpose of the data, MS Excel was used.

6.0 Operational definitions:

6.1 Patient Satisfaction:

Satisfaction of Patient is a crucial quality indicator of healthcare since it reveals how well the provider meets clients' expectations and is a major factor in determining patients' viewpoint behavioral intention. [8]

6.2 TAT

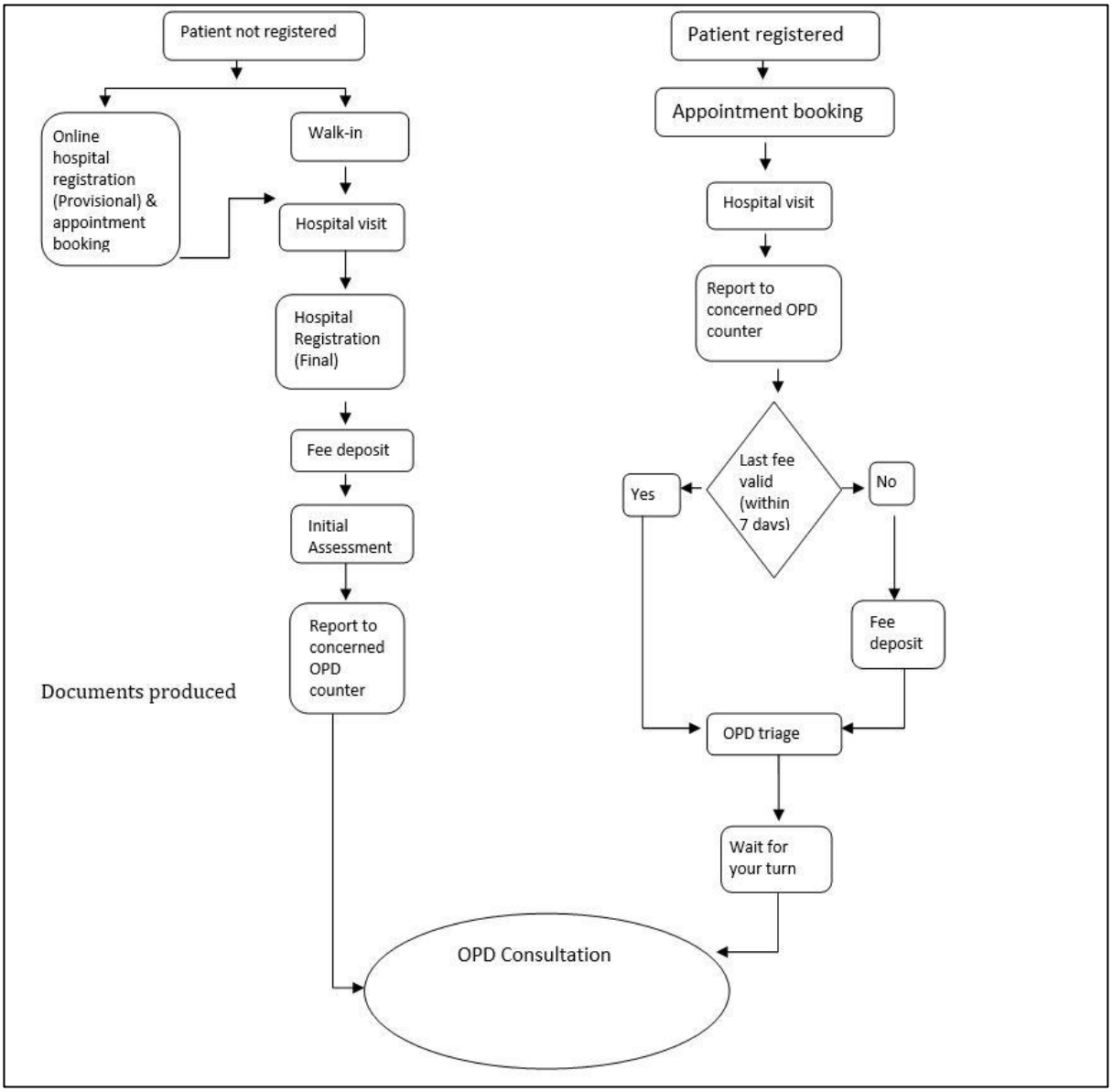
The amount of time needed to finish a process or fulfil a request is known as turnaround time (TAT). As a result, the idea overlaps with lead time and contrasts with cycle time.

6.3 OPD

It is known as outpatient department in which hospitals provide the facility of diagnosis and take care of the patients who cannot stay overnight. This are especially meant for the outpatients. This department is an integral part for the hospital to run.

7. RESULTS

7.1 OPD PROCESS FLOW



7.1.1 May I Assist You?

May I Assist You Patient Helpdesk is positioned in the reception area and is staffed by front office executives who are ready to educate patients on procedures. They are executives who have been appointed to advise you, answer your questions, and support you in any manner they can during the main Reception.

7.1.2 Registration:

On your first visit to the Institute, please fill out your information at the main reception/registration counter. To register, you'll need a picture ID and proof of address, as well as a Pan Card/Aadhar Card and a registration fee of INR 200/-, plus a consultation fee of INR 1200/-.
Patients from other countries must bring a copy of their passport (first page, last page, and visa page) with them. You will obtain a Smart/cash card with a Central Registration Number from the cash counter (CR No.)

7.1.3 Initial Assessment Unit:

Following registration, all new patients will be directed to the Ground Floor's Initial Assessment Unit, where doctors and nurses will collect a medical history, perform a physical examination, and check weight, height, and vitals, among other things.

7.1.4 OPD Consultation

Following the initial examination, you will be directed to the relevant OPD, where a Super specialist doctor will assess your problem further and advise you on additional investigation and treatment in the OPD or IPD, as needed. It is recommended that you arrange an OPD consultation in advance, which you may do at Main Reception, over the phone at +91-1 1-47022071, or online at their website (www.rgcirc.org).

7.1.5 Follow- Up:

For Follow Up, make an appointment with the appropriate doctor at the Appointment Desk or online. Please call ahead to confirm your appointment time and come 10 minutes early. The OPD is open from 2:00 p.m. to 5:00 p.m. (Two days a week, Tuesday, and Friday) (Until 04:45 p.m., the last card will be made.)

