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Hinduja Hospital Community
Quality Healthcare for all ...

TIME AND MOTION STUDY OF HOUSEKEEPING ATTENDANT STAFF (OPD)

LIHMR UNIVERSITY

PRESENTED BY:
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ROLL NO: 1209

INTRODUCTION:-

- The housekeeping staff of any hospital is the backbone in keeping the hospital environment clean and hygienic. This project focuses on the time and motion study of the housekeeping attendant staff in OPD Department.
- There are in all 4 Faculty attendant staff in housekeeping which only look after 1st Floor (Wing 1 and Wing 4) and these staff are the permanent staff.
- There are 17 OPD Attendant Staff which are on rotational shift which are on contract basis.
- In all there are 21 OPD Attendant staff.



OBJECTIVE:

- Reduce overtime of the housekeeping staff.
- Framing weekly roaster in a sustainable way to increase the efficiency of the staff.
- Giving suggestions and recommendations so the time taken for certain activities can be reduced and staff can be more patient centric.



MATERIAL AND DATA COLLECTION:

- **Research design:** Descriptive cross sectional study
- **Sampling method:** Non-probability sampling method
- **Sample size:** 21 OPD Attendant staff.
- **Duration of study:** 18th May 2021- 10th June 2021
- **Data collection source:** To collect primary data detailed observation was done to record the time taken for each activity done by the attendant staff and direct interaction was done on daily basis.
- **Analysis tool:** Microsoft Excel
- **Inclusion criteria:** OPD Attendant staff
- **Exclusion criteria:** Cleaning and sanitization staff



CURRENT DUTIES AND RESPONSIBILITIES:-

○ **FACULTY STAFF:**

- Taking keys from the security at 7 am
- Opening of Wing 1 and Wing 4 of 1st Floor in OPD building
- Bottle refilling
- Cleaning and dusting.
- Collecting Milk from Food Service Department from 6th Floor IPD building
- Making tea/coffee for staff and consultants.
- Tea distribution
- Patient transportation
- File and other material transportation.
- Fetching and arranging linen/laundry for staff
- Closing of the department after the shift and handling keys back to the security.

- **O.P.D STAFF:**

- Collecting / depositing keys from security Opening and closing of the sections, reception counters.
- Dusting, sweeping, cleaning OPD wings including consultation rooms.
- Transport of reports multiple times per day.
- Transport of CSSD items to and fro from IPD (Including collecting articles from sub-sections)
- Obtaining and arranging indent items from various stores
- Miscellaneous office transport- for instance replenishing stationary to reception counters/indent papers to stores, refund approval signatures and refund cheques.
- Escorting wheelchair/ stretcher patients according to hospital protocols, from OPD entrance to various OPD services/ investigations/service source/Consultation completion.
- Equipment sterilization: Washing of material and keeping in sterilizer
- Equipment cleaning
- Equipment transfer to repair section in case of breakdown/ requirement.
- Arranging washing off privacy curtains once in a week
- Assisting in installing/ replacing the disposable bed sheets as and when called for.
- Serving tea/ coffee to doctors and staff in morning and evening
- Co-ordinate with the OPD facility executive on relevant issues related to delivery of service quality.
- Interactions- with OPD supervisory team, Doctors, Technicians, Clerical and other health professionals to provide seamless patient care service.



FINDINGS:

- The list of activities and time taken for each activity performed by an attendant was observed and recorded in Dialysis Department, Gamma Knife Department, ENT Department, Ophthalmology Department, Physiotherapy Department, Neurology department, Cardiology and PFT department and 1st floor faculty wing 1 and 4 where there is major patient footfall every day.



