Sedation is a common opioid adverse effect; respiratory depression is the most serious adverse effect related to opioid use. Frequent patient assessment, prompt identification of advancing sedation, and timely interventions can prevent development of clinically-significant respiratory depression.

### Patient Assessment During Opioid Administration for Pain Management
- **Sedation assessment is required for ALL patients receiving opioid analgesics by ALL routes of administration.**
- Respiratory rate (RR) and quality (depth and regularity) is assessed with advancing sedation and when the patient appears to be sleeping.
- The Pasero Opioid-induced Sedation Scale (POSS) is used to assess sedation in non-critically ill adult and pediatric patient populations, including OB and peri-op.
- The Richmond Agitation Sedation Scale (RASS) is used to assess sedation in the vented and non-vented, critically ill adult receiving opioids to manage pain.
- The hallmark of clinically significant sedation is falling asleep mid-sentence or the inability of the patient to stay awake to maintain conversation. (POSS ≥ 3)

### How to Complete a Comprehensive Assessment of Sedation and Respiratory Status
- Observe the patient without stimulation. Touching the patient or just entering the room can arouse the patient, giving a false impression of level of consciousness.
- **If your patient is sleeping, assess respiratory status before arousing a patient.** RR should be counted for a full minute. Compare rate and quality to patient’s baseline status. Shallow respirations, periods of apnea, and snoring require immediate attention and further evaluation.
- A sleeping patient needs to be gently awakened to assess sedation. Observe how quickly the patient wakes to conversation or touch.
- Ask the patient a simple question and observe the patient’s ability to stay awake and answer the question.

### Frequency of Assessment
- **Assess sedation prior to and after opioid administration;** timing of reassessment is based on drug, dose and route administered. **Suggested reassessment is 15-30 minutes after IV administration and 60-120 minutes after oral administration.**
- Reassess more frequently during the first 24 hours of opioid therapy.
- Reassess sedation and respiratory status more frequently for advancing sedation.
- Assessments may be more frequent in select patient populations by clinician order.
- Patients at risk for respiratory depression require more frequent sedation and respiratory assessments (see page 2).

### Assessment When the Patient Appears to be Sleeping
- The most dangerous time for a patient to develop opioid-induced respiratory depression is during the first 24 hours of opioid therapy and occurs more frequently between the hours of 2300 and 0700 when most patients are sleeping.
- Patients receiving opioid analgesics should be awakened for reassessment during the first 24 hours of opioid therapy.
- The nurse must consider a patient’s need for sleep along with patient safety when determining whether or not to wake a sleeping patient.
- If the patient appears to be sleeping:
  - Assess the patient’s respiratory status. Call out the patient’s name in a normal tone of voice. If the patient does not arouse and RR and quality are WNL for the patient, pain assessment/reassessment can be delayed until the patient wakes, and “sleep” should be charted. Additionally, RR and quality should be charted.
  - If the patient’s RR and quality are not WNL, the patient must be stimulated/awakened to complete more thorough pain, sedation, and respiratory assessments.
Pasero Opioid-Induced Sedation Scale (POSS)

S = Sleep, easy to arouse
   Acceptable; no action necessary; may increase opioid dose if needed

1 = Awake and alert
   Acceptable; no action necessary; may increase opioid dose if needed

2 = Slightly drowsy, easily aroused
   Acceptable; no action necessary; may increase opioid dose if needed

3 = Frequently drowsy, arousable, drifts off to sleep during conversation
   Unacceptable; monitor respiratory status and sedation level closely until sedation level is stable at less than 3 and respiratory status is satisfactory; decrease opioid dose 25-50% or notify primary or anesthesia provider for orders; consider administering a non-sedating, opioid-sparing non-opioid, such as acetaminophen or an NSAID, if not contraindicated; ask patient to take deep breaths every 15 to 30 minutes.

4 = Somnolent, minimal or no response to verbal and physical stimulation
   Unacceptable; stop opioid; consider administering naloxone; call Rapid Response Team (Code Blue), if indicated by patient status; stay with patient, stimulate, and support respiration as indicated by patient status; notify primary or anesthesia provider; monitor respiratory status and sedation level closely until sedation level is stable at less than 3 and respiratory status is satisfactory.

© 1994, Pasero C. Used with permission.

Risk Factors for Opioid-Induced Respiratory Depression

- Individual characteristics: age > 55 years, obesity (e.g., BMI ≥ 30 kg/m²), smoker (> 20 pack years)
- Sleep disordered breathing: untreated obstructive sleep apnea, history of snoring or witnessed apneas
- Disease states: preexisting pulmonary or cardiac disease or dysfunction e.g., COPD, CHF, major organ failure (hepatic or renal)
- Medication use: concurrent administration of sedating medications such as benzodiazepines, anxiolytics, or antihistamines
- Opioid use: first 24 hours of opioid therapy, opioid naïve and received a high dose in a short period of time, opioid tolerant and received a significant amount of opioid in addition to their usual dose, continuous opioid infusion in opioid naïve patients, large single-bolus techniques e.g., single-injection neuraxial morphine
- Surgical considerations: prolonged surgery (> 2 hours), thoracic and other large incisions that may interfere with adequate ventilation
- Pain management considerations: pain is controlled after a period of poor control, patients who received naloxone are at increased risk for repeat respiratory depression as the duration of naloxone is shorter than duration of most opioids.

Key Points to Remember

- Sedation ALWAYS precedes opioid-induced respiratory depression!
- Clinically significant respiratory depression is not defined by a specific RR; a combination of RR and quality (depth and regularity) compared to the patient’s baseline determines if the patient is compromised.
- Use of pulse oximetry and/or end-tidal CO2 monitoring does not replace the need for nursing assessment of sedation.
- Sedation is a measure of level of consciousness and cannot be assessed while the patient is asleep.
- Communicate sedation status during hand-off communications and escalation of clinical issues.
- RASS will continue to be used for all sedation assessments of critically ill adults, vented and non-vented, and as part of the CAM-ICU assessment for delirium.

Peggy Lutz, MSN, FNP-BC, RN-BC, Service Line Director, Pain Management, Ascension Wisconsin

Page 2 of 2

September 2018
References


