Process Mapping Of Converted Leads Of Homecare Services

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Introduction

- Homecare services are those which are provided at your comfort zone by professionals. It includes personalized care, trained nursing staff, medical equipment, pharmaceuticals, ICU set up at home, doctor consultation, pathology, etc.

- Process mapping is an art of understanding the whole process and the subsidiary process to achieve a goal, enlisting all the activities and a way easy to communicate to team members.

- It also helps in analyzing gaps, increasing efficiency. Along with turn-around time, helps in knowing the critical path which can be used to decrease the overall time.

Background

Shalby homecare has 7 services:

- Physiotherapy
- Medical Equipment
- Pharmacy
- Nursing
- Diagnostic
- Attendant
- Doctor Consultation

Need Assessment

There major lead sources are IPD, OPD & social media campaigns.

It has brand name of Shalby with a huge patient base from hospital but also lacks in man power & digitalization which leads to many of the operational and marketing issues.

This gives the scope of improvement for which the study has been conducted.

In the study of process mapping of converted leads, ‘converted leads’ means those whose billing has been done.

Literature Review

Process Mapping Evaluation of Medication Reconciliation in Academic Teaching Hospitals (1)

- The main objective of the study to identify the gaps by applying process mapping in medication reconciliation and the area of aspects to improve.

100 Steps of a DIEP Flap-A Prospective Comparative Cohort Series Demonstrating the Successful Implementation of Process Mapping in Microsurgery (2)

- The study has been done to improve the operational efficiency without disturbing the outcome of DIEP flap operation

By the author **Anne Holbrook (1)**
https://pubmed.ncbi.nlm.nih.gov/28039294/?from_term=process+mapping+of+healthcare+leads+&from_pos=1

By the author **Hrsikea R Sharma (2)**
https://pubmed.ncbi.nlm.nih.gov/30859026/?from_term=Process+mapping+&from_pos=1

Demystifying Process Mapping: A Key Step in Neurosurgical Quality Improvement Initiatives the cornerstone to all quality improvement strategies is the detailed understanding of the current state of a process, captured by process mapping (3)

- Process mapping empowers caregivers to audit how they are currently delivering care to subsequently strategically plan improvement initiatives.

Value stream mapping was used to analyze the workflow process & unnecessary steps were eliminated and variation minimized in the remaining processes (4)

By the author **Nancy McLaughlin (3)**
https://pubmed.ncbi.nlm.nih.gov/24681644/?from_term=Tools+of+process+mapping+&from_pos=6

By the author **J P Hynes (4)**
https://pubmed.ncbi.nlm.nih.gov/31128853/?from_term=decreasing+TAT+by+process+mapping&from_pos=2

Laboratory-based Clinical Audit as a Tool for Continual Improvement: An Example From CSF Chemistry Turnaround Time Audit in a South-African Teaching Hospital (5)

- Monitoring turnaround times (TAT), especially for emergency tests, is important to measure the effectiveness and efficiency of laboratory services. Laboratory-based clinical audits reveal opportunities for improving quality. Our aim was to identify the most critical steps causing a high TAT for cerebrospinal fluid (CSF) chemistry analysis in our laboratory. A process-mapping audit trail of 60 randomly selected requests with a high TAT was conducted and reasons for high TAT were tested for significance.

By the author **Lucius C Imoh (5)**
https://pubmed.ncbi.nlm.nih.gov/27346964/?from_term=TAT+in+process+mapping+of+services+&from_pos=3

Rationale

- Through the literature review, it can be said that process mapping is used to improve the quality, increase the efficiency & to know how the current process is going on. It will help in analysis of gaps and their cause. Along with this, TAT will help in knowing the critical steps causing high TAT. By knowing the workflow along with the turn-around time of that step, we can directly think of the alternative by resource allocation with both the approaches, the operation part of service can be improved, also we can add some quality tools for betterment of services.

- By knowing the weakness of homecare, we can get to know the gaps through process mapping and TAT, also the current process of by the time we get the lead till its conversion.

Research Question

- What is the process flow & turnaround time of converted leads of homecare services in Shalby homecare, SG unit?

Objective

- To know the process flow of different services of homecare from getting the lead to its conversion.

- To know the turnaround time of steps, involve in process flow of lead conversion.

Specific Objective

- To access the gaps found in process flow of all services through turn-around time.

