

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

Dissertation Submitted to



The IIHMR University, Jaipur

For the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

In

Hospital and Health Management

By

Dr. Shreya Damle

Under the Supervision and Guidance of

Dr. Sandesh Kumar Sharma

2023

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DECLARATION BY STUDENT

I hereby declare that this dissertation titled a study on resource utilization and productivity of housekeeping resources using lean approach is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

Dr. Shreya Damle

COMPLETION CERTIFICATE



NHMMI/HR/2023/0107

Date: 22.05.2023

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Shreya Damle** student from IIHMR University Jaipur has completed the Internship in **Quality Department** from NH MMI Narayana Superspeciality Hospital, Dhamtari Road, Lalpur, Raipur (C.G.), from 27.02.2023 to 22.05.2023.

She worked well as part of the team during her tenure. We take this opportunity to thank & wish her all the best for her career.

For, MMI Narayana Superspeciality Hospital, Raipur
(A Unit of Narayana Hrudayalaya Ltd.)



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ABSTRACT

Objectives: The housekeeping staff of this Hospital fulfils various essential roles, including maintaining cleanliness and hygiene, managing linen and laundry, biomedical waste management, providing patient support in wards, facilitating patient transportation, transporting samples to pathology, managing supplies transportation, and performing administrative tasks such as transporting files and documents. The study aims to enhance the availability and accessibility of housekeeping staff within their assigned wards to enhance patient care by minimizing the non-value adding tasks performed outside their designated areas. By adopting a lean approach to this study, we can identify opportunities for resource optimization, streamline workflows, and boost overall productivity.

Methodology: The study is an observational cross sectional study design. It is carried out in the In-Patient wards of the NHMMI Narayana Superspeciality Hospital. The study tools used are lean quality tools such as value stream mapping, root cause analysis, etc. Stratified random sampling technique is used for data collection. The collection of data is done by developing a housekeeping worksheet after keen observation of the activities performed by HK staff. A total of 2770 data entries were collected from 12 different in-patient wards within the span of 1 month.

Key results: The key findings of this study show that the major outside activities performed by the HK staff are patient shifting from one department to another, documents transfer to and from billing, medicine transportation to and from pharmacy, blood and other samples transportation to Laboratory, and radiology for investigations. Out of 2770 sample size, 219 entries show that the housekeeping is taking excess time to complete the tasks ranging from 25 minutes to 2.5 hours. Another observation made from the data is that the ward nurses are giving same task to HK staff repeatedly like blood sample transportation to laboratory which can be done collectively. Furthermore, several non-value adding activities were identified, and an action plan was developed to eliminate them. After the value stream mapping and root cause analysis, the implementation plan was developed through a collaborative discussion with the higher authorities.

Conclusion: The study has yielded valuable findings regarding the effective management of housekeeping services in healthcare facilities. The results emphasize the significance of optimizing resource allocation and utilization to improve productivity and overall operational performance. By conducting a comprehensive analysis, this study has identified critical factors that influence the productivity of housekeeping services. These factors include the volume of activities, staff coordination, interdepartmental communication, supervisor monitoring, and more. By optimizing these resources, healthcare facilities can achieve enhanced efficiency, cost reduction, and increased patient satisfaction.

Key words: value stream mapping, non-value adding activities, housekeeping worksheet, root cause analysis.

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I would like to express my deepest gratitude and appreciation to all those who have contributed to the successful completion of this dissertation report.

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Abbreviations

S. No.	Abbreviation	Meaning
1	HK	Housekeeping
2	SOP	Standard Operating Procedures
3	MICU	Medical Intensive Care Unit
4	CICU	Cardiac Intensive Care Unit
5	ITU	Intensive Therapy Unit
6	HDU	High Dependency Unit
7	MRD	Medical Record Department
8	CSSD	Central Sterile Supply Department
9	TPA	Third Party Administrator
10	OPD	Out-Patient Department
11	BMW	Biomedical Waste
12	EEG	Electroencephalogram
13	ECG	Electrocardiogram
14	IP	In-Patient
15	USG	Ultrasonography
16	TAT	Turn-Around-time

CHAPTER 1: INTRODUCTION

Hospitals are constantly striving to optimize their operations and improve patient care. One crucial aspect of hospital management is the effective utilization of resources, which directly impacts productivity and overall efficiency. Among the integral healthcare team members are hospital housekeeping, who play a pivotal role in providing a safe, clean, orderly, and functional environment for both the patient and the hospital personnel ensuring smooth workflow and administrative tasks within hospital wards.

The housekeeping staff of NHMMI Narayana Superspeciality Hospital plays a crucial role in multiple areas, encompassing crucial responsibilities such as upholding cleanliness and hygiene standards, overseeing linen and laundry management, handling biomedical waste, offering patient assistance within wards, facilitating patient transportation, transporting samples to pathology, managing supply logistics, and assisting with administrative tasks like file and document transportation. In this study, we aim to increase the availability of housekeeping staff in their respective wards for better patient care by reducing all the non-value adding work done by ward housekeeping staff outside their designated areas.

Productivity, 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. Factors such as task distribution, task prioritization, staff availability, workload, and time management will be examined to identify potential bottlenecks and areas for improvement. Lean methodology which is used in a number of industries for waste reduction and streamlining of processes is also being used in healthcare organizations nowadays. Using lean quality tools in this study will help to identify non-value adding activities, areas where housekeeping resources are underutilized, and major problems for unproductivity of housekeeping staff.

