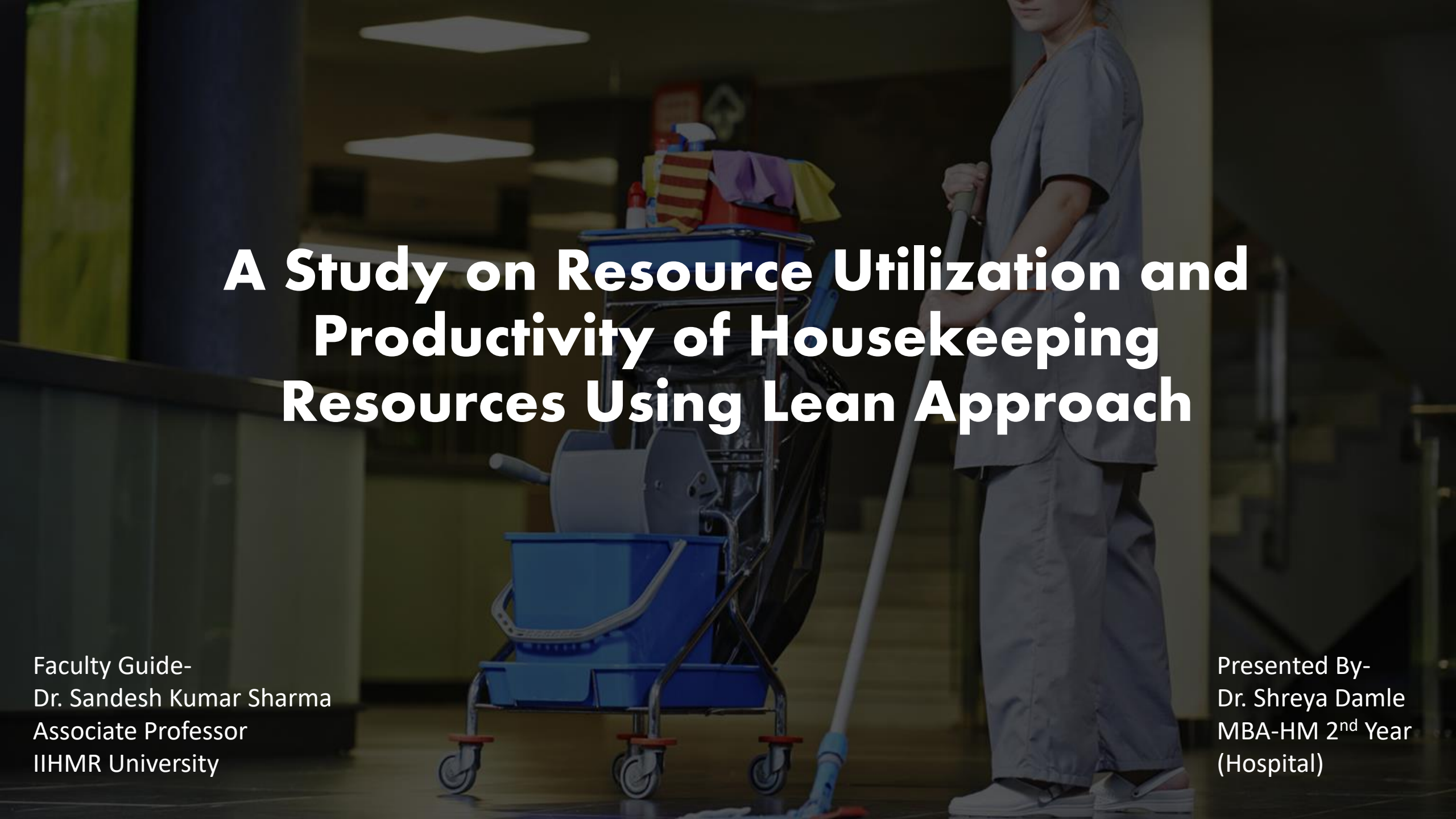

A Study on Resource Utilization and Productivity of Housekeeping Resources Using Lean Approach

