

INTERNSHIP REPORT ON
**A STUDY TO
ANALYZE THE TIME TAKEN FOR TREATMENT OF NEW
OCULAR EMERGENCY PATIENTS PRESENTING TO
OUTPATIENT DEPARTMENT OF ARAVIND EYE HOSPITAL,
MADURAI.**

INTERNSHIP AT



ARAVIND EYE CARE SYSTEM

- Haran
HM 1101

PROJECT GUIDE

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INTERNSHIP ORGANIZATION

- The growing problem of preventable blindness remains a major source of concern in the Indian healthcare system. In view of this, this health care model was developed.
- After retiring at the age of 58 in 1976, Dr. Venkataswamy hoped to establish another health care model that could add to the government's efforts and be able to support itself. So, Aravind Eye Hospitals was established.
- The Aravind Eye Hospital, Madurai has 4 general clinics. UNIT 3 for people aged 16 to 40. UNIT 1, 2 and 4 for people aged more than 40. Pediatric Clinic for 0 – 15 ages. The specialties are Cornea, Glaucoma, IOL, Neuro Ophthal Clinic, Orbit, Retina, Uvea.

VISION and MISSION

EYE HOSPITALS

Provide compassionate and quality eye care that is affordable to all.

OUTREACH

Extending access to quality eye care for the poor and needy - through active community involvement, testing camps, and IT enabling Vision Centers in rural areas.

TRAINING

Improve human ophthalmic resources through teaching and training.



**A STUDY TO
ANALYZE THE TIME TAKEN FOR TREATMENT OF
NEW OCULAR EMERGENCY PATIENTS PRESENTING
TO OUTPATIENT DEPARTMENT OF ARAVIND EYE
HOSPITAL, MADURAI.**

RESEARCH OBJECTIVE

To study the time taken for treatment of new patients presenting with ocular emergency conditions at Aravind Eye Hospital, Madurai.

RESEARCH QUESTION

What is the time taken for the treatment of new patients presenting with ocular emergency at Aravind Eye Hospital, Madurai?

SCOPE

This research is done for assessing the time taken for the treatment of emergency patients. How long does it take for the treatment of new patients presenting with ocular emergency at Aravind Eye Hospital, Madurai.

METHODOLOGY

This research was conducted using the retrospective method.



SCOPE

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DATA COLLECTION

Data was collected from IHMS – Integrated Hospital Management System from the IT department of Aravind Eye Care System using MS Excel software.

DATA ANALYSIS TOOL

The bar graph frequency distribution was used to analyse the data.

STUDY POPULATION

The sample size data collected from the month of 1st – 31st January, 2022.

STUDY AREA

Aravind Eye Hospital, Paid Section, Madurai.



SAMPLE SIZE

The sample size of the data was 167 emergency patients.

INCLUSION CRITERIA

1. 1st VISIT TO Aravind Eye Hospital MADURAI AS EMERGENCY PATIENT.
2. Patients who have got prior TREATMENT FOR EMERGENCY, BUT ON THE SAME DAY.

EXCLUSION CRITERIA

Patients who have got prior treatment for emergency, but not on the same day.



LIMITATIONS

1. The time is calculated from registration to vision at the 1st CLINIC, next from doctors' remarks to next clinic 1st process time. Here we don't know if the patient has gone to eat lunch in-between. That time is not recorded.
2. The exact time when a patient enters a clinic, either unit clinic or specialities, is not known.
 - a. Hence for unit clinics, the time of the 1st process done to the patient is taken as the 'time-the patient enters the unit clinic'.
 - b. For specialities, the time of the last process done to the patient in the previous clinic is taken as the 'time-the patient enters the speciality clinic'.
3. The population study consisted of a sample of only 167 patients.

INCLUSION and EXCLUSION CRITERIA

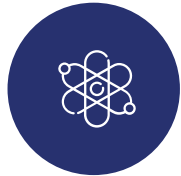
CRITERIA	COUNT
1 st VISIT TO AEH MADURAI AS EMERGENCY PATIENT	145
PRIOR TREATMENT FOR EMERGENCY, BUT ON THE SAME DAY	22
TOTAL	167
EXCLUDED [PATIENTS TREATED PRIOR]	66