To conduct this study, a combination of qualitative and quantitative research methods will be employed. Surveys, interviews, and observational studies will be conducted to gather data on resource allocation, task distribution, workflow patterns, etc. Statistical analysis and lean tools will be utilized to identify areas of waste and propose lean solutions.

By implementing the recommendations derived from this research, hospitals can reduce waste, improve the utilization of resources, and enhance the overall efficiency of housekeeping services.

OBJECTIVES

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

CHAPTER 2: LITERATURE REVIEW

Li Chen, et al., 2005 conducted a study on Designing an efficient hospital porter system. This study was conducted at Vancouver General Hospital. The unavailability of hospital porters was the main issue. Data was collected by a series of meeting and interviews with the managers and then a form was made and distributed to the wards. It identified the issues involved in the unavailability of porters like unclear roles and responsibilities, lack of communication, workload, and task priority. About 10 recommendations were given after the data analysis was completed to design a centralized managed porter system [1].

Claus Bossen and Martin Foss conducted a study in February 2016 in San Francisco, CA, USA. It describes the collaborative work of hospital porters. Data for this study was generated in two phases by the second author. In the first phase, the second author took part in the pilot project at Section South which involved visits to wards, usability tests with porters and clinicians, and meetings with the dispatcher and the logistics managers. In the second phase, three-stage ethnographic fieldwork was conducted over a three month period. First, 23 hours of focused participatory observation with nine different porters was conducted over five different days Comprehensive and detailed field notes were taken during or shortly after each observation. The second author was invited to participate because of his knowledge of the UX design of TMS, and as part of his research. Third, 12 open ended interviews were conducted with porters, clinicians, the dispatcher, a union representative, and the managers of the logistics department. With the implementation of new Task Management System, porters gained greater control over their job, awareness among all partners increased, and porters' work was made more visible and answerable by new stakeholders, including the top management [2].

Carly Henshaw in 2015, conducted a study to improve portering efficiency. The main objective of this study is- to develop a generic portering simulation model; the second is to test the model's generality by using it as a decision support tool to improve porter performance at North York General Hospital and Juravinski Hospital and Cancer Centre. After the development of simulation model, further improvement scenarios were tested. The result of this scenario testing yielded an improvement in key performance indicators including dispatch time, turnaround time and percentage of tasks completed within the target time. This evidence-based research was used to support future portering improvements [3].

M Hasan, et al., conducted a study on Improvement of healthcare system by using lean tools in cardiology department in Khulna Medical centre in Bangladesh. Data collection was in the form of survey questionnaire and the sample size was 130 patients. To identify the problems in the cardiology department, the study implemented lean management tools to understand the causes of the problem. Tools like VSM (value stream mapping) and fishbone diagram for RCA (root cause analysis) was used to understand the issues. After implementation of these

techniques, the patient capacity increased by 39%, ideal time increased by 9.2%, and utilization time increased by 38.46%.[4]

Leticia Bianchini de Barros, et al., 2021 conducted a study on Lean healthcare tools for process evaluation: an integrative review. For this study, an integrated literature methodology was used. 33 articles were selected for the analysis. The main findings from these articles was that the major lean tools used in healthcare organizations are DIMAC (18 studies), VSM (17 studies), SIPOC (10 studies), Ishikawa diagram (9 studies), and 5S model (7 studies) [5].

Siti Haizatul Aishah Haron and Rohaizan Ramlan conducted a study in Malaysia, in 2015. The study highlights the importance of value stream mapping, a lean management tool to understand the process flow and structure of any department. Data was collected quantitatively from a clinic in Johor, Malaysia. The results show that VSM helps to identify the non-value adding activity which can be implemented to improve the process flow. “It shows that value added time is 1999 sec. and non-value added time is 3602 sec. as non-value added time is more, waste is occurring. Through this, the study attempts to reduce the non-value-added time to improve the process [6].

Patrick Schittekat and Tomas Eric Norlander in 2012 conducted a study on optimized patient transport in Norway. The study identifies the problems related to patient transportation for investigations, operation theatres and other care departments. A few problems are delay in patient transportation, workload imbalance of transporters, requirement of more than one porter for patient transport, etc. and solutions were developed to reduce these problems. The porters were given mobiles phones to receive new requests, it also helped to track the position of porters. The proposed solution aims to reduce patient waiting time and transporter idle time by gathering information from a central database [7].

Another article highlights the importance of lean concept in hospitals conducted by Reneta Brajer Marczak and Andrzej Wiendlocha in Wroclaw Poland in 2018. The study was conducted in two district hospitals of Wroclaw to examine the possibility to introduce lean possibility. The study concluded that lean tools which have been used in the manufacturing industries can be helpful for hospital and healthcare facilities as well. It is believed that the success of a lean system depends in 80 to 90% on whether the employees accept the suggested changes, and in 10-20% on the effective implementation of the appropriate tools. Lean tools can be used in hospitals to increase the patient’s satisfaction, reduce inefficient waiting times for tests, test results or diagnosis, reduce the costs of stock, e.g., medicines, improve the punctuality of auxiliary medical services.[8]

Minimizing a maximal ergonomic burden on intra-hospital patient transportation, a study conducted by Alexander Frohlich von Elmbach, Armin Scholl, and Rico Walter highlights

the concerns related to transportation of patients by the hospital porters. The porters, who carry out the physical transport of patients within the hospital faces high physical liability as well as risks of illnesses and injuries due to work-related musculoskeletal disorders. Minimizing their total travel time might serve as a proxy to reduce physical stress. Efforts to optimize the intra-hospital transportation should therefore not only concentrate on timing, economic, or patient-related issues but also on ergonomic aspects [9].