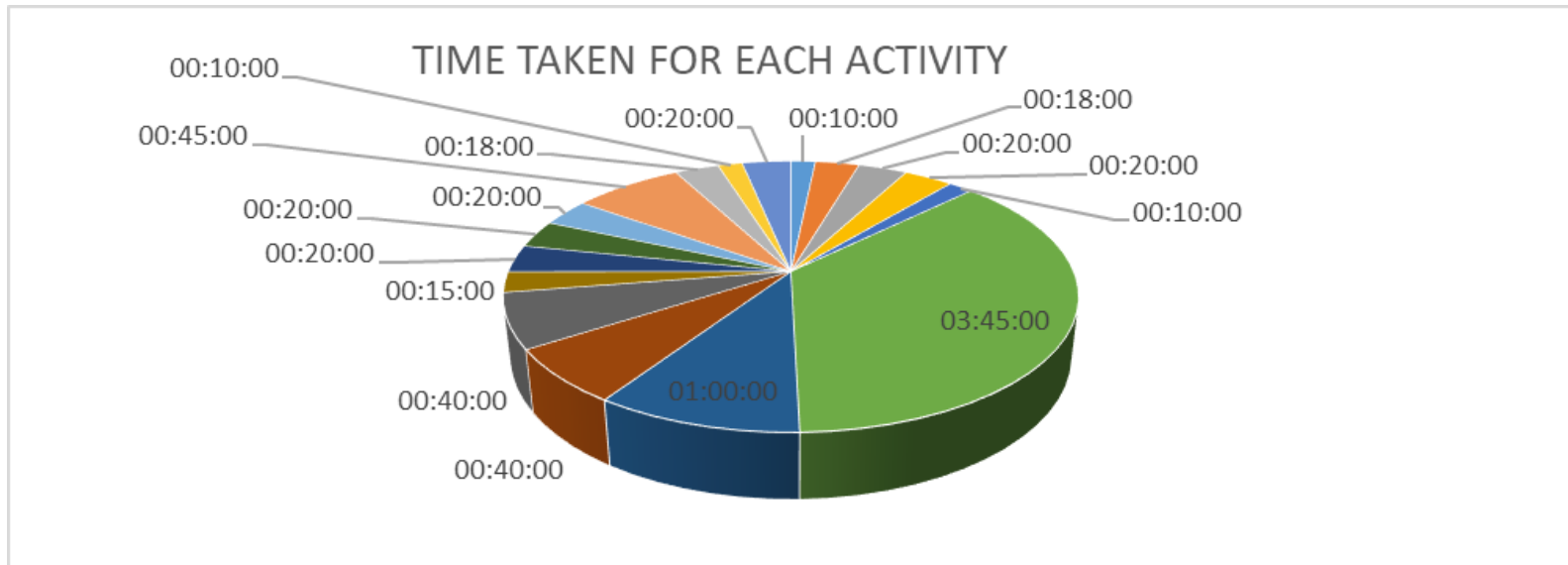
GAMMA KNIFE DEPARTMENT

WORKING HOURS: 7AM TO 3PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General Responsibilities:	
Collecting keys from security at 7am in the morning to open the department	10 minutes
Opening the doors of the department (6 doors x 3 minutes)	18 minutes
Dry mopping the whole department	20 minutes
Dusting the tables and computers with dry cloth	20 minutes
Co-ordinating with consultant if there is a case scheduled for in patient	10 minutes
Helping consultant in patient handling and positioning for the procedure (1 patient takes approximately 75 minutes) (3 cases x 75 minutes)	225 minutes
Transporting patient back to the designated bed after the procedure (3 patients x 20 minutes)	60 minutes
Collecting stationary as per requirement from General stores	40 minutes
Collecting medicine as per requirement from Pharmacy	40 minutes
Bottle refilling from ground floor water purifier for staff (7 bottles x 2 minutes)	15 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (10 minutes x 2)	20 minutes
Tea distribution (10 minutes x 2)	20 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Wet mopping the whole department before closing	45 minutes
Closing of the department (6 doors x 2 minutes)	18 minutes
Handling the keys to the security	
Technical Responsibilities:	
Cleaning of machine with dry cloth everyday once	20 minutes
Total Time	556 minutes

ANALYSIS

- It was observed that the attendant staff is only needed when there are Gamma knife cases, otherwise the staff has ample of idle time when there is no case or less cases
- Dry mopping and wet mopping is done twice in a day



DIALYSIS DEPARTMENT

WORKING HOURS: 7AM TO 11PM

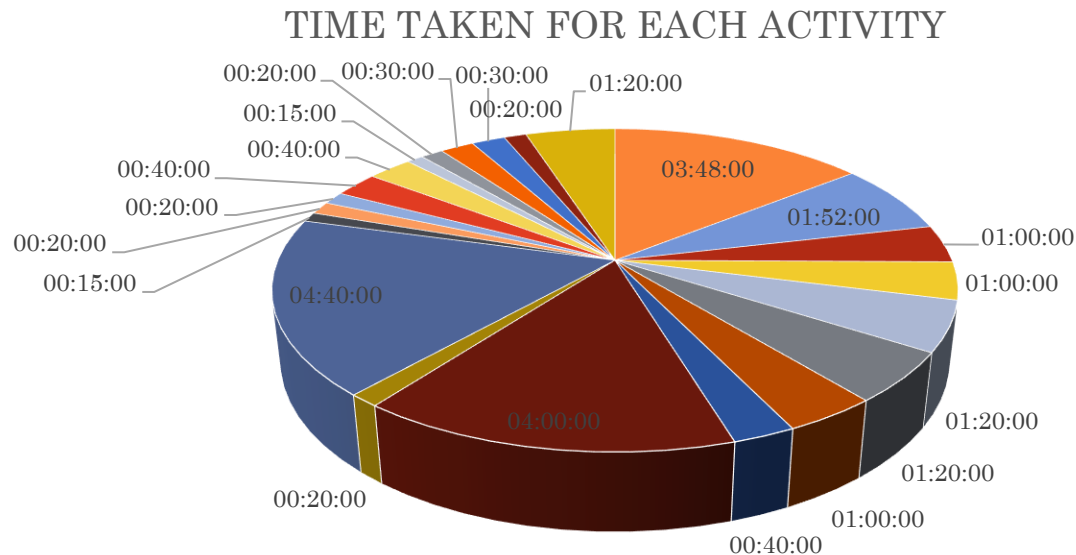
RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
19 Cans used to fill solutions for dialysis are been washed and given to the dialysis technicians (19 cans x 3minutes x 4 shifts)	228 minutes
14 cans of solutions are taken into the trolley and are placed near each bed in every shift (14 cans x 2minutes x 4 shifts)	112 minutes
5 cans of sugar free and potassium solution to be placed at the nursing station in each shift (5 cans x 3minutes x 4shifts)	60 minutes
Arranging saline bottle on the nursing station for technician to use (arranged twice in each shift) (1000ml saline, 2 boxes and each box contains 15 saline bottles) (30 minutes x 2 shifts)	60 minutes
Dry mopping whole department including R/O plant area, reprocessing unit, sterilization room, doctor/staff room, sub-store pantry, patient area, reception area twice. Once in the morning after 1 st shift and second before closing the department (40 minutes x 2 shifts)	80 minutes
Wet mopping of the whole department	80 minutes
Dusting of nursing stations, computers, reception, doctor/staff room tables (30 minutes x 2 times)	60 minutes
6 cans of dialysis solutions to be transferred to s1 department for covid patients daily (once in a day)	40 minutes
Collecting and returning used 30 HD Sets from CSSD department and collecting medicine from the pharmacy in West Block (twice a day) (120 minutes x 2 shifts)	240 minutes



