Streamlining Out-Patient Services: A Step towards Reducing Patient Waiting Time

Internship Training At

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By

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Acknowledgement

When you travel with someone, it makes the trip easier. Undoubtedly, interdependence is better than independence. This project report is the end product of three months of training during which I had a lot of help and assistance. The fact that I can now convey my gratitude to them all is a good element.

I convey my regards to Dr. K.G Kumawat, Executive Director, Amar Jain Hospital, Vaishali Nagar, Jaipur for granting me the opportunity to work with this resourceful organization and for guiding me.

I also express my gratitude towards Dr. Shivani Kumawat to provide me the privilege to work as a Management Trainee, at Amar Jain Hospital during the study period.

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LIST OF ABBREVIATIONS

ABG	**ARTERIAL BLOOD GAS**
ADR	**ADVERSE DRUG REACTION**
CCU	**CORONARY CARE UNIT**
COO	**CHIEF OPERATING OFFICER**
CT	**COMPUTED TOMOGRAPHY**
ED	**EMERGENCY DEPARTMENT**
EM	**EMERGENCY**
ER No	**EMERGENCY EPISODE NUMBER**
EMO	**EMERGENCY MEDICAL OFFICER**
ENT	**EYES NOSE THROAT**
F & B	**FOOD AND BEVERAGES**
HCC	**HEART COMMAND CENTER**
HDU	**HIGH DEPENDENCY UNIT**
HIS	**HOSPITAL INFORMATION SYSTEM**
HMIS	**HOSPITAL MANAGEMENT INFORMATION SYSTEM**
HR	**HUMAN RESOURSE**
ICCU	**INTENSIVE CARDIAC CARE UNIT**
ICU	**INTENSIVE CARE UNIT**
IP No	**INPATIENT EPISODE NUMBER**
IPD	**INPATIENT DEPARTMENT**
JCI	**JOINT COMMISSION INTERNATIONALE**
LAB	**LABORATORY**
LAMA	**LEAVE AGAINST MEDICAL ADVICE**

MLC	**MEDICO LEGAL CASES**
MRD	**MEDICAL RECORD DEPARTMENT**
MRI	**MAGNETIC RESONANCE IMAGING**
MS	**MEDICAL SUPRINTENDENT**
NCR	**NATIONAL CAPITAL REGION**
OBH	**OBSERVATION AND HOLDING AREA**
OPD	**OUT-PATIENT DEPARTMENT**
OT	**OPERATION THEATRE**
PET CT	**POSITRON EMISSION TOMOGRAPHY CT**
RFA	**REQUEST FOR ADMISSION SHEET**
SOP	**STANDARD OPERATING PROCEDURE**
UHID	**UNIQUE HOSPITAL IDENTIFICATION NO.**

PART-A: HOSPITAL PROFILE

ABOUT THE HOSPITAL:

Amar Jain Hospital is a recognised name in comprehensive patient care. It was founded in the year 1971. With a vision to offer the best, equipped with technologically advanced healthcare facilities.

Amar Jain Hospital is a 150 bedded, multi-specialty hospital with ultra-modern facilities and state of the art infrastructure with an experienced team of eminent doctors and trained medical staff.

AMAR JAIN HOSPITAL BUILDING, AMRAPALI CIRCLE, VAISHALI

1.2: Hospital Philosophy

Mission:

To make hospitable healthcare spaces accessible to all, with the support of compassionate and expert medical professionals who touch lives beyond the scope of just the treatment.

Vision:

To redefine healthcare and wellness industry by establishing ourselves as a hospitable and loving healing center, defined by its experience.

1.3: Hospital Location

The hospital is strategically located in the prime center of the posh locality of Vaishali Nagar

Jaipur. The hospital address is 374, Block C, Amrapali Circle, Vaishali Nagar, Jaipur.