7.2 FLOOR PLAN OPD

	SURGICAL ONCOLOGY	MEDICAL ONCOLOGY	RADIATION ONCOLOGY
Ground Floor D Block	BREAST SURGICAL ONCOLOGY	UNIT I MEDICAL ONCOLOGY (BREAST & SOFT TISSUE SARCOMA)	RADIATION-ONCOLOGY UNIT C (BREAST, BONE, STS, HAEMATOLOGICAL)
	PEDIATRIC SURGICAL ONCOLOGY	PEDIATRIC HAEMATO-ONCOLOGY	RAD.ONCOLO. UNIT D
	HEAD & NECK SURGICAL ONCOLOGY UNIT -I & UNIT –II	MEDICAL ONCOLOGY UNIT 2 HEAD & NECK	RADIATION-ONCOLOGY UNIT B (HEAD & NECK)
	NEUROSURGICAL ONCOLOGY UNIT I & UNIT II	MED.ONCOL. UNIT 2(NEURO)	RADIATION ONCO. UNIT B
	RECONSTRUCTIVE SURGICAL ONCOLOGY		
IST FLOOR D BLOCK	URO-SURGICAL ONCOLOGY	MEDICAL ONCOLOGY UNIT-5 (GENITO-URINARY, HEPATOBILLARY)	RADIATION-ONCOLOGY UNIT A (GENITO-URINARY)
	GYNAE-SURGICAL ONCOLOGY UNIT -I & UNIT-II	MED ONCOL. UNIT 5	RAD. ONCOL. UNIT A (GYNAE)
	GI SURGICAL ONCOLOGY	MEDICAL ONCOLOGY UNIT II, METASTATSIS OF UNKNOWN ORIGIN, STOMACH, SMALL INTESTINE, COLON & RECTUM	RADIATION-ONCOLOGY UNIT D (GASTRO-INTESTINAL)
	THORACIC SURGICAL ONCOLOGY	MEDICAL ONCOLOGY UNIT V (THORACIC, STOMACH , SAMLL INTESTINE, COLON & RECTUM)	RADIATION ONCOL. UNIT C (THORACIC)
	ORTHOPEDICS SURGICAL - ONCOLOGY	MEDICAL ONCOL. 1 (STS, BONE)	RADIATION ONCOL. C
IIND FLOOR D BLOCK		HAEMATO-ONCOLOGY	

The above figure shows the Floor wise distribution of OPD in RGCI& RC. Due to improper signages and lack of directional assistance patient faces challenge in reaching their respective OPDs resulting in delayed in the OPD process.

The sample size of 104 patients is divided into two different categories the patients who visited the hospital just for the consultation and the other are those who are in hospital to avail the other investigation facilities or for the treatment as directed by the physician. The sample size is 61 and 43 respectively as per the findings from the raw data. The purpose of dividing the data is to see how TAT of the OPD process can be reduced by observing the graphs of both the samples Simultaneously.

7.3 Help desk to Consultation

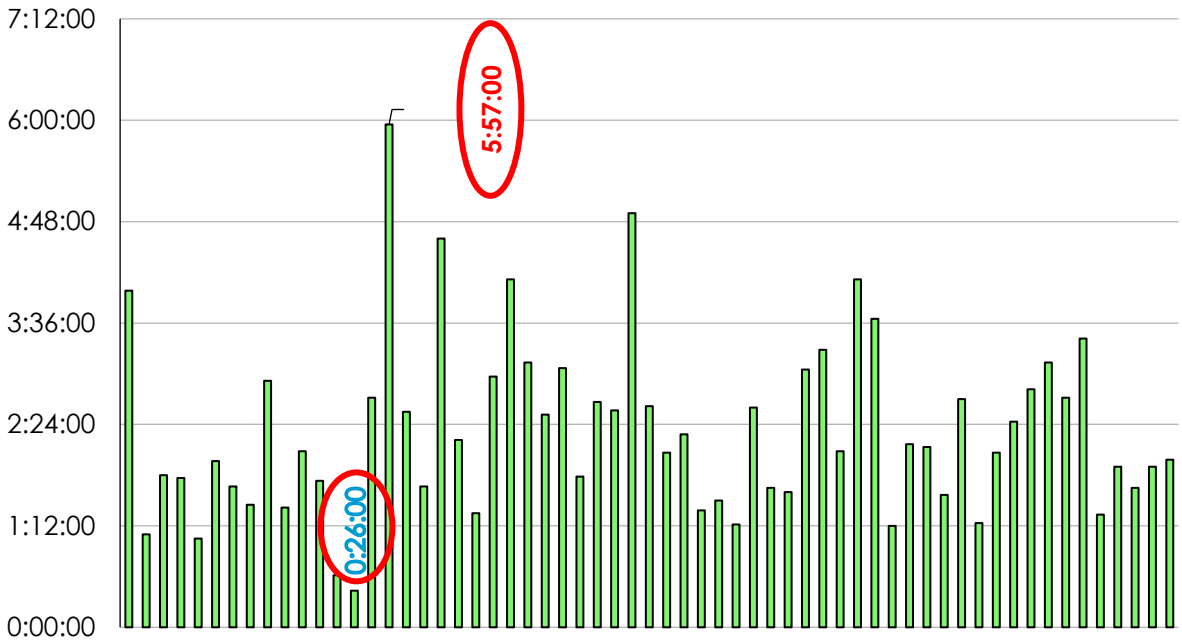


Figure 3: Average TAT of patients from Help desk to consultation

Interpretation: The Graph above shows the TAT of patients who visited the OPD for consultation/Second Opinion only and exited the hospital without availing the investigation facilities.

The sample size of such patients is 61.

Findings: Average TAT of such patients is 02:19:52. However highest peak is at 5:57:00 and Lowest peak is at 0:26:00.

