

‘Breaking Rituals’ of Ward Routine Change of Bed Linen

Yap. K.K.¹, Chai P.S.¹, Khor. L.H.C.², Soong. S.L.¹, Chua. G.C.³
¹Nursing Inpatient Ward, ²Environment Services,
³Nursing Administration
 Yishun Community Hospital

Background/Aim

All the inpatients wards at Yishun Community Hospital have adopted the routine bed linen changing of three times a week done by most acute hospitals. However in **Rehabilitation Care Wards**, above **90%** of the patients did not stayed on their beds for long period during the day. The patients had their meals in the common dining area, received therapy at the ward gym and were actively engaged in volunteer activities. Above **70%** of patients were diaper-free as they were able to ambulate to the toilet with staff assistance or use of walking aids.

This project aims to study the routine bed changing process and to propose a change of routine practices suitable for community hospital setting.

Methodology

A team was formed to study the routine of bed-making process in a pilot rehabilitation care ward.

✓ Data on patient resting-time on bed were collected and analyzed. During the day as the patients were occupied with day activities, the total ‘time resting on bed’ was 2 to 3 hours. Hence, the team members proposed breaking the ritual of routine linen changing.

★ Questionnaires survey were done for 24 patients and family members. This was to engage patients and caregivers on the change of routine ward practices.

⌚ Time motion study was conducted to evaluate the process of linen changing. The nursing staff took **7 minutes** for each bed linen change including sitting the patient out of bed as indicated in Chart 1. A total of **2 hours** for Bed Occupancy Rate (OR) above 70% (25 beds).

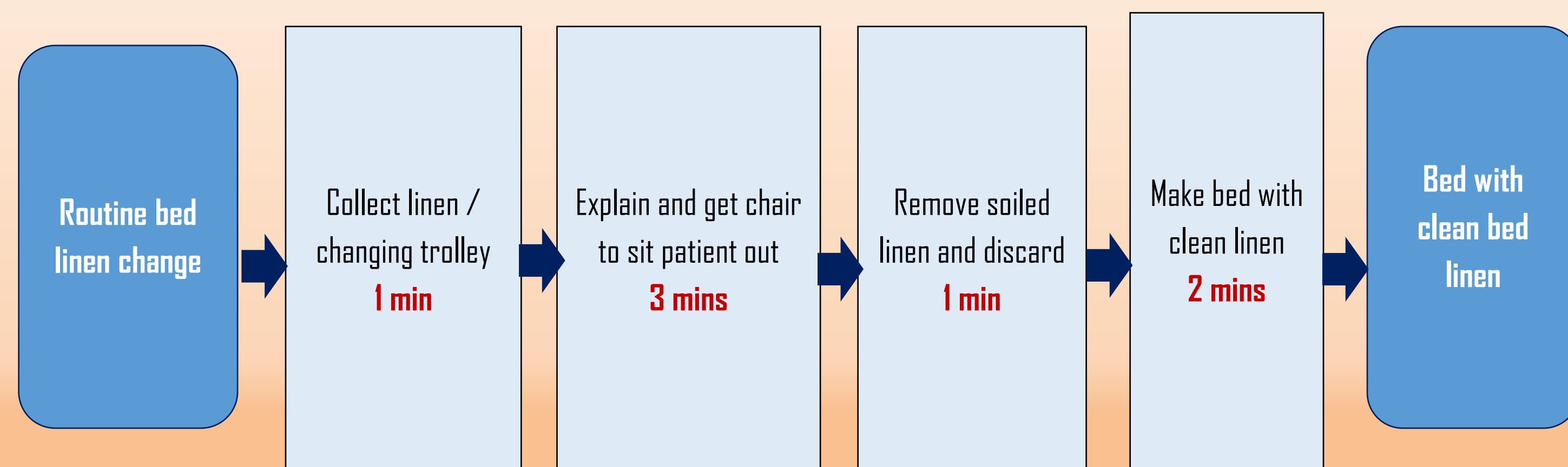


Chart 1: Total Time of 7 mins to perform bed linen change



✂ The team planned to break the ritual of bed linen changing from
 ✂ 3-times to 2-times a week.

Results

Patients and family members were engaged in the bed linen change survey in the pilot rehabilitation ward. The results were shown in Diagram 1 and 2.