Sending 5 cans of dialysis solution in West Block 10 th floor ICU once in a day	20 minutes
Disinfecting / wiping dialysis machine after every dialysis procedure (14 machines x 5 minutes x 4 shifts)	280 minutes
Sending blood samples of patients in Laboratory at the ground floor (OPD patients only)	15 minutes
Sending blood samples of IPD Dialysis patients to the 3 RD floor OPD Stat laboratory	20 minutes
Sanitisation of the bed and curtains in case of covid suspected patient has taken treatment of dialysis	20 minutes
Movement of IPD patients back to their ward post dialysis (per patient)	40 minutes
Placing dirty laundry in hamper bag and packing blood stained linen separately if any twice a day (20 minutes x 2 shifts)	40 minutes
In case of blood stains on the floor wet mopping done with disinfectant	15 minutes
Changing hamper bag for dirty laundry twice a day (morning and evening) (10 minutes x 2 shifts)	20 minutes
Replenishing general stores stationary as per requirement	30 minutes
Cleaning of refrigeration every Saturday in the pantry	30 minutes
Collecting ECG portable machine from 3 rd floor and keeping it back in case of emergencies only.	20 minutes
Collecting 50kg salt bag from Engineering department (West block) twice in a month (40 minutes x 2 times in a month)	80 minutes
Total Time	1590 minutes

ANALYSIS

- It was observed that major time of the attendant staff goes into getting HD sets from CSSD. They have to take 4 rounds.
- Dry mopping and wet mopping is done twice in a day



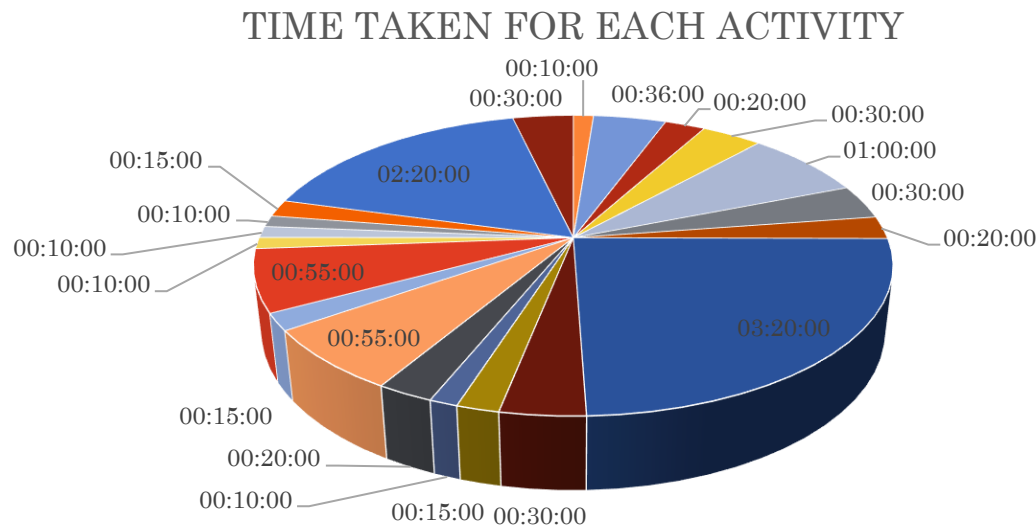
ENT DEPARTMENT

WORKING HOURS: 8AM TO 6PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
a) General responsibilities	
Collecting keys from the security to open the department	10 minutes
Opening the doors of the department (12 doors x 3 minutes)	36 minutes
Collecting milk from Food service department (West block) once in a day	20 minutes
Bottle refilling from the first floor cooler for staff and consultant (10 bottles x 3 minutes)	30 minutes
Tea making twice in a day (morning 9:30 and evening 3 pm) (30 minutes x 2)	60 minutes
Tea distribution (15 minutes x 2 times)	30 minutes
Washing cups in the pantry	20 minutes
Calling out patient names for consultation and helping consultant to settle the patient (20 patients x 10 minutes)	200 minutes
Replenishing the stationary as per the requirement	30 minutes
Collecting soiled linen and keeping the soiled linen in dirty linen room at the end of the day	15 minutes
Putting the new hamper bag to collect dirty laundry	10 minutes
Sanitising / disinfecting chairs and tables after visit of each mucormycosis patient (2 patients per day) (10 minutes x 2)	20 minutes
Dry mopping the whole ENT department all 11 rooms (5 minutes each room x 11 rooms)	55 minutes
Dusting of tables and computers	15 minutes
Wet mopping the 11 rooms before closing the department (5 minutes x 11 rooms)	55 minutes
Closing the department doors	10 minutes
Handling keys to security	10 minutes
a) Technical responsibilities	
Washing the sterilizer	10 minutes
Disinfecting instruments in the disinfectant water	15 minutes
Sterilizing scopes and instruments in sterilizer twice in a day (70 minutes x 2)	140 minutes
Transporting scopes to OT during cochlear implant cases and bringing back to the department post-surgery(usually on Saturdays)	30 minutes
Total time	821 minutes

ANALYSIS

- It was observed that there is no reliever sent for the attendant when there is major patient footfall in the morning 11am- 2pm afternoon. The department is managed by just one attendant staff. Leading to increase in overtime.
- Bottle refilling is done for all staff which consumes time.
- The attendant's time goes in tea preparation in the pantry while there is patient footfall.
- Dry mopping and wet mopping is done twice in a day



OPHTHALMOLOGY DEPARTMENT:

