



Acacium Group

Safe use of Battery Packs

Procedure Reference | SOP VENT 13

Version | V4.1

Procedure Name	Safe use of Battery Packs
Purpose of Document	To ensure that the correct preparation, procedure & outcome are achieved by implementation of a consistent and systematic approach to managing battery packs for ventilated children and adults
Target Audience	All Nurses & appropriately trained Carers
Version	V4.1
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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	July 2018	Review	KMS/VM
V1.1	Feb 2020	Updated to new Template	CC
V2	Jun 2020	2 Yearly Review	Clinical Advisory Group
V2.1	Oct 2020	Update re rebrand	CC
V3	Nov 2022	Reviewed and updated	Clinical Advisory Group
V4	Jan 2024	Rebrand	Clinical Advisory Group
V4.1	Jun 2024	Reviewed and updated	Clinical Advisory Group

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1. Introduction

Ventilation machines are required to be fully functional at all times and it is essential that these are well maintained. A fully charged battery will power the ventilator for approximately 6 – 8 hours, dependent on the make and the model used and the ventilator settings. Some ventilators have internal batteries and external batteries, other just external batteries.

2. Aim

To ensure the ventilated system is able to function at all times and can be independent of mains power in case of power failure.

3. Equipment

- lead acid battery
- secure storage space
- main electric socket
- charging unit with connection
- circuit breaker

4. Procedure

Safe use of battery packs – large 12-volt sealed lead acid battery

N.B. Manufacturer Instructions, Care of Battery packs and Ventilators should be included within client's packs at home and care plans refer to any specific care requirements

	Action	Rationale
1.	Always ensure that the batteries are stored in a cool dry place away from direct sunlight, and that is suitable for supporting their weight i.e. the floor, ventilator trolley, 'heavy weight' push chairs/electric chairs.	The battery must not be placed on standard pushchairs with 'low weight frames'. Overloading the pushchair places a child at risk. Ensuring Battery is kept in appropriate setting, helps to ensure maximum running time expected from a healthy battery.
2.	Batteries should be checked and documented that they are in working order every shift as part of the Emergency checklist. Ensure that an external battery is always attached to the ventilator in the event of a power failure.	Ready for emergency use or as required.
3.	It is essential to turn off the mains power supply whenever you are attaching or removing the battery from the charger AND/OR ventilator. This change over needs to be completed quickly and power to be restored as soon as possible.	To prevent sudden power surges that may cause the fuse to blow. To ensure that the client ventilation is not stopped, and the client compromised.

4.	Ensure all cables are secured and do not 'tangle' at the side of the chair.	To prevent breakage of cables and battery disconnection.
5.	Ensure that the battery is left on charge at all times when not in use – follow manufacturers guidance.	To ensure readiness for emergency use.
6.	Ensure no liquids or rain can spill on the battery. Use protective bags provided at all times.	To avoid a short circuit.
7.	Low battery power - a continuous low volume alarm that may last to up to 20 minutes from onset of alarm.	This time reduces with the battery life and there is no means of testing. It is possible on some ventilators to ascertain the exact amount of time left in the battery – please refer to the ventilator manual or the client's Care Plan.

NB: If the client is going on air travel it is vital that the airlines are notified prior to travel as they have strict criteria regarding batteries on board in the cabin areas. Prior agreement is required in order for the battery to remain with the client.

5. Associated Policies / SOPs

Policies

CLIN 02 Assisted Ventilation Policy
CLIN 12 Safe Use of Medical Devices 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 10 Cleaning the Ventilator Equipment
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 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)

6. References

- Respiratory Care Battery Life of Portable Home Ventilators: Effects of Ventilator Settings - July 2014
- Performance of Portable Ventilators Following Storage at Temperature Extremes Military Medicine May 2016
- NHS Population Needs NHS England https://www.engage.england.nhs.uk/consultation/clinical-commissioning-wave10/user_uploads/cmplx-home-ventilation-serv-spec.pdf
- <https://www.mndassociation.org/media/4333>

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:

 Part of Acacium Group	 Part of Acacium Group
 Part of Acacium Group	 Part of Acacium Group