



Managing Patient Safety Across the Sedation Continuum Webinar Q&A

How do monitoring recommendations (pulse oximetry, capnography, etc.) differ across all levels of sedation? What factors should be considered?

The [HQI toolkit](#) contains detailed information about monitoring recommendations. Please review pages 21-27. Kevin McQueen, one of the panelists for the webinar, was a facilitator for these chapters. Please reach out directly with any questions: kevin.mcqueen@uhealth.org

What are the guidelines around CPAP and BiPAP in the Post-Anesthesia Care Unit (PACU)?

The [STOP BANG](#) tool is used in many facilities. Patients with a score of 5 or above are listed as high-risk.

- Pre-operative settings:
 - Identify patients with "High Risk Obstructive Sleep Apnea (OSA)", typically those with known OSA or STOP-BANG score 5 or greater. Initiate a pre-operative collaborative practice order set, notify Anesthesia in Charge (AIC) of OSA diagnosis or risk for OSA, and place OSA wrist bands on the patient.
 - Ensure OSA order set has been activated for all patients with OSA or at high risk for OSA.
 - Select an inpatient or outpatient order set. EtCO₂ monitoring is not pre-checked and only be ordered if clinically necessary.
 - Create an anesthetic plan for the patient that avoids or minimizes narcotic use with multimodal analgesia, regional anesthesia, and use of shorter-acting narcotics.
 - Evaluate the patient's home CPAP for use in PACU.
- Post-Anesthesia Care Unit (PACU)
 - Continuously monitor patient using pulse oximetry and EtCO₂ monitoring, as clinically indicated.
 - Minimize narcotic use.
 - Notify AIC for persistent hypoxia: O₂ saturation <89% on 6L of O₂. Notify respiratory therapy to evaluate CPAP.
 - Follow routine PACU monitoring per OSA algorithm.

See [CPAP/BiPAP-Non Invasive Ventilation \(NIV\): Care and Monitoring of the Patient](#) and [Postoperative Noninvasive Ventilation](#) for additional information.

What are recommendations for monitoring patients who are post-op same day surgery and are going home with opioids? Are there any studies that address patients at home with OIRD?

The ADA publication of [guidelines](#) for monitoring within the outpatient, non-hospital setting are referenced even for in-patient procedures. Regardless of setting, all guidelines recommend assessment before discharging to determine safety.

Studies have found that most families do not process the information that is given at the time of discharge. Any warnings of drug-drug interactions or what to watch for is not well understood by those who are taking care of the recovering individual. As such, remote monitoring with frequent check ins with the family is being investigated. These check-ins are essential to reinforce the guidelines discussed at discharge, such as which medications should and should not be taken with pain medications and to offer alternative methodologies for pain reduction. The health systems that have employed this type of follow up have seen a reduction in returns to the ED. Engagement of the family is critical to advance their understanding of what could occur within the home setting and to prepare them in the case of deterioration.

What are the recommendations for ketamine administration?

[Ketamine](#), when utilized in low dose, can be an effective medication for management of pain. While ketamine can be effective, it is not a medication that should be used by providers who are not familiar with proper administration and dosing. It is essential that ketamine administration is standardized in both the emergency, pre-hospital settings, and in-hospital settings, and that clinicians understand indications for use, patient risk factors that can influence reaction, interactions with other medications, and anticipated recovery. See below for more information:

- [Consensus Guidelines on the Use of Intravenous Ketamine Infusions for Chronic Pain From the American Society of Regional Anesthesia and Pain Medicine, the American Academy of Pain Medicine, and the American Society of Anesthesiologists](#)
- [Ketamine Safety and Use in the Emergency Department for Pain and Agitation/Delirium: A Health System Experience](#)
- [Ketamine Use in Prehospital and Hospital Treatment of the Acute Trauma Patient: A Joint Position Statement](#)

What are the benefits of continuous physiologic monitoring in managing patient safety?

Continuous monitoring occurs when a patient is continuously attached to a mechanical device to monitor and detect any abnormalities and alert the caregiver on duty. This is primarily used for risk prediction and event detection. With continuous monitoring, more data points may permit more accurate trending of patient status, meaning critical events can be discovered more quickly. Furthermore, continuous monitoring enables immediate life-saving interventions, allows work flow adjustments by floor staff, and also improves patient flow at a lower cost.

- [Intermittent vs. Continuous Monitoring: Is Healthcare as Good as Fedex?](#)



How does the risk of blood clots differ with spinal anesthesia versus general anesthesia?

Spinal anesthesia used to be considered safer in preventing blood clots, however, because the prophylactic Lovenox must be held before the spinal anesthesia is administered, there is little difference. Some studies show spinal anesthesia to increased risk, due to the increased risk post-vasodilation. See the following for more information:

- [Spinal anesthesia increases the risk of venous thromboembolism in total arthroplasty](#)
- [General anesthesia vs spinal anesthesia for patients undergoing total-hip arthroplasty: A meta-analysis](#)
- [Comparison of the incidence of venous thromboembolism between epidural and general anesthesia for total knee arthroplasty: a retrospective study](#)