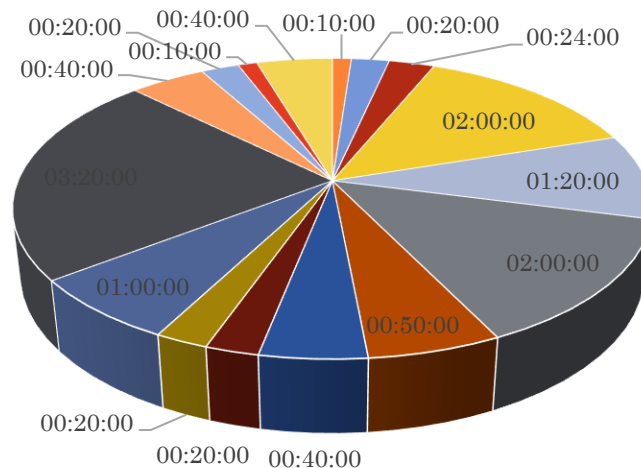
WORKING HOURS: 8 AM TO 7PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General responsibilities:	
Collecting keys from security at 8am in the morning to open the department	10 minutes
Opening the doors of the department (10 doors x 2 minutes)	20 minutes
Bottle refilling of consultant from pantry room 1 st floor (8 bottles x 3 minutes)	24 minutes
Dry mopping of the floor twice a day (60 minutes x 2)	120 minutes
Dusting of tables (12 tables) and windows (40 minutes x 2)	80 minutes
Wet mopping of floor twice a day (60 minutes x 2)	120 minutes
Getting tea filled from OPD ground floor when tea comes from FSD (morning 9:30am and evening 3pm) twice a day (25 minutes x 2)	50 minutes
Tea distribution twice a day (20 minutes x 2)	40 minutes
Collecting dirty linen and keeping in the dirty linen room (10 minutes x 2)	20 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting vouchers of the patient and calling out names of the each patient and giving it to the nursing station (20 pts x 3 min)	60 minutes
Calling out patients name and helping technicians and consultant to settle the patients / patient movement (20 patients x 10 minutes)	200 minutes
Replenishing stationary stock as per the requirements	40 minutes
Closing of the department (10 doors x 2 minutes)	20 minutes
Handing over keys to the security	10 minutes
Technical responsibilities:	
Dusting of optometry machine twice a day (20 minutes x 2)	40 minutes
Total time	874 minutes

ANALYSIS

- It was observed that the reliever for the attendant is not sent on time before lunch which delays the lunch time of the attendant.
- Dry mopping and wet mopping is done twice in the morning and before closing department as well.
- Bottle refilling is done for all staff which consumes time.

TIME TAKEN FOR EACH ACTIVITY



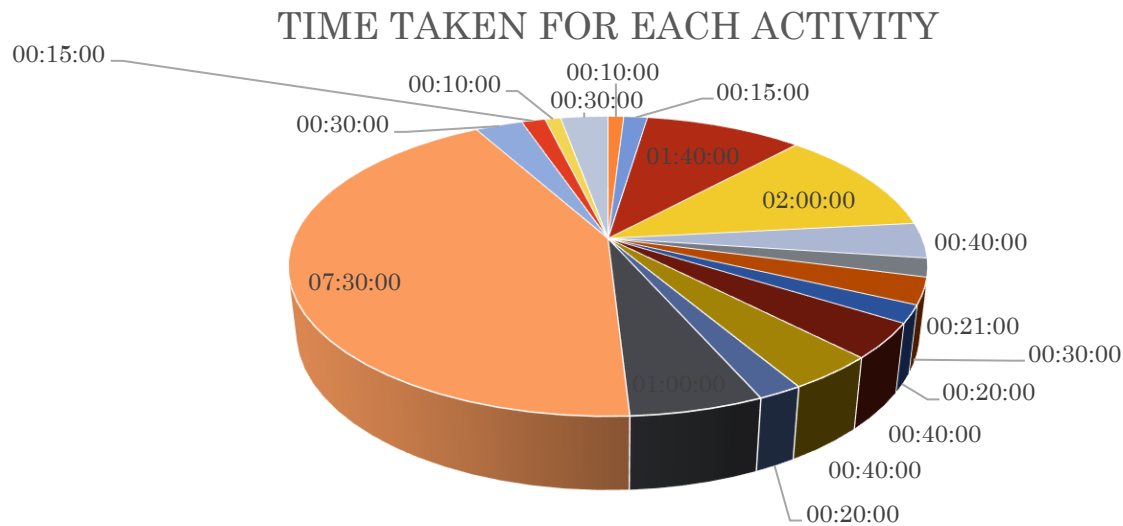
PHYSIOTHERAPY DEPARTMENT:

WORKING HOURS: 7AM TO 10PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General Responsibilities:	
Taking keys from the security to open the department	10 minutes
Opening the doors of the department (5 doors x 3 minutes)	15 minutes
Dry mopping of the whole department twice (50 minutes x 2)	100 minutes
Wet mopping of the whole department (60 minutes x 2)	120 minutes
Dusting of tables with cloth (20 minutes x 2)	40 minutes
Bottle washing and refilling of the staff in the physiotherapy department itself (7 bottles x 3 minutes)	21 minutes
Collecting dirty linen and keeping in the dirty linen room on 1 st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (20 minutes x 2)	40 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Cleaning mirrors of the department every alternate days once in a day	60 minutes
Patient transportation and assisting physiotherapist in patient movements (30 patients x 15 minutes)	450 minutes
Stationary replenishing as per the requirement from stores	30 minutes
Closing of the department	15 minutes
Handling the keys to the security	10 minutes
Technical responsibilities:	
Cleaning of physiotherapy machines alternate days once with dry cloth	30 minutes
Total time	1011 minutes

ANALYSIS

- Bottle refilling is done for all staff which consumes time.
- It was observed there are hardly any patient footfall in the morning from 8am to 11am so the staff has ample of idle time.



