

Hospitalist deep and moderate nitrous sedation protocols (example)

Deep Inhaled Nitrous Sedation Protocol

Patient Population:

- Patients who are 6 months of age and older with ASAPS score of 3 or less.
- Patients with an ASAPS score of 3 requires Anesthesia consultation to proceed with sedation.
- Hospitalists do not sedate children with ASAPS score of 4 or more.

Medication Protocol:

Patients who are 2 years of age or less receive 0.2 mg/kg of po oxycodone and patients who are 3 years of age and older receive 0.3mg/kg of po oxycodone (max 10mg) timed 60 minutes prior to procedure and receive 70% inhaled nitrous oxide for a total maximum of 5- 7 minutes followed by 60% or 50% based on sedation need for the rest of the procedure. When using this protocol we strictly follow hospital NPO guidelines for elective sedation and anesthesia in outpatient areas.

Standard safety checks are performed on nitrous delivery machines prior to use and gas monitors are used to measure ETCO₂, inhaled N₂O concentrations, and ETN₂O.

Indications:

Patients requiring painful procedures such as:

- burn debridement greater than 5% BSA and/or full thickness burns
- extensive wound debridement/care greater than 5% BSA, such as trauma patients
- post-operative wound care for large, painful areas
- wound vac placement/change on large wounds
- arthrocentesis for suspected septic joint
- joint injection with medication for treatment of arthritis
- painful minor laceration repair
- uncomplicated fracture reduction
- initial incision/drainage of an abscess
- complicated/difficult lumbar puncture
- uncomplicated PICC line placement

Extremely painful portions of procedure not to exceed 5 minutes.

Expected duration of sedation: 10-15 minutes

Deep Inhaled Nitrous Sedation Protocol (cont.)

Documentation:

Documentation of the sedation adheres to the Procedural Sedation Forms including a detailed presedation assessment, sedation record, recovery record, and QI record.

Monitoring Requirements:

These patients are routinely monitored following deep sedation guidelines, including EKG, RR, BP, O₂ sat, ETCO₂, inhaled N₂O concentrations, and ETN₂O. Patients are monitored continuously and vital signs are obtained every five minutes while the patient is sedated. The Hospitalists' only duty is to perform the sedation and the procedure is performed by another provider. Sedation Scores are assigned every five minutes during the sedation. Rescue equipment including CPAP bag, suction, and airway supplies are readily available when needed. A trained sedation nurse who is PALS certified is present at all times for assistance when necessary during and after sedation.

Recovery Requirements: as per institutional Sedation Guidelines

The sedation provider remains with the patient at all times during the recovery phase when the patient no longer requires one-on-one direct physician care or when they have reached a sedation score of 2 or less. When transferring care to a skilled nurse for the recovery Phase 1 of deeply sedated patients, continuous monitoring occurs for patients who have reached a sedation score of less than 3, vital signs are monitored every five minutes, and documented every fifteen minutes. These patients are transitioned to Phase 2 recovery when their sedation score is less than 3, oxygen/airway/cardiovascular support is not needed, recovery score is 8 or greater, and pain score is 6 or greater. During Phase 2 recovery, patients are monitored with vital signs obtained every fifteen minutes until their sedation score is 0 if discharged and 1 or less if admitted. Patients who are being discharged home also reach a sedation score of 0 with no reversal within two hours, a recovery score of nine or greater and a pain score of 4 or less. All patients regardless of destination meet the following criteria: vital signs +/- 20% of baseline, no respiratory distress, oxygen saturation at baseline +/- 3% or greater than or equal to 95% without oxygen, motor function at baseline or can sit or stand with minimal assistance, and fluid status and hydration normal without emesis or nausea.

Moderate Inhaled Nitrous Sedation Protocol

Patient Population:

- Patients who are 3 months of age and older with ASAPS score of 3 or less.
- Patients with an ASAPS score of 3 requires Anesthesia consultation to proceed with sedation.
- Hospitalists do not sedate children with ASAPS score of 4 or more.

Medication Protocol:

Patients receive no premedication or 0.15 mg/kg or less of po oxycodone (max 10mg) timed 60 minutes prior to procedure and receive 70% inhaled nitrous oxide for a total maximum of 5-7 minutes followed by 60% or 50% based on sedation need for the rest of the procedure. When using this protocol we strictly follow hospital NPO guidelines for elective sedation and anesthesia in outpatient areas.

Standard safety checks are performed on nitrous delivery machines prior to use and gas monitors are used to measure ETCO₂, inhaled N₂O concentrations, and ETN₂O.

Indications:

Patients requiring moderately painful procedures such as:

- burn debridement less than 5% BSA and/or partial thickness burns
- minor wound debridement/care less than 5% BSA, such as trauma patients
- post-operative wound care for minimally painful, small areas
- wound vac placement/change on small wounds ○ staple/suture removal
- minor laceration repair ○ initial incision/drainage of a minor abscess
- uncomplicated lumbar puncture
- IV start
- VCUg

Painful portions of procedure not to exceed 5 minutes.

Expected duration of sedation: 10-15 minutes

Documentation:

Documentation of the sedation adheres to the Procedural Sedation Forms including a detailed presedation assessment, sedation record, recovery record, and QI record or another approved sedation record.

Moderate Inhaled Nitrous Sedation Protocol (cont.)

Monitoring Requirements:

These patients are routinely monitored following moderate sedation guidelines. Patients are monitored continuously and vital signs are obtained every five minutes while the patient is sedated. The Hospitalists' only duty is to perform the sedation and the procedure is performed by another provider. Sedation Scores are assigned every five minutes during the sedation. Rescue equipment including CPAP bag, suction, and airway supplies are readily available when needed. A trained sedation nurse who is PALS certified is present at all times when necessary during and after sedation.

Recovery Requirements: as per institutional Sedation Guidelines

The sedation provider remains with the patient at all times during the recovery phase when the patient no longer requires one-on-one direct physician care or when they have reached a sedation score of 2 or less. During Phase 2 recovery, patients are monitored with vital signs obtained every fifteen minutes until their sedation score is 0 if discharged and 1 or less if admitted. Patients who are being discharged home also reach a sedation score of 1 or less with no reversal within two hours, a recovery score of nine or greater and a pain score of 4 or less. All patients regardless of destination meet the following criteria: vital signs +/- 20% of baseline, no respiratory distress, oxygen saturation at baseline +/- 3% or greater than or equal to 95% without oxygen, motor function at baseline or can sit or stand with minimal assistance, and fluid status and hydration normal without emesis or nausea.

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