

Document Code:	DPOTMH-E-69-P01-S08	
Effective Date:	03-31-2022	
Document Type:	Standard Operating Procedure	
Page Number:	1 of 4	
Department/Section:	Respiratory Therapy Services	
Document Title:	USE OF MECHANICAL VENTILATOR	

#### **PURPOSE:**

To discuss the steps on how to prepare and set up a mechanical ventilator.

## SCOPE:

Applies to all Respiratory Therapy Services staff of Dr. Pablo O. Torre Memorial Hospital

### PERSON RESPONSIBLE:

Respiratory Therapists

### GENERAL GUIDELINES:

- 1. Use of the mechanical ventilator shall be performed by a trained and experienced Respiratory Therapist.
- 2. The Billing Section shall be informed prior to the attachment of Mechanical Ventilators to check on the patient's financial assessment & for approval.
- A universal precaution by the Infection Prevention and Control Unit shall be observed in the proper handling of ventilator accessories and the proper disposal of contaminated tubing.
- 4. All team members shall wear gloves, face mask and gowns for safety precautions.
- 5. Hand washing before and after hooking the mechanical ventilator and the standard transmission based precautions shall be strictly observed.
- 6. Proper maintenance of ventilators shall be observed and should pass the quality standard. Preventive maintenance shall be done quarterly by the Certified Biomedical Engineers.
- 7. Routine checking of ventilators shall be done every 4 hours. The following shall be checked:
  - 7.1. correct settings as ordered
  - 7.2. cascade water level
  - 7.3. tubing (for disconnections, water, etc.)



Document Code:	DPOTMH-E-69-P01-S08	
Effective Date:	e: 03-31-2022	
Document Type:	Standard Operating Procedure	
Page Number:	2 of 4	
Department/Section:	Respiratory Therapy Services	
Document Title:	USE OF MECHANICAL VENTILATOR	

- 7.4. oxygen supply (need for change of tanks)
- 7.5. cuff attached on the endotracheal tube
- 8. Post the charges for all the supplies that have been used for the procedure.
- 9. In the event that all hospital ventilators are hooked to patients and there is still a need for another one, the department shall request for a back-up Mechanical Ventilator from its accredited supplier to meet the needs of our clients.
- 10. Each ventilator shall be provided with an ambubag for emergency cases and wrench for oxygen replacement.
- 11. Procedures may vary depending on the specific model of mechanical ventilator to be used.



Document Code:	DPOTMH-E-69-P01-S08	
Effective Date:	03-31-2022	
Document Type:	Standard Operating Procedure	
Page Number:	3 of 4	
Department/Section:	Respiratory Therapy Services	
Document Title:	USE OF MECHANICAL VENTILATOR	

#### **PROCEDURE:**

- 1. The Respiratory Therapist checks the physician's order.
- 2. Respiratory Therapist then reviews the patient's chart for the ordered settings:
  - 2.1. Tidal Volume (tV)
  - 2.2. Respiratory Rate (RR)
  - 2.3. Fraction of Inspired Oxygen (FiO<sub>2</sub>)
  - 2.4. Peak Flow (PF)
- Respiratory Therapist verifies the patient's identity using the 2-patient identifier and documents.
- 4. Respiratory Therapist connects the machine to an electrical outlet.
- 5. Respiratory Therapist tests the sensitivity.
- 6. Respiratory Therapist connects the pressure hose to a gas source at 40-70 psi. Staff cascade with sterile water to "Full" mark.
- 7. Respiratory Therapist sets the tidal volume, FiO<sub>2</sub>, and respiratory rate per physician's order.
- 8. Respiratory Therapist adjusts the normal pressure limit (10-15 cmH<sub>2</sub>O)
- 9. Respiratory Therapist checks for possible leak.
- 10. Respiratory Therapist connects the ventilator to the patient.
- 11. Respiratory Therapist checks the ventilator every 4 hours
- 12. Respiratory Therapist document the type of ventilator, its setting upon hooking (Vt, RR, FiO<sub>2</sub>, Peak flow & Mode) for endorsements and checking.

#### REFERENCE:

- 1. Lee N, Hui D, Wu A, et al. A major outbreak of severe acute respiratory syndrome in Hong Kong. N Engl J Med, 2003, 348(20): 1986-1994.
- Yam LY, Chen RC, and Zhong NS. SARS: ventilatory and intensive care Respirology, 2003, 8 Suppl:S31-S35.
- 3. World Health Organization. Clinical management of severe acute respiratory infection when Novel coronavirus (2019-nCov) infection is suspected: Infection is suspected: Interim Guidance.