LIST OF DEPARTMENTS & DIVISIONS VISITED

- Department of Internal Medicine
- Department of Dental Surgery
- Division of Endocrinology & Diabetes
- Division of ENT & Head Neck Surgery
- Department of General Surgery
- Division of GI & Bariatric Surgery
- Department of Hepatology and Liver Transplant
- Department of Urology and Andrology
- Department of Nephrology
- Department of Orthopedics and Joint Replacement
- Department of Ophthalmology
- Division of Plastic, Aesthetic & Reconstructive Surgery
- Department of Pathology and Laboratory Medicine
- Department of Physiotherapy and Rehabilitation
- Department of Respiratory Medicine
- Division of Radiology & Nuclear Medicine
- Department of Transfusion Medicine (Blood Bank)
- Emergency and Trauma Care
- Department of Neurosciences
- Pharmacy

PART-B:

INTERNSHIP AS:

MANAGEMENT TRAINEE

Roles and Responsibilities:

1) Reporting to: Executive Director- Dr. K.G Kumawat
2) Since Amar Jain Hospital is a young and growing organization a lot of learning opportunities and important job responsibilities lied in the role of as a Management Trainee.
3) Out-Patient Department being the first point of contact for the patients plays a critical role in the hospital. OPD deals not only with consultations but also minor procedures that took place on Out-patient basis. It caters to the masses. Being shop window of the hospital,OPD experience of the patient influences his/her response towards other services.
4) In all, the following work responsibilities were provided by the organization-

   a) Ensure better patient experience, better queue management by the staff.
   b) Ensure that the rules and protocols are followed by all the staff members of OPD.
   c) Properly handling patient complaints and staff grievances.
   d) To resolve all issues related to queue management.
   e) Address patient's problems but also provides necessary information in case of any queries.
   f) Ensure availability of doctors on time.
   g) Manage security, housekeeping, billing, and registration to ensure smooth functioning of the department.
   h) Analyse and streamline all the processes in the OPD and suggest reforms continuously.
   i) Coordinating the Hospital at Home vertical.
   j) Managing the marketing department of the Hospital at home services.

PART-C:

DISSERTATION:

Streamlining Out-Patient Services: A Step towards Reducing Patient Wait-Time

1.1: EXECUTIVE SUMMARY

The study was taken because there was long waiting time for both walk-in and appointment patients. Therefore, the goal of this study was to find a way to reduce waiting times and streamline patient flow. Streamlining of the patient was done by first studying the existing patient flow and then decreasing thenumber of contact points and also, training the nursing staff about the newly set process. After study the patient flow and handling the patient complaints, it was found out that long waiting time has more than one cause. So, decreasing the waiting time required working on all aspects of these causes, which included, tracking the delays in starting the OPD, appointments rescheduling and appointment slot redesigning. Another significant issue was the large number of walk-in patients and the lengthy wait times for them, which necessitated including space for walk-ins in the doctors' appointment schedules.

After taking the appropriate measures, it was found that, waiting time for walk-in patients and appointment patients decreased by around 49% and 13% respectively.

1.2: INTRODUCTION

Hospitals these days have a separate Outpatient Department or OPD, which acts as first point of contact between the hospital and patient. The advantage of havingan OPD is that much of investigative and curative work can be done here without admitting the patient in the hospital thus saving medical expenses and avoiding disruption of work and family life for patient.

OPDs serve as a window to hospital services, and the OPD is where patients first form their opinions of the hospital. Since this first impression frequently affects the patient's sensitivity to the hospital, it is crucial to guarantee that OPD services offer great customer service. Furthermore, it is well-known that 8–10% of OPD patients require hospitalisation. Such OPDs, when operated well, can control the flow of inpatients to the hospitals while also preventing confusion, frustration, and overspending by anxious patients. Hospitals nowadays are changing in numerous ways to streamline this sector as a result of what they have witnessed. It is essential to effectively manage time and use it for both consultants and patients.

As more consultants visit hospitals, the situation is tough. It can be difficult for a patient to determine whether the specific consultant he is seeking for is actually present in the OPD because many doctors today are fee-for-service consultants and work in many hospitals, particularly surgeons who are frequently in the operating room. It can take some time until the consultant is available for the patient.

‘Why I have been given an appointment at 11:00am if my Doctor doesn’tarrive at this time?’ –*patient voice.*

‘What is the purpose of booking an appointment if I still have to wait’ –

patient voice.

