Conference Paper

Overview of 5S Housekeeping Implementation in Covid-19 Buildings in University General Hospital of Malang

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Abstract.
Housekeeping is necessary in the workplace, especially in healthcare facilities. Housekeeping involves several aspects such as 5S. 5S is a systematic technique used by organizations that comes from five Japanese words: *Seiri* (sort), *Seiton* (set in order), *Seiso* (shine), *Seiketsu* (standardize), and *Shitsuke* (sustain). A comfortable working environment will improve the efficiency, productivity, quality and safety. This study aimed to describe and evaluate the application of 5S in the Covid-19 infectious installation at a hospital in Malang, especially in the patient care rooms in the intensive care unit, the operation rooms, and the patient care ward. This study used observational and descriptive approaches with a cross-sectional design. The sample included authorized officers in each area. According to the findings, the implementation of 5S in the Covid-19 infectious installation needs to be increased, become the priority, and be supported by top-level management. However, it is recommended that a longitudinal study be conducted to investigate whether there are long-term benefits attained from 5S implementation in the Covid-19 infectious installation.

Keywords: housekeeping, 5S, Covid-19 and infectious installation

1. Introduction

Over the past decades, 5S practice is commonly used among Japanese organizations to improve the workplace environment, enhance human capacity and increase productivity. Since Takashi Osada introduced it in the early 1980s, the application of 5S tool can significantly increase the operational performance of the organization, cleaning practices, occupational health and more. Modern management in companies is not only about implementing quality management system based on the ISO standards series, but also to continuously improve its operational process. In order to implement total quality management in the operating level, 5S is the first methodology that achieved significant results. 5S is the tool help organizations to improve the workplace performance. 5S

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is a management tool from Japan, focusing on creating a good environment in the enterprise, ensuring adherence to standards and in the process, promote the spirit of continuous improvement. [1,2]

Seiri, seiton, shitsuke, seiketsu meaning classification, order, cleanliness, standardization and discipline.

1.1. Seiri = Sort out

This step focuses on getting rid of everything that is not useful in the workplace: residues, spaces, unused tools, equipment, scraps and replaced documents.[3] The benefits of seiri are, process improvement by cost reduction, stock decreasing and better usage of the working area and prevention of losing tools. [4]

1.2. Seiton = Set in order

The main purpose of stability is to find the practical deposit of each necessary tool and these repositories must be properly marked. Each element, which is necessary at work, will be organized in a way that can be easily found when needed. Setting in order ensures that it's easy for everyone to find, use, and place the item away. The aim of all these actions is to eliminate futile research or wastes, improve work safety and make the work environment better.[3,4]

1.3. Seiso = Shine/Sweep

This step can be performed in parallel with the stage of organization and storage. It aims to ensure that workplaces and machines are cleaned regularly and in optimal operating conditions, where anomalies are detected more quickly and easily in cleaner workplaces. Regular cleaning allows the sources of disturbance to be identified and eliminated, and clean workplaces maintained. During cleaning, the cleanliness of the machine, the workplace and the ground, the tightness of the equipment, the cleanliness of the lines, pipes, lighting sources, current data, the clarity and comprehensiveness of the information provided etc. are examined. Care and maintenance of personal hygiene are also indispensable of the Operator.[3]

Seiso can increase the efficiency of machines, maintenance the cleanness of devices, efficiency, keep the clean workplace, easy to check and informing about damages and the work environment.[4]

1.4. Seiketsu = Standardize

It is the integration of the work done in the first three steps. A standard 5S audit calendar was introduced to simplify the entire 5S process. Maintaining this calendar certainly helped to keep records if the scheduled task for all 5S components was completed or not. [3] Seiketsu can incease the safety and working out the procedures defining the course of processes. [4]

1.5. Shitsuke = Sustain

Revolves around the mental and physical disciplines needed to maintain other 4S items. One of the key factors to achieve and maintain the successful implementation of this methodology is the implementation of regular audits to detect the status of each S. Audits should focus on ensuring that specific procedures and timetables are implemented [3]

1.6. Material and Method

This research used observasional descriptif to describe a certain situation with conduct interviews with respondents and observed using sheets observation in the form of a 5R checklist. In terms of time, This research is included in cross sectional design, namely the entire research variable observed simultaneously at one time. [5]

The object of this research is all area in Covid 19 Building University General Hospital especially in the patient care room like Intensive care unit, operation room, and patient care ward. This research located at University General Hospital Landungsari Village, kecamatan dau, kabupaten malang in September 2021 during a week. These Variable in this researh include the implementation about 5S Seiri (sort), Seiton (set in order), Seiso (shine), Seiketsu (standardize), and Shitsuke (sustain) in each area.