7.4 Help desk to Procedure

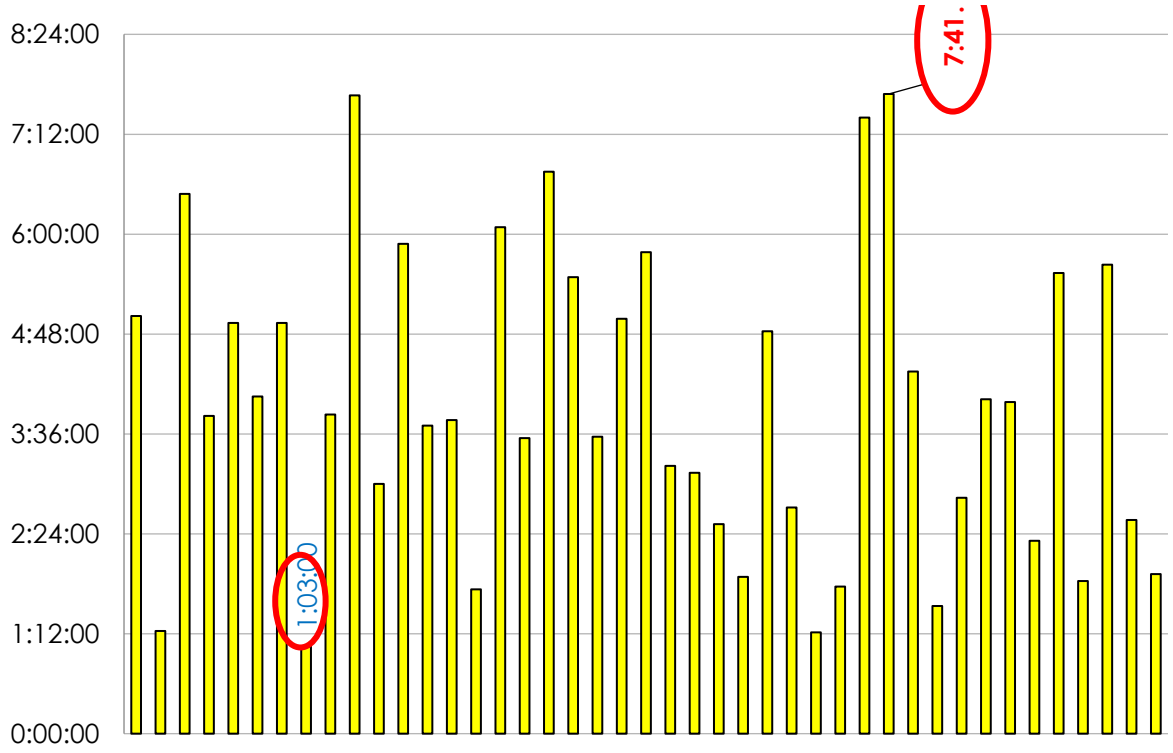


Figure 4: Average TAT of patients from helpdesk to complete procedure

Interpretation: The Graph above shows the TAT of patients who visited the OPD and availed the investigation facilities as directed by physician.

The sample size of such patients is 43.

Findings: Average TAT of such patients is 03:57:28. However highest peak is at 7:41:00 and Lowest peak is at 1:03:00.

7.5 Total Time Taken in registration Process

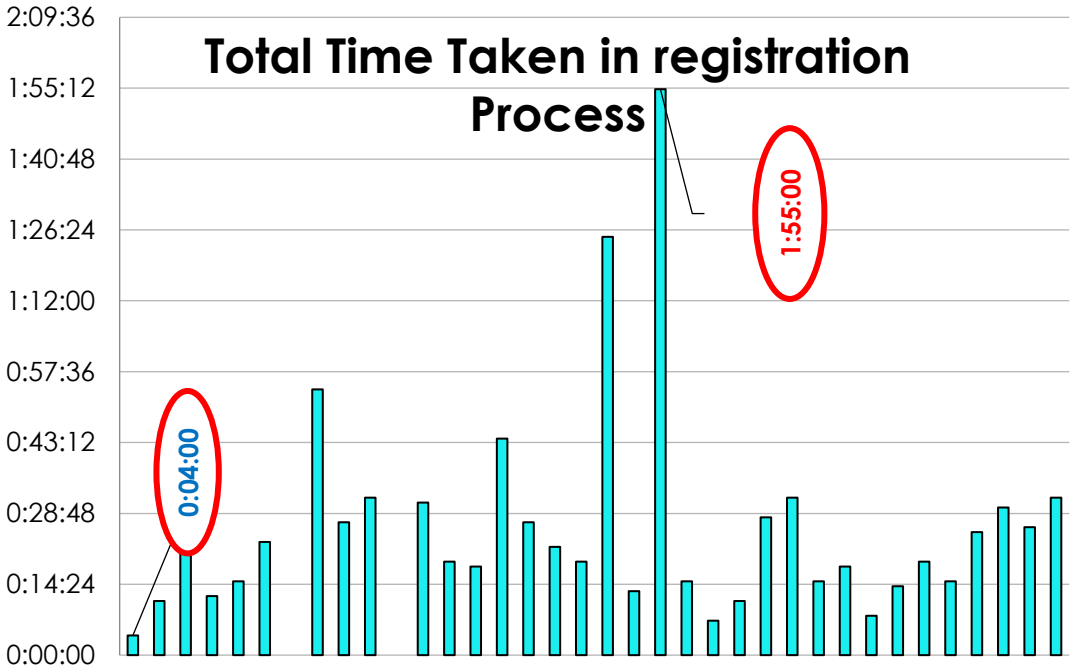


Figure 5: Total TAT of registration process

Interpretation: The Graph above shows the total time taken in registration process of patients at the registration desk. The graph is sample Size of 104.

Findings: The average TAT of registration desk is 00:22:02. However, the highest peak values at 1:55:00 and the lowest peak values at 0:04:00

7.6 Total time taken for IAU

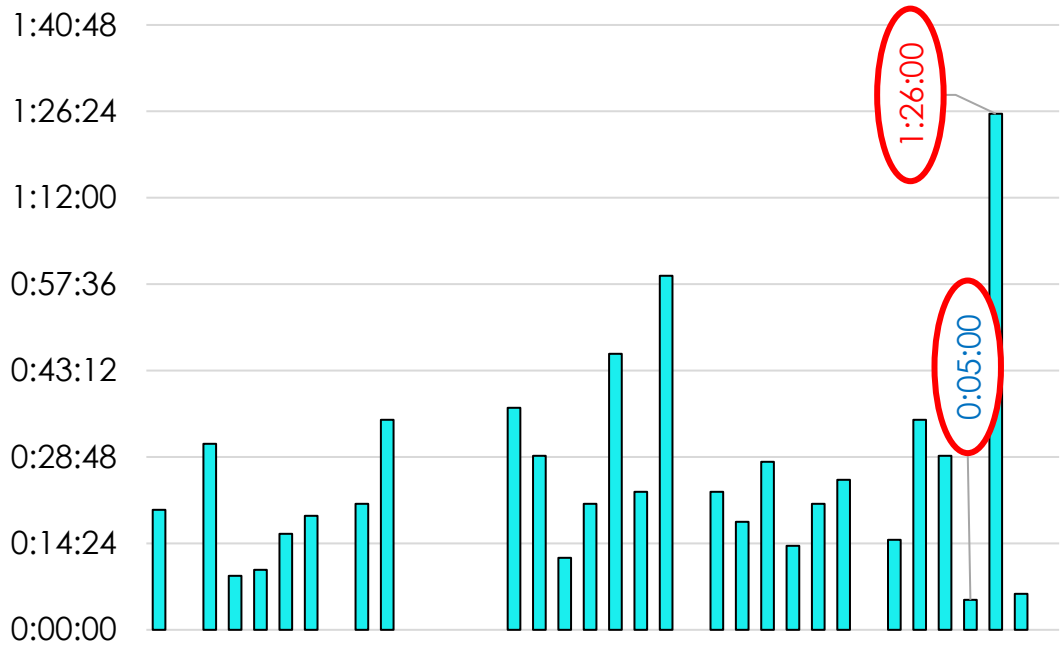


Figure 6: Total TAT of IAU

Interpretation: The graph above shows the total time taken in the IAU for the initial assessment of the patient. The Purpose of the initial assessment is to record some of the basic vitals of the patients including height weight and make a final for medical records. The sample Size of the graph is 104.

