



Background

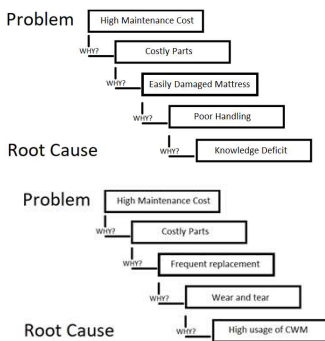
The cost of keeping and maintaining the Circulating Water Warming System in service is high and it will be even higher in future. Accessories that include reusable mattress, inlet and outlet connectors, compressor, etc may get damaged during usage requiring repairs and replacement. All of these contribute to the high costs of maintenance.

Furthermore, some units are reaching the end of their lifespan and need to be replaced, resulting in additional costs incurred. As of 1st October 2022, the price of accessories have increased almost twofold as well.

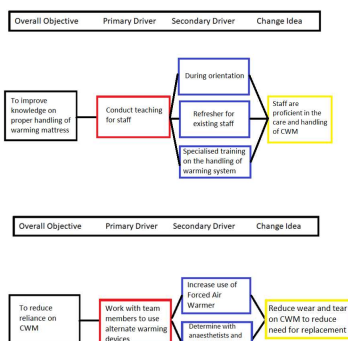
Mission Statement

To reduce the number of replacement of CWM for the warming system in MOT from 10 to 5 over twelve months.

Analysis of problem



5 Why Diagram



Driver Diagram

Root cause was identified by 5 why diagram.

Driver diagram was then used to identify the solution.

The final root causes we are addressing are Knowledge deficit and high usage of CWM

Initiatives

PDSA 1

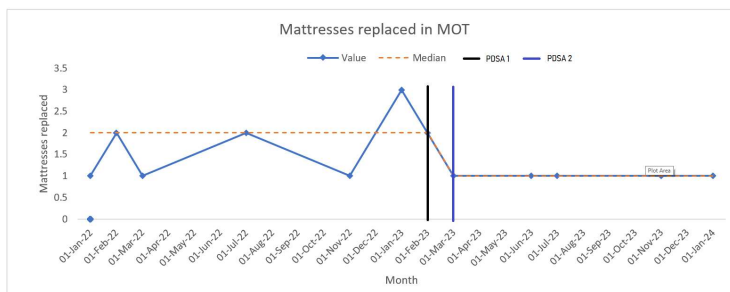
The warming mattress component of the warming system is the most prone to damage as it is most exposed to the user when in operation. To upgrade the knowledge on the proper handling and care of the warming mattress, training sessions were conducted for new and existing staff to educate them on the proper way to handle the mattress so as to prolong the lifespan and reduce the need for replacement and repair.

PDSA 2

Member anaesthetists garnered support from other anaesthetists to use alternative warming systems such as forced air warmer (FAW). Research has shown that FAW are as efficacious as CWM in keeping patient warm intraoperatively. (Nieh, 2016)

Results

The objective of the project was achieved, with a significant reduction in replacement of CWM. Replacement of warming mattress was reduced to 2 (Feb 23 to Oct 23). This is an 80% reduction in the number of CWM replacements.



Each mattress costs \$600 and the replacement went from 10 down to 2. This translates to a cost reduction of from an estimated amount of \$6,000 to \$1,200.

Sustainability Plans

By arming OTTAs and Nurses with the knowledge on the proper handling of the warming mattresses, the cost of yearly maintenance is reduced. There will be continued effort to collect feedback from stakeholders and put out reminders and information regarding proper handling of CWM during roll call to stakeholders involved.

Conclusion

The initiatives carried out are in line with our hospital's goal of cost savings without compromising patient safety and quality of care. This initiative fosters teamwork among various disciplines to ensure prolonged lifespan of equipment which can extend beyond this project.