

Managing Procedural Sedation Risks

Procedural sedation is a common practice in healthcare and has many benefits for patients undergoing noninvasive and minimally invasive procedures. It can help facilitate treatment while reducing pain, stress, and emotional anxiety. However, the use of this technique in settings outside the operating room (OR) has increased, and — as a result — procedural sedation “has considerable variability, is practiced with varying degrees of skill, and has been the subject of controversy”¹

Patient safety is paramount in treatments requiring procedural sedation, and providers must be ready to intervene and rescue patients if complications occur. The following checklist, although not exhaustive, aims to help healthcare organizations and providers review important safety considerations for procedural sedation and identify any potential gaps in their processes.²

	Yes	No
Prior to procedures, are patients assessed using the American Society of Anesthesiologists’ Physical Status Classification System to determine medical comorbidities and to help identify perioperative risks (e.g., airway management difficulties)?	<input type="checkbox"/>	<input type="checkbox"/>
Are patient selection criteria in place to determine which patients are candidates for procedural sedation and which might require general anesthesia administered by an anesthesiology provider in an OR setting?	<input type="checkbox"/>	<input type="checkbox"/>
In nonemergency situations, do providers have thorough informed consent discussions with patients that include reviewing the risks, benefits, and alternatives to the proposed procedure and the use of procedural sedation?	<input type="checkbox"/>	<input type="checkbox"/>
Is the type of procedure, how long it will last, and the patient’s characteristics (e.g., age, medical history, anatomy, allergies, and physical status) carefully considered when selecting the level of sedation?	<input type="checkbox"/>	<input type="checkbox"/>
Are each patient’s current medication list, medication history, allergies, and other risk factors carefully considered when selecting sedation agents?	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
Is the team member who is administering the sedation agent(s) and monitoring the patient experienced with procedural sedation and airway management?	<input type="checkbox"/>	<input type="checkbox"/>
Whenever possible, are at least two healthcare providers present during procedural sedation (e.g., a proceduralist and a sedation provider)?	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> For procedures involving deep sedation, is a third healthcare provider involved when resources and circumstances permit? 	<input type="checkbox"/>	<input type="checkbox"/>
Does the healthcare team use a specific procedural sedation safety checklist or a preprocedure checklist that incorporates sedation safety?	<input type="checkbox"/>	<input type="checkbox"/>
Does the healthcare team verify that all necessary monitoring and emergency response equipment and supplies are available prior to the start of each procedure?	<input type="checkbox"/>	<input type="checkbox"/>
Are procedural timeouts used to perform standard safety measures, such as verifying patient identify and consent, reviewing patient allergies, verifying the procedure and site, and confirming team members' roles?	<input type="checkbox"/>	<input type="checkbox"/>
Are patients appropriately monitored during procedural sedation (e.g., blood pressure, heart rate, respiratory rate, blood oxygen, and end-tidal carbon dioxide), and is the information documented according to established timeframes?	<input type="checkbox"/>	<input type="checkbox"/>
Does the healthcare team use professional, evidence-based guidelines for procedure-specific monitoring recommendations?	<input type="checkbox"/>	<input type="checkbox"/>
Is supplemental oxygen used prior to and during procedural sedation?	<input type="checkbox"/>	<input type="checkbox"/>
Do providers who administer sedation agents have experience and training in medication safety and administration?	<input type="checkbox"/>	<input type="checkbox"/>
Are high-risk sedation agents available in limited concentrations and doses to prevent medication errors in pediatric patients?	<input type="checkbox"/>	<input type="checkbox"/>
Are appropriate size syringes available, and are syringes selected based on the medication dose and volume?	<input type="checkbox"/>	<input type="checkbox"/>
Does your organization enforce the use of standard dosing units (e.g., mg/mL)?	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
Are prefilled, single-use, ready-to-administer syringes available to prevent drug overdoses?	<input type="checkbox"/>	<input type="checkbox"/>
When prefilled syringes aren't available, does the person preparing the syringe clearly label it with the name of the drug, the drug concentration, and the total dose?	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Are syringe labels printed rather than handwritten when possible? 	<input type="checkbox"/>	<input type="checkbox"/>
Is a pharmacist available to provide guidance and oversight during the ordering and administration of high-risk sedation agents?	<input type="checkbox"/>	<input type="checkbox"/>
Does the healthcare team use closed-loop communication and shared terminology (e.g., for dose units) to prevent communication mishaps that may result in patient harm?	<input type="checkbox"/>	<input type="checkbox"/>
Do providers who perform procedural sedation receive adequate training, including simulation exercises?	<input type="checkbox"/>	<input type="checkbox"/>
Does your organization support a culture of safety that encourages reporting sedation-related adverse events and near misses?	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Has a standardized event-reporting tool been implemented? 	<input type="checkbox"/>	<input type="checkbox"/>
Does your organization use data collected from event reporting to track trends, develop education, and devise quality improvement efforts?	<input type="checkbox"/>	<input type="checkbox"/>

Resource

For more information about this topic, see MedPro's [Risk Resources: Procedural Sedation in Adults and Children](#).

Endnotes

¹ Benzoni T, & Cascella, M. (2022, October 16 [last updated]). Procedural sedation. *StatPearls*. Retrieved from www.ncbi.nlm.nih.gov/books/NBK551685/

² This checklist is based on information from the following sources: Benzoni, T., et al. Procedural sedation; Agency for Healthcare Research & Quality. (2023, April 26). The dose makes the poison: Medication error during procedural sedation in the pediatric emergency department. *Web M&M Case Studies*. Retrieved from <https://psnet.ahrq.gov/web-mm/dose-makes-poison-medication-error-during-procedural-sedation-pediatric-emergency-department>; Frank, R. L. (2023, March 2 [last updated]). Procedural sedation in adults: General considerations, preparation, monitoring, and mitigating complications. *UpToDate*. Retrieved from www.uptodate.com/contents/procedural-sedation-in-adults-general-considerations-preparation-monitoring-and-mitigating-complications

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