FINDINGS BASED ON CLINICS



FINDINGS BASED ON DIAGNOSIS



FINDINGS BASED ON TREATMENT



FINDINGS BASED ON FIRST VISIT



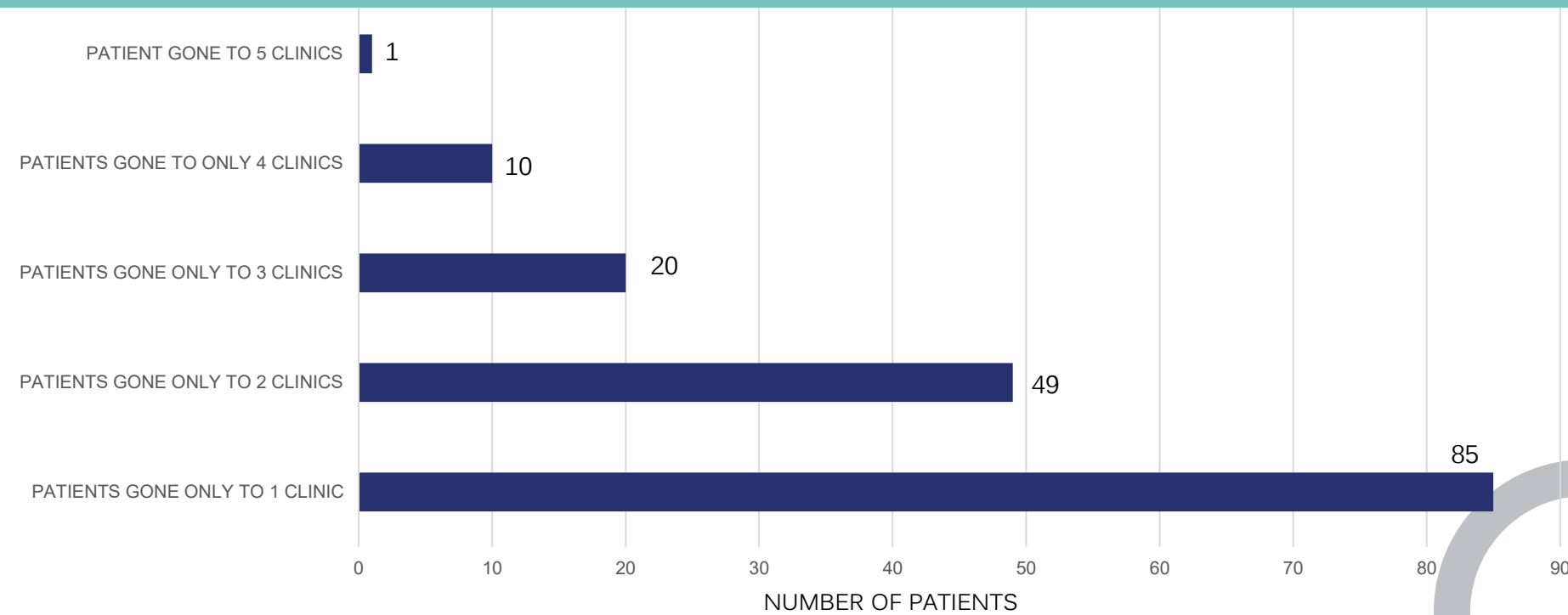
FINDINGS BASED ON REGISTRATION



FINDINGS BASED ON CLINICS

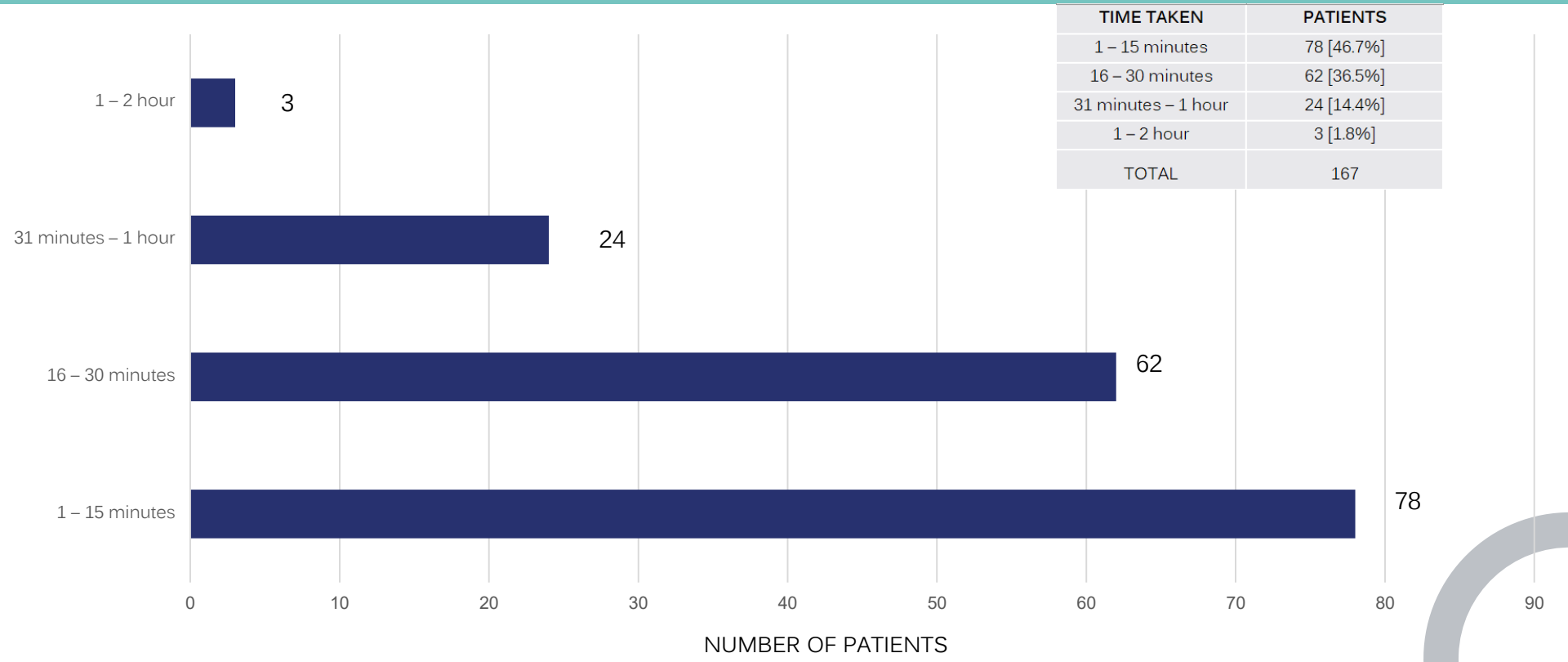
COUNT OF CLINICS THE EMERGENCY PATIENT HAS GONE

Out of the 167 emergency patients,
85 (50.9%) patients have gone only to 1 clinic,
49 (29.3%) patients have gone only to 2 clinics,
20 (12%) patients have gone only to 3 clinics,
10 (6%) patients have gone only to 4 clinics,
1 (0.6%) patient has gone to 5 clinics.