CARDIOLOGY DEPARTMENT:

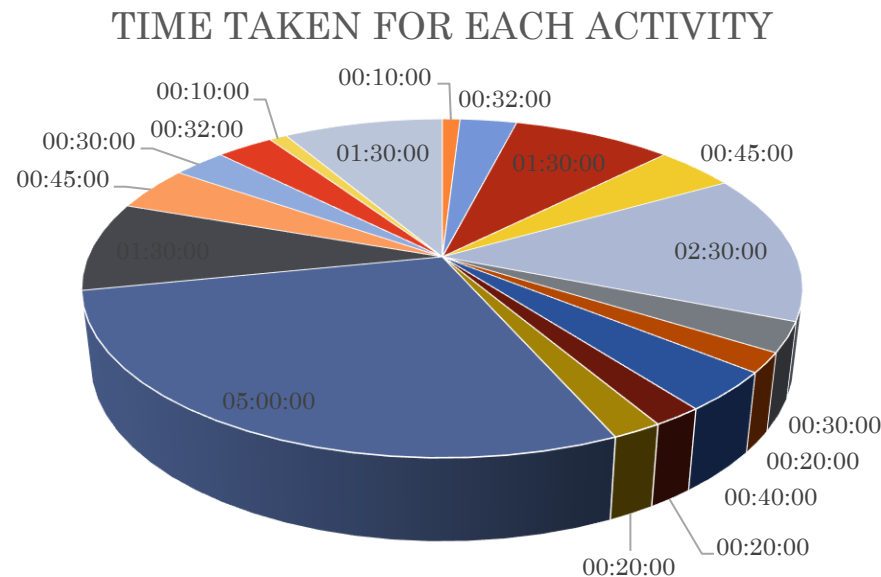
WORKING HOURS: 7AM TO 8PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General Responsibilities:	
Collecting keys from security at 7am in the morning to open the department	10 minutes
Opening the doors of the department (16 doors x 2 minutes)	32 minutes
Wet mopping of the whole department in the morning	90 minutes
Bottle washing and refilling for the consultants and the staff from the 3 rd floor water purifier in the lobby (15 bottles x 3 minutes)	45 minutes
Dusting of the computers and tables with the dry of all 15 rooms (15 rooms x 10 minutes)	150 minutes
Collecting dirty linen and keeping in the dirty linen room on 1 st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (30 minutes x 2)	60 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Patient transportation and assisting consultant/technician in patient movements (15 patients x 20 minutes)	300 minutes
Dry mopping of the whole department before closing the department (15 rooms x 6 minutes)	90 minutes
Collecting stationary on every Saturday from General stores	45 minutes
Arranging the stationaries on the place in relevant department as per the requirements	30 minutes
Closing of the department (16 doors x 2 minutes)	32 minutes
Handling the keys to the security	10 minutes
Technical Responsibilities:	
Cleaning of cardio machines every day with dry cloth	90 minutes
Total Time	1094 minutes



ANALYSIS

- Bottle refilling is done for all staff which consumes time.
- No wheelchair on the floor available for patient movement, the attendant has to go to the ground floor and collect the wheelchair to transport the patient.
- Wet mopping is done in the morning and dry mopping is done before closing the department.



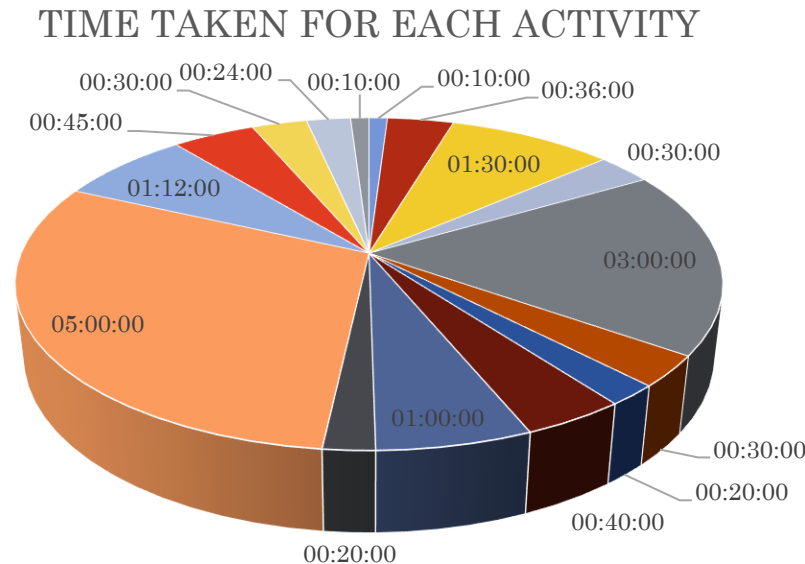
NEUROLOGY DEPARTMENT

WORKING HOURS: 8 AM TO 8PM

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
General Responsibilities:	
Collecting keys from security at 8am in the morning to open the department	10 minutes
Opening the doors of the department (12 doors x 3 minutes)	36 minutes
Wet mopping of the whole department in the morning	90 minutes
Bottle washing and refilling for the consultants and the staff from the 3 rd floor water purifier in the lobby (10 bottles x 3 minutes)	30 minutes
Dusting of the computers and tables with the dry of all 15 rooms (12 rooms x 15 minutes)	180 minutes
Collecting dirty linen and keeping in the dirty linen room on 1 st floor (15 minutes x 2)	30 minutes
Putting hamper bag to collect dirty gowns (10 minutes x 2)	20 minutes
Collecting tea from ground floor pantry twice in a day (9:30 am and 2:30 evening) (20 minutes x 2)	40 minutes
Tea distribution (30 minutes x 2)	60 minutes
Washing and cleaning the tea kettle twice after tea distribution (10 minutes x 2)	20 minutes
Patient transportation and assisting consultant/technician in patient movements (20 patients x 15 minutes)	300 minutes
Dry mopping of the whole department before closing the department (12 rooms x 6 minutes)	90 minutes
Collecting stationary on every Saturday from General stores	45 minutes
Arranging the stationaries on the place in relevant department as per the requirements	30 minutes
Closing of the department (12 doors x 2 minutes)	24 minutes
Handling the keys to the security	10 minutes
Total Time	1015 minutes

ANALYSIS

- Bottle refilling is done for all staff which consumes time.
- No wheelchair on the floor available for patient movement, the attendant has to go to the ground floor and collect the wheelchair to transport the patient.
- Wet mopping is done in the morning and dry mopping is done before closing the department.