Findings: The average TAT of IAU is 00:17:33. However, the highest peak values at 1:26:00 and lowest peak is at 0:05:00.

7.7 Total TAT for OPD counter

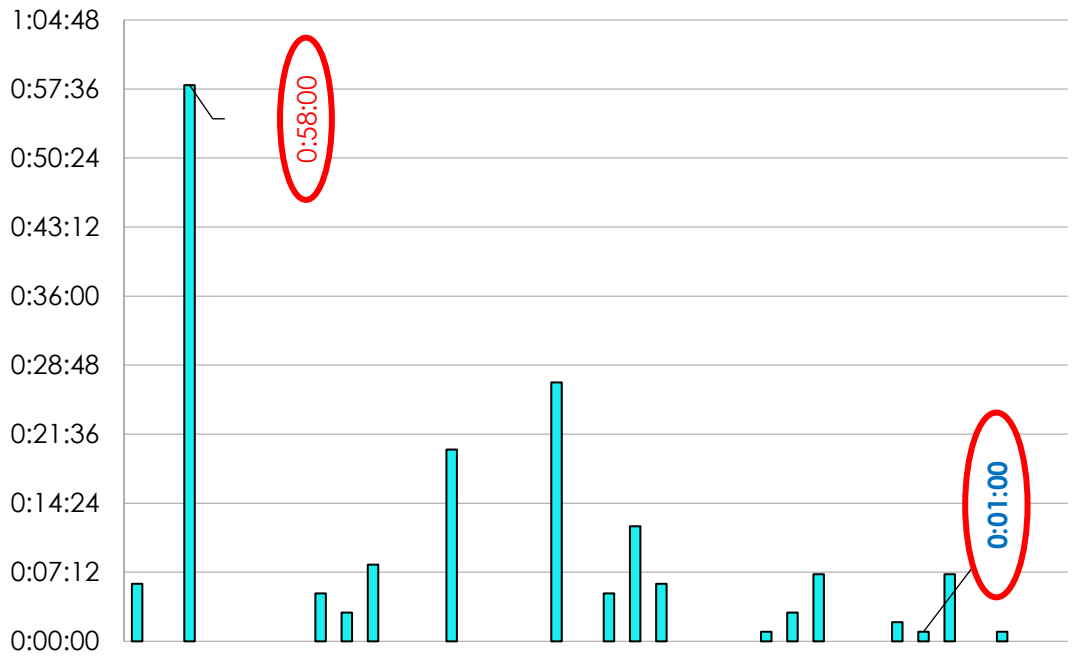


Figure 7: Total TAT for OPD Counter

Interpretation: The graph above shows the total time taken at OPD counter by the patients to avail the token service. Token service is basically a system which shows the patient in a display number of writing ahead.

Findings: The average TAT for OPD counter is 00:11:42. However the highest peak values at 00:58:00 and the lowest peak values at 00:01:00

7.8 Percentage of patients visited OPD counter

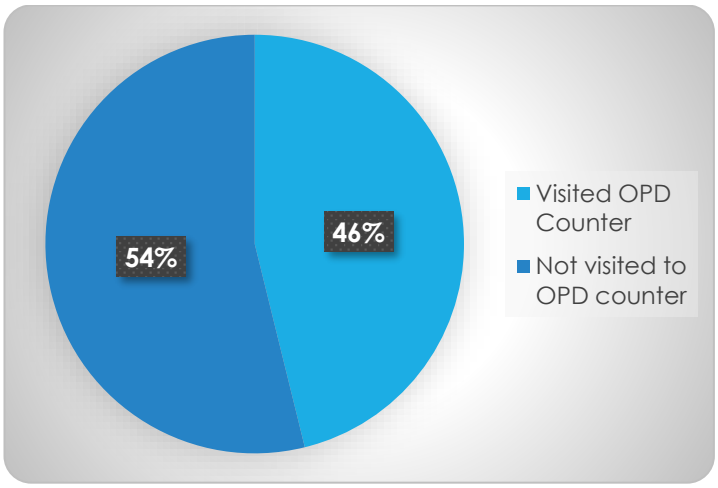


Figure 8: Percentage of people visited OPD counter

Interpretation: The graph above shows the percentage of people visited OPD counter after IAU to avail Token Services

Findings: According to graph 54% of patients do not visit the OPD counter and 46% of patients did not visit OPD counter to avail token.

7.9 Total TAT for consultation

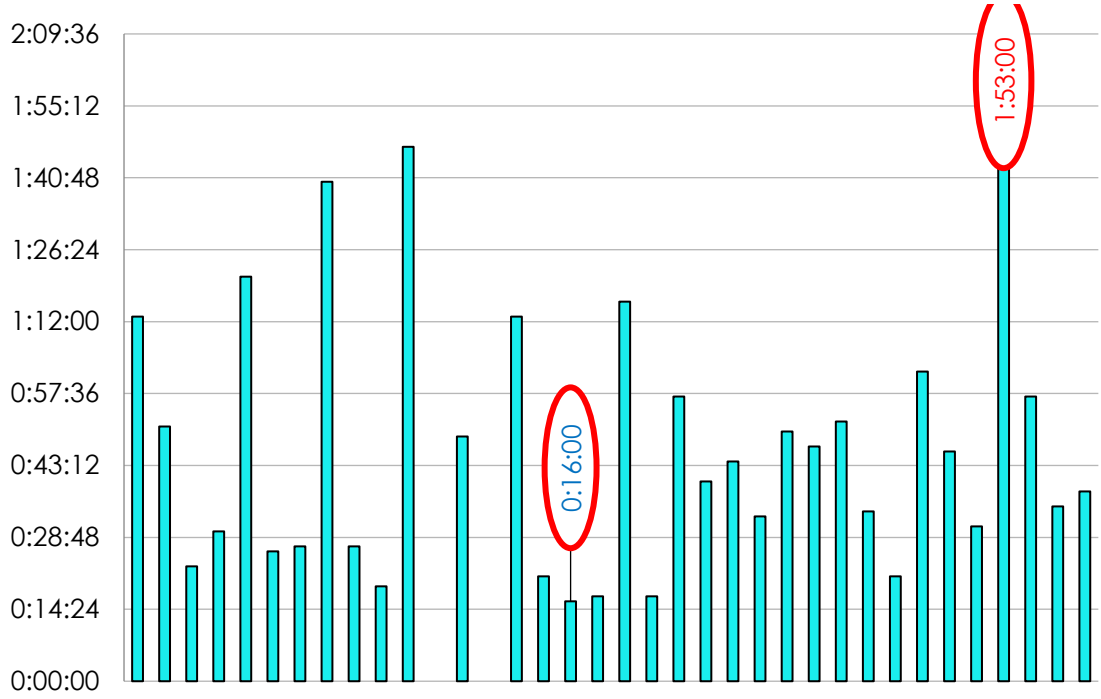


Figure 9: Total TAT for Consultation
Interpretation: The graph above shows the total time taken in consultation with the doctor by patients.
Findings: The average TAT for consultation is 00:52:20. However highest peak values at 1:53:00 and lowest peak values at 0:16:00.

