

Project Title

Applying 6S Concept in Inpatient Clean Utility (CU) Rooms (NTFGH & JCH)

Project Lead and Members

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Organisation(s) Involved

Ng Teng Fong General Hospital, Jurong Community Hospital

Healthcare Family Group Involved in this Project

Nursing, Operations

Applicable Specialty or Discipline

Logistics

Project Period

Start date: January 2022

Completed date: July 2022

Aims

To reduce 50% of staff time spent in locating item by July 2022 by

- Categorizing consumable items according to procedure
- Organizing frequently used items in a systematic manner
- Improving retrieval and top up of consumables items with visual management

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

- Challenge status quo, changing the drop card process
- Involve Ward staff (User) and form a group to champion the 6S
- Build ownership to sustain the change and for continuous improvement
- Build a good inventory process in par level planning and reduce adhoc order
- Share data collected (last minute order and drop card) to appreciate the improvement
- Team synergy between MMD and Nursing with similar goals brought the project to fruition
- 6S concepts can be applied in any other areas.

Conclusion

See poster appended/ below

Project Category

Care & Process Redesign

Build Environment, Inventory Space Management

Keywords

6S, Clean Utility Rooms, Inpatient Wards

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APPLYING 6S CONCEPT IN INPATIENT CLEAN UTILITY (CU) ROOMS (NTFGH & JCH)

- ✓ SAFETY
- ✓ PRODUCTIVITY
- ☐ QUALITY
- ✓ COST
- ☐ PATIENT EXPERIENCE

NURSING: Mag Tan Wooi Lin (Lead), Teo Hui Sin (Co-lead), Ng Wei Wei, Sarina Idris, Hong Kiet Mun, Nur Hariana Bte Abdul Jamal, Nurul Naziyanty Bte Mohd Nasir, Annie Lee Hui Peng and Inpatient Wards NCs.
MMD logistics: Lim Meng Keong, Helen Ng Hwee Shiang.

Define Problem, Set Aim

Problem/Opportunity for Improvement

It was observed that nurses and deployed staff struggled to find consumables in Clean Utility. This is due to

- consumable items in Clean Utility (CU) were frequently placed at different shelf causing staff to spend excessive time locating item
- consumables are in placed in similar bin, making it difficult to search for the items
- staff moved between Main CU and Sub CU to obtain consumables for a procedure

Aim
 To reduce 50% of staff time spent in locating item by July 2022 by

- categorizing consumable items according to procedure
- organizing frequently used items in a systematic manner
- improving retrieval and top up of consumables items with visual management

Methodology: 6S

We applied 6S concepts to organise Clean Utility. 6S is "A system that aims to promote and sustain a high level of productivity and safety throughout a workplace".

Creating an effective work environment

- 1S: SAFETY (see and fix unsafe conditions; Injury free process & practice)
- 2S: SORT & SCRAP (categorize and eliminate what is not needed)
- 3S: STRAIGHTEN (a place for everything & everything in its place)
- 4S: SHINE & SERVICE (clean up; service equipment, see & solve problems)
- 5S: STANDARDIZE (who, what, where, when and how)
- 6S: SUSTAIN (self-disciplined...keep it up!)



Analyse Problem

Shadowing was done to understand the current problems. These were collated:

| Waste Identified | Opportunities for review |
|---|--|
| 1 Nurses move between Main CU and Sub CUs to obtain consumables for one procedure | Standardize common consumables placement in the ward |
| 2 All bins look alike. Difficult for nurses to locate consumables | Provide visual display to help staff to locate consumables |
| 3 Slow moving consumables take up space | Review par level and remove items not required to create space |
| 4 MMD staff drop RFID card | Nurses to drop RFID card |
| 5 No RFID card reader in Sub CU 1 & 3 | Provide RFID readers in all Sub CUs |

Drop RFID tag to trigger MMD for top-up

Pre NGT Steps 218 Steps

Post NGT Steps 46 Steps

79% reduction

Reorganize to reduce motion waste/time spent for procedure preparation

Look alike bins

Implementation

| Scope | Timeline | Status |
|------------------------|-----------------|---|
| 1 Pilot in 9S and C10 | Jan to Apr 2022 | <ul style="list-style-type: none"> Form team members and conducted 6S training Data collection and analyse process Discussed and categorized consumables Organized CU and consumables Visual display on shelf Reviewed Par Level Review RFID drop card process |
| 2 Showcase Pilot to L2 | May 2022 | <ul style="list-style-type: none"> Before and after pilot wards |
| 3 Communication | Jun 2022 | <ul style="list-style-type: none"> Presented at NLM and CN Engagement |
| 4 Spread | Jul to present | <ul style="list-style-type: none"> 80 % roll out to wards (21 wards in NTFGH & 7 wards in JCH). |