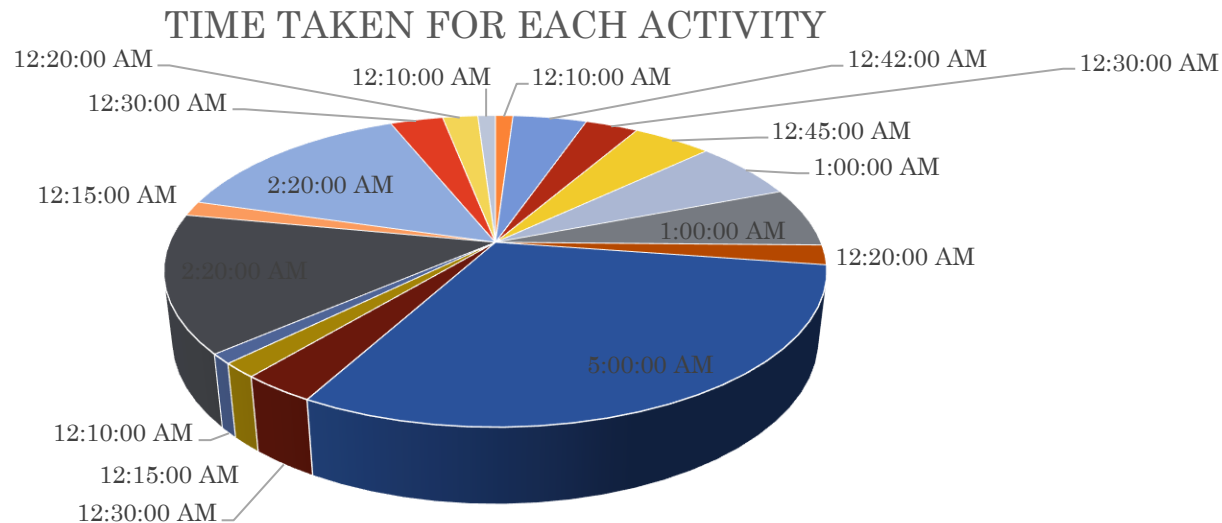
FACULTY STAFF ATTENDANT:

WORKING HOURS: 7AM TO 8PM

(THIS STAFF ONLY MANAGES WING 1 AND 4 ON 1ST FLOOR AND THEY ARE NOT INCLUDED IN OPD ATTENDANTS)

RESPONSIBILITIES	TIME TAKEN FOR EACH ACTIVITY
Collecting keys from the security to open the department	10 minutes
Opening the doors of the department (14 doors x 3 minutes)	42 minutes
Collecting milk from Food service department (West block) once in a day	30 minutes
Bottle refilling from the first floor cooler (15 bottles x 3 minutes)	45 minutes
Tea making twice in a day (morning 9:30 and evening 3 pm) (30 minutes x 2)	60 minutes
Tea distribution (30 minutes x 2 times)	60 minutes
Washing cups in the pantry	20 minutes
Patient transportation (30 patients x 10 minutes)	300 minutes
Replenishing the stationary as per the requirement	30 minutes
Collecting soiled linen and keeping the soiled linen in dirty linen room at the end of the day	15 minutes
Putting the new hamper bag to collect dirty laundry	10 minutes
Dry mopping the department all 14 rooms (5 minutes each room x 14 rooms x 2 shifts)	140 minutes
Dusting of tables and computers	15 minutes
Wet mopping the 14 rooms before closing the department (5 minutes x 14 rooms x 2 shifts)	140 minutes
Transferring documents to other departments	30 minutes
Closing the department doors	20 minutes
Handling keys to security	10 minutes

- Dry mopping and wet mopping is done twice in the morning and before closing department as well.
- Bottle refilling is done for all staff which consumes time.
- It was observed out of 4 faculty staffs 3 staffs are on duty in the morning and one person is only for the evening shift.
- The attendant's time goes in tea preparation in the pantry while there is patient footfall.



DUTY ROASTER FOR ATTENDANT STAFF AND FACULTY STAFF TO INCREASE THE EFFICIENCY OF THE STAFF:

DUTY ROASTER FOR HOUSEKEEPING ATTENDANT STAFF			
NAME	DEPARTMENT	TIMINGS	MANPOWER REQUIREMENTS
SANJAY BANSODE	GROUND FLOOR	8AM TO 4PM	1
SHRIRANG MORE	GAMMA KNIFE	7AM TO 3PM	1
VAIBHAV SHINDE	REPORT DISPATCH/ GROUND FLOOR CLEANING	7AM TO 3PM	1
AJAY RAORANE	ONCO CONSULTATION	7AM TO 3PM	1
ABSHISHEK KHAIRE	ENT	8AM TO 4PM	1
TEJESH JADHAV	OPHTHALMOLOGY	8AM TO 4PM	1
VISHAL SHINDE	NEPHROLOGY	7AM TO 3PM	1
USHA BOBADE	NEUROLOGY	7AM TO 3PM	1
RAHUL DANDEKAR	CDC AND PHYSIOTHERAPY	7AM TO 3PM	1
SANTOSH RUPE	DENTAL	7AM TO 3PM	1
RAJENDRA GHATYE	CARDIOLOGY	7AM TO 3PM	1
DEEPAK BHILLARE	ENT	12PM TO 8PM	1
ABHISHEK ALCHETTI	CARDIOLOGY	12PM TO 8PM	1
SUNIL SATHE	REPORT DISPATCH/ GROUND FLOOR CLEANING	12PM TO 8PM	1
ASHOK MOHITE	DENTAL/ PATIENT TRANSPORT	12PM TO 8PM	1
ADITYA UPARKAR	NEUROLOGY DEPARTMENT	12PM TO 8PM	1
SANJAY VARTAK	OPHTHALMOLOGY	12PM TO 8PM	1
FACULTY STAFF			
DEVJI P ARDE	1 st FLOOR WING 1 AND 4	7AM TO 3PM	1
MUKESH RAORANE	1 st FLOOR WING 1 AND 4	7AM TO 3PM	1
SUNIL VASANT DANDEKAR	1 st FLOOR WING 1 AND 4	12PM TO 8PM	1
UMESH PATIL	1 st FLOOR WING 1 AND 4	12PM TO 8PM	1
TOTAL MANPOWER			21

