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Background

- Suction motors are not commonly used in the polyclinics and do not undergo preventive maintenance or any sort of checks.
- In accordance to the maintenance and usage of medical equipment guidelines all machines required periodic checks to ensure that the machines are safe to be used on patients.

Problem Statement

- There was no preventive maintenance or any sort of checks for the suction motors.

Aim

- To avoid or mitigate the consequences of equipment failure and to save on expensive preventive maintenance cost of the suction motors.

Mission Statement

- Provide safe, effective and efficient patient-centered care by ensuring equipments used on our patients are in working order and safe to be used.

Methodology

- Preventive maintenance refers to regular, routine maintenance to help keep medical equipment functioning efficiently to prevent any unplanned downtime and expensive cost from unanticipated equipment failure.
- A team was formed to look into the functionality and safety check of the suction machine to ensure safe delivery of care.
- Cause and effect analysis was carried out.
- PDSA cycle was used to deliberate on the issue.



Intervention

Intervention 1

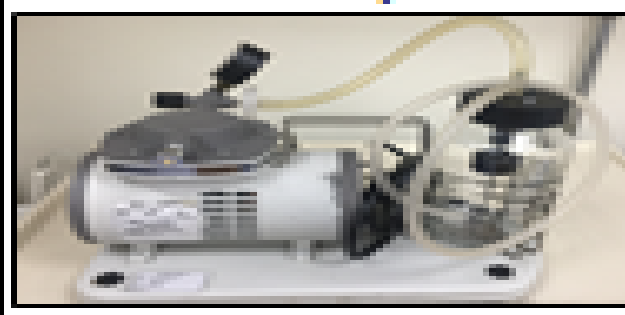


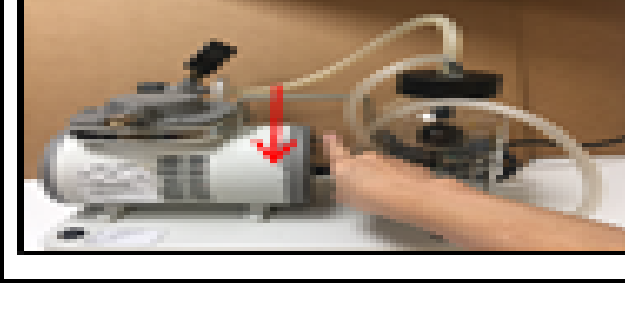
- A standardized checklist was developed to perform the function check of the suction machine, and to ensure consumables were readily available.

Intervention 2

- After testing out the checklist, additional safety checks were introduced to ensure the functional test is completed. One suction machine was checked and tested in clinic.

Intervention 3

- Incorporated photos of all the models of suction machines into the checklist for effective referencing.
- Include information of the recommended suction pressures of 100-150mmHG for Adults, 100-120mmHG for Children, 80-100mmHG for Infants, 60-80mmHG for Neonates.
- Recommended pressures displayed on the suction machines to serve as a benchmark for standard practice of suctioning.

Thomas Suction Motor									
Operation		Checking of Thomas Suction Motor							
Equipment Parts		Thomas suction motor x 1 / Collection bottle x 1 / Bacterial filter x 1 / Tubings x 2							
Consumables		Suction catheters: Size 8 x 1 / Size 10 x 1 / Size 12 x 1 / Size 14 x 1							
SN	CHECKS SEQUENCE	STANDARD	DATE CHECKED						
			Jul	Aug	Sept	Oct	Nov	Dec	
1	Perform inspection 	Check all components for missing parts or physical damage. Ensure tubing are not kinked.							
2	Plug and switch on the suction motor 	Plug AC power cord into the electrical power outlet. Switch on the suction motor by pushing the knob up.							
3	Perform test 	Adjust vacuum level by regulating control knob to desired setting i.e. 10-20 cmHg vac. Occlude connecting tubing to ensure vacuum gauge increases.							
4	Switch off the suction motor 	Switch off the suction motor by pushing the knob down. Switch off AC power and unplug power cord from electrical power outlet.							
		Staff Initial							
		Staff Signature							

Conclusion

- The standardized checklist helped to ensure the suction mechanism is functional and ready for use when needed.
- To ensure the safety check is sustainable and test is carried out adequately, the processes need to be simple and manageable.
- To ensure compliance, the staff must be communicated on the purpose of the checking.

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 We thanked Chief Nurse Stephanie for the support given.