Visual Display
Team used colors to help with ease of locating consumables

| Material Code | Material Description | Categories |
|---------------|---|-------------|
| V130-04-001-A | Mask,N95,Fluid Resistance,3M 1860S | RESPIRATORY |
| V130-04-003-A | Mask,N95,Non-Fluid Resistance,3M 8110S | RESPIRATORY |
| V130-04-002-A | Mask,N95,Fluid Resistance,3M 1860 | RESPIRATORY |
| V130-02-002-A | Mask,3 Ply,High Filtration,W/Ear Loops | RESPIRATORY |
| V250-06-002-A | Cath,Foley 2Way,Ster,Latex-Silicon,14FG | URINARY |
| V470-04-001-A | Sheath,Urosheath,W/Liner,25mm | URINARY |
| V240-01-001-A | Bag,Urine Colltn,Steri,2000ml | URINARY |
| V460-03-002-A | Container,Urine,Witches Hat | URINARY |
| V170-04-003-A | Drape,Utility,Ster,75x90cm | DRESSING |
| V140-01-002-A | Glove,Exam,PF,Non-Sterile,Nitrile,S | DRESSING |
| V180-05-001-A | Dressing,Basic Set,Ster,Disp | DRESSING |
| V140-01-003-A | Glove,Exam,PF,Non-Sterile,Nitrile,M | DRESSING |

Implementation



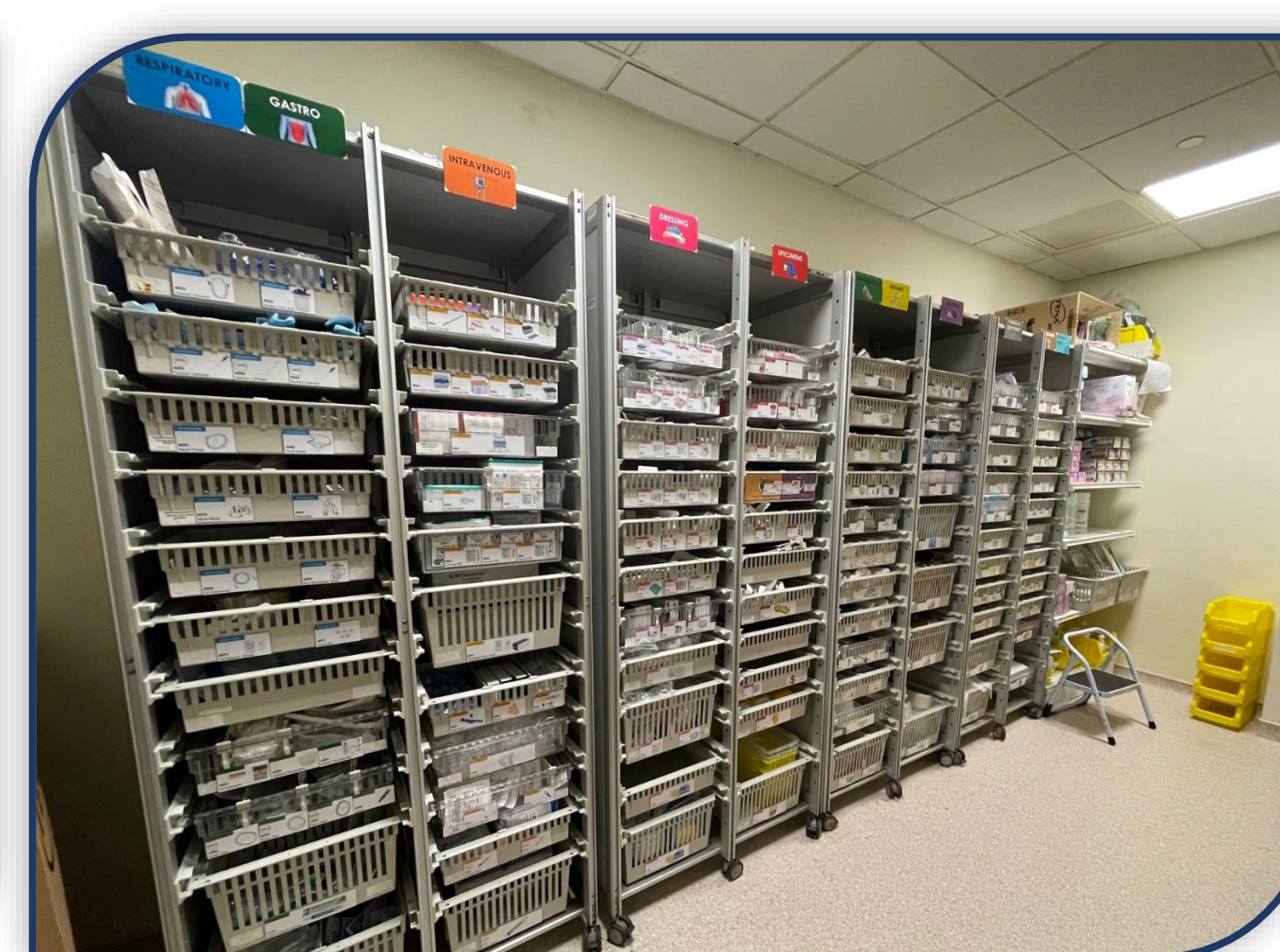
Sort, Straighten & Standardize



Review PAR level with MMD



Before implementation



After implementation



Result

- Visual display for easier retrieval and top up of items
- CU neat, organized and categorized