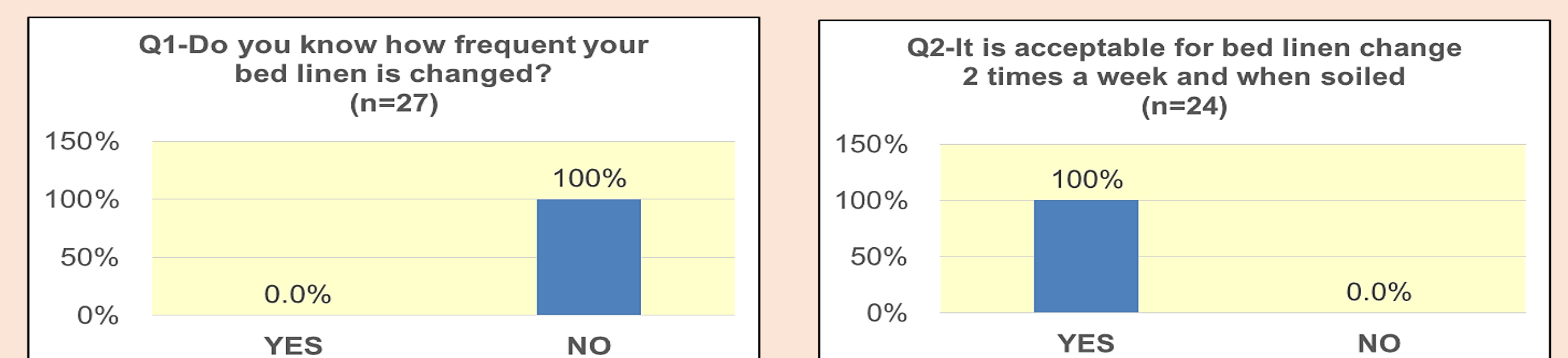
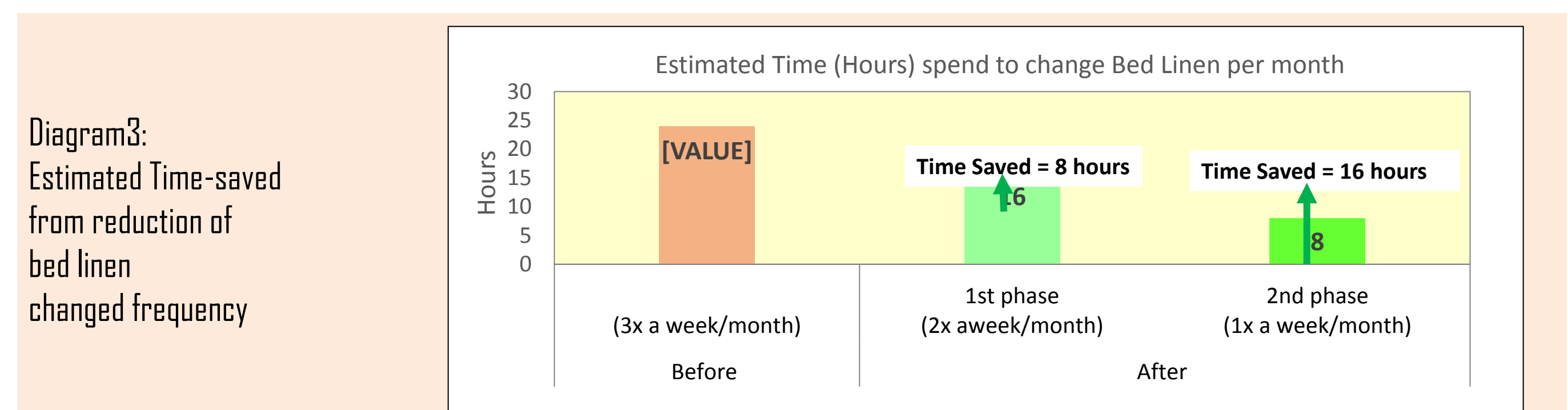