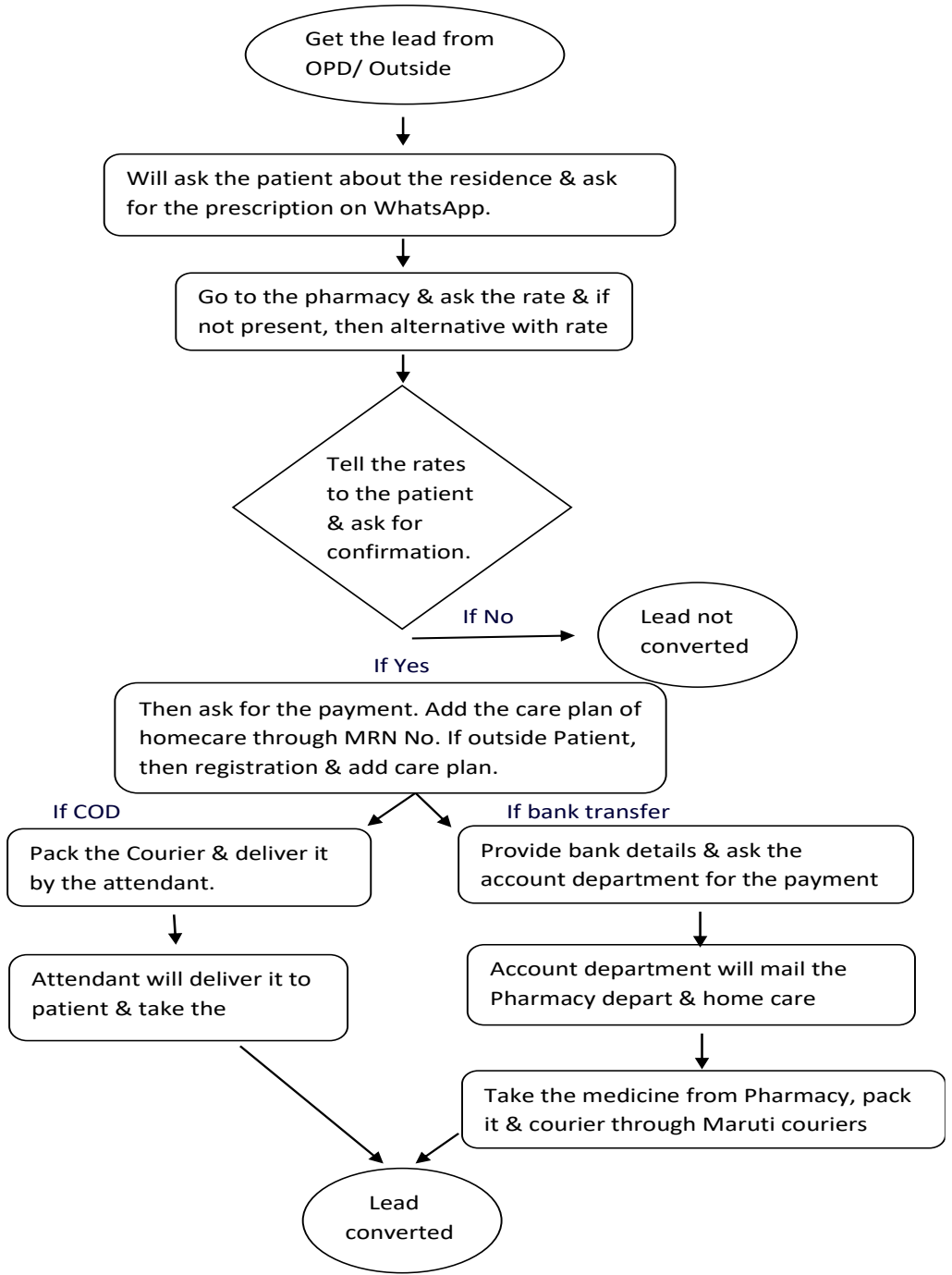
Methodology

- **Time period**- The data has been collected from March1, 2020 till April30, 2020.
- **Study Area-** Shalby Homecare, SG Unit, Ahmedabad.
- **Sample Size**- 79 out of 220 leads converted in the time period of 2 months which makes around 36% of sample size.
- **Type of Sampling**- Nonprobability convenient sampling.
- **Type of Study**- Cross-sectional study design.
- **Approach**- Quantitative, prospective.
- **Tools for Data Collection**- Through observation in IPD & OPD rounds & CUG calls
- **Inclusion & Exclusion Criteria-** Leads of physiotherapy, pharmacy, medical equipment, attendant & nursing from all lead sources are included while leads of Dr. consultation at home & diagnostic are excluded.
- **Data Analysis-** With the help of MS excel