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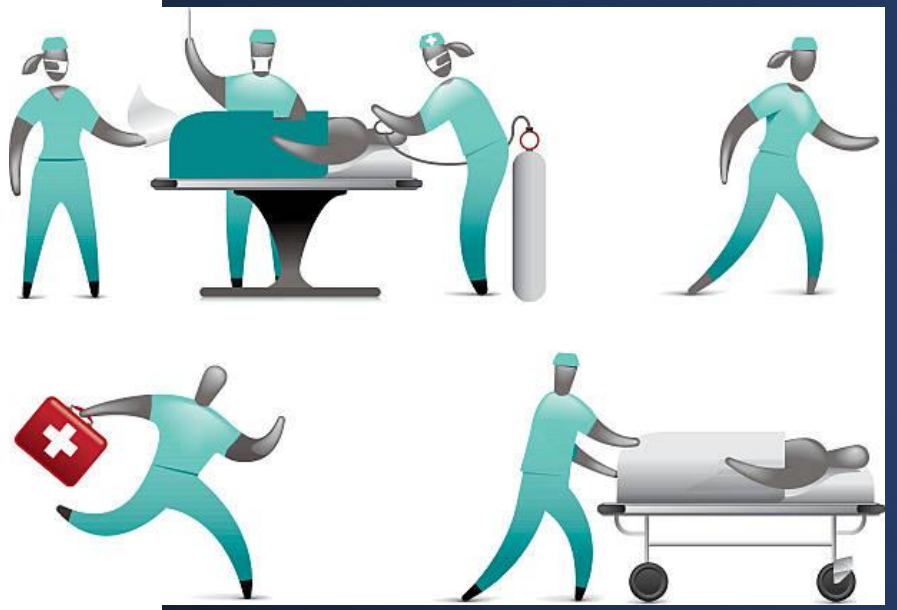
INTRODUCTION

Housekeeping plays a crucial role in providing a clean, safe, orderly, and functional environment for both the patients and the hospital personnel.

Responsibilities of housekeeping resources-

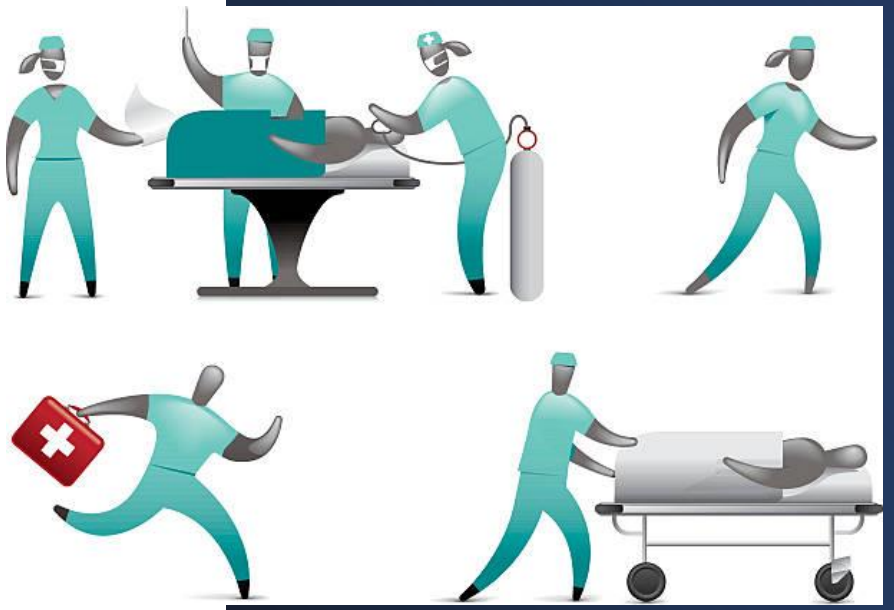
- Maintaining cleanliness in the hospital
- Linen and laundry management
- Biomedical waste management
- Patient assistance within the wards
- Patient transportation
- Sample transportation to laboratory and blood bank
- Assisting in administrative tasks like files and documents transportation, etc.



Productivity and resource utilization, in the context of this study, refers to the efficiency and effectiveness of housekeeping services in maintaining cleanliness, facilitating all the patient care activities, and performing various transportation tasks.

OBJECTIVES

1. Increase the availability and accessibility of housekeeping staff in their respective wards.
2. Identify gaps in the working process of housekeeping staff.
3. Process improvement of housekeeping services using lean tools like VSM, RCA, etc.



METHODOLOGY

The Study was conducted at In-patient wards of NH MMI Narayana Superspeciality Hospital, Raipur.