Major Findings:

- After consultation patient will visit their respective departments based on their requirements and referral by the doctor.
- According to data out of 104 patients only 43 patients stayed in the hospital for further examination as per the requirements and remaining 61 visited hospital just for consultation.

7.10 Total TAT for Cash Counter

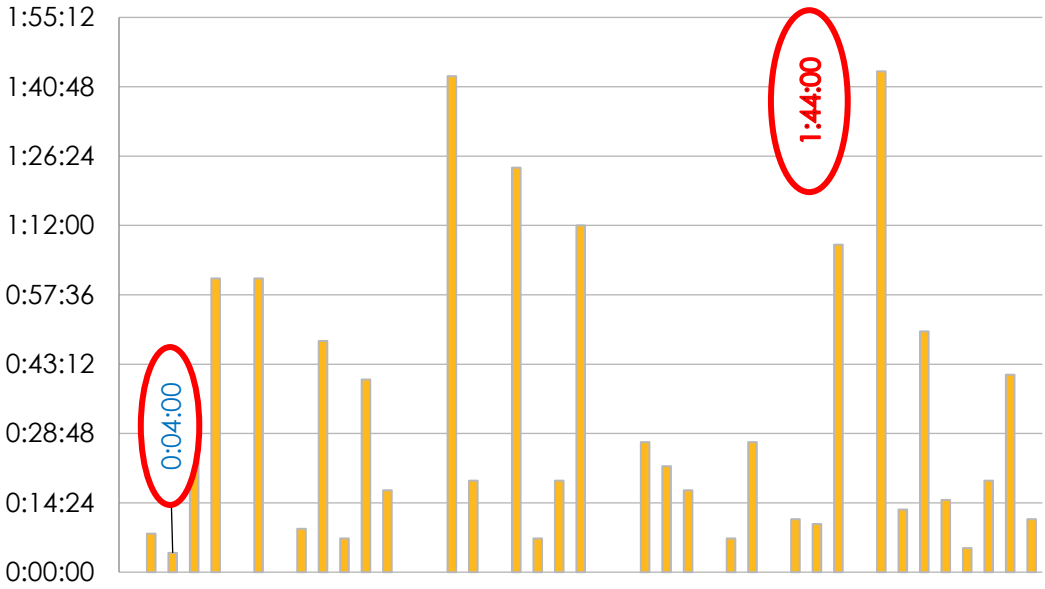


Figure 10: Total TAT for Cash Counter

Interpretation: The graph above shows the total TAT of the cash counter. After consultation with the doctor the patient goes to cash counter for further investigation and pays the cash to receive receipts for investigation.
Findings: The average TAT for cash counter is 00:31:55. However, the highest peak values at 1:44:00 and lowest peak values at 00:04:00.

7.11 Total TAT for Minor OT

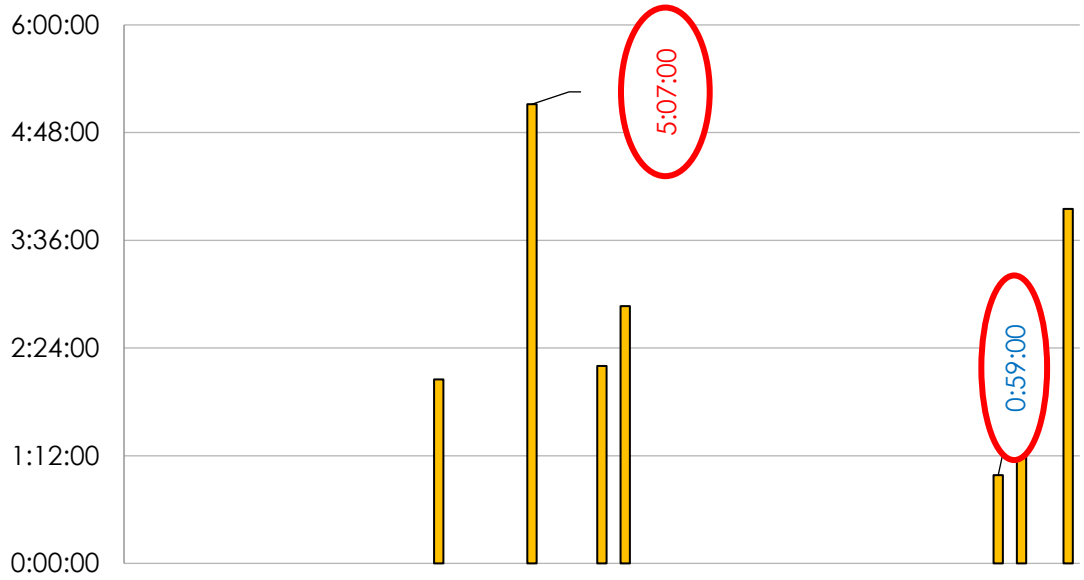


Figure 11: Total TAT for Minor OT
Interpretation: The graph above shows the total number of patients visited Minor OT and the total TAT of Minor OT.
Findings: Out of the total sample size of 104 only 7 patients visited the Minor OT, and the average TAT of minor OT is 02:25:37. However the highest peak values at 5:07:00 and lowest peak values at 0:59:00

7.12 Percentage of patients seeking assistance

Other major Findings:

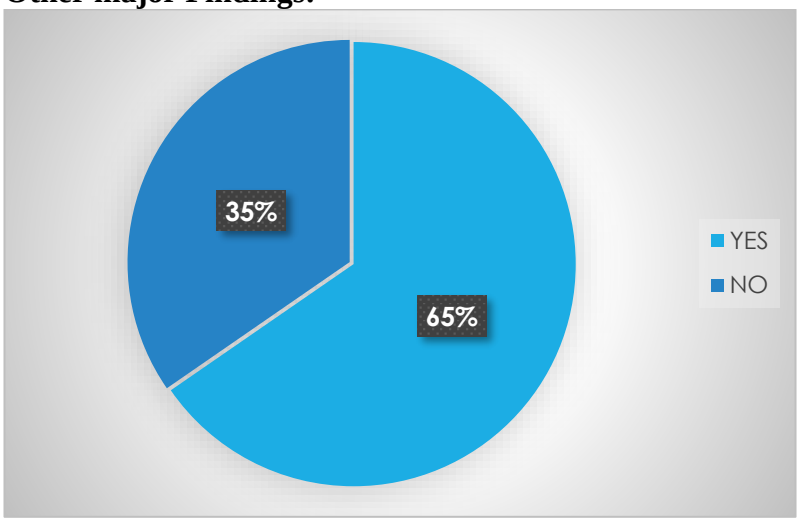


Figure 12: Percentage of people/patients seeking assistance.