BASED ON TIME TAKEN 'FROM REGISTRATION TO VISION at 1st CLINIC'

TOTAL PATIENTS-167



PATIENT DETAILS FOR WHOM IT TOOK 1 -2 HOURS 'FROM REGISTRATION TO VISION at the 1st CLINIC'

TOTAL PATIENTS-3

S. No	REGISTRATION TIME	REGISTRATION TIME to VISION TIME	VISION TIME	CLINIC NAME
1.	12.22 PM	1 hour 1 minute	1.23 pm	Unit 3
2.	6.47 AM	1 hour 37 minutes	8.24 AM	NEURO OPHTHAL
3.	6.22 PM	1 hour 1 minute	7.23 PM	UNIT 3

PATIENT DETAILS FOR WHOM IT TOOK 31 MINUTES - 1 HOUR ‘FROM REGISTRATION TO VISION at the 1st CLINIC’

TOTAL PATIENTS-24

S. No	REGISTRATION TIME	REGISTRATION TIME to VISION TIME	VISION TIME	CLINIC NAME
1.	12.08 PM	31 minutes	12.39 PM	UNIT 1
2.	7:21 AM	37 minutes	7.58 AM	PAEDIATRIC CLINIC
3.	1.10 PM	33 minutes	1.43 PM	IOL CLINIC
4.	6:58 AM	31 minutes	7.29 AM	PAEDIATRIC CLINIC
5.	7:31 AM	38 minutes	8.09 AM	PAEDIATRIC CLINIC
6.	9.56 AM	39 minutes	10.35 AM	RETINA CLINIC
7.	`1.32 pm	33 minutes	2.05 pm	Unit 3
8.	7.20 am	36 minutes	7.56 am	unit 4
9.	11.07 am	38 minutes	11.45 am	Unit 4
10.	10.50 AM	36 minutes	11.26 AM	Unit 3
11.	11.29 am	34 minutes	12.03 PM	Unit 1
12.	12.10 PM	48 minutes	12.58 PM	ORBIT

PATIENT DETAILS FOR WHOM IT TOOK 31 MINUTES - 1 HOUR ‘FROM REGISTRATION TO VISION at the 1st CLINIC’

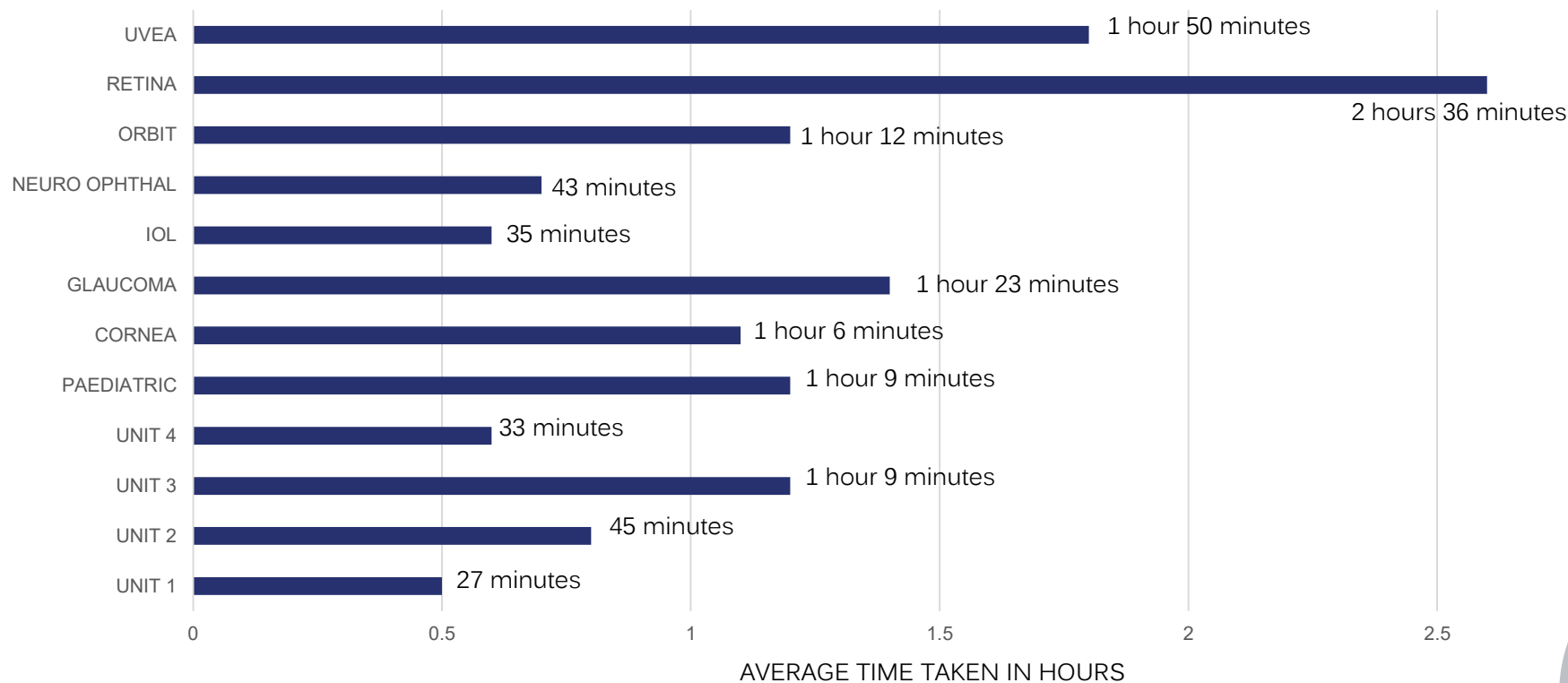
TOTAL PATIENTS-24

S. No	REGISTRATION TIME	REGISTRATION TIME to VISION TIME	VISION TIME	CLINIC NAME
13.	6.07 PM	58 minutes	7.05 PM	UNIT 3
14.	1.17 PM	40 minutes	1.57 PM	UNIT 2
15.	5.54 PM	36 minutes	6.30 PM	UNIT 1
16.	8.40 AM	34 minutes	9.14 AM	UNIT 3
17.	12.33 PM	35 minutes	1.08 PM	UNIT 3
18.	2.00 PM	32 minutes	2.32 PM	UNIT 1
19.	6.42 PM	38 minutes	7.20 PM	PAEDIATRIC
20.	10.37 AM	35 minutes	11.12 AM	IOL CLINIC
21.	8.04 AM	49 minutes	8.53 AM	UNIT 2
22.	3.06 PM	35 minutes	3.41 PM	UNIT 4
23.	6.52 AM	34 minutes	7.26 AM	RETINA
24.	7.45 AM	33 minutes	8.01 AM	PAEDIATRIC