Every half an hour my turn is extended in the queue, how long I have to wait

if I don’t have an appointment with Doctor? –walk-*in patient*

From the above comments of the stakeholders i.e. the patients of the hospital gives us a clear idea about the problems faced at OPD by patients as well as hospitals. A well planned and well-designed OPD can help better market a hospital as well as reduce patient anxiety.

In order to prevent patients from being kept waiting unnecessarily, hospitals must set up mechanisms in consultation with physicians to make sure that everyone knows why they must arrive on time and how much time is given for each consultant. In this situation, a committed full-time physician can significantly alter the situation. There is always a mob of outpatients because most patients, whether new or old, prefer to visit the hospital in the morning. Additionally, doctors like to meet patients in the mornings, and frequently, patients arrive without an appointment. We may state that the appointment and scheduling system is a crucial area that needs to be improved. Long lines form to see the concerned doctors during periods of high patient volume, and scheduling appointments is becoming more challenging for both patients and doctors due to erroneous time estimates on both sides. Patients can be kept by a doctor with an efficient central scheduling system. A single point of contact is essential for making and cancelling appointments, as this can assist the hospital and the doctors work more quickly and efficiently. This will

lessen situations where patients visit hospitals and discover that the doctors haven't arrived for the OPD, etc.

The effective operation of OPDs depends on an effective scheduling system as well as a well-groomed and effective billing and front office staff. Developing a culture of empathy and compassion for patients in the OPD, as well as providing customer-focused and process-centric training to OPD staff, should be a top priority for today's hospitals. The patient feels secure and their anxiety is lessened when they discover that a helpful and kind person is on hand to welcome them, provide information, and cater to any needs they may have. The front office executives also need to be well-versed in the numerous customary practises. Experts stress the need of having special coordinators and nursing personnel available in addition to doctor-only rooms. It is possible to select knowledgeable secretaries for the consultants who will assess the mood of the patients and make the appropriate subtle adjustments so that those who are booked up can be given priority access to the doctors without disturbing those who are patiently waiting.

Poor facility planning and space allocation for specialties, dispersed functionally connected departments, and OPD and IPD tasks including reception, billing, and diagnostics are the main obstacles to a hospital's efficient operation.

1.3: REVIEW OF LITERATURE:

PATIENT SATISFACTION AT THE MUHIMBILI NATIONAL HOSPITALIN DAR ES SALAAM, TANZANIA- E.P.Y. Muhondwa, M.T. Leshabari, M.

Mwangu, N. Mbembati, M. J. Ezekiel:

In this study on patient satisfaction, the authors looked at how satisfied Muhimbili National Hospital (MNH) patients were with the treatment and services they received from MNH outpatient services. This was a component of a baseline research that aimed to ascertain the hospital's level of performance prior to significant reform, restructuring, and renovations. The primary study technique used to gauge patient satisfaction was exit interviews. Patients who were leaving the OPD clinics, the lab, the X-ray room, the pharmacy, and the inpatient wards were questioned. This study also made clear that waiting times and staff behaviour were important for OPD patients, since patients in the survey voiced issues about staff shortages and unruly staff members, as well as the length of time they had to wait.

Patients particularly complained about the staff's unprofessional conduct and their use of harsh remarks when attending to patients. Patients thought that services were being delivered very slowly. Patients then lingered in the hospital for a considerable amount of time as a result of this. Patients said they waited a long time for a consultation.

STUDY ON OUTPATIENTS' WAITING TIME IN HOSPITAL UNIVERSITY KEBANGSAAN MALAYSIA (HUKM) THROUGH THE SIX SIGMA APPROACH: Abdullah Hanafi Mohamad.

The aim of this study was to catalogue the numerous practises used at the outpatient clinic and to look into any potential operational issues that can result in lengthy patient wait times. The length of the patient's wait will have a significant impact on how well the service is received. The study was conducted at Hospital University Kebangsaan Malaysia, one of Kuala Lumpur's teaching hospitals in Malaysia (HUKM). The participants were walk-ins to the HUKM outpatient clinic. In this study, the author recognised three key explanations as contributing factors for patients' prolonged wait times at the OPD, including the length of registration, the dearth of counter service personnel, and the dearth of physicians. Therefore, efforts should be taken to reduce the registration time as well as to improve the doctor-patient ratio.

