

# Capnography solutions



## Comprehensive solutions

to assist your system in implementing a capnography monitoring program.



**Per the AHA In-Hospital cardiac arrest recommendations:**

“Quantitative end-tidal CO<sub>2</sub> waveform capnography is recommended for ventilation with a bag-mask, for intubated patients and for those undergoing conscious sedation.”<sup>1</sup>

# Capnography solutions

from Stryker

Monitoring EtCO<sub>2</sub> has become the standard in ALS care and is recommended by both the American Heart Association (AHA) and European Resuscitation Council (ERC) in the 2010 and 2015 Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care science. Stryker offers you several solutions for easily displaying, measuring and recording EtCO<sub>2</sub>, respiratory rate and the capnography waveform.

**Isn't it time to expand your capnography program and get in line with the guidelines? Stryker can help.**

## **The American Society of Anesthesiologists states:**

"During moderate or deep sedation, the adequacy of ventilation shall be evaluated by continual observation of qualitative clinical signs and monitoring for the presence of exhaled carbon dioxide unless precluded or invalidated by the nature of the patient, procedure or equipment."<sup>6</sup>

## Waveform capnography and the Guidelines

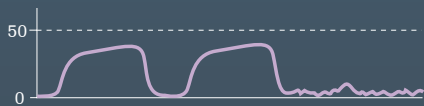
In 2010, the International Liaison Committee on Resuscitation (ILCOR)<sup>2</sup>, AHA<sup>3</sup> and ERC<sup>4</sup> put forth new guidelines to assist in cardiopulmonary resuscitation (CPR). In these guidelines, waveform capnography is recommended for the following:

- Confirming correct ET tube placement
- Monitoring ET tube placement
- An indication of compression effectiveness
- An indication of ROSC

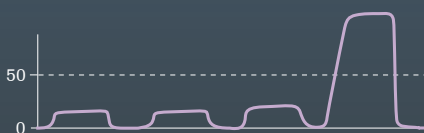
2015 Guidelines updates continue to support the 2010 Guidelines on waveform capnography.<sup>5</sup>

### Intubated EtCO<sub>2</sub> monitoring can help you to:

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



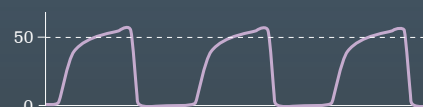
Sudden loss of EtCO<sub>2</sub>, often associated with ET tube displacement



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

### Non-intubated EtCO<sub>2</sub> monitoring can help you to:

- 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



Severe bronchospasm

## The advantages of Microstream® technology include:

- Ability to use for both intubated and non-intubated patients
- No need to compensate for O<sub>2</sub> therapy on non-intubated patients; device does not need to be re-calibrated after each use
- Readings unaffected by surrounding levels of CO<sub>2</sub> or surrounding temperature changes
- Automatic calibration
- Provides breath sampling lines for the broadest base of patients, including neonates
- Eliminates the external, heavy sensors which can be a significant issue with neonates
- Uses a small sampling rate of 50 ml per minute, which allows the use of capnography for all aged patients and reduces moisture and humidity entering the sampling line



Our philosophy is to partner only with best-in-class companies, giving users access to the best patient monitoring capabilities available today.

## Training and education programs

Stryker offers world-class education programs to train clinicians in the use of EtCO<sub>2</sub> monitoring technology. These training options are designed to meet the needs of a broad range of users.

Training options include:

- **Capnography Made Easy**—a 5 CE credit online training program featuring Tim Phalen in collaboration with Pat Brandt, leading experts in the use of capnography. This interactive 5 part course reviews the use of capnography, capnography waveform interpretation, clinical decision making using capnography assessment, and practical application through case studies.
- Additional online courses are available through a partnership with a leading capnography manufacturer. This includes clinical modules related to the use of EtCO<sub>2</sub> monitoring with non-intubated and intubated patients in various clinical settings.