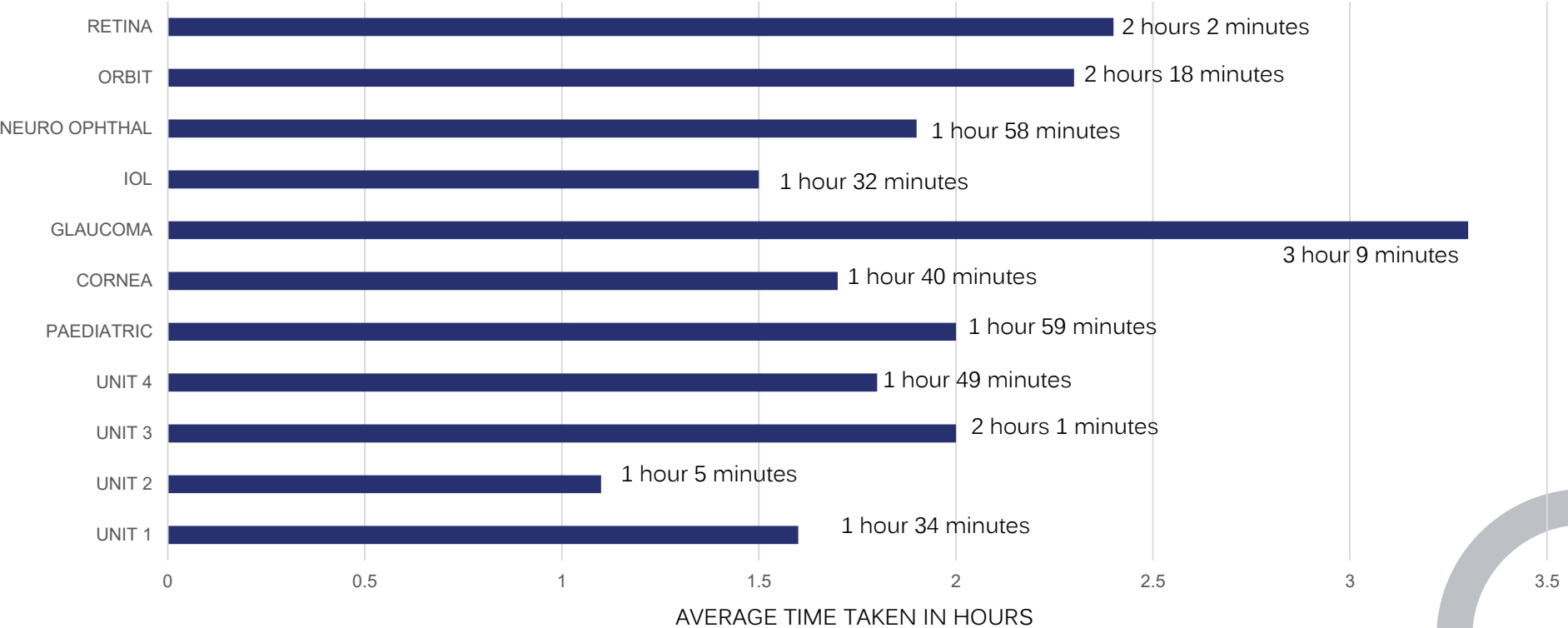


FINDINGS BASED ON TREATMENT

AVERAGE TIME AT EACH CLINIC OF 'PATIENTS WHO DID NOT UNDERGO DILATION or any SPECIAL INVESTIGATION'



AVERAGE TIME AT EACH CLINIC OF 'PATIENTS WHO UNDERWENT DILATION or any SPECIAL INVESTIGATION'