Alexandre Beaudry, et al., 2006 conducted a study on Dynamic Transportation of patients in hospitals. The real time data was collected from a German hospital. The problems identified were delay in waiting time for patients, idle time in area waiting for patients, underutilization of resources, task prioritization, etc. it also highlights the importance of hospitals transporters or porters in timely patient transportation. As a solution, a two-phase heuristic procedure was developed to solve a dynamic dial-a-ride problem arising in a hospital context [10].

CHAPTER 3: METHODOLOGY

Sample size- a total of 2770 data entries were collected for analysis.

Study design- descriptive observational study design is used.

Study area- In-patient departments of NHMMI Narayana Superspeciality Hospital.

Duration of data collection- 01 April 2023 to 05 May 2023.

Data collection tools- a housekeeping worksheet was prepared for data collection.

Analytical tools- Microsoft Excel was used for data entry and analysis. Lean tools like Value Stream Mapping (VSM) and Root Cause Analysis (RCA) were also used.

Sampling technique- convenience sampling.

Study Criteria:

Inclusion criteria- Housekeeping Staff allocated in In-Patient wards including both 6 hours shift and general shift staff.

Exclusion criteria- housekeeping staff allocated in other areas of the hospital (like OPD, radiology department, etc)

Data Collection Procedure

Upon careful observation over the course of several days, gaps were identified in the productivity of housekeeping resources. To gather relevant data and effectively analyse the gap to find appropriate solutions, a housekeeping task worksheet was developed. The worksheet contains details of all the transportation work carried out by housekeeping resources like staff name, task name, area, and time taken to complete each task (Table 3.2).

To ensure accurate data collection, the responsibility of filling out the worksheet was assigned to the nursing staff members who allocate tasks to the housekeeping staff.

Data was collected from 12 different In-patient wards including both critical and non-critical areas (Table 3.1). A total of 2770 data entries were gathered from April 1, 2023, to May 5, 2023, for analysis. To ensure a representative sample, a minimum of 10 days data was collected from each in-patient department.

(Annexure 1 shows a sample of housekeeping worksheet.)

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

Table 3.1 areas of data collection

HOUSEKEEPING WORKSHEET					
WARD NAME-					
DATE	TASK	AREA/WARD	COMPLETED BY	START TIME	END TIME

Table 3.2 housekeeping worksheet

CHAPTER 4: RESULTS/DATA ANALYSIS

AREA-WISE ANALYSIS

Area-wise analysis shows that the housekeeping staff performs 26 different types of tasks and the highest number of visited areas are as follows. Patient shifting is the highest with 486 times, then billing 401 times, IP pharmacy 398 times, radiology 374 times and lab 329 times.

Patient shifting includes shifting of patients from one ward to another, pt shifting for investigations like echo, endoscopy, uroflowmetry, etc. Billing includes financial clearance, file transfer to billing, etc. Pharmacy includes both drug-return for discharge process and medicine delivery from IP pharmacy to wards.

Some tasks like photocopy. MRD, CSSD, machine transport were seem to be non-value adding activities and measures can be taken to eliminate them.

