Acacium Group

Cleaning the Ventilator Equipment (Mask and Ventilator Circuits)

Procedure Reference | SOP VENT 10

Version | V5.0

Procedure Name	Cleaning the Ventilator Equipment (Mask and Ventilator Circuits)
Purpose of Document	To ensure all Acacium Group staff in the community setting are aware of the importance of cleaning ventilator equipment according to manufacturer's requirements in order to minimise infection risks for the client
Target Audience	All Acacium Group Nurses and Support Workers in the community setting.
Version	V5.0
Author	Karen Matthews-Shard
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Lead Director	Karen Matthews-Shard
Review Frequency	2 yearly
Last Reviewed	July 2024
Next Review Date	July 2026
Equality Impact Assessment (EIA) Form	Acacium Group is committed to Equality, Diversity and Inclusion and in line with our values, we strive to ensure that everyone that is part of the Acacium community is not disadvantaged or discriminated against given their individual need or characteristics. To support this, an Equality Impact Assessment has been undertaken on this policy/procedure. This information is held centrally and can be requested from the Clinical Governance Team.
About Acacium Group	Details of all Acacium Group trading companies that this policy applies to are detailed within Appendix A

Document History			
Version	**Date**	**Changes made/comments**	**By whom**
V1	Dec 2016	Implementation of document history page	KNF/VM
V1	Jul 2018	Annual review	KMS/SJ
V1.1	Feb 2020	Updated to new Template	CC
V2	Jun 2020	2 yearly review	Clinical Advisory Group
V2.1	Oct 2020	Updated re rebrand	CC
V3	Dec 2022	Reviewed and updated	Clinical Advisory Group
V4	Jan 2024	Rebrand	Clinical Advisory Group
V5	July 2024	Reviewed and updated	Clinical Advisory Group

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1. Introduction

Ventilated clients are at high risk of infections.

Equipment used in delivering Non Invasive/Invasive Ventilation in the community may be exposed to potentially infectious material during routine use through contact with the client/service user's skin, mucous membranes, respiratory secretions, and blood.(British Thoracic Society Standards of Care Committee – 2022).

Ensure that the backup ventilator is powered on and functioning correctly. Check the power switch and any indicators to confirm it's operational.

Check Circuit Connections. Make sure that all the necessary tubing and connections are securely attached to the ventilator. This includes the inspiratory and expiratory limbs of the circuit.
Inspect Face Mask/Headgear If you're using a face mask or headgear with the ventilator, ensure it's properly attached. Check for any leaks or loose straps that could affect the seal.
Confirm that the ventilator settings match the ventilator prescription.

Before applying the face mask/headgear to the patient, conduct a brief test to ensure that the ventilator is delivering airflow properly.

Once everything is set up correctly, position the client comfortably and replace the ventilator in use with the backup equipment ensure face mask or headgear are attached securely
Continuously monitor the patient and the ventilator throughout the ventilation process to ensure proper function and patient comfort.

Good infection prevention and control measures along with client/service user observation help to minimise the associated risks.

2. Aim

To clean and maintain ventilator equipment according to manufacturer's requirements and infection control procedures in order to minimise infection risk to the client.

3. Equipment

- Appropriate PPE in line with current guidance
- Checklist for accurate record keeping of infection control procedures
- Cleaning equipment
- Replacement ventilator equipment.

4. Procedure

Cleaning of mask ventilator circuit (re-usable) – wet and dry circuits

	Action	Rationale
1.	Wash hands in accordance with infection prevention and control policy and wear non-sterile gloves.	To minimise the risk of cross infection.

2.	Explain procedure to the client and gain consent	To ensure client is happy with and aware of actions being completed.
3.	Refer to client specific care plan for agreed process and prescribed frequency based on manufacturers guidance. Remove circuit from ventilator and disconnect from mask and headgear. Ensure back up ventilator is applied to the client if required to maintain adequate oxygenation and Sp02. **Weekly** • Wash the circuit and mask in warm water with a mild detergent such as washing up liquid, then rinse them thoroughly with cold water. Air dry them completely using disposable paper or kitchen towels and hang them to drip dry. Avoid drying them with a towel. **Daily** • Remove any rain from the ventilation circuit by safely considering infection control, encourage excess water to go back into humidification unit to prevent risk of infection. • Clean the mask by wiping it with a cloth soaked in hot, soapy water (using washing up liquid). Then, wipe off any soap residue with a cloth dampened in plain water. Dry it with a clean paper towel or let it air dry if not in use.	To enable the task to be completed safely and ensure client safety. To keep circuit clean and minimise risk of infection. To keep circuit clean and minimise risk of infection.
4.	Reassemble the circuit, mask/headgear while adhering to infection control guidelines.	To ensure correct assembly of circuit and prevent risk of cross infection.
5.	Before attaching the ventilator to the client, verify the prescribed settings inline with documented prescription or care plan and switch the ventilator on. Ensure that the pressures are achieved when the mask is occluded.	To ensure the ventilator is working and pressures are achieved.
6.	Attach the circuit to the client when needed and ensure they are comfortable.	To resume ventilation.
7.	Document completion of the task on the checklist and record it in the client's notes.	Ensure accurate documentation is in place.

