



Republic of the Philippines
Department of Health, Center for Health Development (CHD) IV-CALABARZON
BATANGAS MEDICAL CENTER
Batangas City
ISO 9001:2015 CERTIFIED



OUTSOURCED PULMONARY UNIT MECHANICAL VENTILATOR TERMS OF REFERENCE

1. SPECIFICATIONS

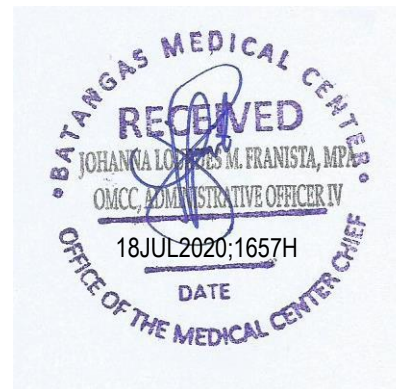
- **Basic ventilation modes include:**
 1. Assist- control mode (AC)
 2. Synchronized Intermittent Mandatory Ventilation (SIMV)
 3. Continuous Positive Airway Pressure (CPAP)
 4. Spontaneous Mode (Spont)
 5. Non Invasive Ventilation (optional) – can be able to provide NIV mask

- **Adjustable setting:**
 1. Tidal Volume (VT)
 2. Fraction of Inspired Oxygen (FI₀₂)
 3. Respiratory Rate (RR)
 4. Flow Rate (FR)
 5. Positive End Expiratory Pressure (PEEP)
 6. Flow Rate (FR)
 7. Inhalation: exhalation Ratio (I:E ratio)
 8. Trigger settings and wave form (optional)

- Turbine / Piston type / compressor type (built in)
- With built in battery
- With built in nebulizer
- With inclusion of filters
- Not older than 15 years old from the manufacturing date

2. Maintenance and servicing

- Whoever wins and awarded for outsourced ventilator provider ensures the company's availability of necessary qualified technician and trained personnel to maintain all pulmonary equipment and services including repair of hospital owned ventilator.
- Schedule for corrective and preventive maintenance every six months.
- The company will provide the necessary disinfection solutions and materials for the sterilization of their machines.



- The company provider will provide 90 units of mechanical ventilators available at any given time.
 - 40 neonatal/pediatric ventilators
 - 50 adult ventilators
- The company will provide at least 5 adult ventilators and 5 pediatric/neonatal ventilator 24 hours standby hence if additional ventilators are needed. The company should ensure the provision of additional ventilators all the time **as soon as possible** (2-4 hours response time from their storage area).
- The company will provide BiPAP machine with provision of NIV masks needed.

Other provisions:

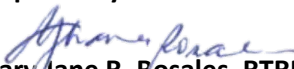
Other equipments which may be deemed necessary for the pulmonary services.

1. **Wright Spirometer** – for calibration and measurement of correct tidal volume.
2. **Oxygen Analyzer** – for measurement of oxygen delivered by the machine.
3. **Finger Probe Pulse Oximeter** – portable use for spot check for actual oxygen saturation of patient.
4. **Negative Inspiratory Force device (with inclusion of accessories)** – to assess patient’s ability to successfully weaned from ventilator


Other issues:

1. The company provider will be evaluated by the end users for consideration on the next bidding period after the expiration of contract.

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