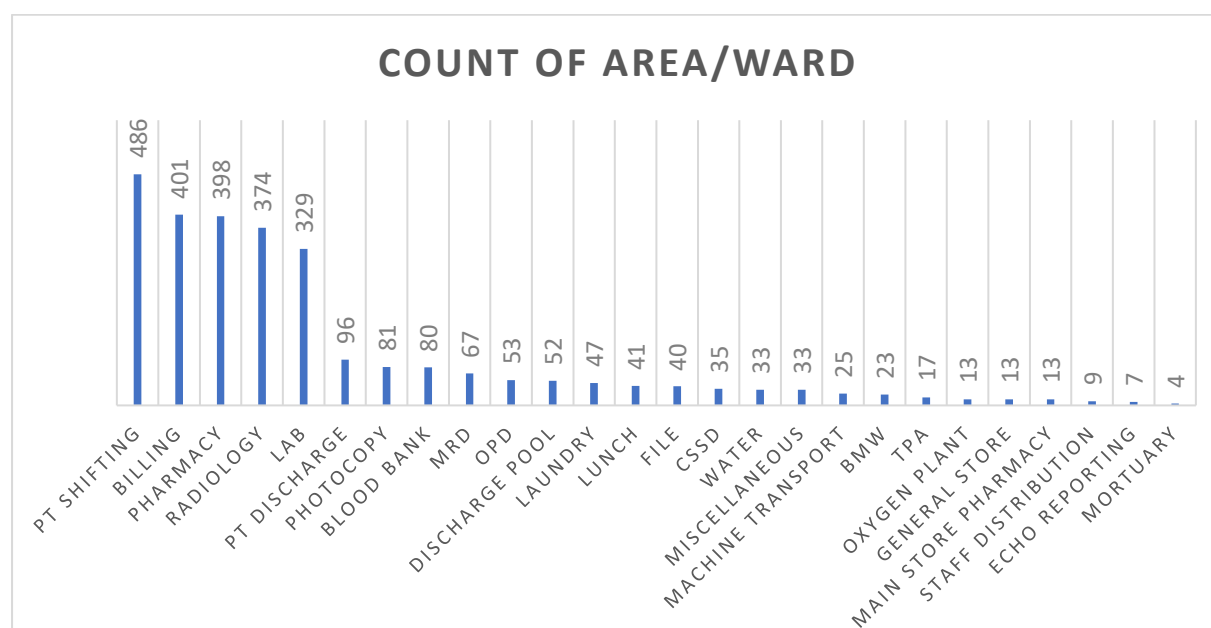


Fig. 4.1: Count of Area/ward

TIME-WISE ANALYSIS

Table 4.1 shows the count as well as average of minute spent by the housekeeping staff to complete each task. The highest time taken on average to complete is General store having 35 minutes. Then 27 minutes for main store pharmacy, 21 minutes for oxygen plant, and 20 minutes for laundry respectively.

AREA	Count of AREA/WARD	Average of Minute
pt shifting	486	00:18:24
BILLING	401	00:15:54
pharmacy	398	00:12:16
radiology	374	00:17:05
lab	329	00:16:26
pt discharge	96	00:15:15
photocopy	81	00:13:27
blood bank	80	00:19:40
MRD	67	00:15:21
OPD	53	00:15:16
discharge pool	52	00:12:13
laundry	47	00:20:18
lunch	41	00:29:28
file	40	00:10:27
CSSD	35	00:19:27
water	33	00:12:25
miscellaneous	33	00:14:58
machine transport	25	00:20:43
BMW	23	00:19:16
TPA	17	00:15:18
oxygen plant	13	00:21:32
general store	13	00:35:28
main store pharmacy	13	00:26:55
staff distribution	9	00:09:27
echo reporting	7	00:07:09
mortuary	4	00:17:30
Grand Total	2770	00:16:21

Table 4.1 Count of area with average of time

Excess time taken by housekeeping staff.

This analysis is helpful to evaluate the unproductivity of housekeeping staff. Out of the 2770 sample size, 219 tasks took excessive time to complete ranging from 25 minutes for lab, pharmacy, and billing to 2.25 hours for general store. The pie chart in figure 4.2. Shows that 1.5 to 2.5 hours taken for 3% of tasks, 1 to 1.5 hours for 9%, 30 minutes to 1 hour for 33 % tasks, and 25-30 minutes for 55% of tasks.

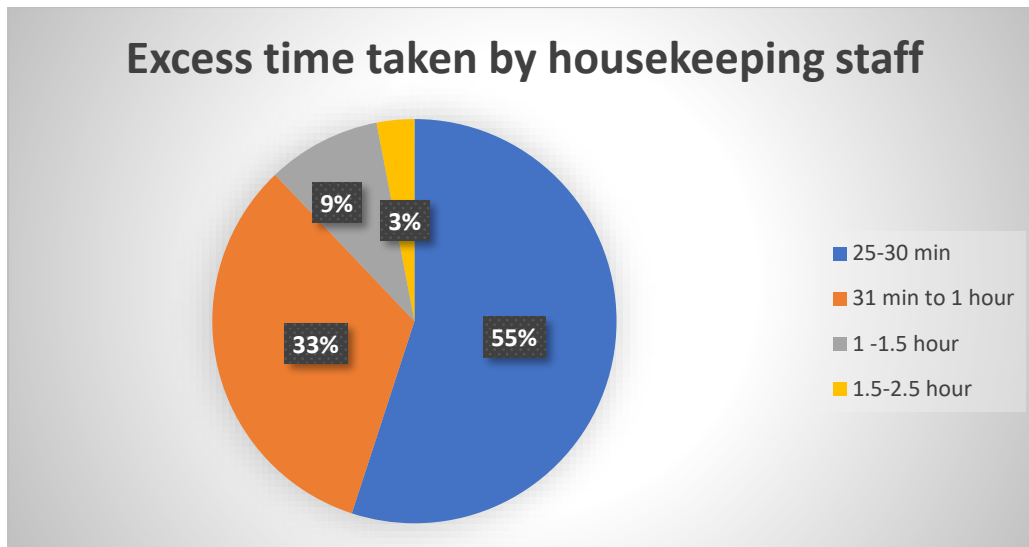


Fig 4.2: excess time taken by housekeeping staff to complete task.

ANALYSIS OF TASK REPETITION

Housekeeping staff were seen going to same area repeatedly for same tasks. E.g., sample transportation to laboratory. For this activity, the ward nurses repeatedly send the HK staff for sample transportation to lab as there is no coordination between the ward nurses and each nurse is sending samples for their assigned patients only. Instead, the ward nurses can coordinate and collectively send the samples at one time avoiding repetition of task. Ward nurses are also sending the HK staff to laboratory to put barcode on sample sent previously.

Fig. 4.3 shows that highest number of repetitions is seen in deluxe ward. Number of repeated tasks was 33 in CICU and 28 in executive neuro ward respectively. It was lowest in 3B nephron ward.

