STUDY SHOWS ADVANTAGES OF MINUTE VENTILATION MONITORING OVER END-TIDAL CO₂ IN PATIENTS UNDERGOING PROCEDURAL SEDATION

Waltham, MA (May 6, 2016) Respiratory Motion, Inc. – An independent study by the University of Vermont College of Medicine—being presented this week at the Society for Ambulatory Anesthesia conference in Orlando, FL—indicates that, “Minute Ventilation (MV) monitoring provides superior information versus capnography (EtCO₂) in monitoring non-intubated patients for during procedural sedation.”

The study, “Respiratory Volume Monitoring Could Improve Safety in Procedural Sedation,” concluded that the use of Respiratory Volume Monitoring (RVM), as a direct measure of adequacy of ventilation, may substantially reduce the amount of time a patient is in “unsafe” MV status, during an endoscopic procedure, by between 45% to 65%.

Opioids, commonly used for pain control in patients undergoing orthopedic surgery, can cause opioid-induced respiratory depression (OIRD) and post-operative-apnea (POA), in which patients cease breathing. To reduce the risk of these complications, continuous respiratory monitoring is necessary both for intubated and non-intubated patients (those who are not on a ventilator and most at risk for opioid-induced respiratory depression).

According to the study:

“Verification of patient respiratory sufficiency is essential in the fast-paced procedural sedation environment, but dark room conditions and limited access to the patient’s airway can make clinical assessment difficult. Pulse oximetry is commonly used for respiratory monitoring, but provides only late indication of respiratory depression, especially with the administration of supplemental oxygen. Capnography has unfortunately proven to be unreliable in non-intubated patients.”

Minute Ventilation monitoring, also referred to as Respiratory Volume Monitoring (RVM), is a direct, non-invasive measure of respiratory status, providing real-time measurements of minute ventilation (MV), tidal volume (TV), and respiratory rate (RR) in both intubated and non-intubated patients. In capnography, variables such as sensor positioning, changes in respiratory patterns, and changes in oxygen supply all distort the measurements in non-intubated patients. Because it is an indirect indicator of respiratory compromise, diagnosis is often delayed and readings are often false.

This 73-patient study by the University of Vermont College of Medicine utilized a non-invasive respiratory volume monitor (RVM) providing continuous real-time measurements of minute ventilation (MV), tidal volume, and respiratory rate (RR) to assess the adequacy of ventilation during endoscopy. According to the study’s key findings, the use of RVM was directly responsible for a reduction of between 45% and 65% in the percent of time with potentially unsafe MV. “Unsafe” MV was considered less than 40% of Predicted MV.
The study states:

- “… Since the only difference between Endoscopy-Blinded and Endoscopy-Unblinded groups was the use of the RVM, we can attribute the reduction of >45% in the percent of time with potentially unsafe MV to the use of the RVM.
- This is further supported by the fact that when the care provider found the RVM to be “very useful,” the improvement was >65%.

About the study
“Respiratory Volume Monitoring Could Improve Safety in Procedural Sedation” was an independent study conducted by Donald Mathews, MD; Michael Oberding, MD; Eric Simmons, MD; Karl Kristiansen, MD; Stephen O’Donnell, MD; and Kevin Abnet, MD, of the Department of Anesthesiology, University of Vermont College of Medicine, Burlington Vermont.

About SAMBA
The Society for Ambulatory Anesthesia is one of the fastest growing anesthesia organizations, responding to the education and research needs of perioperative physicians practicing ambulatory anesthesia. Founded in 1985, SAMBA enjoys a membership of over 1,300 physicians who actively practice ambulatory anesthesia, other health professionals with an interest in ambulatory anesthesia, and residents in training. The goals of the Society are:
- To advance the practice of ambulatory anesthesia in all ambulatory venues.
- To encourage high ethical and professional standards and by fostering and encouraging education and research.
- To provide professional guidance for the practice of ambulatory anesthesia.

The Society for Ambulatory Anesthesia strives to keep the medical profession and the public informed about the role of anesthesiologists in the perioperative care of patients undergoing ambulatory surgery. The Society also supports programs and efforts in ambulatory anesthesia by the American Society of Anesthesiologists as well as establishes guidelines for subspecialty training in ambulatory anesthesia. Education stands in the forefront of the Society’s mission. Visit www.sambahq.org.

About Respiratory Motion, Inc.
Respiratory Motion, Inc. is the global leader in innovative Minute Ventilation Monitoring useful across patient populations and environments. Our mission is to improve patient safety and reduce the cost of care in providing non-invasive respiratory monitoring wherever care is delivered. “Never Miss a Breath – with the ExSpiron™
To learn more, visit www.respiratorymotion.com

For more information, contact:

Jack Auer
Vice President, Marketing
Respiratory Motion, Inc.
781-373-1636
jack.auer@respiratorymotion.com