KNOW THE WARNING SIGNS.
PROCEDURAL SEDATION OUTSIDE THE OR.

More procedures are happening outside the OR — under sedation rather than general anesthesia — than ever before.¹ Because different patients respond differently, monitoring individual responses during procedural sedation can help avoid complications.²

To help evaluate oversedation or other unexpected reactions, watch for these warning signs during minimal, moderate, and deep sedation.

MINIMAL SEDATION
Balancing comfort and consciousness

**Clinical Evaluation**

- **Optimal**
  - Ready response to speech, including eye contact³

- **Warning signs**
  - Lack of eye contact (may mean deeper sedation)³

**Blood Pressure**

- **Optimal**
  - Patient baseline⁴

- **Warning signs**
  - > 180 mm HG (may indicate anxiety or pain)⁴
  - < 90 mm HG (may indicate hypotension)⁴

**Oxygen Saturation**

- **Optimal**
  - > 90% SpO₂ via pulse oximetry⁵

- **Warning signs**
  - Decline of 5% or more from baseline (may indicate significant oxygen desaturation)⁶

WATCH FOR: OVERSEDATION, ADVERSE REACTIONS

Not enough sedation can also pose a problem, as patients may experience anxiety, pain, or discomfort that can interfere with the procedure.⁶
WATCH FOR: OVERSEDATION, RESPIRATORY RISKS

In one procedure type, 26 percent of patients became deeply sedated when moderate sedation was intended. And the side effects of some hypnotic agents used for moderate sedation may include respiratory depression or respiratory compromise.

Know the warning signs.

Clinical Evaluation

- **Optimal** Movement/opening eyes in response to loud voice

- **Warning signs** Lack of response to voice (may mean deeper sedation)

Oxygen Saturation

- **Optimal** > 90% SpO₂ via pulse oximetry

- **Warning signs** Decreased SpO₂ (may be lagging sign of ventilatory problem)

Ventilation

- **Optimal** 35–45 mm HG EtCO₂, normal “plateau” waveform

- **Warning signs** Changes in waveform (may signal respiratory compromise)

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To help evaluate oversedation or other unexpected reactions, watch for these warning signs during minimal, moderate, and deep sedation.
WATCH FOR: OVERSEDATION, AIRWAY PATENCY
Too much sedation could make a patient slip into general anesthesia. Monitor to ensure a patient’s airway is functioning without obstructions.

MORE PROCEDURES ARE HAPPENING OUTSIDE THE OR — UNDER SEDATION RATHER THAN GENERAL ANESTHESIA — THAN EVER BEFORE. Because different patients respond differently, monitoring individual responses during procedural sedation can help avoid complications.

To help evaluate oversedation or other unexpected reactions, watch for these warning signs during minimal, moderate, and deep sedation.

**DEEP SEDATION**
Focusing on risks to the airway

**AIRWAY FUNCTION**
- **Optimal** Normal capnography waveform and observed breathing
- **Warning signs** Apnea, laryngospasm, and other threats to airway patency

**VENTILATION**
- **Optimal** 35–45 mm HG EtCO₂, normal waveform
- **Warning signs** > 45 mm HG EtCO₂ (may indicate hypercarbia)

**CARDIOVASCULAR FUNCTION**
- **Optimal** Normal sinus rhythm via electrocardiogram
- **Warning signs** QRS complex mean frontal plane axis: < -30°, > 90°


