End Tidal CO2 (EtCO2) - OPTIONAL

EtCO2 monitoring is evaluated in a numerical reading and waveform reading. This protocol uses the understanding of the tool, physiology, and interpretation of EtCO2 to help the provider assess and treat patients appropriately. This tool gives the provider the ability to support a physical exam and confirm the ventilation process. Normal EtCO2 is 35 - 45 mm/hg.

A. Perform **Initial Treatment / Universal Patient Care Protocol** and follow the proper protocols for medical management based on clinical presentation.

B. If EtCO2 is available it may evaluated in a moving vehicle.

C. Waveform EtCO2 numerical readings can be utilized to assess the following:

1. Confirm breathing is present
2. Confirm the airway is open and patent
3. Confirm the physiology of ventilation is normal or abnormal

D. Non-Intubated patients; EtCO2 readings can be utilized to assess the following:

1. Rapid assessment of the patients respiratory status
2. Monitor critically ill patients to alert providers to impending respiratory arrest
3. Assist in managing patients with ICP by verifying and maintaining levels of EtCO2 at 30 - 35 mm/hg

E. Intubated patients; EtCO2 readings can be utilized to assess the following:

1. Verification of Tube placement
2. Proper titration of respiratory assistance to maintain proper EtCO2.
3. Evaluate cardiac output during CPR. (perfusion efforts and early detection of ROSC)
4. Assist in managing patients with ICP by verifying and maintaining levels of EtCO2 at 30 - 35 mm/hg

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EVENT	EVIDENCE	TREATMENT
Apnea	No EtCO2 number. No waveform, No RR	O2, Ventilate
Obstruction	No waveform, No or decreased LS, impedance	O2, alignment maneuvers, remove obstruction
Laryngospasm	No waveform, No LS, Impedance, does not respond to alignment maneuvers	O2, Ventilate
Bronchospasm	Waveform abnormality	O2, breathing tx, CPAP
COPD	Abnormal EtCO2 level	O2, possibly Nitro / possibly breathing tx, CPAP
Hypoventilation	Low EtCO2, short wave form	O2, Ventilate
Tube Displacement	Short or no waveform, low or no EtCO2 number	Intubate
ROSC	Increase EtCO2 number, waveform, impedance	O2, Assist Ventilations
ICP	If signs of ICP	Maintain EtCO2 at 30 - 35 mm/hg