Interpretation: The graph above shows the percentage of patients seeking Physical assistance which includes Wheelchair/stretcher/GDA.
Findings: Out of the total sample size of 104, 65% of patients seeks for the physical assistance as soon as they enter the OPD.

7.13 Percentage of People Seeking directional Guidance

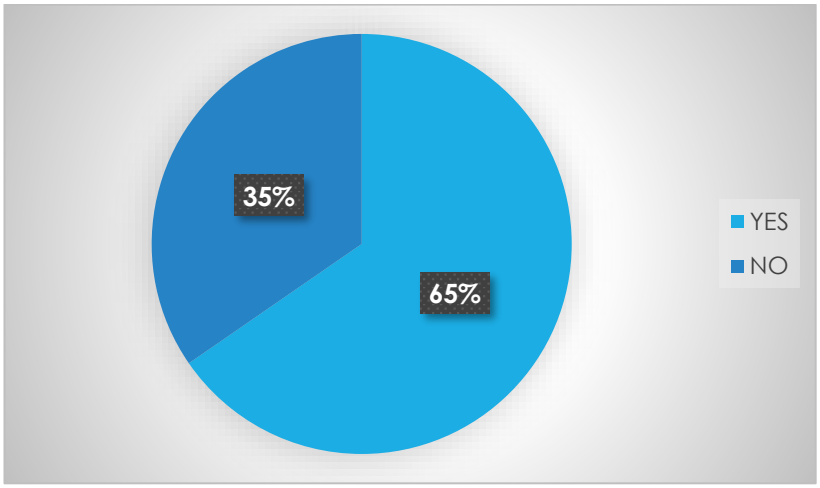


Figure 13: Percentage of people seeking directional assistance.
Interpretation: The graph above shows the percentage of patients seeking directional assistance once they are done with the registration process.
Findings: Out of the total sample size of 104, 65% of patients seeks directional assistance inside the hospital for further investigation.

8. DISCUSSION

TAT is defined as the time taken to complete or fulfill the generated request. This study aims to find out bottlenecks in the existing operational mechanism of OPD and suggesting ways to reduce the TAT of OPD which in turns increases patient satisfaction.

A significant and commonly applied metric for determining the standard of medical care is patient satisfaction. Patient satisfaction influences clinical outcomes, patient retention, medical malpractice and , patient retention litigation. It affects the timely, efficient, and patient-focused delivery of high-quality healthcare. [10]

Patient satisfaction in RRGCI & RC is vital as the patient footfall is from both the countries national as well as international majorly from Nepal and it is considered as one of the premier cancer institutes in North India.

In terms of hospitals OPD waiting time for registration must be less than 15 min, pre consultation waiting time must be less than 30 min, Consultation documented waiting time is also less than 30 min. So, in conclusion waiting time from registration to consultation should be less than 90 min. [14] Our study shows that the average time taken from registration to consultation is 2:19:52 which surpasses the stated average waiting time.

The major reasons of delayed in OPD Consultation were due to time consumed in registration process and at the help desk. Waiting time before consultation alone has the highest degree of error due to the token machine which is not working most of the time and is not fully functional at all the floors.

Other major factor is the Signages which are not bilingual and are not placed in proper visibility.

Below are the pictures depicting the current scenario in RGCI & RC of OPD:

Figure 14: RGCI & RC registration Counter

Figure 15: RGCI & RC Cash Counter

Figure 16: RGCI & RC ground Floor OPD

9. CHALLENGES

9.1 HELP DESK

- Help desk is not placed in the visibility.
- Lack of manpower at the help desk- There are only 2 people at the help desk which are not sufficient when the patient load is more.

9.2 REGISTRATION AREA

- Registration process is time consuming & the patients are made to wait at the OPD waiting area & then called once the file is ready after scanning the reports and the relevant documents.
- The scanning process of documents is slow & at times the IT service crashes due to heavy load.
- There is no provision for cost estimation for patients prior to treatment
- sPatients find difficulty in reaching to referred OPDs due to inadequate signages & less manpower for guidance (GDA staff)

9.3 SERVICESSS

- Inappropriate staff training
- Staff at the counter are not aware of the Portal (PARAS) & App (RGCI-RC CARE APP)
- The staff is not empathetic towards the patient as they are meant to be specially with cancer patients

9.4 OPD AREA

- Display for token number isn't working half of the time due to technical issues & staff incompetency
- The system for calling names of the patient for OPD is inaudible in case of high patient load
- Long waiting hours at the OPD for consultation
- Patient is not informed at the earliest regarding the Doctor's absence & are made to wait for long hours & at times the whole day
- As the Doctor in the Cardiology department is on call basis so the waiting time is more for ECG, EBUS & 2D-Echo.

10. SUGGESTIONS

10.1 Signages**:** Signages should be incorporated such that they are easily understood & clearly visible. Ideally signages must be placed Bilingually.

10.2 Mapping**:** The mapping system which already exist needs to be simplified and implemented by the ground staff.

10.3 Staff Training**:** More emphasis should be given on staff training for better understanding of Hospital Portal and App system and for soft skills training.

10.4 Manpower: Effective management of existing manpower for patient's navigation and enquiry.

10.5 IT**:** Processes such as registration should be done in online mode as well to reduce patient waiting time.

10.6 Ancillary Services**:** There should be a separate counter from where patient can avail wheelchair services.
Proper drinking water & sitting facilities should be there in front of the registration counter.

10.7 Patient Grievance**:**

- Segregation of hours during the day for appointment patients and walk-in patients for consultation
- Cost estimation should be provided to the patients post consultation.
- Strict rules and regulations on number of attendants accompanying the patients to reduce overcrowding hence improving the general aura of the hospital.
- Temperature at each floor should be modulated accordingly keeping in mind the patient's condition.

