

## Quick Reference Guide

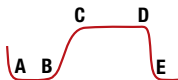
# Capnography

Capnography is an objective monitoring tool for assessing respiratory status in the intubated and non-intubated patient.

2015 AHA and ERC Guidelines\* recommend waveform capnography for the following:

- Confirming correct ET tube placement
- Monitoring ET tube placement
- An indication of compression effectiveness
- An indication of return of spontaneous circulation (ROSC)

### Normal Waveform:



- A–B** Respiratory baseline
- B–C** Expiratory upslope
- C–D** Expiratory plateau
- D** End-tidal value—peak CO<sub>2</sub> concentration—at the end of exhalation
- D–E** Inspiratory downstroke

# Intubated Patient

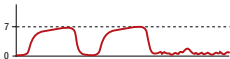
Applications on intubated patients include:

- Verify and monitor ET tube placement
- Demonstrate effectiveness of rescue efforts during CPR
- Detect early signs of ROSC

## Examples:

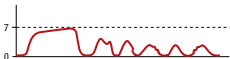
Sudden loss of waveform

- ET tube disconnected, dislodged, kinked or obstructed
- Loss of circulatory function



Decreasing EtCO<sub>2</sub>

- ET tube cuff leak
- ET tube in hypopharynx
- Partial obstruction



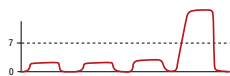
CPR Assessment

- Attempt to maintain minimum of 1.33 kPa



Sudden increase in EtCO<sub>2</sub>

- Return of spontaneous circulation (ROSC)



# Non-intubated Patient

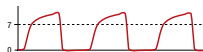
Applications on non-intubated patients include:

- Detect obstructive lung diseases such as emphysema or asthma
- Detect hypoventilation during sedation, analgesia, alcohol or drug intoxication, or post-seizure
- Rapidly assess and triage patients; this can be particularly useful when assessing high volumes of critically ill patients

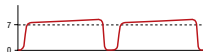
## Examples:

Bronchospasm (“Shark-fin” appearance)

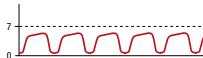
- Asthma
- COPD



Hypoventilation



Hyperventilation



Decreased EtCO<sub>2</sub>

- Apnea
- Sedation



\* Link M, Berkow L, Kudenchuk P, et al. Part 7: adult advanced cardiovascular life support: 2015 American Heart Association Guidelines Update for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. *Circulation*. 2015;132(suppl 2):S444-S464.

Soar J, Nolan J, Bottiger B, et al. European Resuscitation Council Guidelines for Resuscitation 2015 Section 3. Adult advanced life support. *Resuscitation*. 2015;95:100-147.

**For further information please contact your local  
Physio-Control representative or visit our website at  
[www.physio-control.com](http://www.physio-control.com)**

---



©2016 Physio-Control, Inc. Redmond, WA  
GDR 3326417\_A