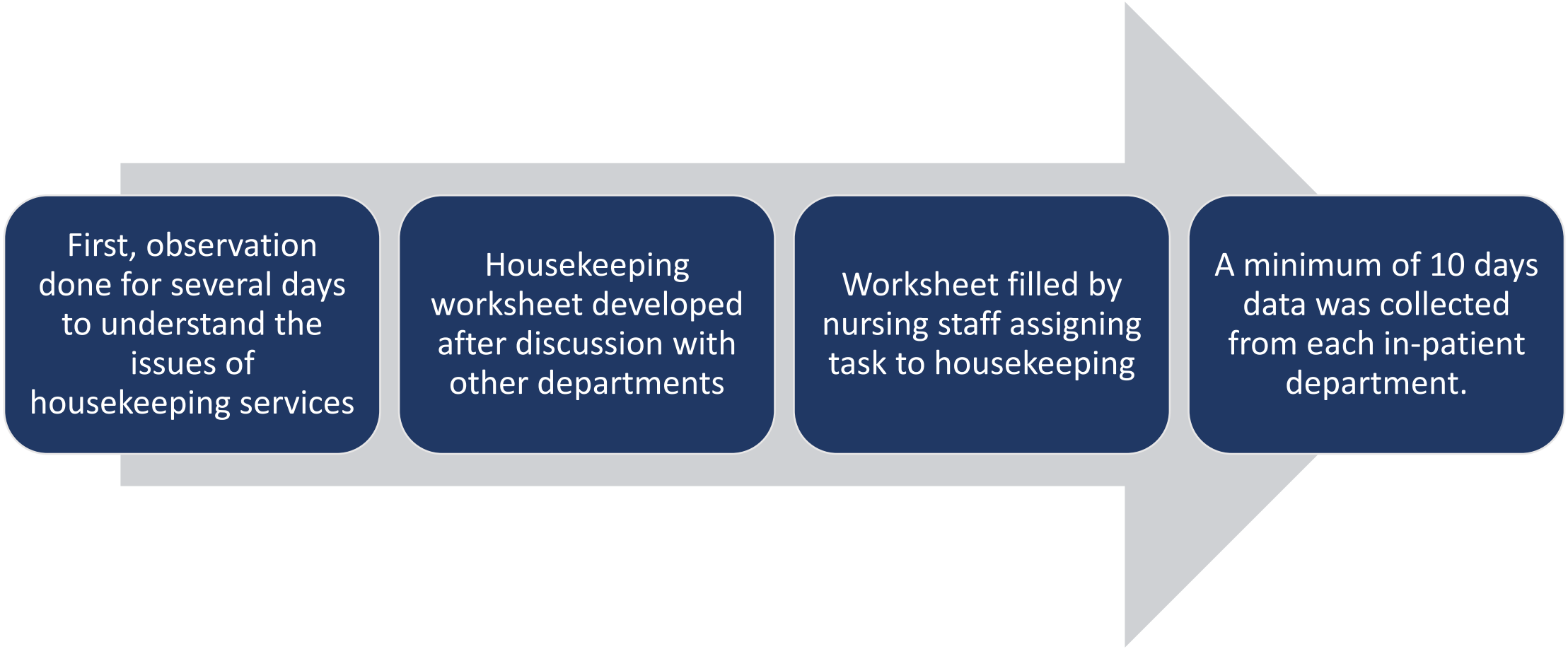
Descriptive observational study design was used with convenience sampling technique.

A sample size of 2770 data entries was taken for the study.

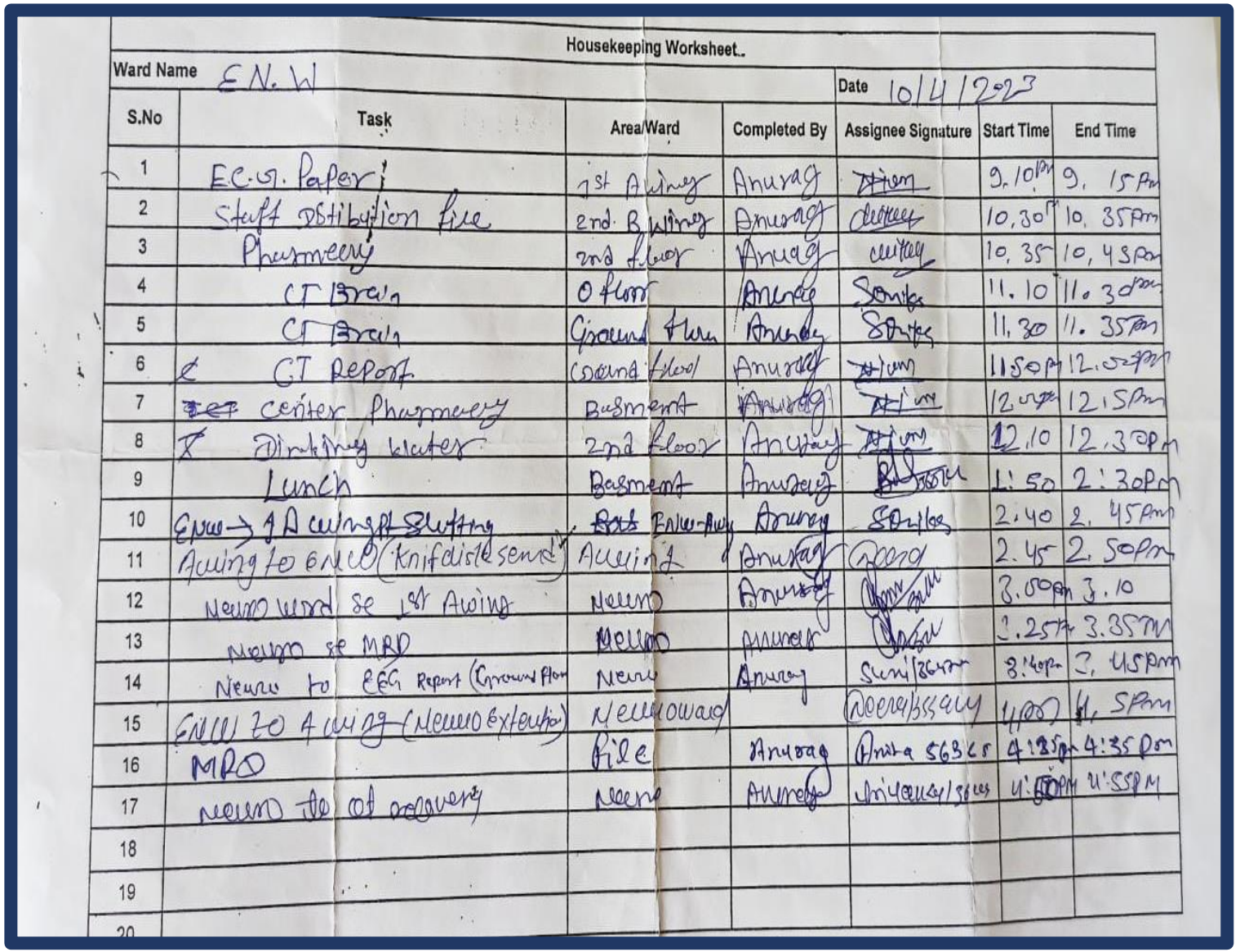
Study tools like Microsoft Excel and Lean tools like value stream mapping, root cause analysis were used.