EVALUATION OF SERVICE QUALITY OF HOSPITAL OUTPATIENT DEPARTMENT SERVICES- Col Abhijit Chakravarty:

By designing a cross-sectional research of patients visiting the hospital's OPD, this study was carried out at a 99-bed peripheral service hospital with basic specialty services. A self-administered questionnaire was given to every third patient who had used the hospital's OPD services at least once prior to the current visit. After finishing the doctor's consultations, patients were asked to complete the survey while waiting for their supply of medications at the dispensary, with full assurances of secrecy and anonymity. It was shown that OPD patients had a significant level of discontent because of the lengthy wait times before consultations. Additionally, a statistically significant quality gap between expectations and perceptions was seen in comparison to the requirement for rapid service and prompt response. This

shortcoming might have been a demand for further inputs in the OPD staff's behavioural training. However, it might also be seen as an indication that the OPD is understaffed because dependable and helpful staff members are unable to provide fast treatment despite their willingness to do so.

A CROSS-SECTIONAL STUDY OF PATIENT'S SATISFACTION TOWARDS SERVICES RECEIVED AT TERTIARY CARE HOSPITAL ON OPD BASIS:

Patavegar Bilkish N, Shelke Sangita C, Adhav Prakash, KambleManjunath S.

The relationship between patient wait times and patient satisfaction with OPD services was highlighted in this study as one of the key elements influencing the hospital's reputation. The study's major goals were to assess OPD patients' satisfaction in tertiary care hospitals and determine the relationship between numerous factors and OPD patients' satisfaction. The authors also emphasised that a variety of factors, including the standard of clinical care given, the accessibility of medications, the conduct of medical professionals, the cost of services, hospital infrastructure, physical comfort, emotional support, and respect for patient preferences, all affect how satisfied patients are with their care. Health satisfaction is seen as a crucial factor in determining how well patient care services are provided. The length of time between seeking medical advice and being completely satisfied was also discovered by the authors to be statistically significant. P value is 0.001. Patients already experience pain or other distress. It makes sense that people would want to see a doctor as soon as possible to be relieved of their misery. Patients desire

to begin therapy as soon as possible after seeing a doctor so they can be alleviated of their agony. They are eager to obtain medicines as soon as possible. Naturally, patients who waited longer reported being less satisfied.

TIME EXPECTATION AND SATISFACTION: PATIENTS' EXPERIENCE

AT NATIONAL HOSPITAL ABUJA, NIGERIA- Oluwagbenga

Ogunfowokan, Muhammad Oora:

The purpose of this study was to ascertain how much time patients spent at various service points in the general OPD of the National Hospital Abuja (NHA), to ascertain how much time patients believed they spent with doctors, and to describe how satisfied patients were with the services they received. For which a cross-sectional study was carried out at the NHA's main OPD. A patient-administered, validated questionnaire was used to collect data from 320 randomly selected patients about, among other things, the amount of time spent at the various service sites. At the general OPD of NHA, it was discovered that cutting the length of the patient-clinic encounter and fulfilling patients' pre-visit expectations might greatly increase patient satisfaction.

1.4: RATIONALE

The goal of the study was to comprehend the OPD patient flow process, develop changes to shorten wait times for patients, and then assess the impact of the changes. Long wait times were found to be the subject of 92 percent of patient complaints in the OPD. There was no provision in the appointment plan for walk-in patients, yet 50.06 percent of OPD patients arrived as walk-ins. One of the greatest problems was the extraordinarily large wait times for walk-in patients. The majority of patients' first point of contact is the OPD, therefore how they are treated there affects how they interact with other hospital services.

1.5: AIM

To understand the OPD flow process and reduce patient waiting time in the OPD of the hospital.

