



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Respiratory Care Services		
Document:	Departmental Policy and Procedure		
Title:	Mechanical Ventilator Support		
Applies To:	Respiratory Therapist		
Preparation Date:	January 08, 2025	Index No:	RT-DPP-005
Approval Date:	January 22, 2025	Version :	2
Effective Date:	February 22, 2025	Replacement No.:	RT-MPP-005 (1)
Review Date:	February 22, 2028	No. of Pages:	03

1. PURPOSE:

- 1.1 To perform physical examination on all neonates examined in the Maternity and Children Hospital departments.
- 1.2 To detect any physical abnormalities to be able to provide earlier management.
- 1.3 To use international standardization terms to describe human morphology to facilitate reliable comparisons of findings among patients.

2. DEFINITIONS:

- 2.1 **Mechanical Ventilator** - is a special computerized machine used with an artificial airway to enable a flow of gases in and out of the lungs in patients who are unable to ventilate their lungs adequately.

3. POLICY:

- 3.1 Licensed Respiratory Care Practitioner manage the ventilator to deliver volumes of pressure of gas into patient lungs over an extended period of time to remove metabolically produced carbon dioxide and to provide the pulmonary system with the mechanical power to maintain physiologic ventilation, ventilatory pattern and airway pressures for purposes of improving the efficiency of ventilation/oxygenation, and to decrease myocardial work by decreasing the work of breathing.
- 3.2 Indications:
 - 3.2.1 Acute alveolar hypoventilation due to any cause.
 - 3.2.2 Acute respiratory failure due to any cause.
 - 3.2.3 Prophylactic post - op in certain patients.
- 3.3 If a patient's spontaneous ventilation is clinically adequate, mechanical ventilation may not be indicated.
- 3.4 Assess newborn for any potential problems related to maternal pregnancy history or familial disorders

4. PROCEDURE:

- 4.1 Verify physician's order to start initial settings including:
 - 4.2.1 Mode
 - 4.2.2 Pressure Support
 - 4.2.3 FiO₂
 - 4.2.4 Inspiratory Flow
 - 4.2.5 Respiratory Rate
 - 4.2.6 I:E ratio
 - 4.2.7 Trigger
 - 4.2.8 VT = Tidal Volume
 - 4.2.9 PC = Pressure Control
 - 4.2.10 PEEP

- 4.2 Set up ventilator with an appropriate circuit based on patient requirements.
- 4.3 Check ventilator for proper operation of all systems:
 - 4.3.1 No leaks in circuit.
 - 4.3.2 Alarms functional and audible.
 - 4.3.3 HME/ Heated Humidifier.
- 4.4 Make sure proper size of resuscitator bag and mask are at the bedside attached to O2 source.
- 4.5 Explain procedure to patient or family if possible.
- 4.6 Connect circuit to patient airway and monitor patient and ventilator to assure adequate ventilation and oxygenation and patient tolerance.
- 4.7 Complete a ventilator check and patient assessment and document results in medical record.
- 4.8 Once patient is stable, assess patient ventilator settings based on blood gas results and after each parameter change.
- 4.9 Circuits will be changed every 5 days, HME should be changed every 24 hours, heated Humidifier should be refilled every shift.

5. MATERIALS AND EQUIPMENT:

- 5.1 Mechanical Ventilator
- 5.2 Mechanical Ventilator Circuit
- 5.3 Bacterial Filters/Heat and Moisture Exchange (HME)
- 5.4 Heated Humidifier

6. RESPONSIBILITIES:

- 6.1 Respiratory Therapist

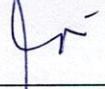
7. APPENDICES:

- 7.1 N/A

8. REFERENCES:

- 8.1 AARC Clinical Practice Guidelines; Patient-Ventilator System Checks, Respiratory Care; 1992; 37:882- 886.
- 8.2 AARC Clinical Practice Guidelines; Humidification During Mechanical Ventilation, Respiratory Care1992; 37:887-890.
- 8.3 Donald F. Egan, Craig L. Scanlan, Robert L. Wilkins, James K. Stoller, Egan's Fundamentals of Respiratory Care, Eight Edition, Mosby; June 2, 2003.

9. APPROVALS:

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