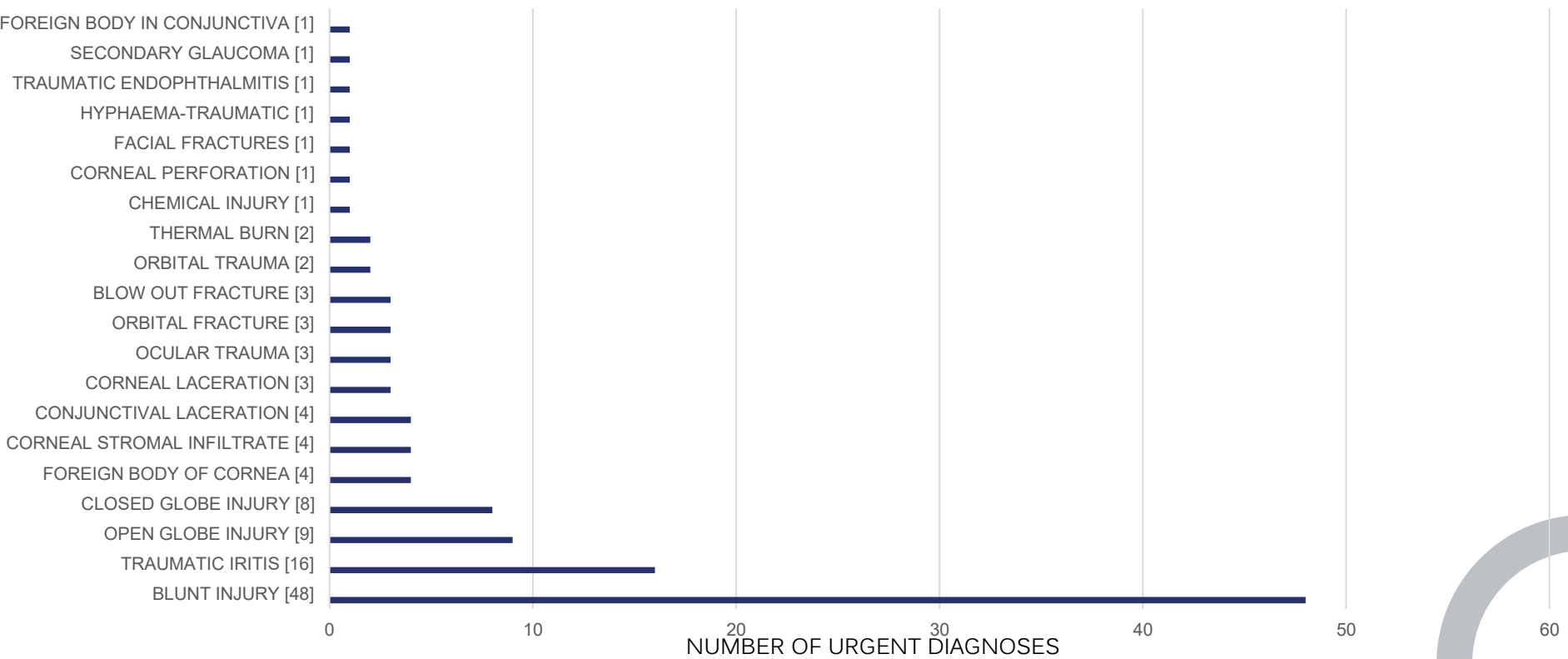




FINDINGS BASED ON DIAGNOSIS

DISTRIBUTION OF TOP-20 URGENT DIAGNOSES

During the month January 2022, there were 167 ophthalmic emergency initial encounters to the Aravind Eye Hospital, Madurai. The top-20 urgent diagnoses represented 116 (69.5%) of the total Emergency initial encounters and are depicted below and ranked according to their frequency. The top-five most frequent diagnoses include blunt injury (28.7%), traumatic iritis (9.6%), open globe injury (5.4%), closed globe injury (4.8%), foreign body of cornea (2.4%).



OTHER EMERGENCY DIAGNOSES DURING JANUARY 2022

The other emergency patients include 30% of the total emergency patients. Out of the 167 emergency patients, 51 patients belonged one of the category below.