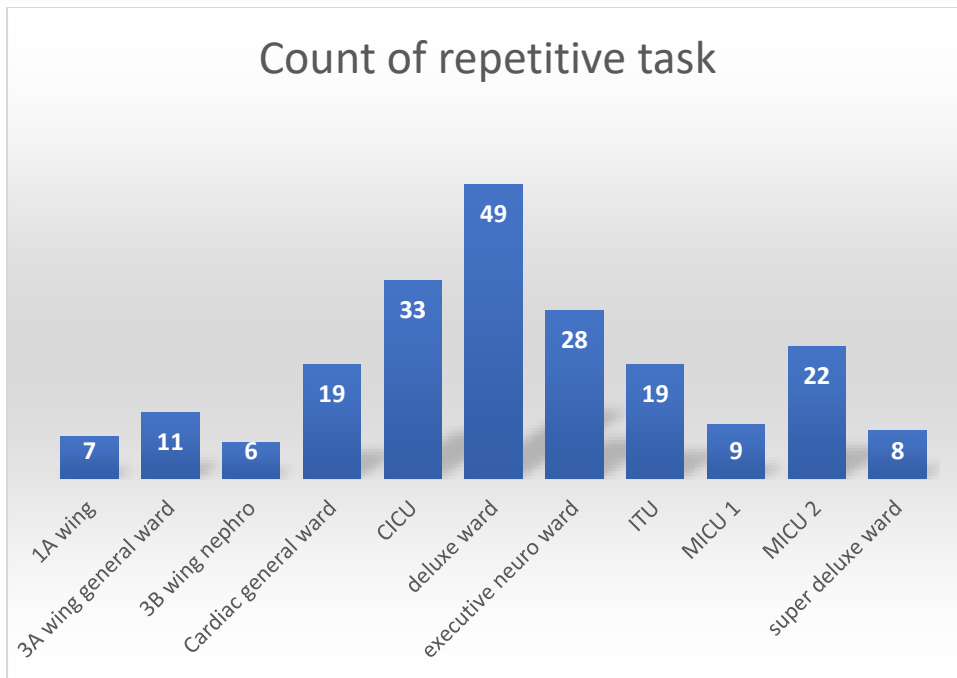


Fig. 4.3: Count of repetitive task

The highest repetition of work is seen in the deluxe ward. Fig. 4.4 shows the details of repetition work in deluxe ward with billing and radiology being the highest. Other tasks like lab, pharmacy, and blood bank are also repeated several times.

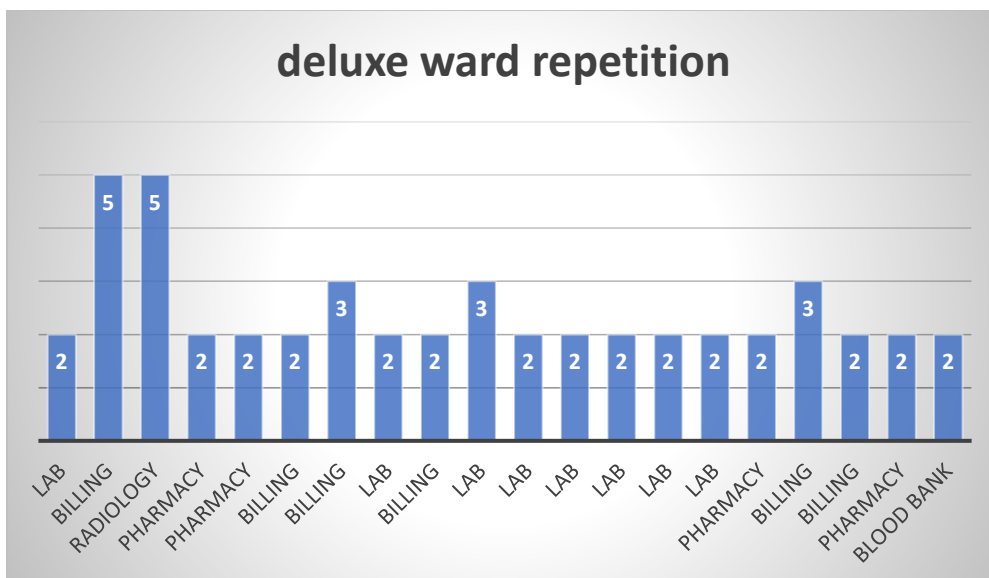
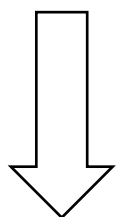
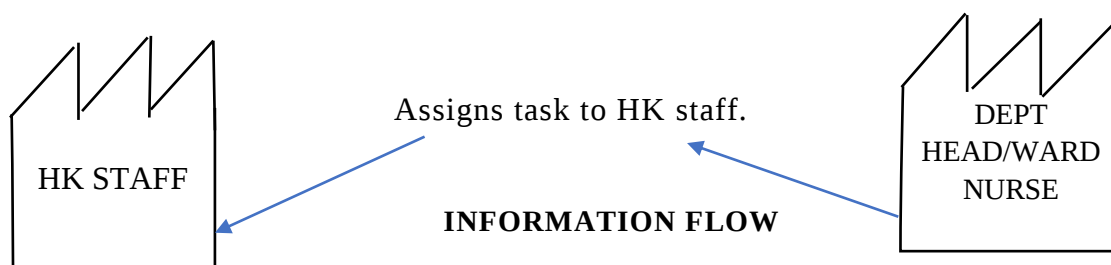