1.6: RESEARCH QUESTION:

- Why there are so long delays at the OPD?
- What actions could be taken to reduce the long OPD wait times?

1.7: OBJECTIVES:

1. To determine how long walk-in and appointment-only patients will wait.
2. To study the relation of waiting time with number of walk-in patients.
3. To access the need for increasing the number of appointment slots, if any.
4. To study the effect of slot redesigning on waiting time.

1.8: METHODOLOGY

Sampling method: Systematic stratified sampling.

Sample size: 5% patients of all doctors were followed.

Study design: cross sectional analytical study.

Study area & duration: Out-patient department of 150 bedded multi-super specialty hospital.

Duration of the study was from Mar'22 to June'22

Data analysis: was done using Microsoft Excel 2007 and SPSS 16.0

1.9: ETHICAL CONSIDERATIONS

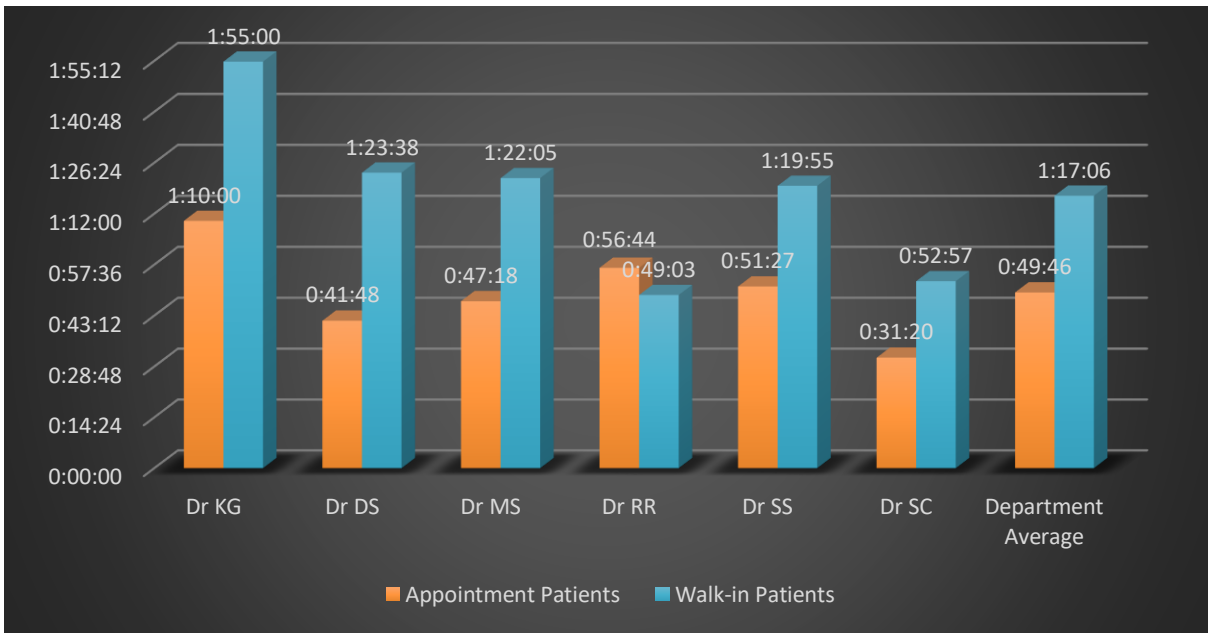
The data collected from the records is kept confidential and anonymous.

The anonymity, privacy and confidentiality of the respondents was ensured

The data collected will only be used for research purposes.

