STREAMLINING THE PREPARATION OF TRACHEOSTOMY SUCTIONING CARE

Sharmila, S., Suriani, M.I. , Norshahizal, S., Muhammad Fuad, B., Razlina, M.N., Hari Priyaa, R., Nurlina, R., & Galang, L. G.
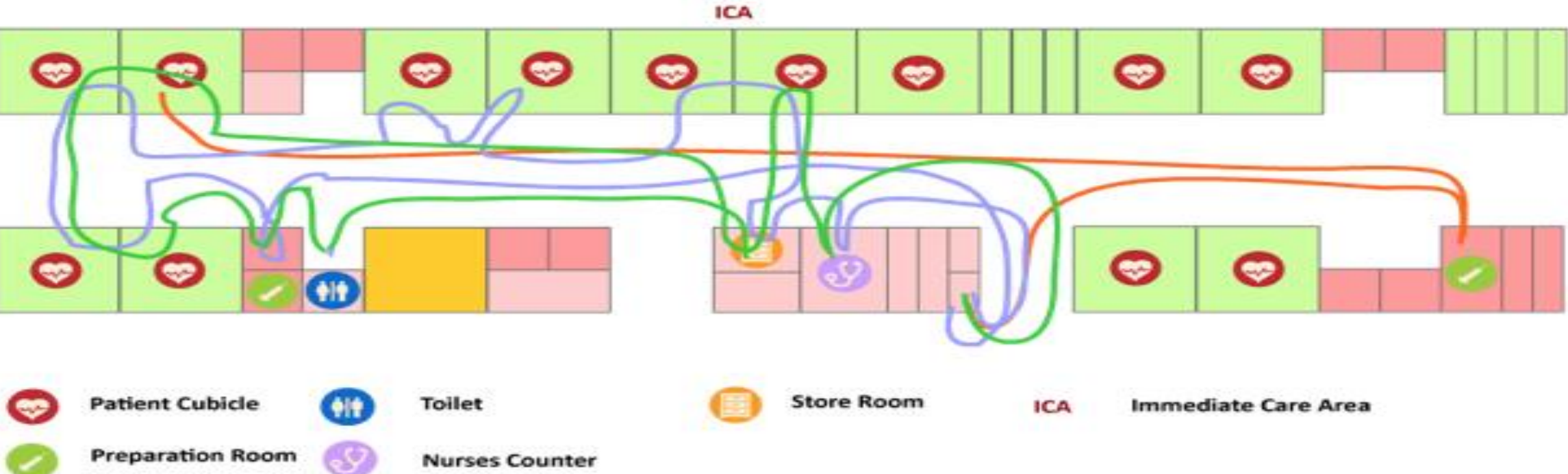
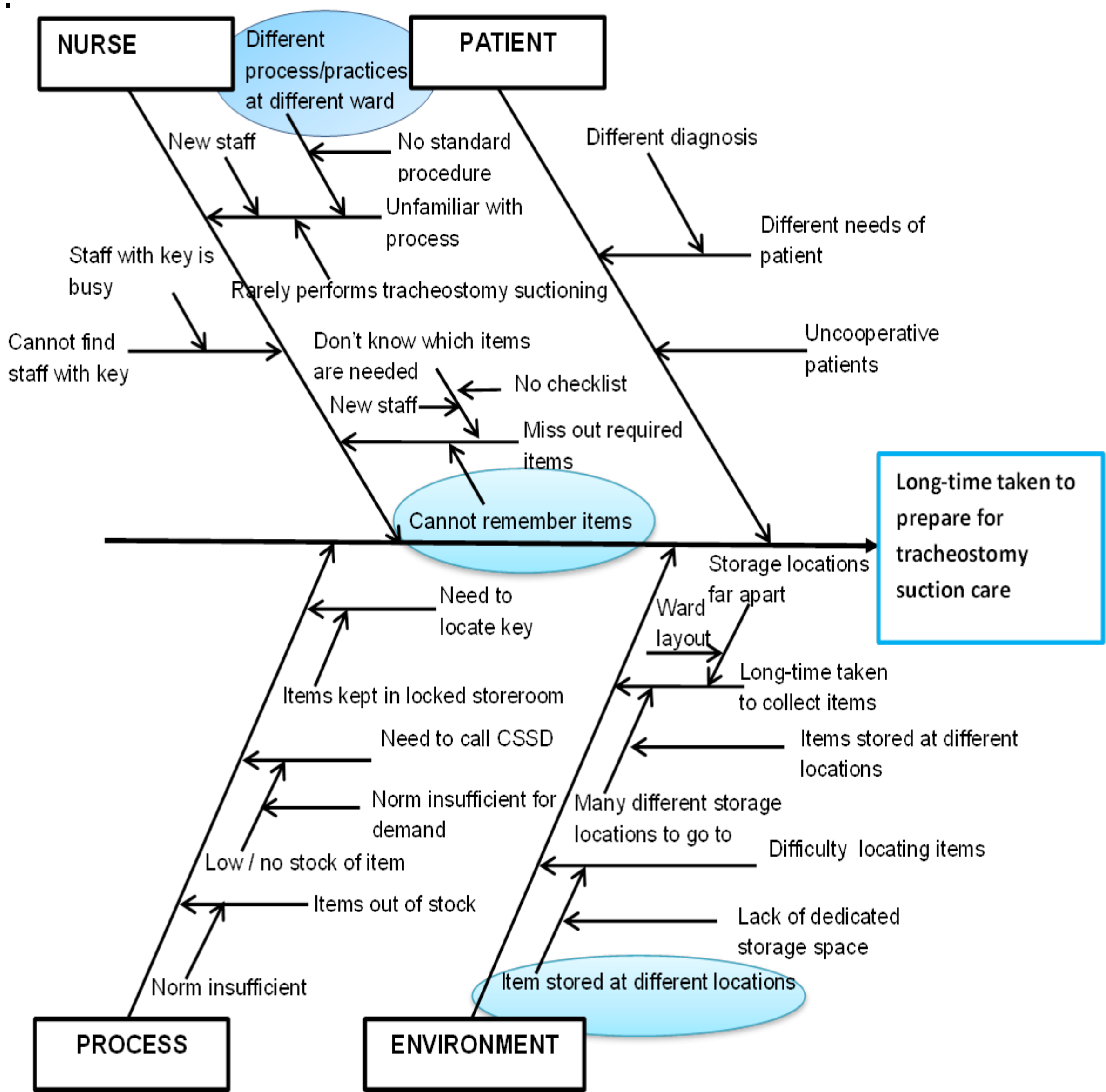**NURSING DIVISION, SINGAPORE GENERAL HOSPITAL**

