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PROJECT BACKGROUND

PROBLEM: Theatre Sterile Supply Unit (TSSU) has difficulty coping with the reprocessing of multiple surgical sets (Phaco Cataract (PC) set & Phaco Handpiece) needed for the rapid turnaround & long surgical cataract list. The issue is further complicated by the tight manpower and limited storage space in TSSU sterile store.



Phaco Handpiece set



Phaco Cataract set

2 sets required to be used during Phaco cataract surgery

OBJECTIVES:

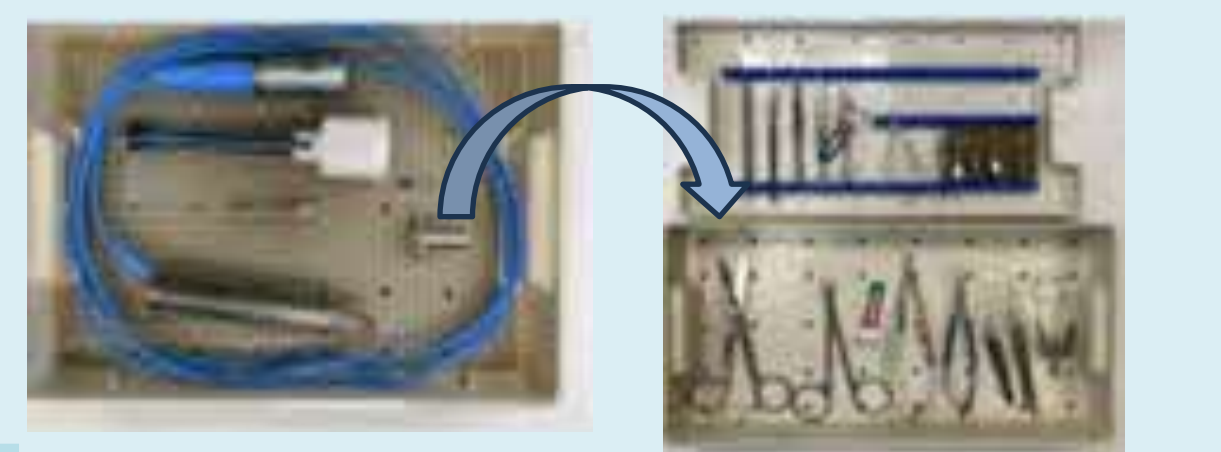
- To lessen workload on existing limited staff at TSSU
- Better manage the high & rapid turnaround of surgical sets
- To better maximize the storage space in sterile store

DESCRIPTION OF CHANGE

1) Assessed current trends on usage of surgical instruments in PC set & removed rarely used instruments



2) Modify the current surgical instrument tray arrangement to accommodate all instruments from two separate sets into a single set.



3) To assure safe usage and quality assurance, two-in-one sets have to pass three rounds of negative biological indicator testing.



4) Trial use of the new 2 in 1 sets and gathered verbal feedback from staff. After evaluating the feedback, the reconfiguration was carried out.



5) Conducted a survey on the evaluation of 2 in 1 set after new configuration post verbal feedback to attain any further feedback/ improvements



PROJECT AIM

INCREASE STAFF EFFICIENCY RATE

COST SAVING

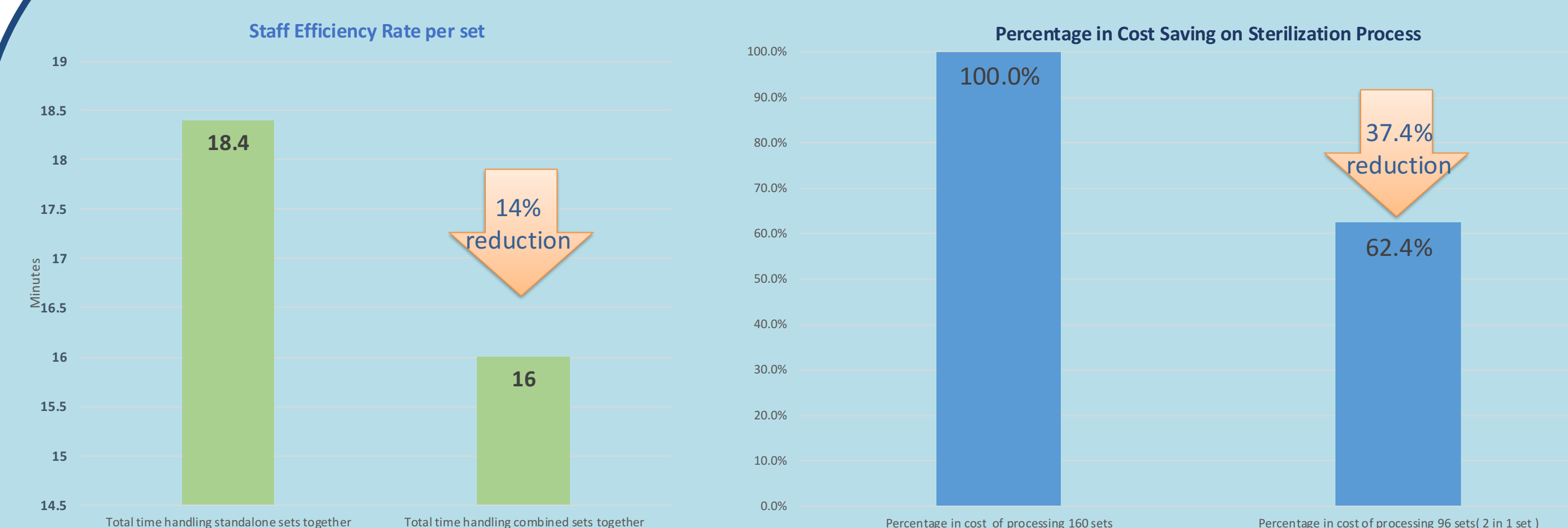
Process & Outcome: Visualize difference in the number of shelves occupied by sets