11. CONCLUSION

- In this study the objective was to find out the turn-around-time for the various processes of OPD & the challenges faced by the patients during the processes.
- By the end of the study, I concluded that maximum waiting time calculated is for Consultation (**0:52:20**) & minimum is at the OPD counter (**00:11:42**) which are common for all the patients.
- After consultation, once the patient is referred to their respective department, the maximum waiting time observed is for PAC(**1hr:54mins:40secs**). As fewer number of patients visited this department comparatively, so this is the Outlier according to the study.

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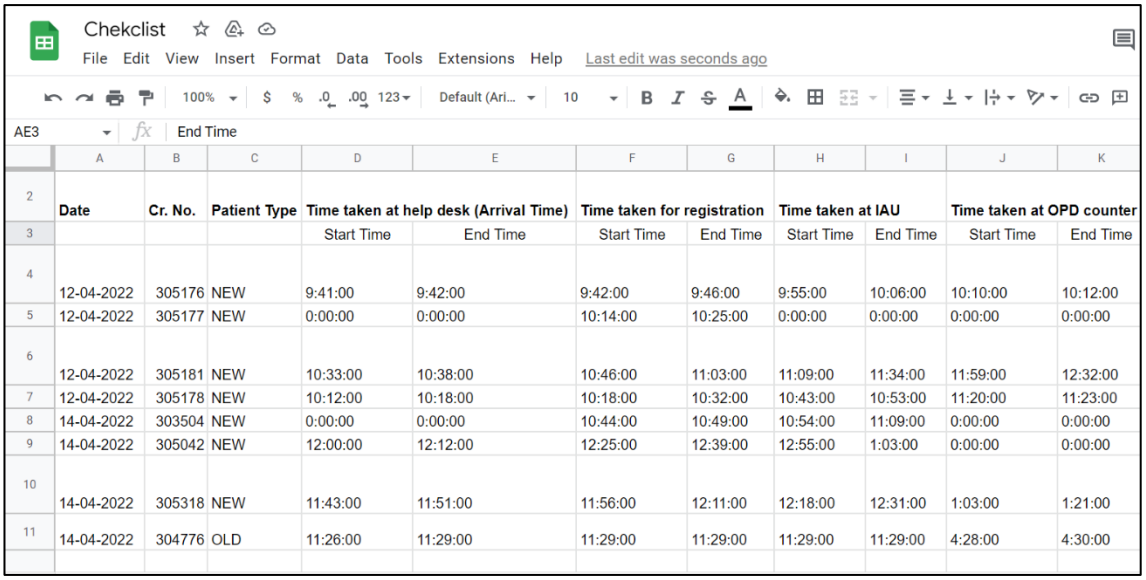
Annexure 1: Checklist used for recording time



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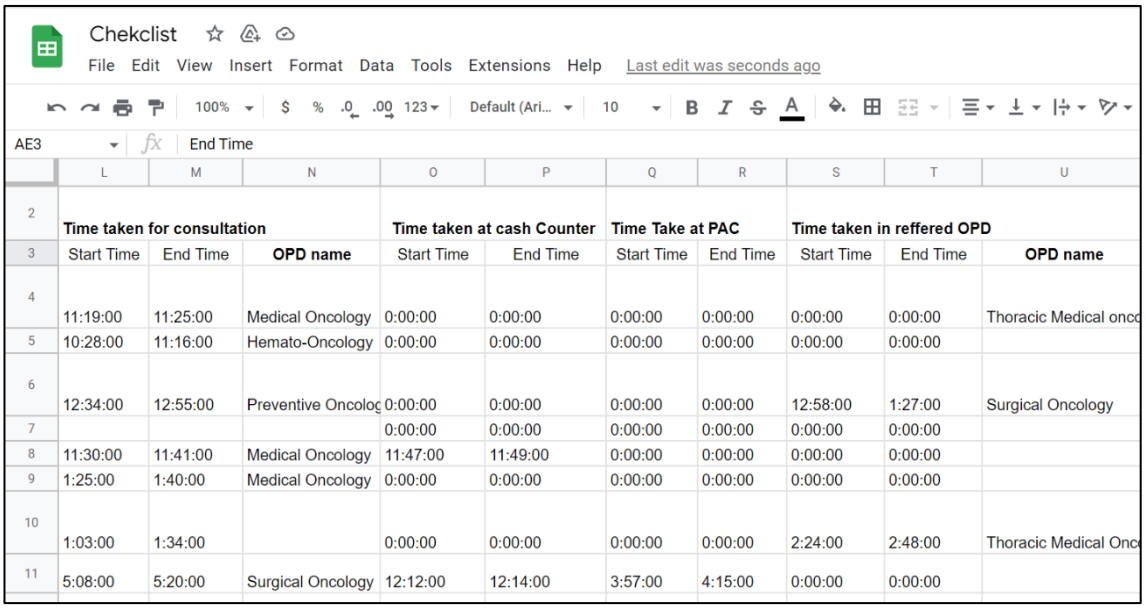
AE3 | End Time

	Date	Cr. No.	Patient Type	Time taken at help desk (Arrival Time)		Time taken for registration		Time taken at IAU		Time taken at OPD counter	
				Start Time	End Time	Start Time	End Time	Start Time	End Time	Start Time	End Time
4	12-04-2022	305176	NEW	9:41:00	9:42:00	9:42:00	9:46:00	9:55:00	10:06:00	10:10:00	10:12:00
5	12-04-2022	305177	NEW	0:00:00	0:00:00	10:14:00	10:25:00	0:00:00	0:00:00	0:00:00	0:00:00
6	12-04-2022	305181	NEW	10:33:00	10:38:00	10:46:00	11:03:00	11:09:00	11:34:00	11:59:00	12:32:00
7	12-04-2022	305178	NEW	10:12:00	10:18:00	10:18:00	10:32:00	10:43:00	10:53:00	11:20:00	11:23:00
8	14-04-2022	303504	NEW	0:00:00	0:00:00	10:44:00	10:49:00	10:54:00	11:09:00	0:00:00	0:00:00
9	14-04-2022	305042	NEW	12:00:00	12:12:00	12:25:00	12:39:00	12:55:00	1:03:00	0:00:00	0:00:00
10	14-04-2022	305318	NEW	11:43:00	11:51:00	11:56:00	12:11:00	12:18:00	12:31:00	1:03:00	1:21:00
11	14-04-2022	304776	OLD	11:26:00	11:29:00	11:29:00	11:29:00	11:29:00	11:29:00	4:28:00	4:30:00



