

PARAMEDIC – ADULT & PEDIATRIC

PURPOSE

- To define the methodology and practice for using a mechanical ventilator.
- To optimize oxygenation and ventilation of endotracheally intubated patients as well as patients with supraglottic airways.

INDICATIONS

- Adult patients with advanced airways placed by EMS prehospitally. The use of ventilators in the PIFT environment is not addressed by this protocol.
- Adult and pediatric patients on their own ventilator:
 - If the ventilator is operational, transport patient with their ventilator and caregiver on previously prescribed ventilator settings.
 - If the ventilator is inoperable, assist caregiver with troubleshooting using the SCOPE mnemonic (see below). Use bag valve mask device and transition to EMS ventilator as necessary, if available.

CONTRAINDICATIONS

- Pediatric patients with advanced airway placed by EMS.

SPECIAL CONSIDERATIONS

- All patients receiving mechanical ventilation will have an appropriate size BVM with mask, an appropriately sized OPA, and a 10cc luer lock syringe readily accessible.

SETTINGS

The following initial settings are recommended:

Mode: Assist Control (AC) – Volume.

Tidal Volume: 6-8 mL/kg of Ideal Body Mass (see charts below):

MALE		
Height in Ft/In	6 mL/kg	8 mL/kg
5.0	314	418
5.1	320	426
5.2	328	437
5.3	341	455
5.4	355	474
5.5	369	492
5.6	383	510
5.7	397	529
5.8	410	547
5.9	424	566
5.10	438	584
5.11	452	602
6.0	466	621
6.1	479	639

FEMALE		
Height in Ft/In	6 mL/kg	8 mL/kg
5.0	286	382
5.1	293	390
5.2	300	400
5.3	314	406
5.4	328	438
5.5	342	456
5.6	356	474
5.7	370	493
5.8	383	511
5.9	397	530
5.10	411	548
5.11	425	566
6.0	439	585
6.1	452	603

Protocol Continues 

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Rate: Initially 8 - 12, titrate to appropriate EtCO₂ based on patient's condition (e.g. severe asthma, aspirin overdose, traumatic brain injury).

FiO₂: Start at 100% FiO₂, then titrate to maintain SpO₂ >94% (90% for COPD patients).

PEEP: 2 to 5 cmH₂O.

ALARM SETTINGS

- High pressure alarm: 30 cmH₂O.
- Low pressure alarm, if available: 4 cmH₂O.



Further adjustments in ventilator settings may be done in conjunction with on or offline **Medical Control**.

SCOPE

S: Suction
C: Connections
O: Obstructions
P: Pneumothorax
E: Equipment/Tube Dislodgement

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