Time motion study on preparation of

- Catheterization **Pre: 19.33mins Post: 8.10mins Savings: 11.23mins (58%)**
- Nasogastric Tube (NGT) **Pre: 2.18mins Post: 0.46mins Savings: 1.76mins (79%)**

Feedback from Nurses

Ward B9S and Ward C10 Feedback done after 6S

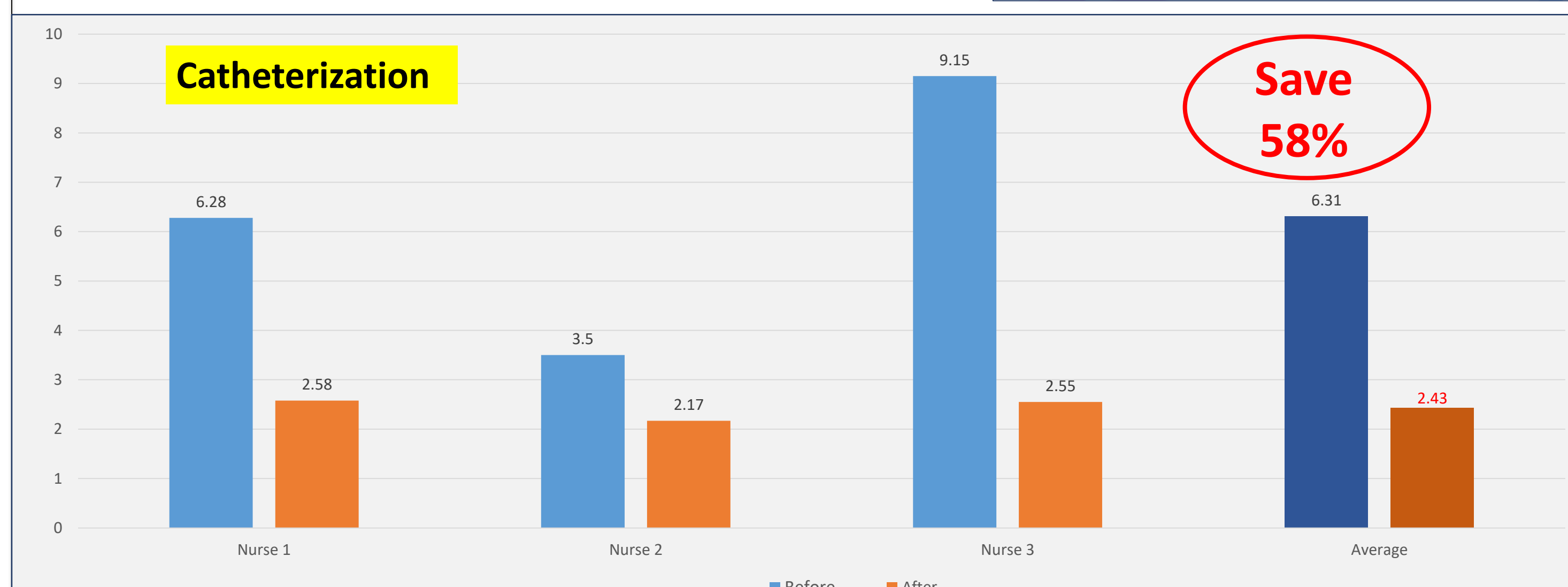
Items in the clean utility are more organized

Visual aids are great!

Reduce time taken to look for items

Easier to look for items, especially when being deployed

Less clutter!



Spread Changes, Learning Points

Spread changes

- 'Show and tell' to Nurse Leaders, on reason for change and result achieved at pilot wards
- Presented to larger pool of Nurse Leaders at Nursing Leader Meeting on the improvement.
- Spread to all Inpatient wards in NTFGH and JCH in progress.
- Potential to be adopted by SOC and specialized areas; Kidney Unit, Isolation ward, ICU and Ambulatory Unit
- Use 6S audit tool to sustain 6S efforts

Key Learnings for team

- Challenge status quo, changing the drop card process
- Involve Ward staff (User) and form a group to champion the 6S
- Build ownership to sustain the change and for continuous improvement
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