Fig. 4.4: Count of repetition in deluxe ward

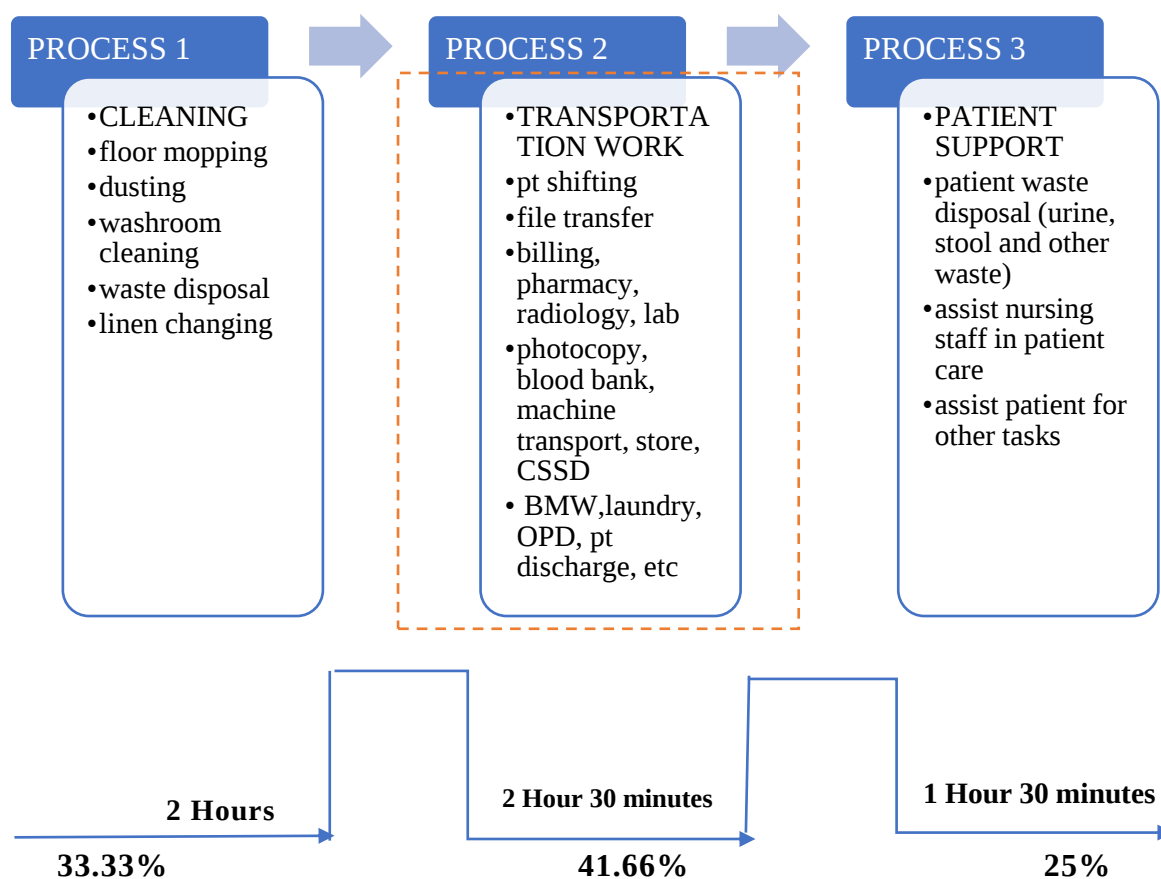
Non-value adding activities	Stakeholders	Action Plan
Repetition of same task like sample transportation, IP pharmacy, etc	Ward Nurses	Improve communication and coordination between nurses
MRD for file transportation of discharged/diseased patients	Housekeeping staff	Assign dedicated housekeeping staff 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.