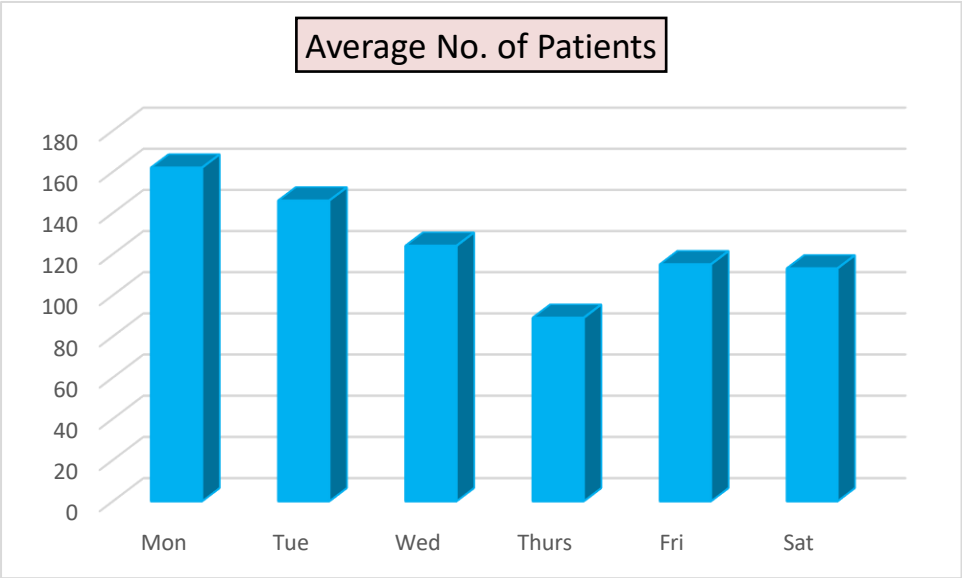
1.10: DATA ANALYSIS AND INTERPRETATION:

Graph 1.1: Doctor-wise patient wait time



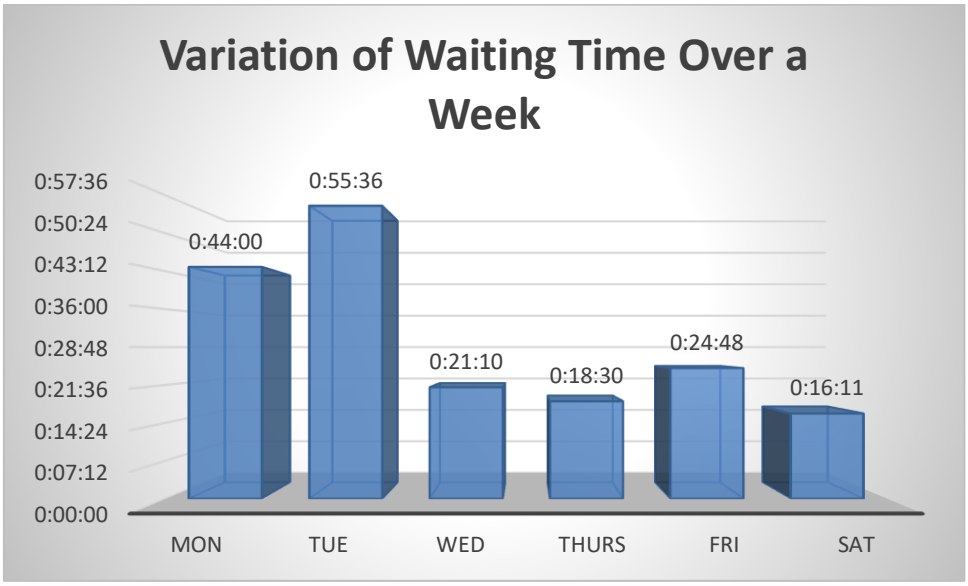
Graph1.1 shows the doctor wise waiting time for appointment and walk-in patients. It was seen that waiting time for Dr KG is maximum, being 1hour 10 minutes for appointment patients and 1 hour 55 minutes for walk-in patients. Average waiting time for the department was 49 minutes for appointment patients and 1 hour 17 minutes for walk-in patients.

