

NEVADA STATE BOARD OF NURSING

Practice Decision

Requirements for the Registered Nurse in the Administration of Nitrous Oxide Outside of the Operating Room.

It is within the scope of practice of the (RN) to administer nitrous oxide (N₂O)/oxygen (O₂) as a single sedative agent for anxiolysis/analgesia, not to be administered concurrently with any other sedative, anesthetic agent or narcotic analgesic to support short, planned or emergent clinical procedures outside the operating room.

It is also within the scope of practice of the RN to monitor maternal self-administration of N₂O/O₂ during labor for purposes of anxiolysis/analgesia.

General Requirements:

1. A qualified licensed independent practitioner (LIP) credentialed in emergency airway management and cardiovascular support selects and orders the N₂O/ O₂ to achieve minimal sedation/ anxiolysis/ analgesia. A LIP with ACLS or PALS dependent on patient population is to be readily available in person at the facility or medical complex.
2. The RN managing the care of the patient receiving minimal sedation/anxiolysis shall have no other responsibilities that would leave the patient unattended or compromise continuous monitoring of vital signs including pulse oximetry, airway, and level of consciousness. The complex nursing functions, including vital signs, shall not be assigned to unlicensed assistive personnel.
3. Use of guidelines for preprocedural assessment and evaluation prior to administration of N₂O/ O₂ using American Society of Anesthesiologists (ASA) physical status classification system and the Mallampati score.
4. Policy and procedure for patient monitoring, drug administration and protocols for dealing with potential complications or emergency situations are available and have been developed in accordance with nationally accepted standards of practice.
5. The RN has current ACLS or PALS (for the pediatric patient).
6. The RN has demonstrated current competencies regarding the administration and monitoring of minimal sedation/ anxiolysis/ analgesia (NAC) [632.225](#).
7. The RN may administer the N₂O/ O₂ for the purpose of minimal sedation/ anxiolysis in an appropriate setting to the practice determined by the facility that employs the RN. The facility will have written policies regarding the location of where minimal sedation/ anxiolysis may occur, the training and qualifications of personnel, monitoring equipment, pharmacological guidelines, patient recovery, quality assurance and documentation.

N₂O/O₂ **is not** to be administered by an RN concurrently with any other sedative, anesthetic agent except for local anesthetic (administered by a provider) or narcotic analgesic. For any other administration of a sedative, anesthetic agent, or narcotic analgesic for the nurse **must meet general requirements** the NSBN practice decision dated March 2018, the Role of the RN in moderate/procedural sedation. For patients less than twelve months of age the LIP must be present at bedside during administration of nitrous oxide.

COMPETENCIES

The registered nurse must successfully complete an instructional program to include nitrous oxide administration. Documentation of the successful completion and ongoing clinical competency to be kept on file with employer to perform the function, and the function must be performed in a manner consistent with the standard of practice. In administering medications to induce minimal sedation/anxiolysis, the RN is required to have the same knowledge and skills as for any other medication the nurse administers. This knowledge base includes but is not limited to:

- Effects of the medication, potential side effects of the medication,
- Contraindications for the administration of the medication, and
- The dose of the medication to be administered
- Anatomy and physiology specific to age, developmental levels, and exclusion criteria.
- Pre-sedation assessment specific to age, developmental level and exclusion criteria.
- Understanding of the clinical indications related to ASA classifications and/or Mallampati scores
- Pharmacologic properties of nitrous oxide and oxygen.
- Indications and contradictions of nitrous oxide administration.
- Technique of administration, including equipment usage, titration and 100% oxygen administration following termination of nitrous oxide.
- Level of consciousness assessment and physiological response to the drug.
- Airway management including usage of nasal and oral airways, ambu bags and jaw thrusts.
- Complication management
- Emergency situation management and appropriate interventions.
- Abuse potential
- Occupational exposure to nitrous oxide. Nitrous oxide is a potential teratogenic.
- Legal implications, responsibility, documentation.
- Nurses' role
- Patient self-administration for labor and delivery
 - Nitrous oxide/oxygen concentration for anxiolytic/ analgesic purposes
 - Risk and benefits
 - Patient and family education and support

The requisite skills include the ability to:

- Competently and safely administer the medication by the specified route,
- Anticipate and recognize the potential complications of the medication,
- Recognize emergency situations, and
- Institute emergency procedures
- Competently and safely administer reversal medications
- Techniques of administration, including equipment usage, titration and 100% oxygen administration following termination of nitrous oxide use.

Thus the RN shall be held accountable for knowledge of the medication, medication delivery system and for ensuring that the proper safety measures are followed. The institution shall have in place a process for evaluating and documenting the RN's demonstration of the knowledge, skills and abilities for the management of patients receiving agents to render minimal sedation/ anxiolysis. Evaluation and documentation for initial competency and on-going competency shall occur on an annual basis.

SAFETY CONSIDERATIONS

The safety considerations for minimal sedation/anxiolysis include: continuous monitoring of oxygen saturation, cardiac rate and rhythm, blood pressure, respiratory rate and level of consciousness. The RN shall ensure the immediate availability of resuscitative equipment and on-site availability of back-up personnel for airway management. The RN administering agents to render minimal sedation (anxiolysis) shall conduct a nursing assessment to determine that administration of the drug is in the patient's best interest. The RN shall ensure that all safety measures are in force.

MANAGEMENT OF NURSING CARE

The RN is held accountable for any act of nursing provided to a patient. The RN has the right and obligation to act as the patients advocate by refusing to administer or continue to administer any medication not in the patient's best interest. This includes medications which would render the patient's level of sedation to moderate and deep sedation and/or a loss of consciousness.

DEFINITIONS

Minimal sedation (anxiolysis): A drug-induced state during which patients respond normally to verbal commands. Although cognitive function and coordination may be impaired, ventilator and cardiovascular function are unaffected (AANA, 2022)

RESOURCES

American Association of Nurse Anesthetists (AANA) (2022). Non-anesthesia provider procedural sedation and analgesia: Policy considerations. Retrieved September 21, 2022 from: [https://www.aana.com/docs/default-source/practice-aana-com-web-documents-\(all\)/professional-practice-manual/non-anesthesia-provider-procedural-sedation-and-analgesia.pdf?sfvrsn=670049b1_10](https://www.aana.com/docs/default-source/practice-aana-com-web-documents-(all)/professional-practice-manual/non-anesthesia-provider-procedural-sedation-and-analgesia.pdf?sfvrsn=670049b1_10)

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Clark, M. S., & Brunick, A. L. (2020a). Multidisciplinary applications of nitrous oxide and oxygen sedation. In M. S. Clark, & A. L. Brunick, *Handbook of Nitrous Oxide and Oxygen Sedation* (5th ed., pp. 129-142). St. Louis: Elsevier.

Clark, M. S., & Brunick, A. L. (2020b). Patient assessment and evaluation. In M. S. Clark, & A.

L. Brunick, *Handbook of nitrous oxide and oxygen sedations* (5th ed., pp. 89-98). St. Louis: Elsevier.

Nevada State Board of Nursing (NSBN). (2022). *Authorized acts under emergency or special conditions; regulations. [Effective January 1, 2022.]*. Retrieved October 19, 2022, from: <https://www.leg.state.nv.us/nrs/NRS-632.html#NRS632Sec235>

Nevada State Board of Nursing, Practice Decision titled: The Role of the RN in Moderate/ Procedural Sedation. [Nevada State Board of Nursing \(nevadanursingboard.org\)](http://nevadanursingboard.org).

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