2. Result

Covid 19 Building in University General Hospital of Malang was build separated from main building since the spike of covid pandemic in Malang city. This building has two main patien care area, namely Matahari and Alamanda. Alamanda area is used to treat covid patient with mild and moderate symtomps. Whereas Matahari area is used to treat severe covid patients. This study aim to evaluate and overview 5S application

on it. Based on this observation, we obtain that 5S implementation is not optimally implemented in Covid 19 building of University General Hospital. There a lot of material placed not accordance based with 5S concept.

2.1. Seiri/Sort Out

The implementation of *Seiri/Sort out* in patient care area is good enough. Sorting waste is devided by two groups, namely Infectious wastes and Non-Infectious wastes. But there are some sources of disturbance must be identified and eliminated, and clean workplaces maintained. There are some unused cardboard, empty water gallons, and broken infusion pole that placed in patient care area. That's mean, all items that are not needed for clinical and administrative processes and activity must be remove from that area. Based on this findings, there's need further identification and sorting of unused sourches in patients care area.

It is not always easy to identify unneeded equipment, medications, and supplies in a busy healthcare facility. Providers seldom know how to separate items needed for healthcare processes and procedures from unnecessary items. Healthcare managers and providers often look directly at waste without recognizing it. The red-tag strategy is a simple method for identifying potentially unneeded items in the healthcare facility, evaluating their usefulness, and dealing with them appropriately.[6]

Usually, an organization that is launching a red-tagging effort needs to establish a central red-tag holding area. This area is used to manage the flow of items that cannot or should not be disposed of by individual departments or work areas. [6]

Each department or work area that articipates in red-tagging also needs a local red-tag holding area. The local red-tag holding area is used to manage the flow of red-tagged items within a local department or work area.[6]

2.2. Seiton/Set in Order

In seiton/Set in order application both Alamanda and Matahari are still not optimall because there are a lot of items that not put where it should be. Inappropriate item's placement will reduce the value Set in Order comcept, such as laying unused infusion poles in the corners of the room or on the patient's bed. Cleaning tools and cleaning are still placed carelessly in rest room because there is no special place for cleaning tools.

Once best locations have been decided, we need a way to identify these locations visually so that everyone will know "at a glance" what goes where and how many pieces of each item belong in each location. We have several strategies for identifying what, where, and how many.[6]

2.3. Seiso/Shine/Sweep

In the application of *Seiso/Shine/Sweep* dust is present in open area, this dust will be cleaned every day by workers before and after work so that the intensity of dust can be suppressed. There is need to make a special rack for cleaning tools that are placed in a corner so that they are easily visible and do not look for cleaning tools if want to clean the patient care area. There was broken dispenser that make water from dispenser flooded on the floor, so dispenser must be remove or repair or replace with the new one as soon as possible.

2.4. Seiketsu = Standardize

It is the integration of the work done in the first three steps. A standard 5S audit calendar was introduced to simplify the entire 5S process. Maintaining this calendar certainly helped to keep records if the scheduled task for all 5S components was completed or not. Standardization as creating a consistent way to perform tasks and procedures. Building on this definition, we may define Standardize as the outcome when the first three pillars—Sort, Set in Order, and Shine—are properly maintained.

When it comes to maintaining the 3S conditions, everyone must know exactly what they are responsible for doing and exactly when, where, and how to do it. If providers and support staff are not given clear 3S job assignments based on their own workplaces, the Sort, Set in Order, and Shine activities will not have much meaning.[6]

2.5. Shitsuke = Sustain

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3. Conclusion

The implementation of *Seiri/Sort out* in patient care area is good enough but there are some sources of disturbance must be identified and eliminated, and clean workplaces maintained That's mean, all items that are not needed for clinical and administrative processes and activity must be remove from that area. The red-tag strategy is a simple method for identifying potentially unneeded items in the healthcare facility, evaluating their usefulness, and dealing with them appropriately.

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