Data collection was done from April 01, 2023, to May 05, 2023.

Data Collection Procedure



DATA COLLECTION



Housekeeping Worksheet

Ward Name: E.N.W

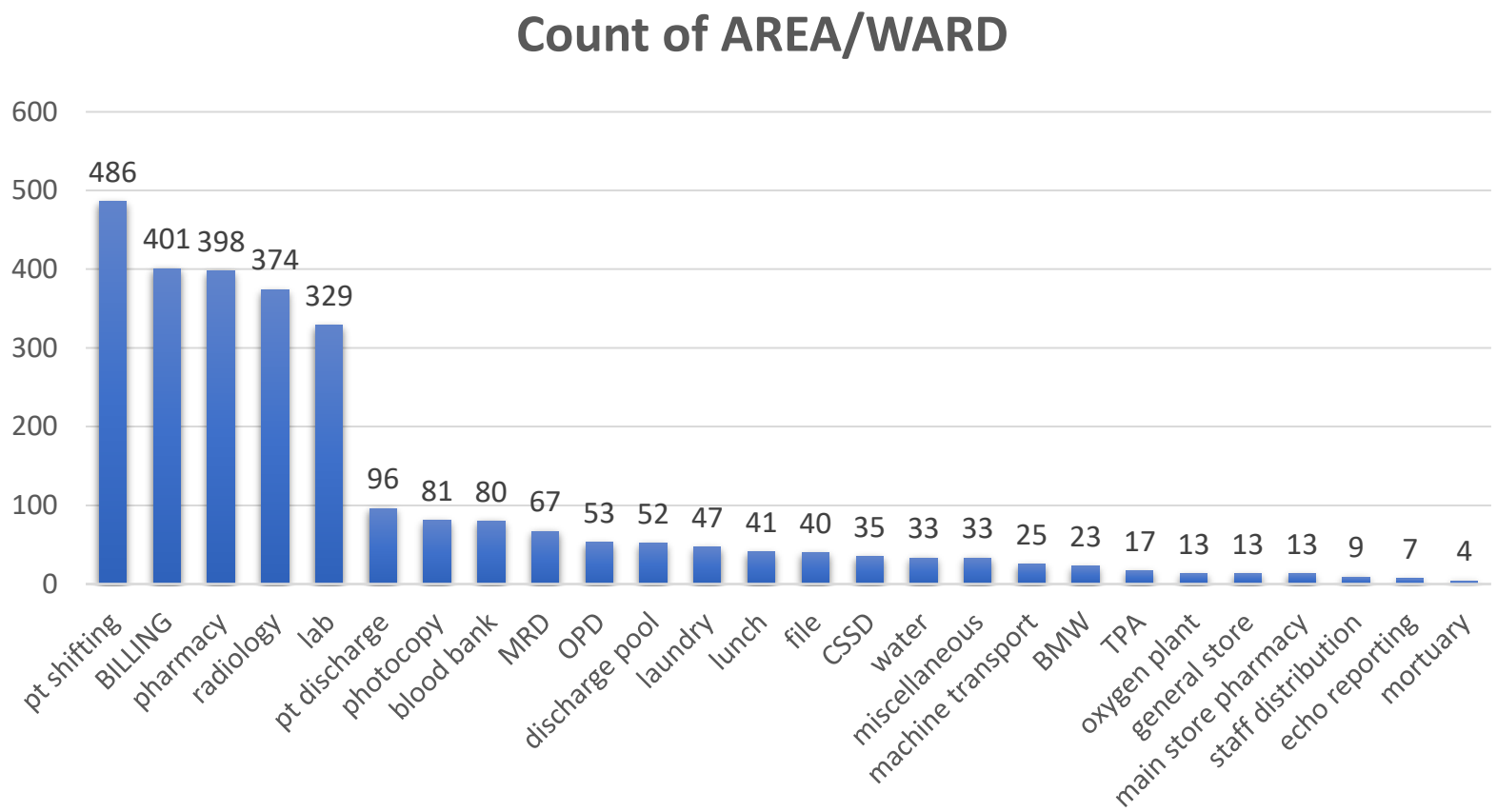
Date: 10/4/2023

S.No	Task	Area/Ward	Completed By	Assignee Signature	Start Time	End Time
1	E.C.G. Paper	1st A wing	Anurag		9.10	9.15
2	Staff distibution file	2nd B wing	Anurag		10.30	10.35
3	Pharmeery	2nd floor	Anurag		10.35	10.45
4	CT Brain	0 floor	Anurag		11.10	11.30
5	CT Brain	Ground floor	Anurag		11.30	11.35
6	& CT Report	Ground floor	Anurag		11.50	12.00
7	~~ECG~~ center Pharmeery	Basment	Anurag		12.00	12.15
8	X Drinking Water	2nd floor	Anurag		12.10	12.30
9	Lunch	Basment	Anurag		1.50	2.30
10	ENW → 1A wing ~~Shifting~~	~~Out~~ Enw-Aw	Anurag		2.40	2.45
11	Awing to ENW (knife dish send)	Awing	Anurag		2.45	2.50
12	Neuro ward se 1st Awing	Neuro	Anurag		3.00	3.10
13	Neuro se MRD	Neuro	Anurag		3.25	3.35
14	Neuro to ECG Report (Ground Flor	Neuro	Anurag		3.40	3.45
15	ENW to A wing (Neuro Extention)	Neuro ward			4.00	4.05
16	MRD	File	Anurag		4.35	4.35
17	Neuro te of recovery	Neuro	Anurag		4.50	4.55
18						
19						
20						

DATA COLLECTION AREAS	
CRITICAL WARDS	MICU 1
	MICU 2
	CICU
	ITU
	HDU
NON-CRITICAL WARDS	Deluxe ward
	Superdeluxe ward
	1A ward
	Executive neuro ward
	Cardiac general ward
	3A General ward
	3B nephron ward