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Page Number:	4 of 4	
Department/Section:	Respiratory Therapy Services	
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Effective Date:	07-15-2022	
Document Type:	Work Instruction	
Page Number:	1 of 2	
Department/Section:	Respiratory Therapy Services	
Document Title:	USE OF MECHANICAL VENTILATOR	

	KEY TASKS	PERSON RESPONSIBLE
1.	Checks the physician's order and functionality of the equipment prior to the procedure.	
2.	Reviews the patient's chart for the ordered settings.	
3.	Verifies the patient's identity.	
4.	Connects the machine to an electrical outlet.	
5.	Tests the sensitivity.	
6.	Connects the pressure hose to a gas source at 40-70 psi.	
7.	Sets the tidal volume, FiO <sub>2</sub> , and respiratory rate per physician's order.	RTS Staff
8.	Adjusts the normal pressure limit (10-15 cmH <sub>2</sub> O)	
9.	Checks for possible leak.	
10	. Connects the ventilator and checks the patient every 4 hours.	
11	Documents the type of ventilator, its setting upon hooking (Vt, RR, FiO <sub>2</sub> , Peak flow & Mode) for endorsements and checking.	



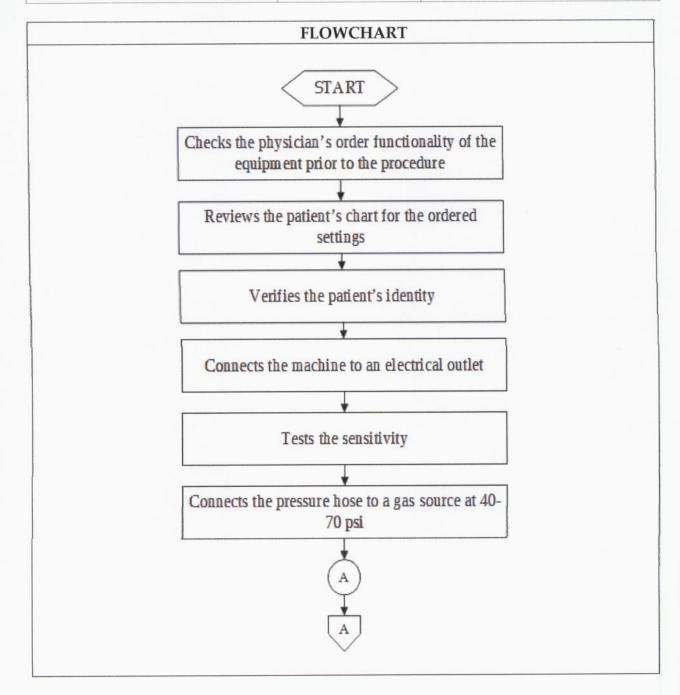
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Page Number:	2 of 2	
Department/Section:	Respiratory Therapy Services	
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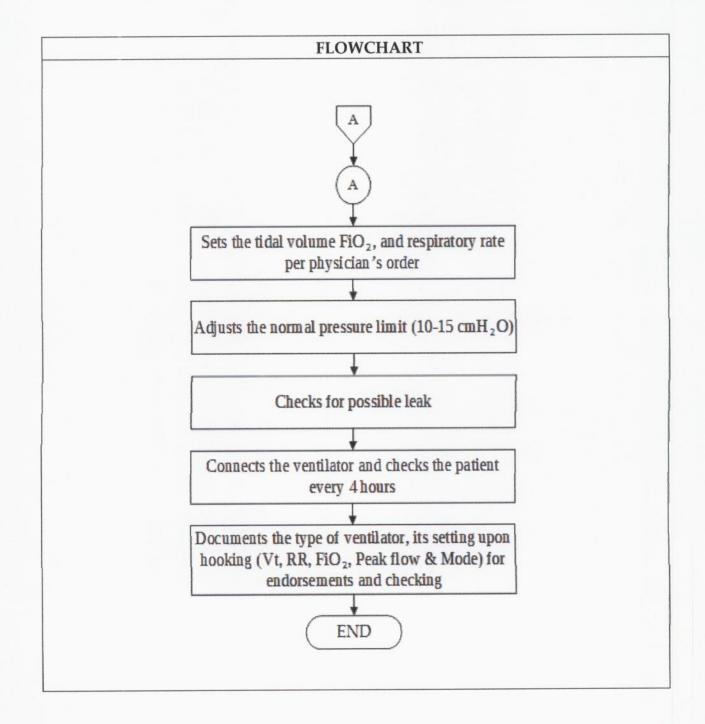


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Effective Date:	07-15-2022	
Document Type:	Flowchart	
Page Number:	1 of 3	
Department/Section:	Respiratory Therapy Services	
Document Title:	USE OF MECHANICAL VENTILATOR	





Document Title:	USE OF MECHANICAL VENTILATOR
Department/Section:	Respiratory Therapy Services
Page Number:	2 of 3
Document Type:	Flowchart
Effective Date:	07-15-2022
Document Code:	DPOTMH-E-69-P01-FC08





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