



NYS DOH Office-Based Surgery

Use of *Capnography/End Tidal CO₂ monitoring* in patients receiving Moderate Sedation, Deep Sedation & General Anesthesia

Background – Capnography* monitoring measures carbon dioxide levels in exhaled gas from the lungs and provides a continual evaluation of ventilation. The addition of capnography to the monitoring of patients receiving moderate and deep sedation has been found to decrease the number of adverse events, including apnea and hypoxia. The use of capnography is an evidenced based practice recommended by professional organizations and societies as a standard of care for patients receiving moderate sedation, deep sedation, and general anesthesia.

Purpose – To improve patient safety and decrease adverse events by requiring a standard of care for the monitoring and evaluation of adequate ventilation in patients receiving moderate sedation, deep sedation, and general anesthesia in the office-based surgery setting.

Standard – In order to maintain accreditation, office-based surgery practices will be required by Accrediting Organizations to provide continual[†] monitoring of end tidal CO₂ using capnography for moderate sedation, deep sedation and general anesthesia in the New York State office-based setting. Compliance to this standard is to be effective January 31, 2018.

During moderate or deep sedation, and general anesthesia, the adequacy of ventilation shall be evaluated by continual observation of qualitative clinical signs and monitoring for the presence of exhaled carbon dioxide using capnography, unless precluded or invalidated by the nature of the patient, procedure or equipment. When capnography is utilized, the end tidal CO₂ alarm should be audible to the clinical staff responsible for monitoring the patient. Capnography will be documented at frequent intervals in the physiologic monitoring record.

References:

American Society of Anesthesiologists (2015, October). *Standards for basic anesthetic monitoring: Standards and practice parameters*. Available at <http://www.asahq.org/For-Members/Standards-Guidelines-and-Statements.aspx>. Accessed February 6, 2017.

American Society of Anesthesiologists. Practice guidelines for sedation and analgesia by non-anesthesiologists. *Anesth.*2002;96(4), 1004-17. Available at <http://www.asahq.org/For-Healthcare-Professionals/Education-and-Events/Guidelines-for-Sedation-and-Analgesia-by-Non-Anesthesiologists.aspx>. Accessed February 6, 2017.

American Society of Anesthesiologists (2015, October). *Statement on Documentation of Anesthesia Care*. Available at <http://asahq.org/quality-and-practice-management/standards-and-guidelines/search?q=statement>. Accessed June 2017.

Kodali, B. S. (2013). Capnography Outside the Operating Rooms. *Anesthesiology*, 118(1), p. 192-201.

Saunders, R., Erslon, M., & Vargo, J. (2016). Modeling the costs and benefits of capnography monitoring during procedural sedation for gastrointestinal endoscopy. *Endoscopy International Open*, 4(3), E340–E351. <http://doi.org/10.1055/s-0042-100719>

*Capnography for the purpose of this standard is defined as the continual monitoring of the presence of exhaled carbon dioxide to assess the adequacy of ventilation during moderate sedation, deep sedation and general anesthesia in the office based-setting.

† Continual for the purpose of this standard is defined as repeated regularly and frequently in steady rapid succession whereas continuous means prolonged without any interruption at any time.

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