KEY FINDINGS

AREA-WISE ANALYSIS



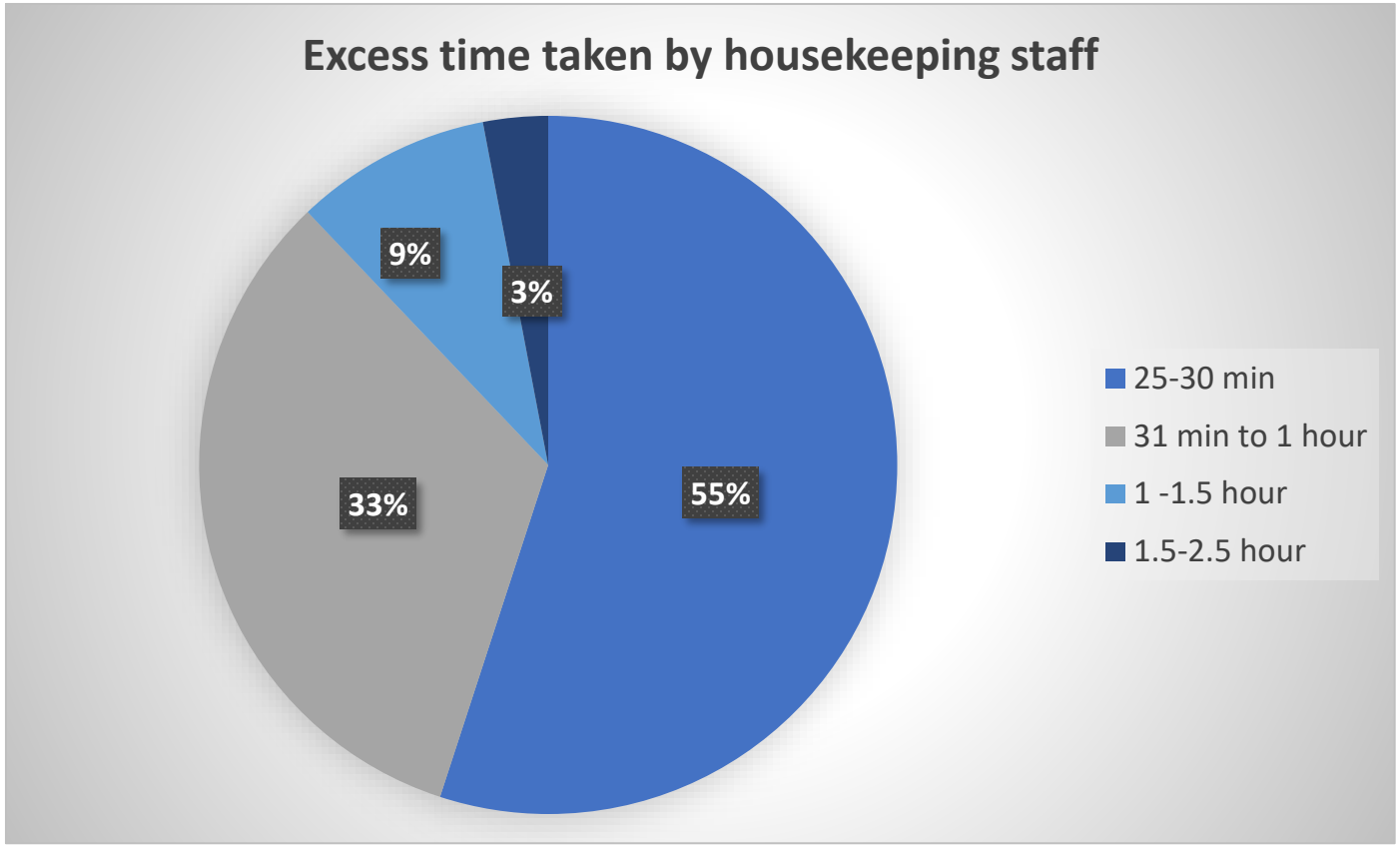
KEY FINDINGS

TIME-WISE ANALYSIS

AREA	Average of Minute
pt shifting	00:18:24
BILLING	00:15:54
pharmacy	00:12:16
radiology	00:17:05
lab	00:16:26
pt discharge	00:15:15
photocopy	00:13:27
blood bank	00:19:40
MRD	00:15:21
OPD	00:15:16
discharge pool	00:12:13
laundry	00:20:18
lunch	00:29:28
file	00:10:27
CSSD	00:19:27
water	00:12:25
miscellaneous	00:14:58
machine transport	00:20:43
BMW	00:19:16
TPA	00:15:18
oxygen plant	00:21:32
general store	00:35:28
main store pharmacy	00:26:55
staff distribution	00:09:27
echo reporting	00:07:09
mortuary	00:17:30
Grand Total	00:16:21