Ametropia

Anophthalmic Socket

Anterior Uveitis

Aphakia

Berlin's Edema

Commotio Retinae

Compound Hyperopic

Astigmatism

Compound Myopic Astigmatism

Conjunctival Injury

Corneal Abrasion

Corneal Scar

Orbital Hematoma

PCIOL

Punctate epithelial cornea

Subconjunctival Haemorrhage

Temporal Pterygium

Third Nerve Palsy Pupil Involved

Traumatic Cataract

Traumatic Iridocyclitis

Traumatic epithelial defect

Traumatic Optic Neuropathy

Full thickness macular hole

Epithelial Defect

Eyelid haematoma

Homonymous

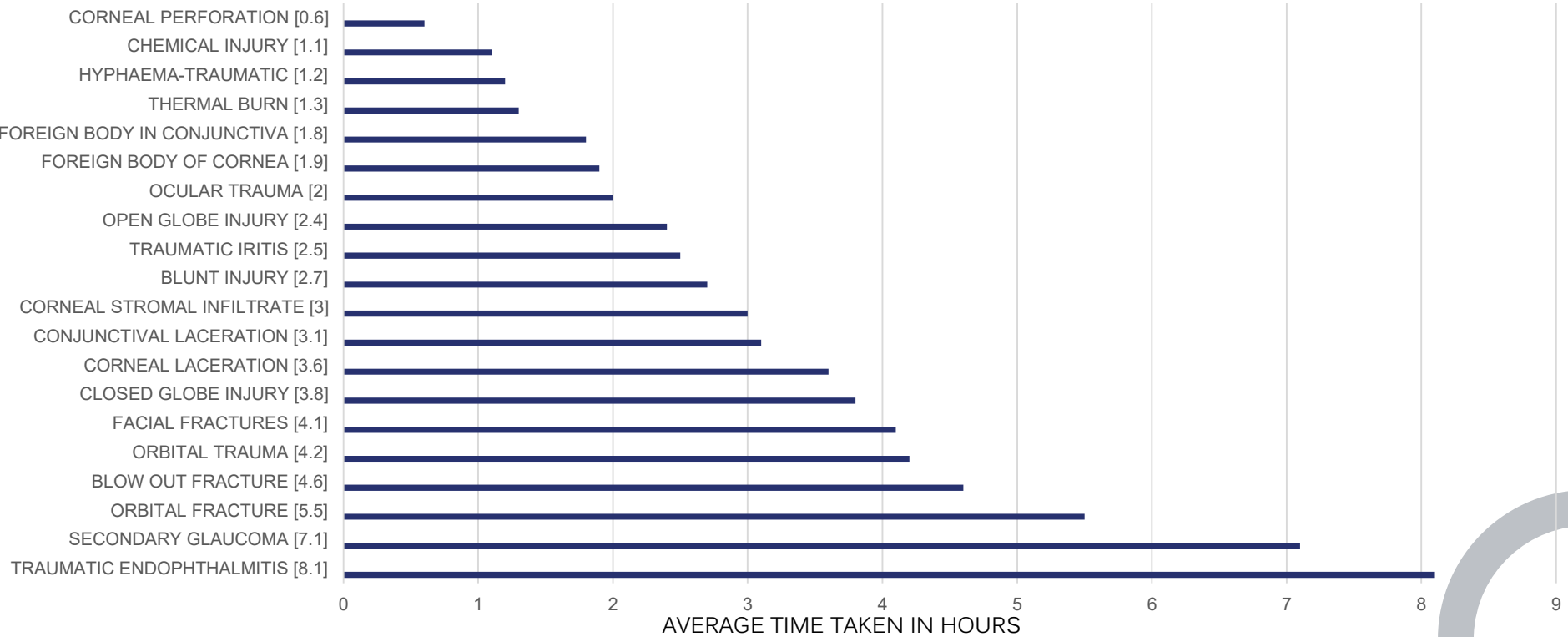
Hemianopia

Madar Juice Keratitis

Traumatic Orbital Apex
Syndrome

AVERAGE TIME TAKEN OF TOP-20 URGENT DIAGNOSES

The average ocular emergency visit time in the Aravind Eye Hospital, Madurai for January 2022 was 3 hours 12 minutes based on the 167 emergency patients. The visit time is defined as the total time from when the patient 'registered' to when the patient 'completed the last process in the last unit' on that particular day.