Diagram 1: Knowledge on linen change frequency

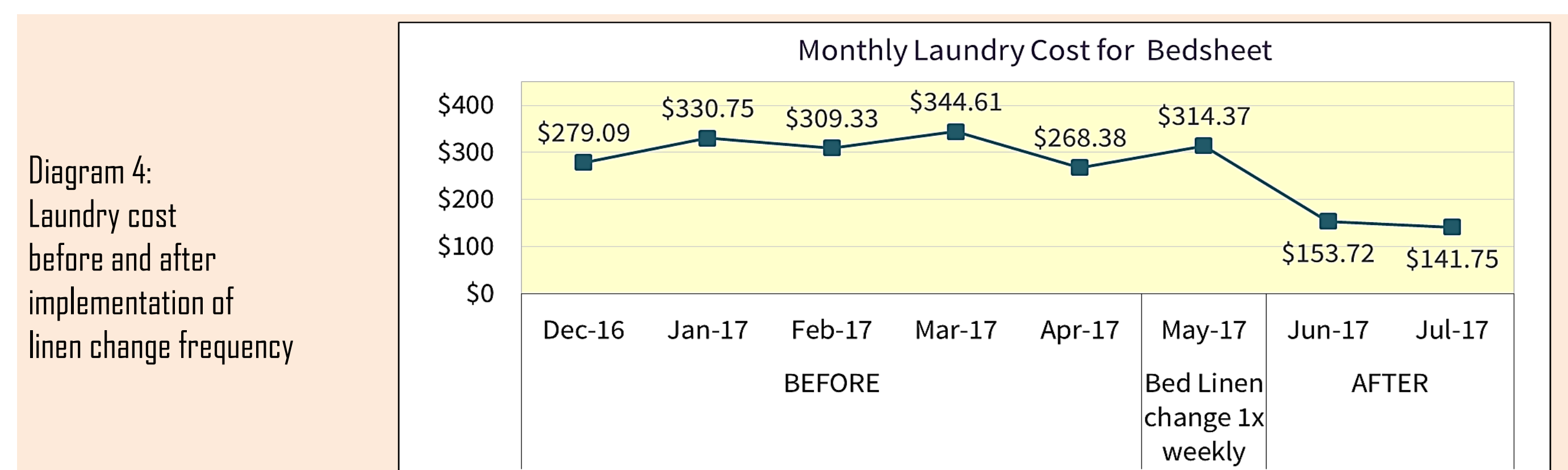
Diagram 2: Acceptance of Linen change 2-times a week

The team continued to evaluate patients and care giver feedback and in May 2017, implemented the bed linen changing to **once weekly** as indicated in Diagram 3. Above 70% BOR, the time-saved for nursing care staff was increased to **4 hours per week**



Project Impact

➡ **Cost -Saving:** An estimated cost of **\$1920** was saved a year and total of **\$5760** when spread to three wards (refer to Diagram 4).



➡ **Nursing Manpower-Saving :** An estimated of manpower cost saving for 2x linen changing per month of 8 hours = **\$1,078 per month** and **\$2,156 per year**.

| Manpower (EN/HCA) | Average Cost (Per hour) | Average Cost (Per hour) | Per 8 hours in a month (2x bed linen changing) | Per 8 hours in a month (1x bed linen changing) |
|---|-------------------------|-------------------------|--|--|
| Number of Manpower | 1 | 4 | 32 | 64 |
| Estimated Manpower Cost Savings per month | \$8.42 | \$33.69 | \$1,078.08 | \$2,156.16 |
| Estimated Manpower Cost Savings per year | \$101.07 | \$404.28 | \$12,936.96 | \$25,873.92 |

➡ **Time-Saving:** An estimated **8 hours** (70% bed occupancy) **per month** from the reduction of bed linen changing **frequency to 2 times** a week. The time-saved allowed nursing care staff to spend more time to engage their patients in quality activities.

Sustainability & Follow-up

The team has reviewed the different patient’s profile to assess feasibility and has adopted once a week bed linen changing since May 2017 and had spread to all Rehabilitation wards in Yishun Community Hospital. Environment services manager will continue to track bed sheets laundry expenses monthly.

Conclusion

The team members were energized for given the opportunity to the review of this routine process. They were able to further review the frequency by getting references with other community hospitals practices before reducing to 1x bed linen change week. The team learnt the importance of engaging patient and family members to contribute to the change of ward routine processes. Beds on contact precaution were excluded from this project. The nurses will continue to change the bed linen whenever it is soiled. There was no reported acquired skin infection. Infection control team will continue to monitor and report any acquired infections. Management support in this project encouraged the ward team to start small initiatives. The team felt empowered to make changes and will continue to improve on their ward processes to simplify their work.