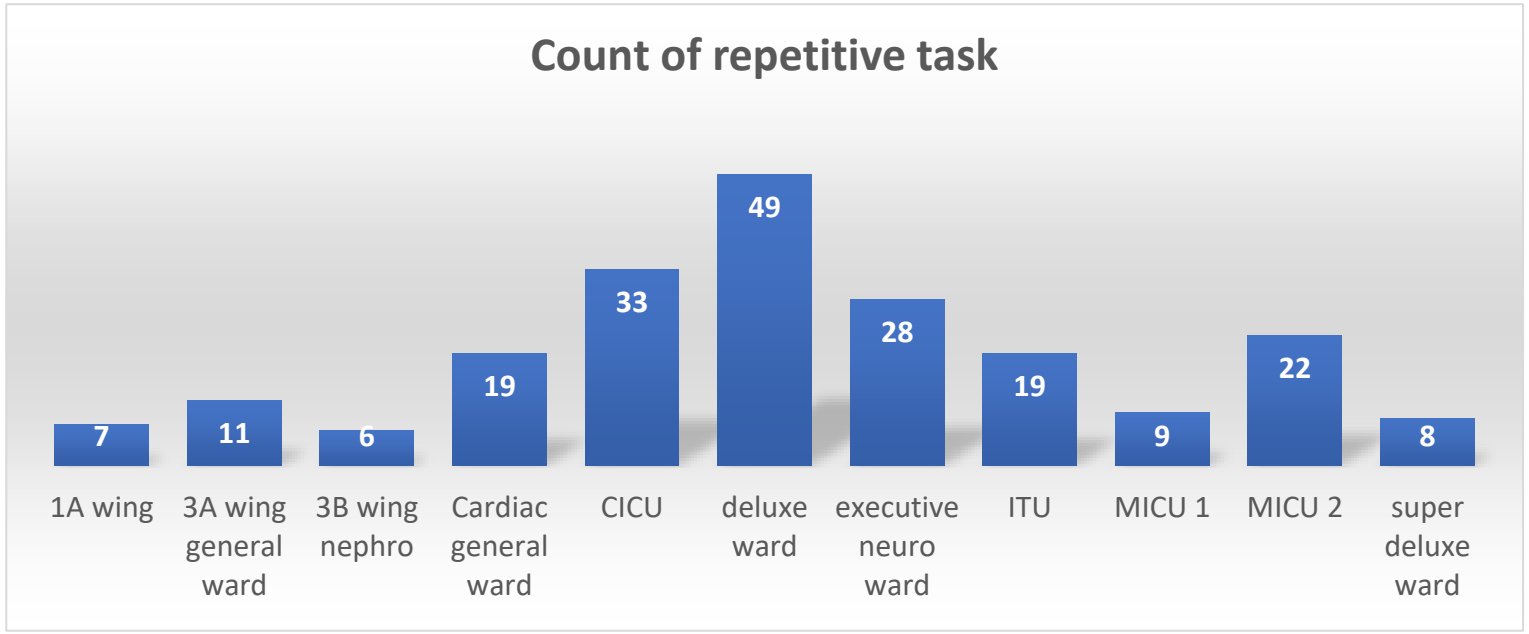
KEY FINDINGS

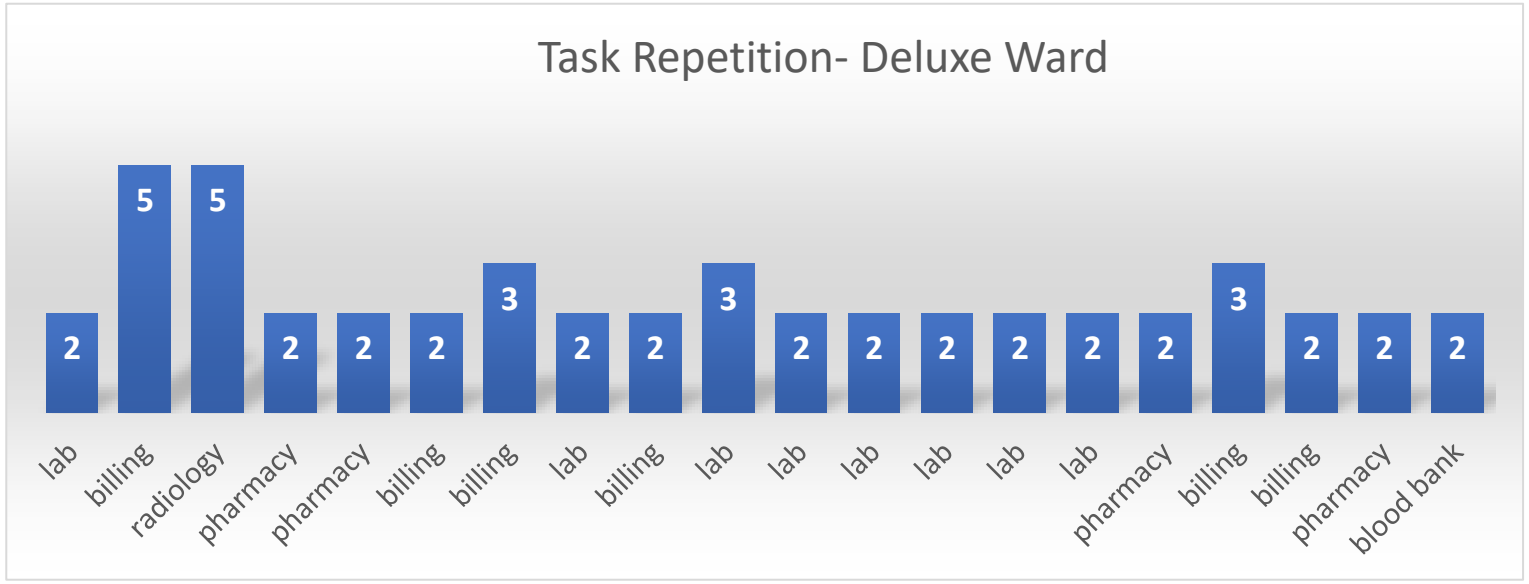
TIME-WISE ANALYSIS



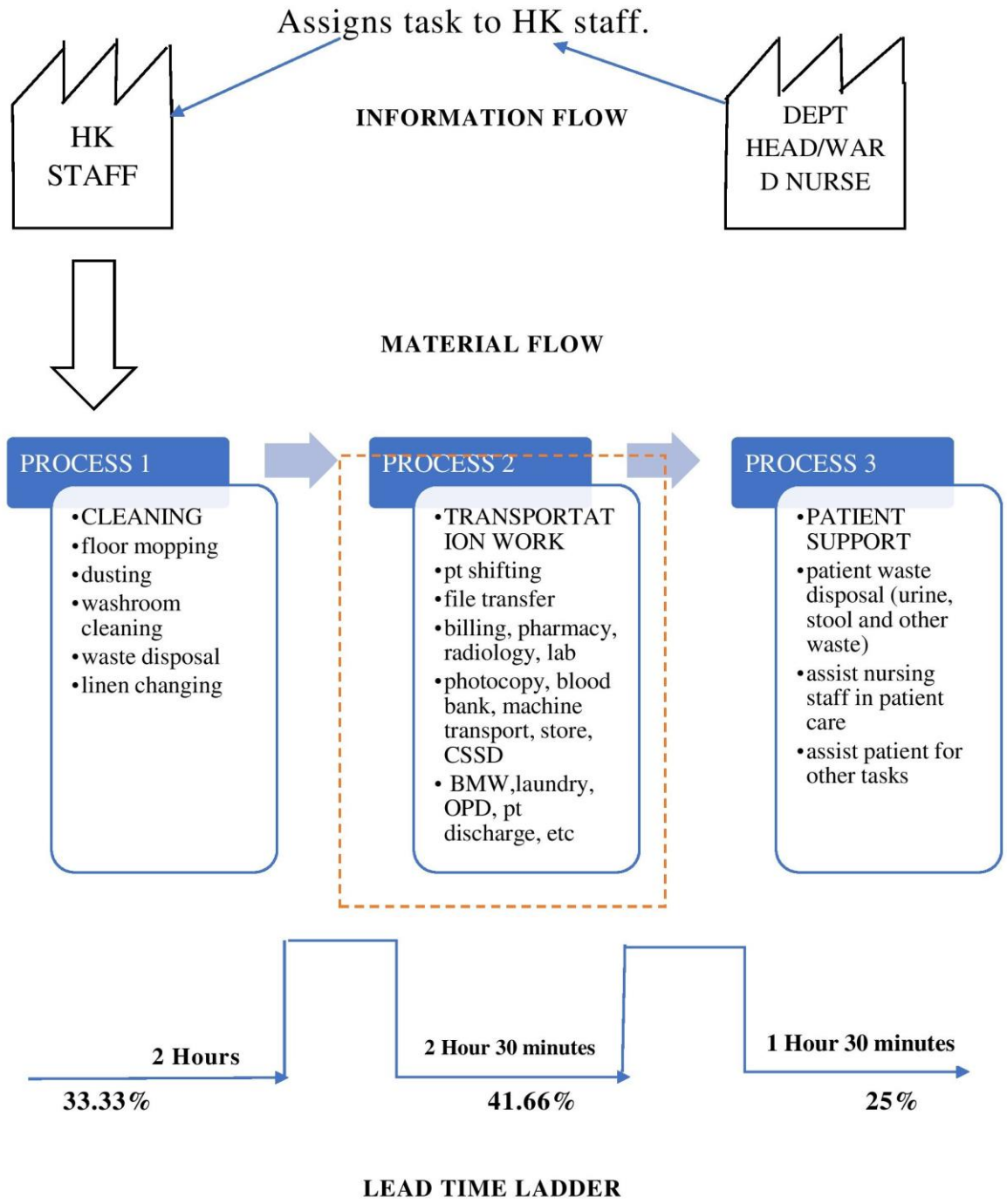
KEY FINDINGS

ANALYSIS OF TASK REPETITION





Value Stream Mapping



ROOT CAUSE ANALYSIS

Resource utilization and productivity of housekeeping staff

Manpower

lack of willingness to work in HK staff due to heavy workload

lack of coordination between ward nurses

Inefficient communication between ward nurses

System & Policies

Communication Gap between departments

No defined TAT for any task done by housekeeping staff

Responsibilities of HK staff not defined properly

Process

Poorly defined housekeeping work process

Inadequate supervision by floor Housekeeping Supervisor

NON-VALUE ADDING ACTIVITIES

Non-value adding activities	Stakeholders	Action Plan
Repetition of same task such as sample transportation, IP pharmacy, etc	Ward Nurses	Improve communication and coordination between nurses
MRD for file transportation of discharged/diseased patients	Housekeeping staff	Assign dedicated housekeeping staff to collect files from all wards