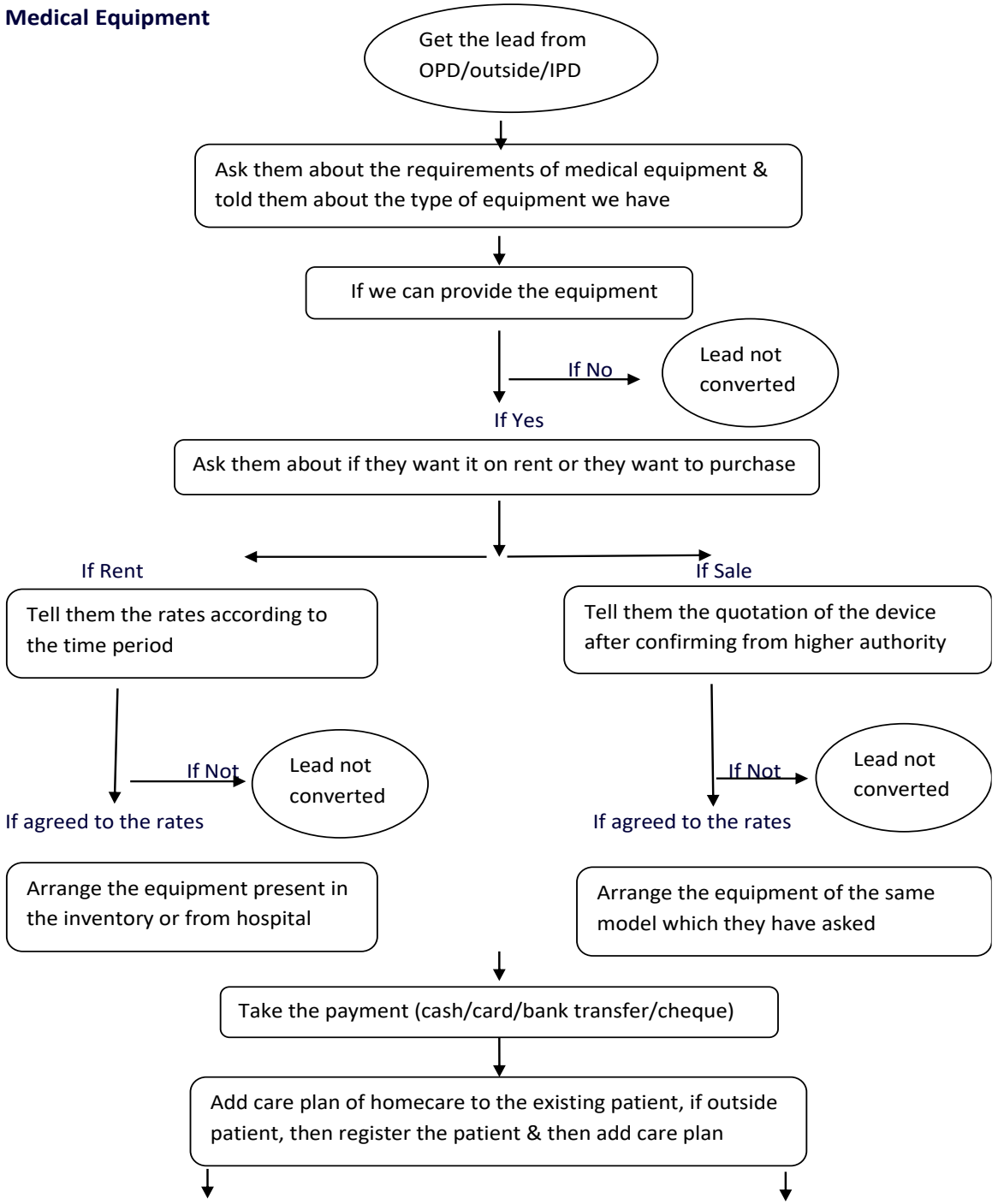
Key Findings

Process Flow of Pharmacy

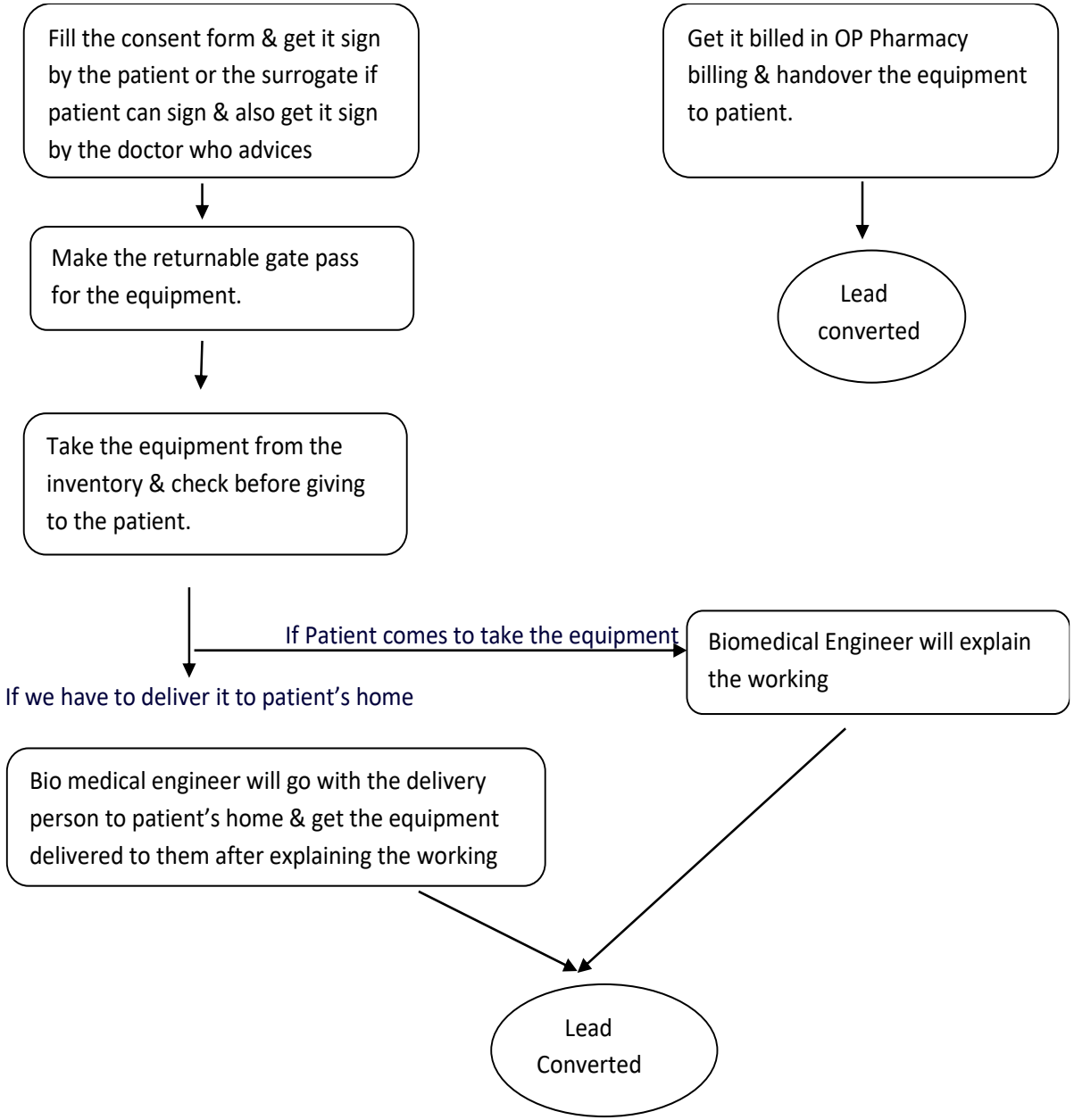
Pharmacy



Process Flow of Medical Equipment

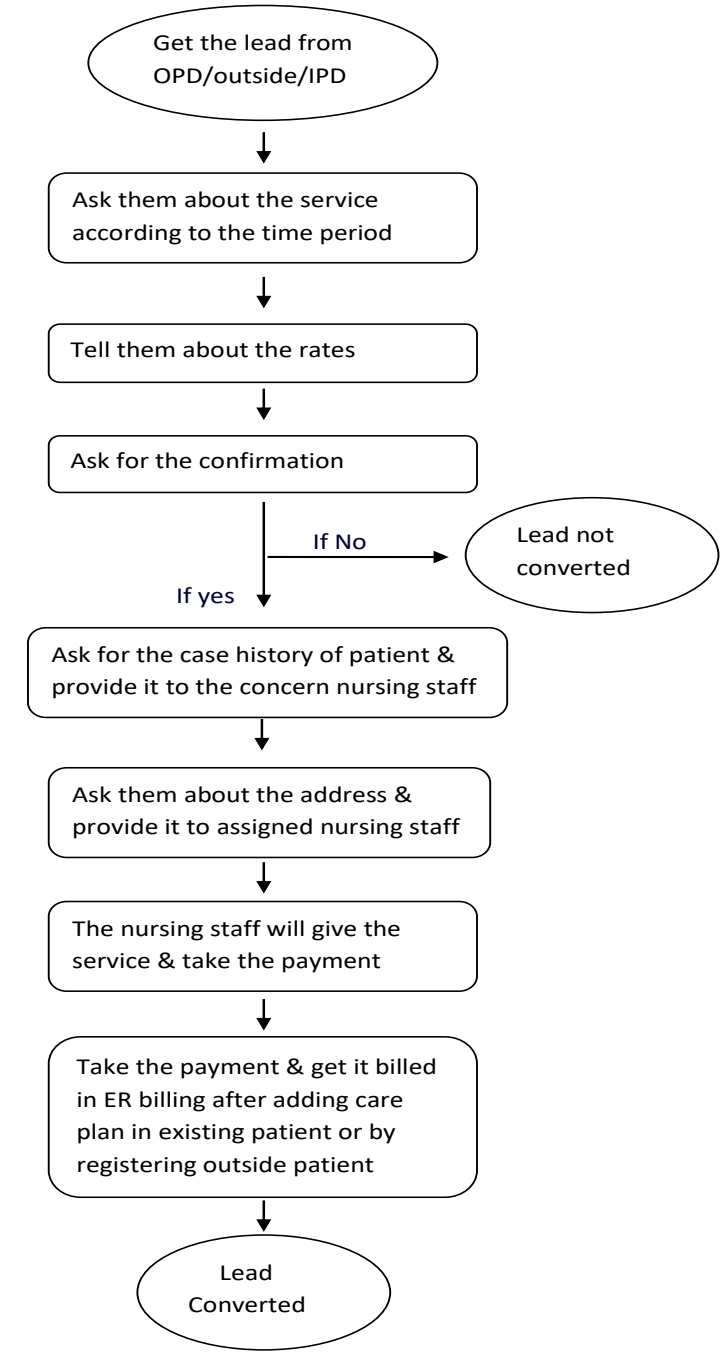


Process Flow of Medical Equipment