LIMITATIONS OF THE STUDY:

- The role of the housekeeping staff is not same each day hence it is difficult to track the time and motion of the each staff .
- The intern was introduced to each staff by one to one interaction. As the staff knew their activities were being observed by someone, naturally the they try to show the 'desk behaviour'.



RECOMMENDATION

- Cleaning including dry mopping and wet mopping should be done only before closing the department so there is no cleaning work at the morning and there is more focus on the patient.
- Only dusting and little touch up can be done in the morning before starting of the patient footfall.
- In Gamma department and physiotherapy if there are less cases the same attendant can be transferred to any other department as a reliever or can be sent to other department to help other attendant where there are more number of patients mostly in the ENT department.
- In the ENT department tea can be ordered from FSD department like all other departments. As preparing tea for the staff and consultant consumes more time.
- Attendant staff should only do bottle refilling for consultants and not for other staff as it consumes time.
- At least 2 Wheelchairs in cardiology department and 2 wheelchairs in neurology department are to be kept so as to patient does not have to wait, as attendant has to bring the wheel chair from the ground floor to transport patient.



- In AKD Department HD sets for each shift can be brought altogether in the morning and the used HD sets can be given in the night shift before closing the department, this will consume less time of the attendant and can the attendant can focus on the patients.
- Duty roaster is prepared in such a way that the manpower is used efficiently and there is no idle time for any staff. And all staff are to be put in rotation in each department in every two weeks so that all the attendant staff can be trained for all the activities performed in each department.
- 2 faculty staff should be kept on duty in the morning and 2 in the evening shift so that one staff can manage cleaning and the other staff can manage patients.





SCOPE TAGGING REASONS FOR OPD REFUND



PRESENTED BY:
MS SIDDHI RAJENDRA
SHASANE
ROLL NO: 1209

INTRODUCTION AND OBJECTIVE:

- OPD service vouchers are refunded for various reasons right from errors by billing staff, waivers by Doctors, appointment cancellations etc., capturing reasons for refunds will give management an insight to understand the reasons for refund for audit purpose and keeping track of refunds.
- Expectation from this project: Development of OPD CARE module, Hinduja Clinic Refund Vouchering.



SCOPE:

- In the refund module there is no set of fixed reasons when the service vouchers are refunded. The billing staff has to state the reasons for the refund by typing in the module.
- Besides there is no standard format for the reasons that are stated. Every staff types in their own way and style which makes it difficult for the managers and supervisors to keep a record and track of the refunds and also to understand.
- Some of the staff hastily do not type the reasons at all which makes it difficult for the manager / supervisor as he/she has to refer the refund vouchers to track a refund or for any audit purposes. The reasons for the amount is stated 'on paper' but there is no system in the module to keep a track for the same.
- The typing of the reasons consumes the time of the billing staff, as there are many refunds that are to be processed every day.
- So the scope of this report is to develop a system in the module which states the readymade reasons for the refunds that are being processed daily and if there are any other reasons besides the readymade reasons given, the reason should be mandatorily stated in the system without which the data cannot be saved.



MATERIAL AND DATA COLLECTION:

- **Research design:** Descriptive cross sectional study
- **Sampling method:** Non-probability sampling method
- **Sample size:** 1671 OPD Refunds for the month of May
- **Duration of study:** 15th June 2021- 1st July 2021
- **Data collection source:** Refund record of May given in excel sheet by OPD supervisor.
- Studied refund vouchers and reasons for refund by personally checking the vouchers.
- **Analysis tool:** Microsoft Excel



RECOMMENDATION:

- After the analysis of the refunds which were processed for the month of May, for better classification Codes and Sub codes were made for each reason stated by the billing staff for the refund.
- The codes stated the responsible person or department for the particular refund and the sub codes states the main reason for the refund.
- In the refund module, the reasons can be stated with 2 drop downs, 1st drop down will state the codes, 2nd drop down should have the sub-codes. The codes and sub-codes are as follows:



CODE AND SUB-CODE:

a) CODE: As per the department note:

SUB-CODE:

- PFT
- X-RAY
- EEG
- EMG
- HISTOPATHOLOGY
- LABORATORY
- MRD
- AKD

a) CODE: Consultant

SUB-CODE:

- Asper consultant's note
- Change in the treatment
- Rescheduled appointment
- No charge
- Free OPD
- To be charged as Normal clinic
- Change in the test
- Transfer of patient under other consultant



CODE AND SUB-CODE:

- a) **CODE: AS per Email**
- a) **CODE: As per Officer**
 - b) **SUB-CODE:**
 - Dummy voucher
- a) **CODE: Health check up**
 - b) **SUB CODE:**
 - Included in the package
- a) **CODE: Laboratory**
 - b) **SUB CODE:**
 - No growth/ABS



CODE AND SUB-CODE:

a) CODE: Staff

b) SUB CODE:

- Wrongly charged
- Wrong/No Nikshay ID mentioned
- Wrong/ No credit party selected
- Wrong name/surname
- Wrong gender
- Wrong Age
- Wrong mode of payment
- Wrong reference ward
- Wrongly made in clinic
- Wrong HH number
- Wrong consultant selected
- Wrong reference selected