Machine transportation (EEG, ECG, USG machine)	Housekeeping staff	Assign trained housekeeping staff for machine transportation (will also reduce wear and tear of portable machines)
Task like Photocopy which is 81 times in 10 days can be eliminated.	Housekeeping staff Ward nurse	Briefing to be given to nurses as all the documents are available in the system present in all departments. The nursing staff can directly print the required documents from there rather than sending HK staff for same.
HK staff repeatedly visit IP pharmacy to bring as well as return drug.	Pharmacist Housekeeping staff	Communication with the IP pharmacy to send their own dedicated HK staff for all drug return for planned discharges.

SUGGESTIONS

- Introducing technological monitoring – geotagging
- Dedicated staff for file and documents transfer- MRD, TPA, pharmacy, etc.
- Set a standard TAT for all activities performed by housekeeping staff.
- Trained personnel for machine transport
- Training sessions for nursing staff – for better coordination and effective communication.
- Constructive feedback, recognition of achievements, and opportunities for advancement - motivate staff and contribute to a culture of continuous improvement.
- Regular performance evaluation.
- Performance metrics such as response time, completion of tasks within specified timeframes, and patient satisfaction scores can be used to assess productivity levels.

CONCLUSION

The housekeeping department is the most neglected area of the hospital. Just as nursing is considered to be the backbone of the hospital, the housekeeping department is the backbone of nursing as they assist and support nursing staff in providing quality care to the patient.

In this hospital, the housekeeping staff have a heavy workload as they are responsible for cleaning tasks, assists in patient care and manage the outside tasks as well. That is why it is high time for the hospital managers and administrators to invest in housekeeping resources and to monitor and evaluate them regularly. By applying the recommendations given in this study, healthcare organizations can increase operational efficiency of housekeeping personnel, reduce the cost, and improve the overall patient satisfaction.

THANK YOU