Process Flow of Nursing

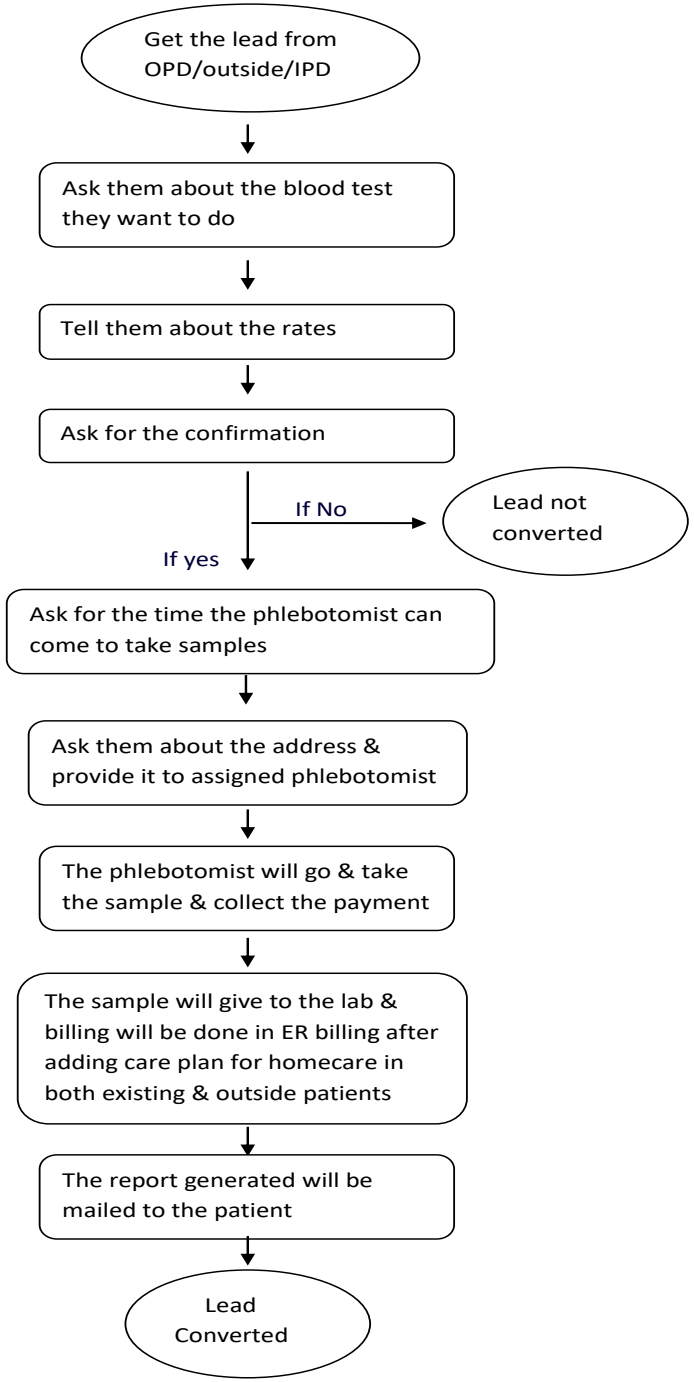
Nursing



Flow Chart 3

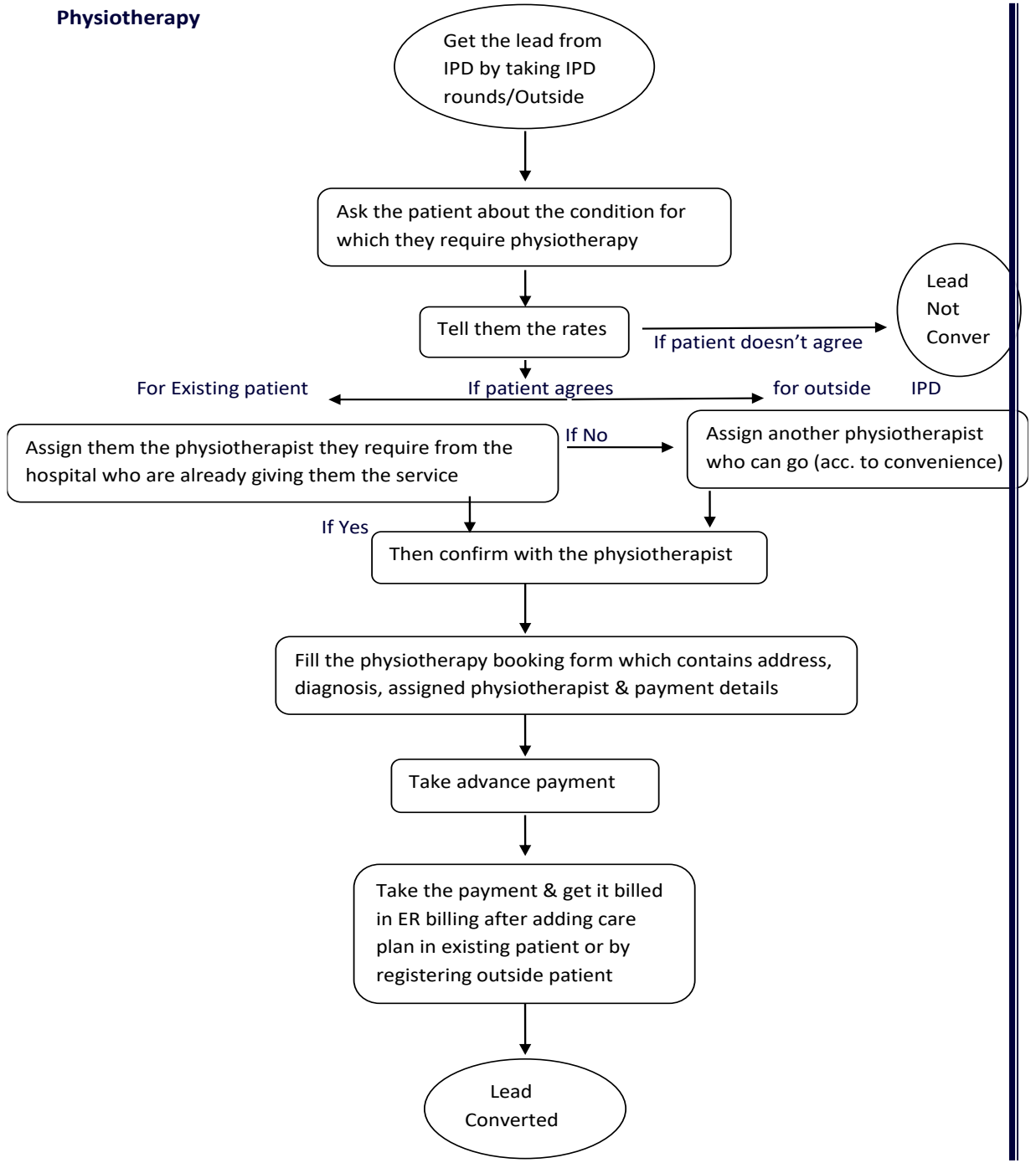
Process Flow of Diagnostic

Pathology



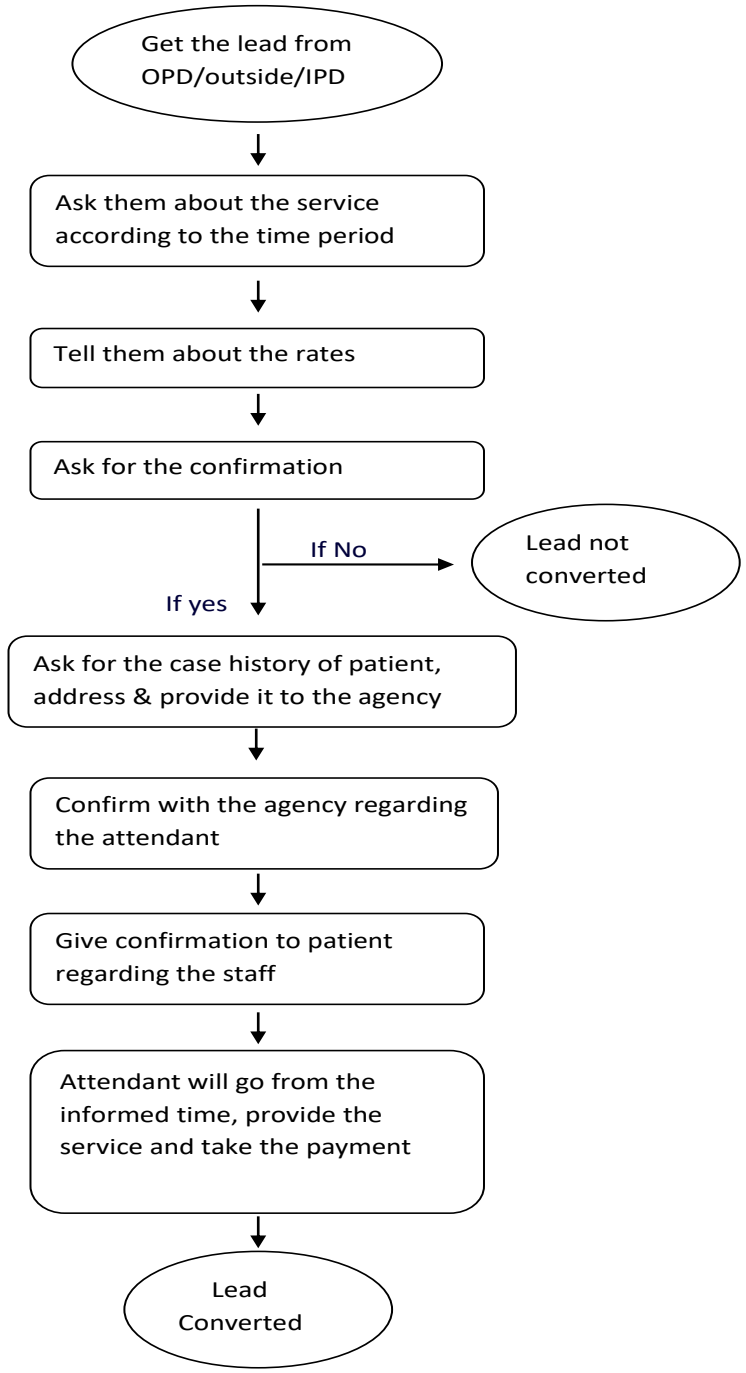
Flow Chart 4

Process Flow of Physiotherapy