Cleaning of tracheostomy ventilator circuits (re-usable) – wet and dry circuits

	Action	Rationale
1.	Gain consent and explain procedure to client	To ensure client is happy with and aware of actions being completed.
2.	Refer to client specific care plan for agreed process and prescribed frequency	To ensure consistency
3.	Wash hands and wear non-sterile gloves.	To minimise the risk of cross infection.

4.	Ensure that the backup ventilator is powered on and functioning correctly. Check the power switch and any indicators to confirm it's operational. Check Circuit Connections. Make sure that all the necessary tubing and connections are securely attached to the ventilator. This includes the inspiratory and expiratory limbs of the circuit. Inspect Face Mask/Headgear If you're using a face mask or headgear with the ventilator, ensure it's properly attached. Check for any leaks or loose straps that could affect the seal. Confirm that the ventilator settings match the ventilator prescription. Before applying the face mask/headgear to the patient, conduct a brief test to ensure that the ventilator is delivering airflow properly. Once everything is set up correctly, position the client comfortably and replace the ventilator in use with the backup equipment ensure face mask or headgear are attached securely Continuously monitor the patient and the ventilator throughout the ventilation process to ensure proper function and patient comfort.	To enable the task to be completed safely.
5.	Discard: • HME Filter (dry) • Bacterial Filter (wet) • Humidifier Dome (wet) • Swivel Elbow (both) • Exhalation Port (both) • Oxygen Port (both) Disconnect: • Heater Wires (wet)	To minimise the risk of infection.
6.	Immerse the circuit in hot water and an appropriate cleaning solution (mild detergent such as washing up liquid or Kapitex cleaning powder; or an acetic acid solution).	To soften and remove built up dirt.
7.	Submerge the circuit in a bowl designated for this purpose, ensuring the solution reaches all parts and soak for 20 minutes.	To prevent risk of legionnaires disease and to keep clean.
8.	Rinse thoroughly in cold water.	To remove soapy residue.
9.	Dry the exterior of the circuit thoroughly using disposable paper or kitchen towels. Then, hang it up to air dry completely. Once dry, store it in the designated container with a lid.	
10.	Document completion of task on checklist.	Ensure accurate documentation is in place

Bacterial Filters

Bacterial filters are designed to prevent any germs, irritants, mould or dust that may have got through the machine's filters, from entering the mask to provide the cleanest air possible.

The client specific care plan will indicate if a bacterial filter is to be used and where it should be fitted on the ventilation circuit.

The frequency of changing the filter will also be detailed in the care plan.

5. Associated Policies / SOPs

Policies
CLIN 02 Assisted Ventilation Policy

SOPs
SOP VENT 01 Tracheostomy Dressing Change (Adult & Child)
SOP VENT 02 Tracheostomy Care General Guidelines
SOP VENT 03 Humidification of a Client's Tracheostomy
SOP VENT 04 Tracheal Suctioning (Adult & Child)
SOP VENT 05 Tracheostomy Tube Care (Adult)
SOP VENT 06 Tracheostomy Tube Change (Adult)
SOP VENT 07 Tracheostomy Tube Change (Child)
SOP VENT 08 Administration of a Nebuliser through a Ventilator Circuit
SOP VENT 09 Assembling a Ventilator Circuit
SOP VENT 11 Safe Management of a Ventilated Service User During Outings
SOP VENT 12 Safe Management of a Ventilated Service User During Power Cuts
SOP VENT 13 Safe use of Battery Packs
SOP VENT 14 Assisted Airway Maintenance and Cough (Adult)
SOP VENT 15 BiPAP
SOP VENT 16 Oral and Nasal Suctioning
SOP VENT 18 CPAP
SOP VENT 19 Mechanical Cough Assist
SOP VENT 20 Changing Tracheostomy Cotton Ties (Child)
SOP VENT 21 Changing Tracheostomy Velcro Tapes (Child)
SOP VENT 22 Phrenic Nerve Pacing
SOP VENT 23 Laryngectomy Care General Guidelines
SOP VENT 24 Emergency Tracheostomy Tube Change (Adult)
SOP VENT 25 Emergency Tracheostomy Tube Change (Child)
SOP VENT 26 Nasopharyngeal Airway Management (Adult & Child)
SOP VENT 27 Nebuliser Therapy

6. References

- NMC Consent to Care
- British Thoracic Society Standards of Care Committee

Appendix A: About Acacium Group

Acacium Group consists of a number of trading companies, each providing services within core niche areas of the health and social care industries. Therefore, as this document is a Group Policy, the Policy herein applies to all trading companies detailed below:

pulse Part of Acacium Group	Thornbury Nursing Services Part of Acacium Group
Thornbury Community Services Part of Acacium Group	Scottish Nursing Guild Part of Acacium Group