PROBLEM DEFINITION

The long-time taken to prepare the tracheostomy suction items and the unavailability of some requisites causes delay in transfer of patients' with tracheostomy. An incomplete set-up of suctioning apparatus could compromise patient safety as suctioning is important for removal of secretions and maintaining a patent airway. Waiting too long will portray a negative image of the organization to family/caregiver. The patient's next-of-kin will be anxious about the patient's care if they are kept waiting. It was also observed that there are differences in practices and standards among the different wards when caring for these patients.

To reduce the time and steps taken in preparing tracheostomy suction care set by 50% from 12 mins 19 seconds to 6 mins in 9 months.

METHODOLOGY

- ❤ Patient Cubicle
- 🚻 Toilet
- 🟧 Store Room
- ICA Immediate Care Area
- ✅ Preparation Room
- Nurses Counter

Current practice: Team studied the **Spaghetti diagram** above and observed time wastage by staff pacing to and fro to the preparation room, store room and patient bedside while preparing the requisites.

Analysis: **Cause and effect diagram** was used to identify the possible root causes. A **Pareto diagram** was plotted based on multivoting of the finer bones. The 3 final root causes identified are cannot remember items, Items stored at different locations and different process/practices at different wards

SOLUTION

Possible solutions were developed using the **serendipity method** and final solution were derived using the **Tree diagram** and **Prioritization matrix.**

Requisites stored in kit

Tracheostomy suction care kit

Items	Norm
Suction Catheter (Size 12 fr)	10 pieces
Water for Injection /Normal Saline	20 ampoules
Gauze	2 packets
Sterile Copolymer gloves	10 pieces
Micropore tape	1
Velcro/ Cotton twill tape	1
Sterile swab sticks	1 packet
Tracheal Dilator	1
Container for inner tube	1
Suction apparatus (in tote box)	
-Suction motor	1
-Suction canister	1
-Suction tubing	1
-Suction Liner	1
-Suction catheter holder	1

Team developed a **"tracheostomy suction care kit"** with **tote box** to house all consumables required to perform tracheostomy suctioning. A **"norms list"** which serves as a checklist for the items required as well as prevents waste by ensuring requisites are topped up according to norms.

RESULTS

Before implementation

Time taken to prepare tracheostomy suctioning care requisites

Ward A	Ward B	Ward C	Ward D	Average time taken
14mins 2secs	13mins 57secs	11mins 16secs	10mins	12mins 19secs

Post implementation

Time taken to prepare tracheostomy suctioning care requisites

Ward A	Ward B	Ward C	Ward D	Average time taken
3mins 46secs	3mins 30secs	3mins 10secs	3mins	3 mins 22secs

Total Time Saved = **8 mins 57secs**

Overall the team achieved **72%** of time savings (more than the 50% target set) with the installation of the tracheostomy suction care kit with a **tote box** to house all the requisites. At the same time, the organized kit prevents clutter by the patients' bedside

CONCLUSION

Our solutions have created value to the organization by saving time and indirectly helps in bed crunch situation as nurses no longer need to wait for all items to be ready to accept patients as now it is readily available. This also helps to boost staff morale as the time saved can be channeled to other beneficial patient care activities.

FUTURE PLANS

This project was started and implemented in ward 52B (Neurosurgery) and rolled out to ward 74 (Neurology).The team is working with Materials Management Department and finance department with the aim of having the kit pre-packed and to make it available for individual patient use and roll it out to the other wards in Singapore General Hospital.