Process Flow of Attendant

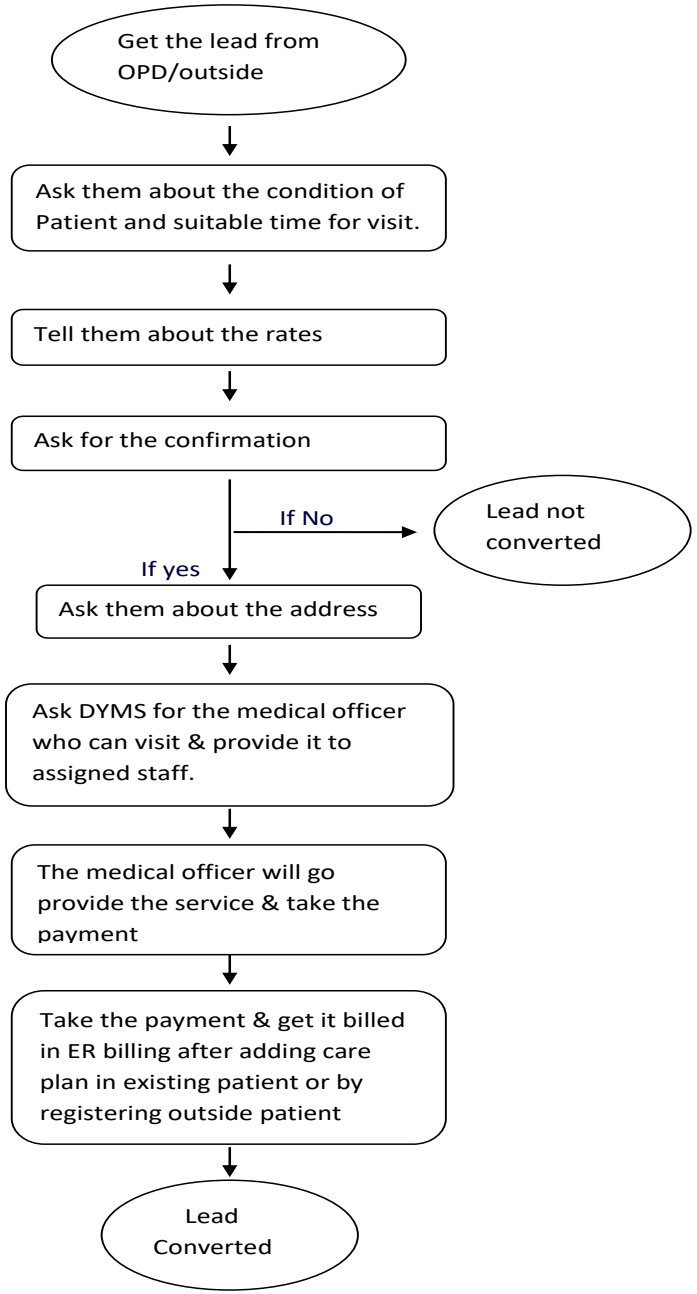
Attendant



Flow Chart 6

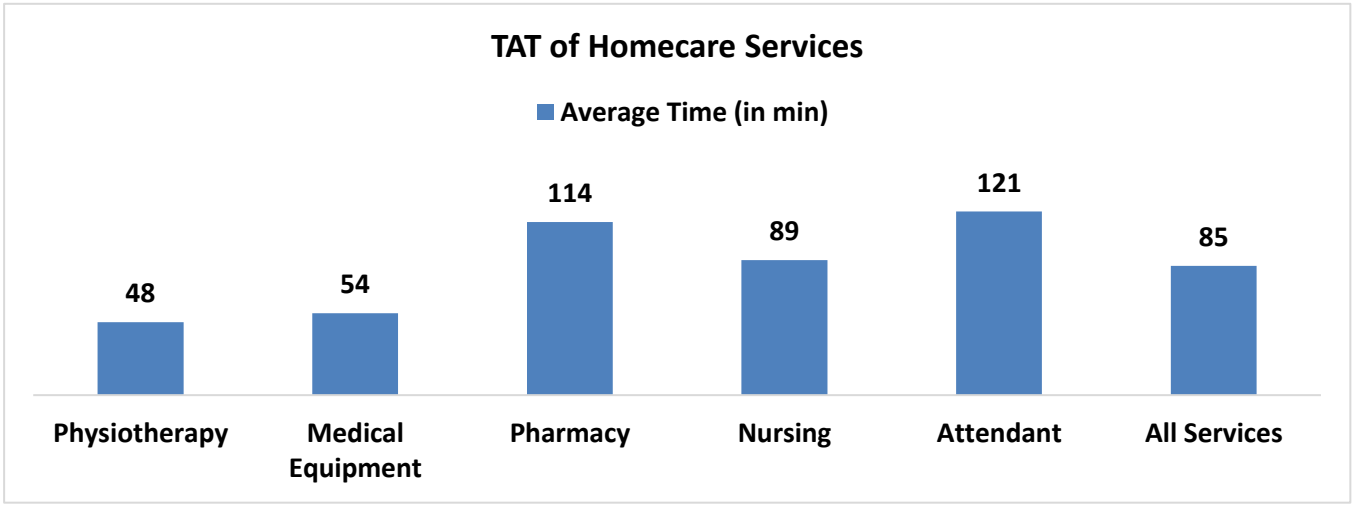
Process Flow of Doctor Consultation

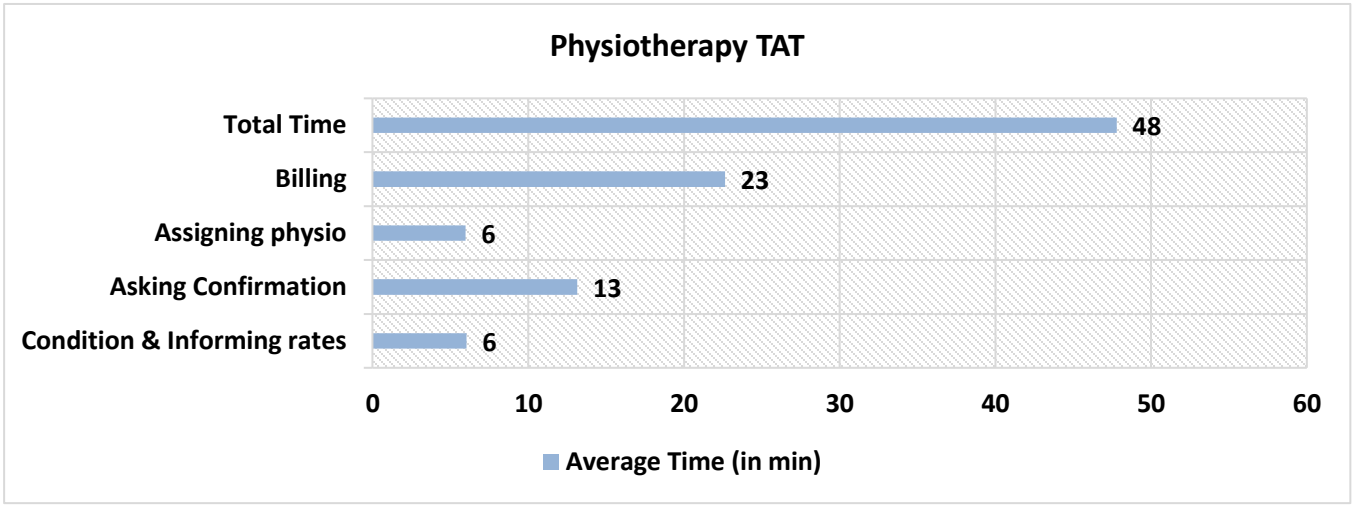
Doctor Consultation