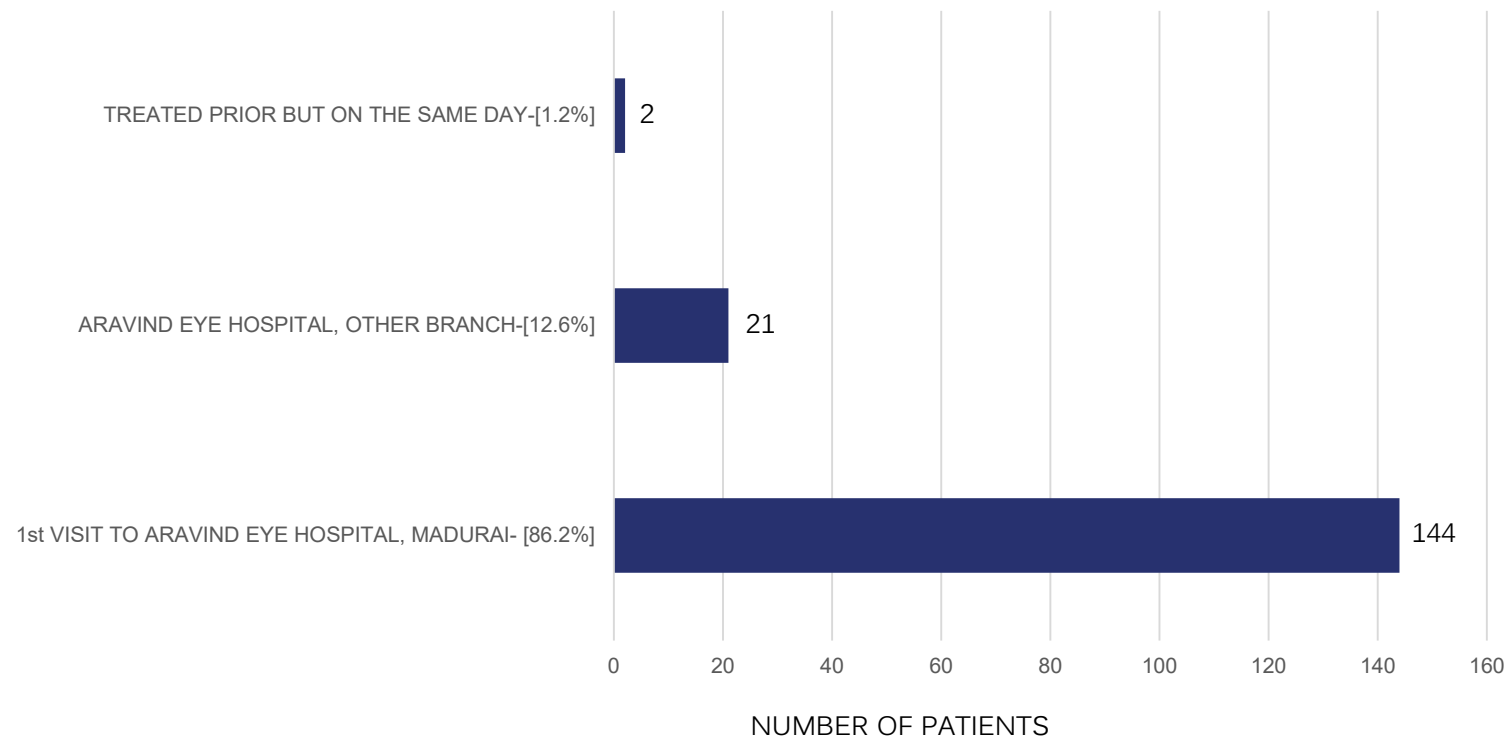




FINDINGS BASED ON ACTUAL FIRST VISIT

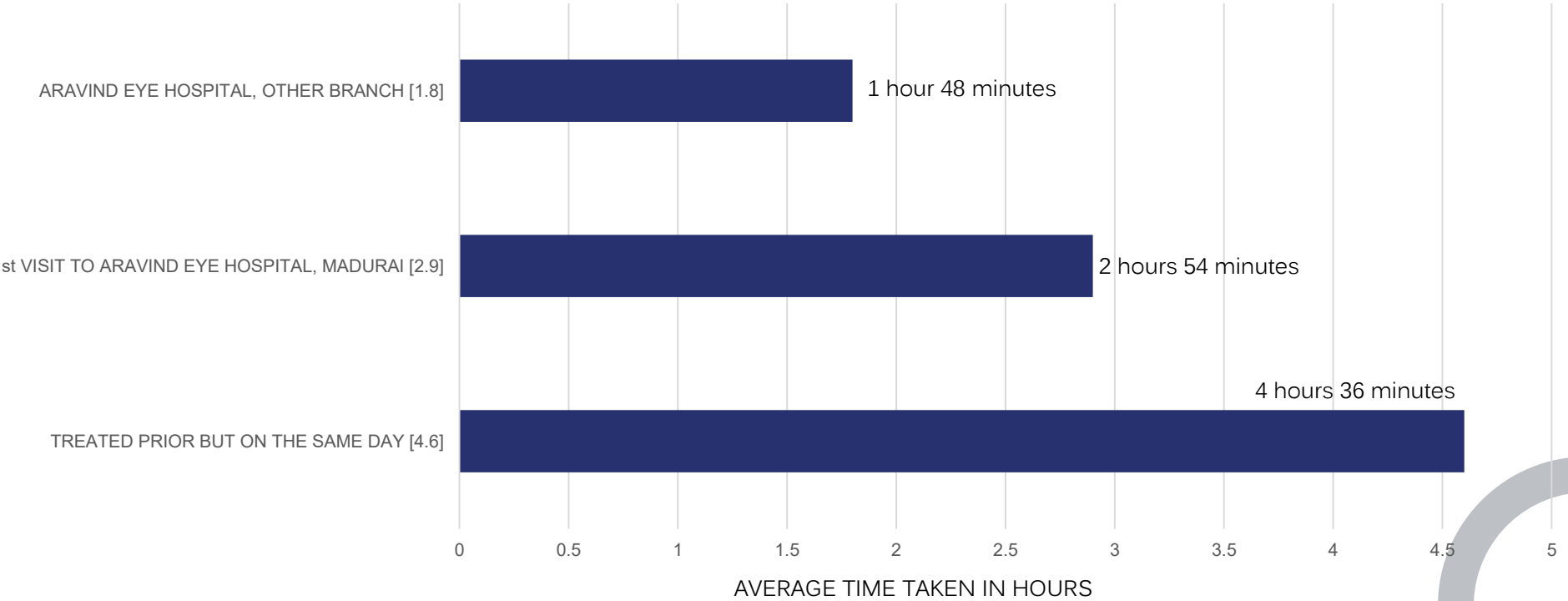
COUNT OF PATIENTS BASED ON ACTUAL FIRST VISIT

Out of the 167 ophthalmic emergency encounters, 144 (86.2%) patients visited Aravind Eye Hospital, Madurai as their 1st encounter. The rest 23 patients have went to any of the AEH Vision Center or City Center or Community Center or any other hospital where they have been given prior treatment on the same day.



AVERAGE TIME TAKEN OF PATIENTS BASED ON ACTUAL FIRST VISIT

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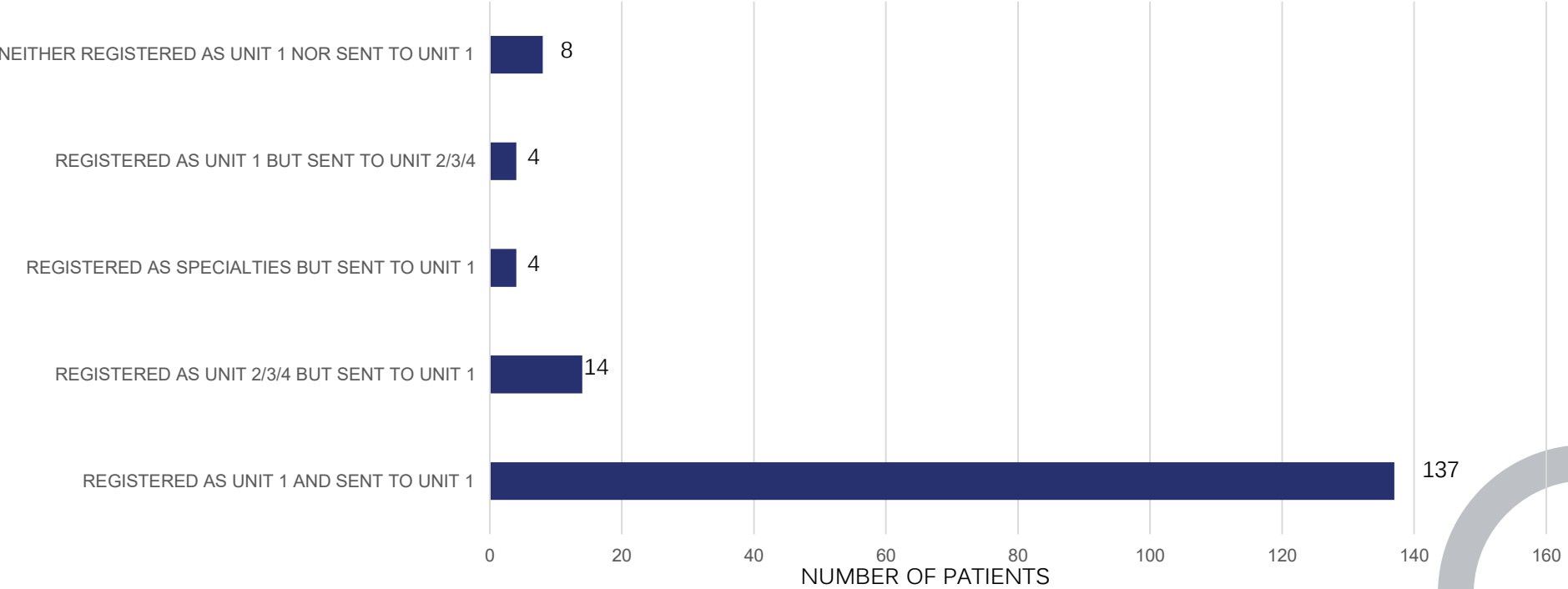