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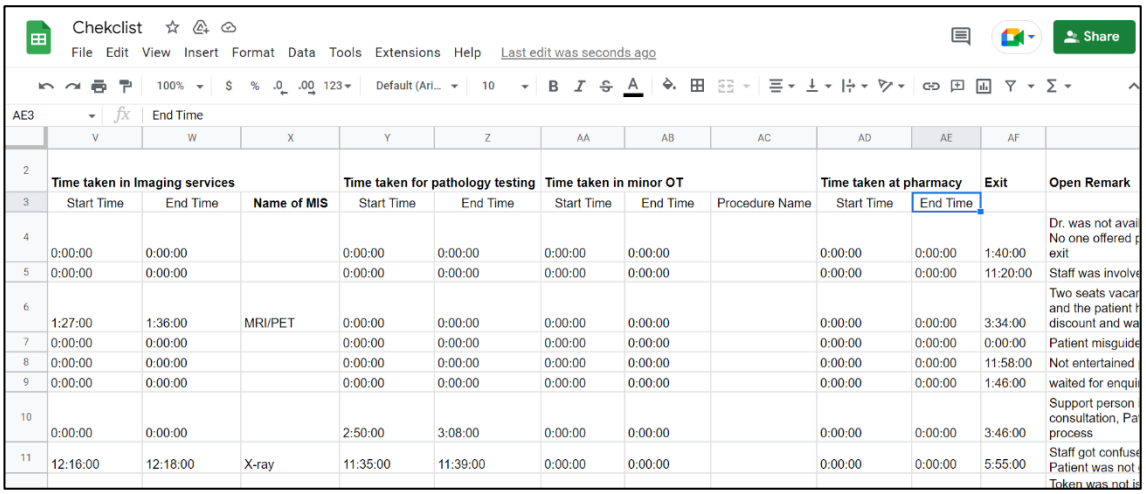
AE3 | End Time

	Time taken for consultation			Time taken at cash Counter		Time Take at PAC		Time taken in reffered OPD		
	Start Time	End Time	OPD name	Start Time	End Time	Start Time	End Time	Start Time	End Time	OPD name
4	11:19:00	11:25:00	Medical Oncology	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	Thoracic Medical onc
5	10:28:00	11:16:00	Hemato-Oncology	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	
6	12:34:00	12:55:00	Preventive Oncolo	0:00:00	0:00:00	0:00:00	0:00:00	12:58:00	1:27:00	Surgical Oncology
7				0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	
8	11:30:00	11:41:00	Medical Oncology	11:47:00	11:49:00	0:00:00	0:00:00	0:00:00	0:00:00	
9	1:25:00	1:40:00	Medical Oncology	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	0:00:00	
10	1:03:00	1:34:00		0:00:00	0:00:00	0:00:00	0:00:00	2:24:00	2:48:00	Thoracic Medical Onc
11	5:08:00	5:20:00	Surgical Oncology	12:12:00	12:14:00	3:57:00	4:15:00	0:00:00	0:00:00	



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Share

AE3 | End Time

	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	
2	**Time taken in Imaging services**			**Time taken for pathology testing**		**Time taken in minor OT**			**Time taken at pharmacy**		**Exit**	**Open Remark**
3	Start Time	End Time	**Name of MIS**	Start Time	End Time	Start Time	End Time	Procedure Name	Start Time	End Time		
4	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	1:40:00	Dr. was not avai No one offered p exit
5	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	11:20:00	Staff was involve
6	1:27:00	1:36:00	MRI/PET	0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	3:34:00	Two seats vacar and the patient h discount and wa
7	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	Patient misguide
8	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	11:58:00	Not entertained
9	0:00:00	0:00:00		0:00:00	0:00:00	0:00:00	0:00:00		0:00:00	0:00:00	1:46:00	waited for enqui
10	0:00:00	0:00:00		2:50:00	3:08:00	0:00:00	0:00:00		0:00:00	0:00:00	3:46:00	Support person consultation, Pa process
11	12:16:00	12:18:00	X-ray	11:35:00	11:39:00	0:00:00	0:00:00		0:00:00	0:00:00	5:55:00	Staff got confuse Patient was not Token was not is

Annexure 2: Registration form filled by patients for registration in OPD

F-66

Rajiv Gandhi Cancer Institute and Research Centre
A Unit of Indraprastha Cancer Society
Registered under "Societies Registration Act 1860"
Sector-V, Rohini, Delhi - 110 085
Tel. : 47022222 (30 Lines), 27051011 - 1015
Fax : 91-11-27051037

PATIENT REGISTRATION FORM

PATIENT DETAILS FOR REGISTRATION/पंजीकरण के लिए रोगी के विवरण
(To be filled by Patient/Attendant in Capital Letters)
(मरीज या सम्बन्धी द्वारा ही भरा जाए)

CR No./सी.आर. नं. ..... Date/तिथि .....

Patient Name/रोगी का नाम ..... Spouse's Name/पति या पत्नी का नाम .....

Father's Name/पिता का नाम ..... Mother's Name/माता का नाम .....

Gender/लिंग : M / F / Others ..... Religion/धर्म : ..... Patient's Occupation/मरीज का व्यवसाय : .....

Date of Birth/जन्म तिथि : ..... Age/आयु : .....

Nationality/राष्ट्रीयता : ..... Marital Status/वैवाहिक स्थिति .....

Address/पता	Permanent/स्थाई	Local/स्थानीय
H.No./ मकान नं. :		
Street No./ गली नं. :		
District/ जिला :		
:		
City/ शहर :		
Pin Code/ पिन कोड :		
Country/ देश :		
Phone No. with S.T.D. Code/ दूरभाष नं. कोड के साथ : (1) Home/ घर का : (2) Office/ ऑफिस :		

Mobile No./ मोबाइल नं.:
(1) .....

E-mail/ ई–मेलः
(1) .....

☐ I want to consult ..... ☐ As per my Medical Records .....

Referred by/Sponsered by/निर्दिष्ट द्वारा/प्रायोजक द्वारा :.....

UID No./Aadhar card No./यू.आई.डी. नं./आधार कार्ड नं. ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

PAN No./ पैन नं. ☐☐☐☐☐☐☐☐☐☐

Remarks : .....

I confirm that all the information provided above are correct & authentic to the best of my knowledge.
मैं प्रमाणित करता हूँ कि उपरोक्त दिया गया विवरण मेरी जानकारी के अनुसार सही और सत्यापित है।

Signature/Thumb Impression/हस्ताक्षर/अगूँठा चिन्ह
Name/नाम :.....
.....
Relationship with the Patient/मरीज के साथ सम्बन्ध

Translator(if any) - Signature/हस्ताक्षर
अनुवादक अगर कोई है तो- Name/नाम