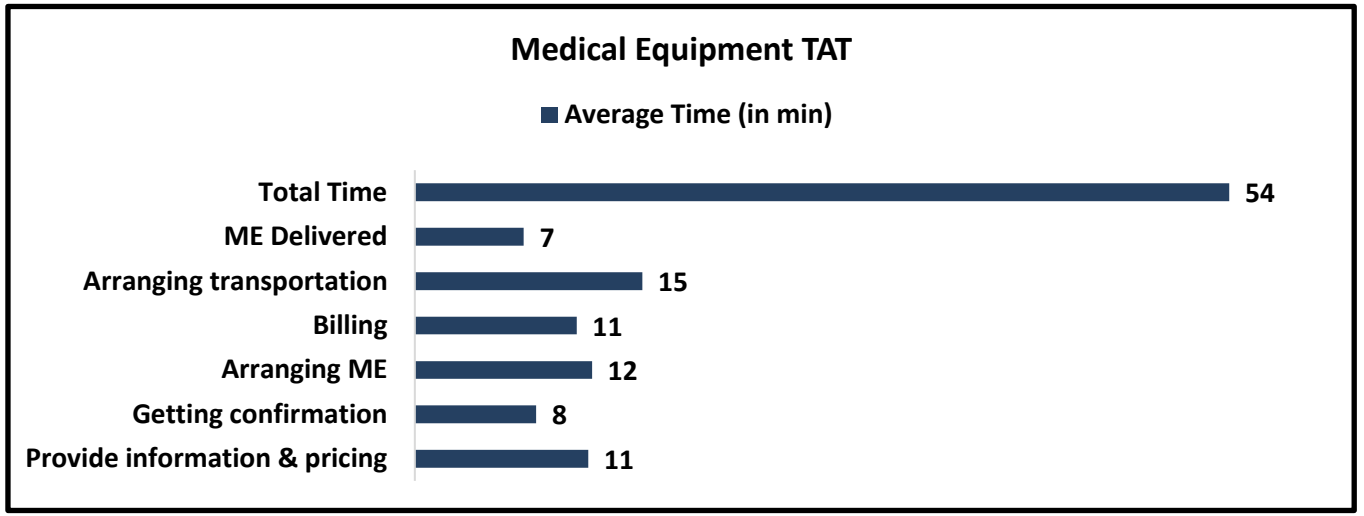
Flow Chart 7

Average TAT of Services & Physiotherapy TAT





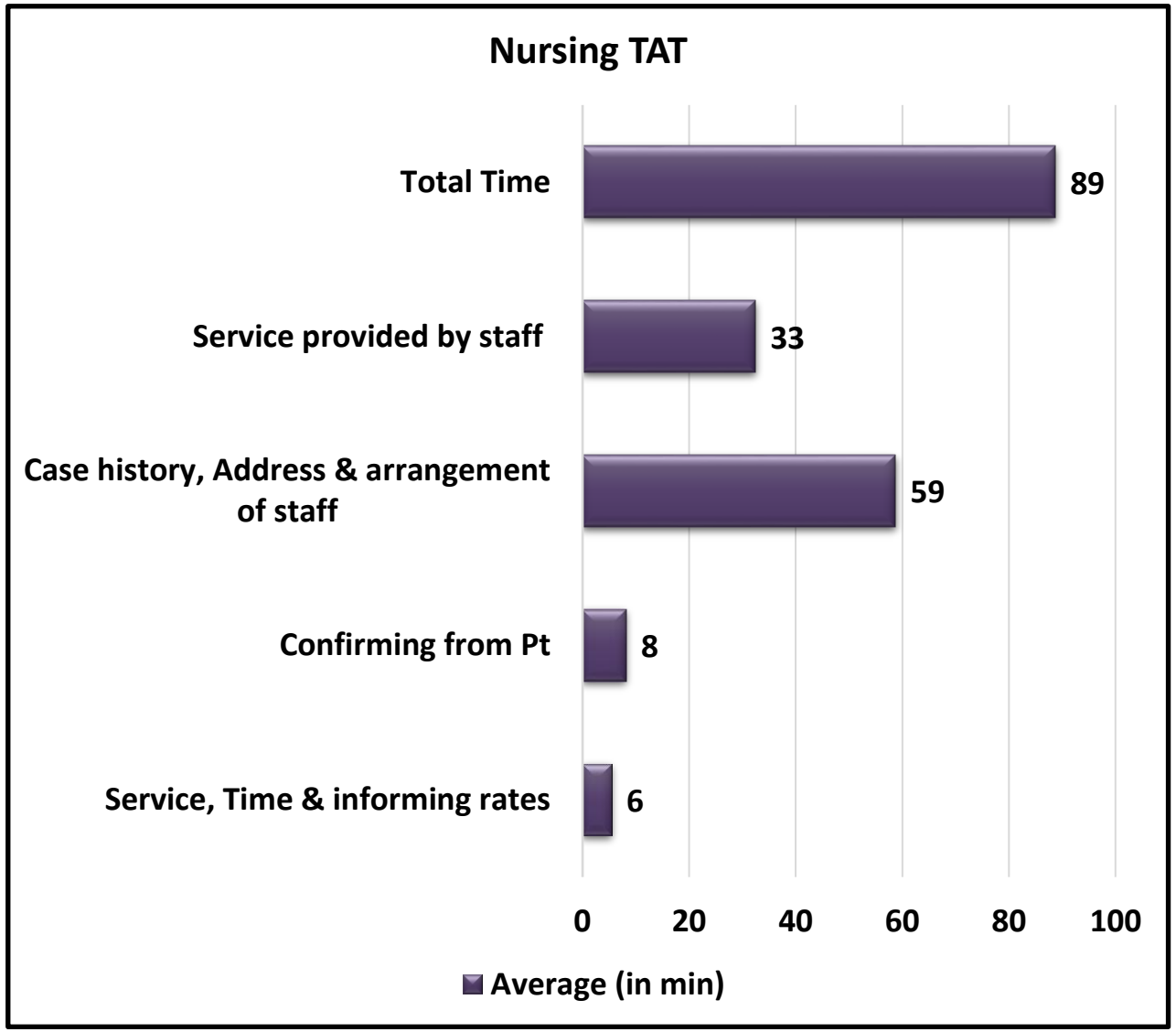
Medical Equipment TAT -

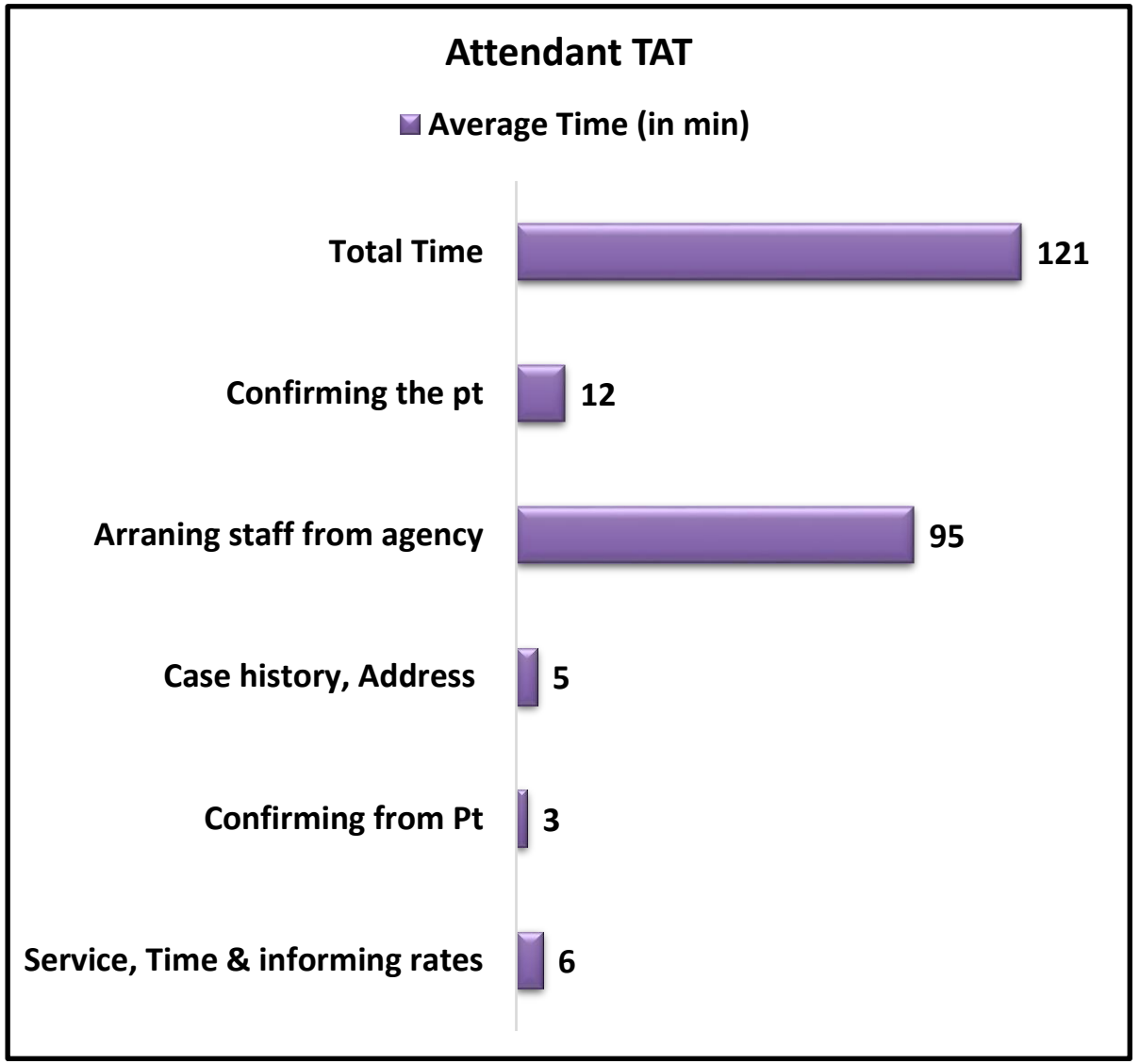


Row Labels	Average of Provide information & pricing	Average of Getting confirmation	Average of Arranging ME	Average of Billing	Average of Arranging transportation	Average of ME Delivered	Average of Total Time
IPD	11	5	9	11	10	7	44
OPD	10	8	6	11		5	40
Outside	14	15	17	10	15	8	79
Grand Total	11	8	10	11	14	7	50

