

Training and Competency in Sedation Practice in Gastrointestinal Endoscopy



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KEYWORDS

- Conscious sedation • Deep sedation • Endoscopy • Gastrointestinal • Curriculum • Education • Medical • Graduate

KEY POINTS

- Instruction in endoscopic sedation includes theoretical and practice-based components.
- Critical skills needed to safely perform sedation include preprocedural assessment, informed consent, sedation administration, intraprocedure and postprocedure monitoring, adverse event management, and safe discharge.
- The use of propofol by nonanesthesia providers mandates a more intense training curriculum given the narrow therapeutic range and resulting increased risk of deep or general anesthesia induction.
- Simulation allows trainees to gain hands-on experience managing sedation and related adverse events in a controlled environment.
- Methods to assess endoscopic sedation competency differ among institutions, but requires testing of knowledge and technical skills.

NEED FOR SEDATION TRAINING

The purpose of endoscopic sedation is to relieve the patient's discomfort and anxiety while simultaneously reducing disruptive movements so that an adequate endoscopic examination may be performed. Patient safety needs to be ensured while procedural efficacy is maintained. The delivery of sedation requires multifaceted expertise and the endoscopist needs to be adept at each step of the sedation process ranging from preprocedural planning to patient discharge.^{1,2}

The increasing use of propofol to support endoscopy has intensified awareness of these challenges.³⁻¹³ Although large studies have demonstrated consistently low

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morbidity, the classification of this agent as a general anesthetic has led to questions about endoscopists' lack of proper training in sedation and potential ramifications for patient safety.^{14,15} Furthermore, a significant portion of the American malpractice claims against gastroenterologists originates from sedation-related complications.^{16,17}

Thus, a key challenge currently encountered in fellowship programs and clinical institutions is to ensure that endoscopists are trained properly in the practice of sedation to the level of competency. Traditionally, training in sedation for endoscopy has been done via the informal apprentice and mentor model within the endoscopy suite.^{18–20} Although training under the direct guidance of an anesthesiologist has not been required, the consensus of the gastroenterology community is that the training process needs to be done with a more thorough and programmatic approach.^{17,20–23} This process includes the need for formal education, simulator-based experiences, immediately supervised hands-on practice, and finally testing for competence.¹ In this review, we aim to cover the current guidelines and approaches to training gastroenterologists in the practice of sedation and the tools available for assessing competency.

CURRENT GUIDELINES

The most widely recognized American curriculum and competency guidelines for sedation training of Gastroenterology professionals are included in the Multisociety Sedation Curriculum for Gastrointestinal Endoscopy (MSCGE; 2012) derived from the combined efforts of the American Society for Gastrointestinal Endoscopy, American Gastroenterological Association, American College of Gastroenterology, the American Association for the Study of Liver Disease, and the Society for Gastroenterology Nurses and Associates.^{1,2,17} The American Society of Anesthesiologists (ASA) sedation guidelines for nonanesthesiologists (2002) remains highly influential.² The most recent European curriculum comes from a consortium of the European Society of Gastrointestinal Endoscopy, European Society of Gastroenterology, and the European Society of and Gastroenterology and Endoscopy Nurses and Associates in 2013.²³ This curriculum was updated in 2015 with a special focus on nonanesthesiologist administered propofol training.²⁴ Other published guidelines include the Spanish Society of Digestive Endoscopy (2014), Japanese Gastroenterological Endoscopy (2015), Australian Tripartite Endoscopy Sedation Committee (2010), and the German (S3; 2008) guidelines.^{2,22,25–28} The impact of the implementation of the S3 guidelines has been the subject of prospective investigation.²⁹

Although the guidelines differ in specific content, they emphasize that the training process needs to include both theoretical and practical skills training.^{1,23} The former involves a blend of didactics and self-teaching and the latter entails simulation scenarios as well as direct observation of clinical performance by an instructor. The 2 main curricula defer in that the MSCGE takes a more self-directed, individualized approach to learning, whereas the European curriculum serves as more of an instruction guide to teachers and organizations seeking to organize sedation courses. The MSCGE aims to provide a foundation of knowledge and then create pathways to allow the individual to fill in gaps in their current understanding of endoscopic sedation.^{1,23} The course structure of the European curriculum consists of a 3-day introductory course that combines theory and practice followed by at least a 2-week course of clinical training with a mentor.²³ Both courses recommend detailed training in preprocedure assessment and preparation, appropriate pharmacologic and monitoring strategies during the procedure, management of adverse events, and postprocedure monitoring.^{1,23}

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