Table 4.2. List of non-value adding tasks with stakeholders and action plan

VALUE STREAM MAPPING



MATERIAL FLOW



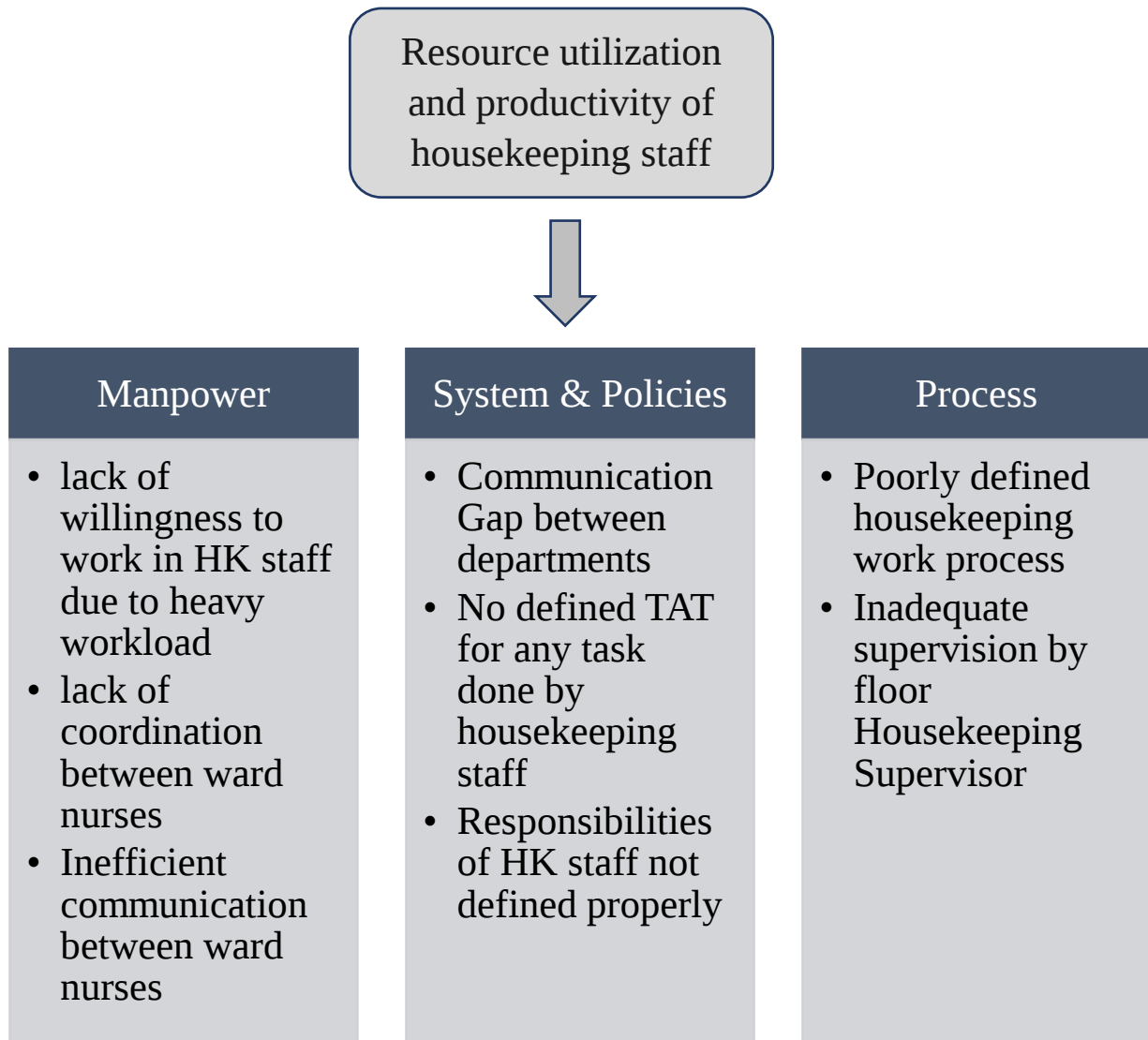
LEAD TIME LADDER

HK STAFF SHIFT- 6 HOURS

NON VALUE ADDED WORK- 41.66%

NOTE: Transportation work is considered non-value adding as it is not monitored by ward nurses or other supervisors and by minimizing this work, we can increase the availability of housekeeping staff in their respective wards.

ROOT CAUSE ANALYSIS



SUGGESTIONS

1. Implement technology for enhanced monitoring of housekeeping staff by utilizing geotagging (GPS tracking devices). This will enable the tracking of housekeeping staff across different departments, ensuring better oversight and accountability.
2. Set a standard Turn-Around-Time (TAT) for all activities performed by housekeeping staff. This will help optimize their workflow, promote efficiency, and ensure timely completion of tasks.
3. Eliminate all the non-value adding activities allowing housekeeping staff to allocate more time to patient care and essential cleaning tasks within the wards.
4. Assign a dedicated housekeeping staff for tasks like file transport to MRD, TPA, machine transportation, linen transportation, etc.
5. Streamline the drug transportation processes and minimize the need for frequent trips to and from the pharmacy, assign housekeeping (HK) staff members within the pharmacy department, who can take on the responsibility of transporting drug returns and delivering medications to the various wards.
6. Performance metrics such as response time, completion of tasks within specified timeframes, and patient satisfaction scores can be used to assess productivity levels.
7. Training to nursing staff for better coordination and effective communication in wards to reduce the repetition of tasks.
8. Comprehensive training program to provide necessary skills and knowledge to handle their responsibilities efficiently.
9. Define and communicate roles and responsibilities of housekeeping staff.
10. Constructive feedback, recognition of achievements, and opportunities for advancement can motivate staff and contribute to a culture of continuous improvement.
11. Regular performance evaluation and feedback mechanisms are essential for monitoring and improving the productivity of hospital housekeeping.

IMPLEMENTATION

After the completion of data analysis, an implementation plan was formulated through collaborative discussions with the key stakeholders, including the Facility Director, senior quality manager, Operations head, Nursing Superintendent, Head of Housekeeping Department, housekeeping supervisors, and other managers and executives. The aim of the action plan is to increase the availability of housekeeping staff within their respective departments.

Phase I of the implementation plan includes the following initiatives:

1. Introducing technological monitoring- after recognizing that there is a lack of supervision by housekeeping supervisors, a geotagging device can be put into the ID cards of all ward housekeeping staff. This device will allow supervisors to track the whereabouts of the staff more precisely and effectively.
2. Dedicated staff for file and documents transfer- to streamline administrative processes, a dedicated housekeeping staff will be assigned for file and document transfer. HK staff assigned in MRD and TPA department will be responsible for handling these tasks. This will ensure efficient documents management as well.
3. Trained personnel for machine transport- a specialized and trained housekeeping staff to be assigned for machine transportation (EEG, ECG, USG machine, etc) to reduce the risk of damage and ensure proper handling of the portable machines. This will also help to extend the lifespan of these equipments and reduce wear and tear.
4. Training sessions for nursing staff- as the study identified that ward nurses play an important role in managing the housekeeping staff, training sessions will be organised for them which will concentrate on improving their ability to assign appropriate tasks to HK staff and explaining the importance of effective communication and coordination between the nurses.
5. Coordination with the pharmacy manager- to address the medicine transportation related issues, communication will be established with the pharmacy manager to dedicate their housekeeping staff to handle the drug return and medicine delivery to wards ensuring timely and secure delivery.