Process & Outcome: Calculate average time taken to handle standalone sets vs 2 in 1 sets

Process & Outcome: Calculate % difference of cost in sterilization between standalone sets vs 2 in 1 sets

IMPROVE STORAGE SPACE

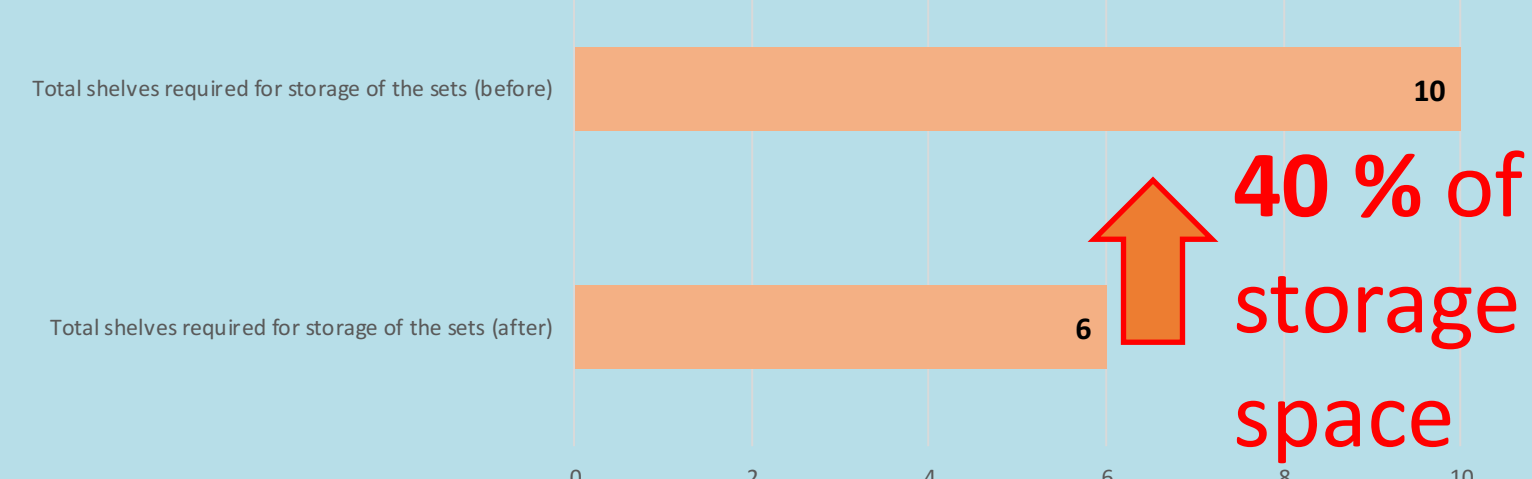
RESULTS BEFORE & AFTER IMPLEMENTATION



Results showed that staff efficiency rate increased by 14% with handling 2 in 1 sets

2 in 1 sets reaped cost savings of 37.4% to the department

Space Saving in Sterile Store after Implementation



OTHER IMPACTS SEEN: Less sets being overloaded onto the trolley during the transfer from the sterile store to the theater, lowering the likelihood of instruments falling off and sustaining damage.

Our team find the **results sustainable** as the 2 in 1 set utilizes less consumables & utilities in the processing.

This 2 in 1 set is also currently being implemented in Sengkang General Hospital- EYE OT for 1 of their eye sets.

METHODOLOGY

A Define, Measure, Analyzing, Improving and Control (**DMAIC**) methodology was used to explore the solution to combine PC/ Phaco Handpiece set over the previous standalone PC and Phaco Handpiece set.

Define:

- Reduce the workload on the current limited manpower at TSSU
- Manage surgical sets more efficiently
- Maximized storage space in TSSU sterile store

Measure: Handling time and space needed to store cost of the current set in 1 load full of PC set and Phaco Handpiece

Analyze: Detected infrequently used instruments in sets

Improve: Using Lean principles of waste reduction and value creation to combine 2 sets into 1.

Control: All Staff were informed and trained to use the new sets.

CONCLUSION

The implementation of 2 in 1 set and the removal of infrequently used instruments have reduced workload and save cost, time and storage space.

FUTURE PLANS

To implement 2 in 1 sets for all the handpieces as this will further reduce manpower workload, increase more storage area & cost savings to the department