Graph 1.2: Average Number of Patients visiting on different days of the week



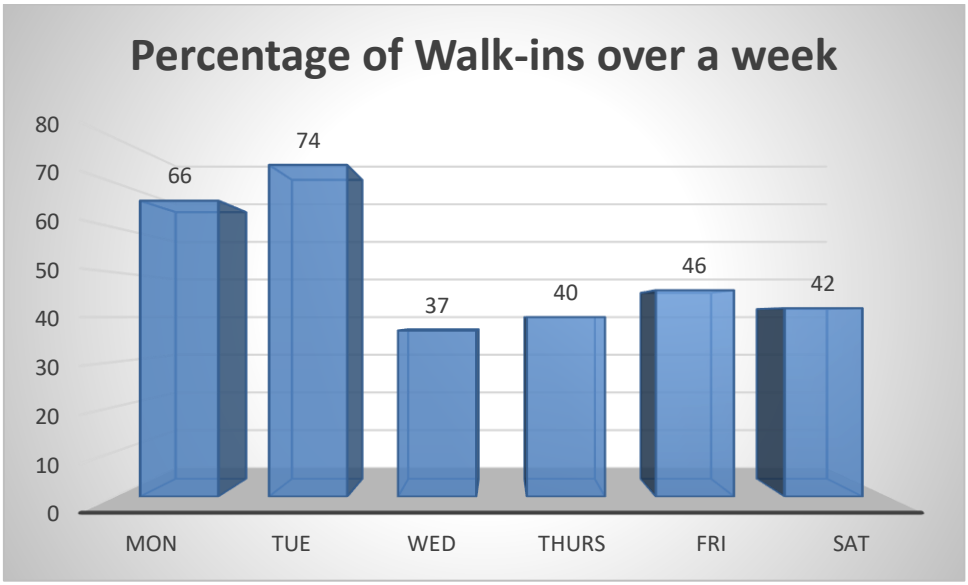
Graph 1.2 shows the variation of number of patients over the week, maximum patientswere catered on Mondays and Tuesdays and minimum on Wednesdays. Thus, therewas uneven flow of the patients over the week, leading to increased waiting time on Mondays and Tuesdays.

Graph 1.3 Variation of waiting time over a week



Variation of waiting time over the week follows the same pattern as the variation in number of consultations over the week and number of walk-ins. Days with more number of consultations and walk-ins have more waiting time.

Graph 1.4 Percentage of Walk-in patients over a week



Graphs 1.3 and 1.4 show that patient wait time over the week followed the sametime as the percentage of walk-in patients over the week. Thus when correlationtest was applied, the value of R came out to be 0.98, suggesting strong positive correlation.

Table 1. The discrepancy between number of slots available of week's days and average number of consultations

Days	Consultations	Slot	Shortage	% Shortage
Mon	185	131	54	41.2
Tue	152	128	24	18.8
Wed	101	78	23	29.5
Thu	77	65	12	18.5
Fri	105	101	4	4
Sat	93	73	20	27.4
	AVERAGE			23.20%

Table 1.1 shows the discrepancy between number of slots available of week's days and average number of consultations done. Thus, suggesting the need for increasing the number of appointment slots.

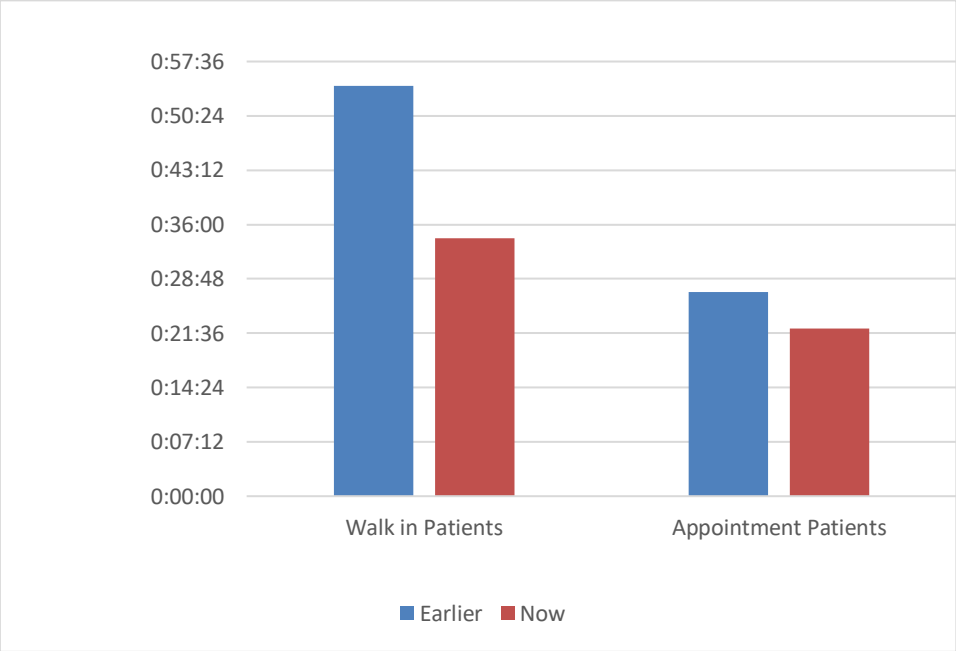
Suggestions:

- Redesigning the appointment slots.
- Increasing number of appointment slots to accommodate follow uppatients and to convert walk-in to appointment patients.
- Introducing buffer slots among appointment slots to accommodate walk-in patients, this will reduce the waiting time for walk-in patients.
- Educating patients about booking an appointment before coming for consultation. (Bilingual Leaflets for OPD patients) to convert maximum number of walk-ins into appointment patients.
- Designated 'On call' Gastro-Physician for walk-in patients. So that walk-in patients don't have to wait for OPD of specific Doctor to start. This will help reduce the waiting time for outliers.
- For delay in start of OPD, any delay of more that 15 minutes will be recorded, and the weekly report will be shared with chairman of the department

Results of redesigning the slots:

The wait time for patients, especially walk-ins, decreased significantly once more slots were added and buffer spaces were added.

Graph 1.5 Graph after redesigning slots



Graph1.5 demonstrates that the waiting times for patients who were walking and those who had appointments fell by 49.29 percent and 19.73 percent, respectively.

Null hypothesis: there is no reduction in waiting time of the patient's post-intervention.

H1: there is significant reduction in waiting time of the patient's post-intervention.

On applying chi-square test, calculated value came out to be 0.0123 and tabulatedvalue is 0.00393. Thus, null hypothesis was rejected. So, there is significant reduction in waiting time of the patients. This is beginning, waiting time is expected to reduce further, as training of staffand patient education will follow the learning curve.

1.11: Conclusion

One of the main important performance factors for OPD managers is the length of patient wait times. It also serves as a measure for how well the OPD is operating. The length of the delay also affects patient satisfaction. The degree of patient satisfaction begins to decline after 30 minutes of waiting. Therefore, maintaining it to a minimum is crucial for an outpatient department to operate effectively. The most walk-in patients possible must be converted to appointment patients in order for those patients to arrive at their appointments on time and avoid having to wait. Additionally, it involves scheduling appointments to accommodate for them.

Resistance from the staff and educating and inspiring the patients to schedule an appointment in advance were the two main difficulties encountered during the redesign of the slots.

1.12 : REFERENCES

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1.13: Annexure

a) A Format used for collecting data on patient wait-time.

DATE	DOCTOR	UHID	Arrival Time	Appointment time	Consultation time	WAIT TIME

b) Earlier Slotting format:

Time	Patient Details	visit type	Reason for Contact	Contact Details
12:00-12:10				
12:10-12:20				
12:20-12:30				
12:30-12:40				
12:40-12:50				

12:50-1:00				
1:00-1:10				
1:10-1:20				
1:20-1:30				
1:30-1:40				
1:40-1:50				
1:50-2:00				

C) New Slotting format

Time	Patient Details	visit type	Reason for Contact	Contact Details
12:00-12:06				
12:06-12:12				
12:12-12:18				
12:18-12:24	**Blocked**			
12:24-12:30				
12:30-12:36				
12:36-12:42				
12:42-12:48	**Blocked**			
12:48-12:54				

12:54-1:00				
1:00-1:06				
1:06-1:12	**blocked**			
1:12-1:18				
1:18-1:24				
1:24-1:30				
1:30-1:36	**blocked**			
1:36-1:42				
1:42-1:48				
1:48-1:54				
1:54-2:00	**blocked**			