FINDINGS BASED ON REGISTRATION

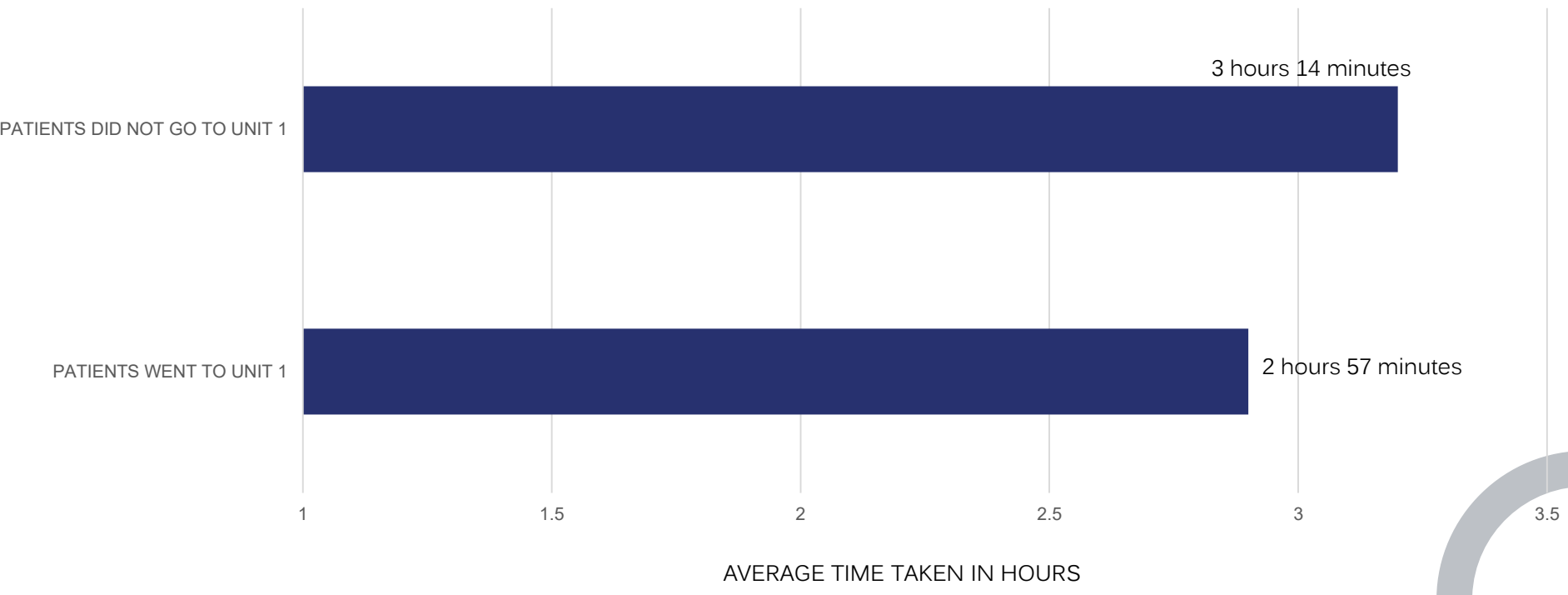
COUNT OF PATIENTS BASED ON REGISTRATION

Out of the 167 ophthalmic emergency initial encounters to the Aravind Eye Hospital, Madurai, 155 (92.8%) patients went to UNIT 1 initially, 12 (7.2%) patients either went to any of the other units or specialties.



AVERAGE TIME TAKEN BASED ON 1st UNIT AS THE INITIAL ENCOUNTER

Out of the 167 ophthalmic emergency initial encounters to the Aravind Eye Hospital, Madurai, 155 (92.8%) patients went to UNIT 1 initially, 12 (7.2%) patients either went to any of the other units or specialties.



LEFT WITHOUT BEING SEEN PATIENTS

“Left without being seen” (LWBS) refers to patients who present to an emergency patient but left before completing the process as advised by the ophthalmologist. The Aravind Eye Hospital, Madurai reported a 5 ‘left without being seen’ emergency patients (167 emergency patients in January 2022).

S. No	DIAGNOSIS	NUMBER OF CLINICS THE PATIENT HAS GONE	INCOMPLETE PROCESS	DATE OF INJURY	VISIT DATE	PRIOR TREATMENT	TOTAL TIME TAKEN	REGISTRATION TIME
1.	BLUNT INJURY	2	CORNEA	11 Jan	11 Jan	no	UNIT 2 – 4 minutes; CORNEA 1 HOUR 38 MINUTES	3.22 PM
2.	BLUNT INJURY	2	CT SCAN	7 Jan	25 Jan	no	UNIT 3 – 2 hours 16 minutes; ORBIT - 1 HOUR 10 MINUTES	1.15 PM
3.	BLUNT INJURY	1	LEFT THE UNIT 2 AT MIDWAY	21 Jan	20 Jan	no	No dilation	1.05 OM
4.	EPITHELIAL DEFECT	1	CORNEA	6 Jan	6 Jan	no	UNIT 1 – 14 minutes	6.02 PM
5.	CLOSED GLOBE INJURY	1	ORBIT	18 Jan	18 Jan	no	PAEDIATRIC – 49 minutes	6.10 PM

RECOMMENDATIONS

1. Every emergency patient should be followed by 1 MLOP till the process ends.
2. All staff should strictly follow the set protocols - all emergency patients should be sent to UNIT 1, which is near by the registration area.
3. Those patients who left without completing the entire process, must be called through telephone and must be said – how serious is the injury.
4. Inside UNIT 1, it is written as EMERGENCY UNIT. Outside of the unit, the unit's name is written – UNIT 1. It should be changed to “EMERGENCY UNIT/ UNIT 1”.
5. In the reception area separate REGISTRATION DESK for emergency cases, should be opened as the patients will not stand in the usual queue.

CONCLUSION

Outpatients with an eye emergency condition completed their process in 3 hours and 12 minutes. Patients who did not undergo dilation or any special investigation completed their process in 1 hour 6 minutes. Dilated patients and patients who must undergo special investigations completed their process in 2 hours 30 minutes. Most people who visited the clinic were pleased with their experience there.