The first phase of the implementation plan will be executed and completed in 45 days. After this period, a comprehensive monitoring process will be initiated to evaluate the impact and effectiveness of the implemented changes by evaluation of various indicators and collecting relevant data to measure the results achieved. By making this assessment, the organisation will be able to determine the effectiveness of the change and identify any additional adjustments or interventions that may be necessary.

CHAPTER 5: DISCUSSION

The study on resource utilization and productivity of housekeeping staff provides a valuable insight into the efficient management of housekeeping services in the healthcare institutions. The hospital housekeeping are essential to maintain a clean, orderly, and functional environment for patients and hospital personnel as well as enabling smooth workflow and administrative activities within the hospital wards. Analysing their resource utilization and productivity can help optimize their effectiveness and contribute to improved operational efficiency.

Our aim in this study is to remove all the unnecessary work done by housekeeping personnel and to ensure their availability and accessibility in the respective wards for better patient support. Using lean quality tools in this study, we can identify areas where resources are underutilized, activities can be eliminated, work process can be streamlined, and productivity can be increased.

The data represents all the outside tasks performed by the housekeeping staff. The major activities include patient shifting from one ward to another (486 times), file transfer to billing (401 times), drug transportation to and from pharmacy (398 times), patient transportation to radiology for investigations (374 times), sample transportation to laboratory (329 times). Other tasks like photocopy, blood bank, MRD, discharge pool for discharge summary, laundry, CSSD, machine transportation is also performed by the housekeeping staff.

One key finding of the study is that the housekeeping staff is taking excess time to complete some tasks ranging from 25 minutes to 2.5 hours which shows lack of seriousness in housekeeping staff and measures are to be taken to minimize the wastage of time of Hk staff.

The study also highlights the role of nursing staff of wards in resource utilization of housekeeping staff. The data shows that HK staff are given same tasks repeatedly by the ward nurses. The highest repetition is seen in deluxe ward, CICU, and executive neuro ward. The major tasks with repetition are pharmacy, billing, and lab.

Furthermore, all the non-value adding activities are identified like file transfer to MRD, photocopy, TPA, machine transport, etc for which plan of action is developed to eliminate these non-value adding tasks.

Based on the findings, a Root Cause Analysis (RCA) was conducted to identify the primary factors contributing to unproductivity and non-value adding activities within the hospital's housekeeping department. The RCA process has allowed for the formulation of valuable recommendations, which have been incorporated into an implementation plan designed to enhance the efficiency and utilization of the housekeeping staff. This plan is scheduled to be executed over a span of 30 days, focusing on targeted improvements within the department. After this, close monitoring and evaluation will be conducted to assess the impact and measure the outcomes of the implemented changes.

CHAPTER 6: 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 nursing staff in providing quality care to the patient.

Through the study, we have identified various elements that are responsible for unproductivity of housekeeping staff. These are, the number of activities assigned to the housekeeping staff, coordination between the ward nurses, ineffective interdepartmental communication, lack of tracking and monitoring by the floor housekeeping supervisors, etc. Optimization of all these elements can lead to improved efficiency and better patient satisfaction.

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. There should be regular performance reviews, training and education programs, feedback strategies can assist in identifying areas for improvement and long-term productivity. 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.

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Annexure 1

Sample of housekeeping worksheet

NHMMI Narayana
Superspecialty Hospital
Unit of Housekeeping

Housekeeping Worksheet

Ward Name E.N.W Date 10/11/2023

S.No	Task	Area/Ward	Completed By	Assignee Signature	Start Time	End Time
1	ECG Paper	1st A wing	Anurag	[Signature]	9:10 PM	9:15 PM
2	Staff Distribution File	2nd B wing	Anurag	[Signature]	10:30 PM	10:35 PM
3	Pharmacy	2nd floor	Anurag	[Signature]	10:35	10:45 PM
4	CT Brain	0 floor	Anurag	[Signature]	11:10	11:30 PM
5	CT Brain	Ground floor	Anurag	[Signature]	11:30	11:35 PM
6	CT Report	Ground floor	Anurag	[Signature]	11:50 PM	12:05 PM
7	Center Pharmacy	Basement	Anurag	[Signature]	12:05	12:15 PM
8	Drinking Water	2nd floor	Anurag	[Signature]	12:10	12:30 PM
9	Lunch	Basement	Anurag	[Signature]	1:50	2:30 PM
10	Expo → 1st A wing & 2nd B wing	1st A wing	Anurag	[Signature]	2:40	2:45 PM
11	Awing to 2nd B wing (Knifedist send)	Awing	Anurag	[Signature]	2:45	2:50 PM
12	Neuro ward se 1st A wing	Neuro	Anurag	[Signature]	3:00 PM	3:10
13	Neuro se MRD	Neuro	Anurag	[Signature]	3:25	3:35 PM
14	Neuro to EEG Report (Ground floor)	Neuro	Anurag	[Signature]	3:40 PM	3:45 PM
15	ENW to 4 wing (Neuro Extent)	Neuro ward	Anurag	[Signature]	4:00	4:50 PM
16	MRD	File	Anurag	[Signature]	4:25	4:35 PM
17	Neuro to 2nd B wing	Neuro	Anurag	[Signature]	4:50 PM	4:55 PM
18						
19						
20						