Device Wise TAT

ROW LABELS	AVERAGE OF PROVIDE INFORMATION & PRICING	AVERAGE OF GETTING CONFIRMATION	AVERAGE OF ARRANGING ME	AVERAGE OF BILLING	AVERAGE OF ARRANGING TRANSPORTATION	AVERAGE OF ME DELIVERED	AVERAGE OF TOTAL TIME
BiPap	15	10	35	10	20	15	105
OC	13	7	14	11	15	10	66
Sleep Study	15	30	5	7	10	5	72
Walker	8	6	6	10		5	36
Wheelchair	14	5	15	14		5	52
Grand Total	11	8	12	11	15	7	54

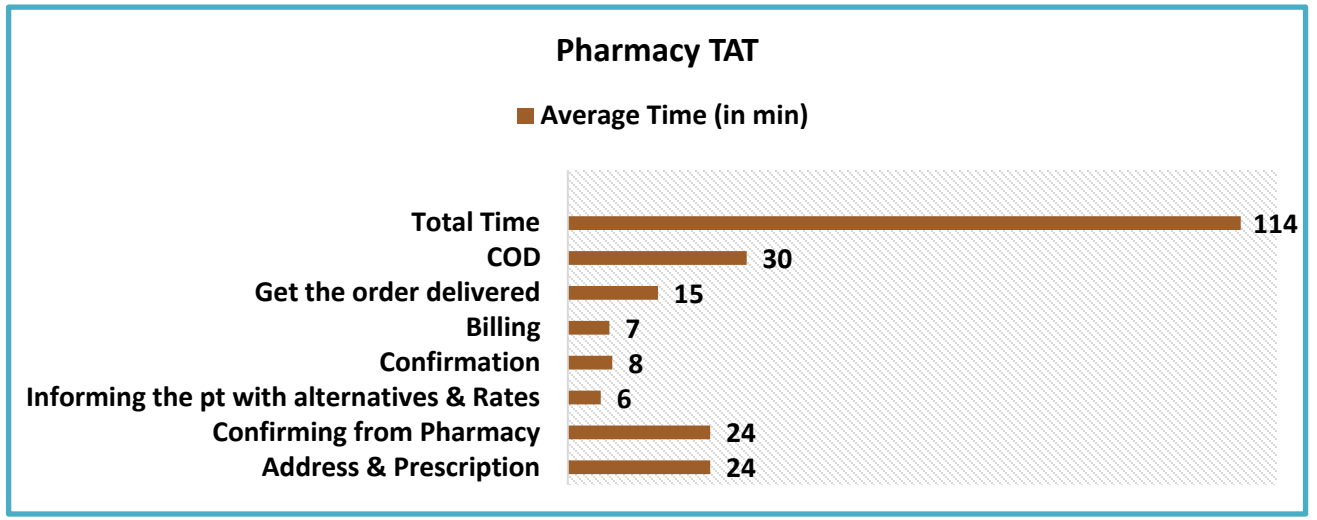




Nursing & Attendant TAT

Sample Size for Nursing – 4 & Attendant - 3

Pharmacy TAT



Row Labels	Average of Address & Prescription	Average of Confirming from Pharmacy	Average of Informing the pt with alternatives & Rates	Average of Confirmation	Average of Billing	Average of Get the order delivered	Average of COD	Average of Total Time
OPD	5	27	6	5	6	18	38	105
Outside	28	24	6	8	7	15	29	116
Grand Total	24	24	6	8	7	15	30	114

Results

THE AVERAGE TURN AROUND TIME OF HOMECARE SERVICE FOR ITS CONVERSION WAS OBSERVED TO BE 85 MINUTES.

THE HIGHEST TURN-AROUND TIME WAS OF ATTENDANT I.E. 2 HOURS (121 MIN) WHILE THE LOWEST OBSERVED IN PHYSIOTHERAPY WAS 48 MIN.

IN THE PROCESS FLOW OF MEDICAL EQUIPMENT, MAXIMUM TIME HAS BEEN CONSUMED IN ARRANGING TRANSPORTATION I.E. 15 MIN WHICH WAS BASICALLY OBSERVED FOR THE LEADS WHOSE SOURCE WERE OUTSIDE. ALSO, MAX TIME IS CONSUMED FOR CONVERSION OF LEADS FOR RESPIRATORY DEVICE SUCH AS OC, BIPAP, ETC.

IN THE PROCESS FLOW OF PHYSIOTHERAPY, THE MOST TIME-CONSUMING ACTIVITY WAS BILLING WHICH TAKES AVERAGE OF 23 MIN.

Results

IN THE PROCESS FLOW OF PHARMACY, THE MAX TIME-CONSUMING ACTIVITY WAS DELIVERY WHICH CANNOT BE CHANGED AS THE DISTANCE BETWEEN THE HOSPITAL PHARMACY TO PATIENT'S HOME DIFFER FROM PATIENT TO PATIENT. AFTER THAT THE MAX TIME WAS CONSUMED IN TAKING PATIENT'S PRESCRIPTION AS WELL AS TAKING CONFIRMATION FROM PHARMACY I.E. 24 MIN. CONFIRMATION FROM PHARMACY TAKES MORE TIME IN OUTSIDE PATIENT THAN OPD.

IN THE PROCESS FLOW OF NURSING, THE MOST TIME-CONSUMING ACTIVITY WAS ARRANGEMENT OF STAFF WHICH TAKES 59 MIN ACCORDING TO CASE HISTORY OF PATIENT & ADDRESS.

IN THE CASE OF ATTENDANT, MAX TIME WAS CONSUMED IN ARRANGEMENT OF STAFF FROM THE AGENCY THAT TAKES 95 MIN.

Conclusions

- It can be concluded through above results that majorly in all services, the gaps which were identified was arrangement issue which was both of staff as well as transportation. Also, it has been identified that the TAT of outside patients was more than of OPD or IPD patients. It can lead to patient dissatisfaction in delivery of any service. Though the process flow is driven by homecare staff, but still the main confirmation from patient side or arrangement from third party also increase the TAT.

Recommendations

Physiotherapy - for IPD, to lower the billing time, we can provide the physiotherapy form to patients at time of rounds after getting assigning physio so that at time of discharge when they come for IP billing for final process, at that time they can go directly to ER billing after the discharge process. At ER billing they can provide the forms to billing person and they get the bill done after putting care plan in patient profile. For that training should be provided to billing staff. After that at time, homecare staff will get the forms from there leading to surety of conversion.

Medical Equipment - To lower the transportation arrangement, there can have trained delivery person who knows both four-wheeler & two-wheeler driver.

Pharmacy, - To lower the confirmation time from pharmacy, can have the rights in SRIT of pharmacy stock, so that the homecare staff will directly check the stock availability. If not, then there can be list of medicines provided to homecare which can be divided into H-scheduled drug, psychiatric drugs and other medicines along with the brand.

Nursing - There can be defined roaster such as each nursing staff should be allotted for injection, dressing & 12-hour service.

Attendant - Their can be recruitment of 2 trained attendant.

Thank You