**For more information, contact your Stryker representative.**

## Frequently asked questions

**I have older LIFEPAK® devices and I'd like to add EtCO<sub>2</sub> monitoring capability to it. What are my options?**

If you own a LIFEPAK 20 or 20e defibrillator/monitor, you can upgrade the device by purchasing the CodeManagement Module®, which includes EtCO<sub>2</sub>. All LIFEPAK 20 and 20e devices can be upgraded to add the CodeManagement Module.

If you own a LIFEPAK 12 or 15 monitor/defibrillator, you can upgrade your device to include EtCO<sub>2</sub> monitoring.

**I have an older defibrillator/monitor and I'm ready to purchase a new one with EtCO<sub>2</sub> monitoring features. What are my options?**

Buy a new LIFEPAK 20e with CodeManagement Module or LIFEPAK 15 monitor/defibrillator equipped with EtCO<sub>2</sub> monitoring.

**I have a LIFEPAK 12/15 device with EtCO<sub>2</sub> monitoring capability, but we currently are not using that feature. How can we get started?**

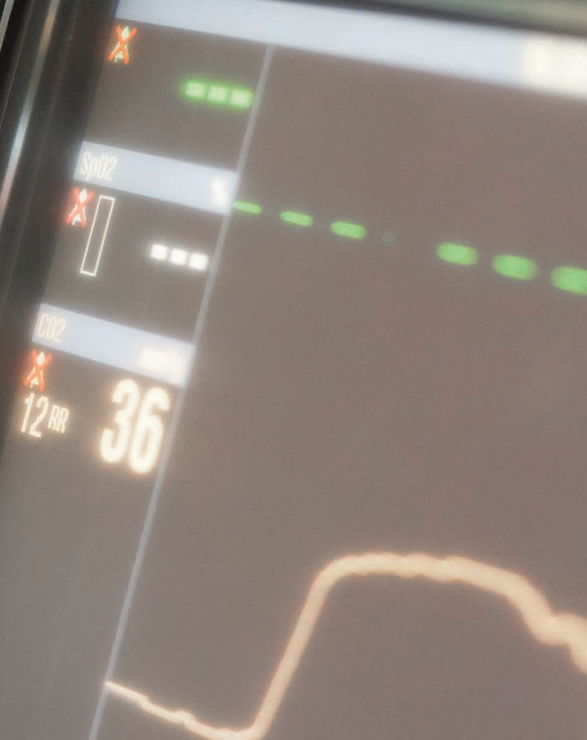
Stryker offers a range of training options and supporting products to help you begin your EtCO<sub>2</sub> monitoring program. For more information on these options, contact your local sales representative.

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For more information on capnography visit [www.capnographyeducation.com](http://www.capnographyeducation.com)



LIFEPAK 15 MONITOR-DEFIBRILLATOR



# Taking the next step

For more information on our Capnography solutions, contact your local Stryker representative.

Visit [strykeremergencycare.com](http://strykeremergencycare.com) and choose Find a Rep.

## References

- 1 Morrison L, Neumar R, Zimmerman J, et al. Strategies for Improving Survival After In-Hospital Cardiac Arrest in the United States: 2013 Consensus Recommendations: A Consensus Statement From the American Heart Association. *Circulation*. 2013;127:1546.
- 2 2010 International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations. *Circulation*. 2010;122:S265, S345, S350, S376.
- 3 2010 AHA Guidelines, *Circulation*. 2010;122:S731,S740.
- 4 2010 European Resuscitation Council Guidelines. *Resuscitation*. 2010;81:1219-1451.
- 5 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.
- 6 ASA Standards for Basic Anesthetic Monitoring, Committee of Origin: Standards and Practice Parameters (approved by the ASA House of Delegates on October 21, 1986, and last amended on October 20, 2010 with an effective date of July 1, 2011, excerpt from section 3.2.4).

**For further information, please contact Stryker at 800.442.1142 (U.S.), 800.668.8323 (Canada) or visit our website at [www.strykeremergencycare.com](http://www.strykeremergencycare.com)**

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