CODE AND SUB-CODE:

a) CODE: Human Resource

b) SUB CODE:

- Pre-employment test
- Staff dependent
- Retired staff

a) CODE: On account deposit

b) SUBCODE:

- No change
- Deposit refund
- OPD to IPD

a) CODE: Patient

b) SUB CODE:

- As per patient note/ request
- Request to change mode of payment
- Paid twice
- Wrong information given by the patient
- Name change for claim purpose



CODE AND SUB-CODE:

a) CODE: PRD Discount Patient

a) CODE: Research patient

b) SUB CODE:

- T1D1
- Dr Udwardia
- Dr Phulrenu Chauhan
- Other consultants

a) CODE: System error

b) SUB CODE:

- Discount is not reflected
- Voucher saved twice
- EDC Machine error
- Others



CODE AND SUB-CODE:

a) **CODE: Vaccination center**

b) **SUB CODE:**

- As per department note
- Less gap between 1st and 2nd dose
- Patient was Covid positive within 3 months'
- Planning pregnancy

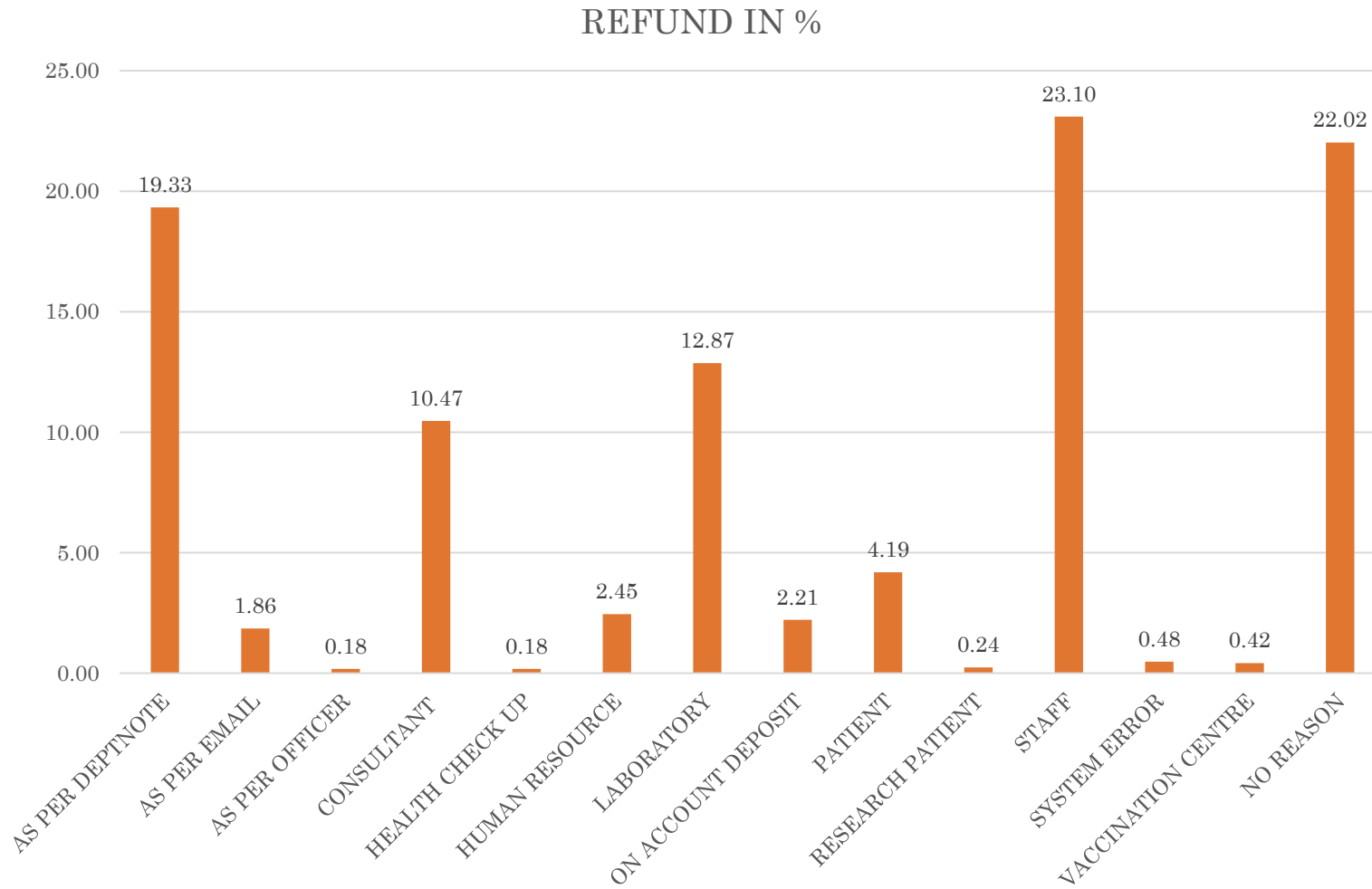
CODE: OTHERS

b) **SUBCODE:**

- This reason can be used when there is no code and sub code for the refund available in the drops. The reason can be typed and the reason should be stated **mandatorily** without which the system should not save the refund voucher. This will help to track the reasons easily for record for every OPD refund transaction.
- The software module should have an option to import the saved data into an excel sheet for records and audit purpose.



ANALYSIS



CONCLUSION:

- As per the graph the major refunds are because of staff error and 22.02% refunds that are been processed for the month of May 2021 has **No Reason** stated for the refund which shows that there are refund reasons written on the refund voucher but there are no records in the system to refer and to keep track to.
- Hence it is necessary to develop a software module that can be user friendly, time saving and easy to track refunds and maintain record.



Thank You

