Institutional Handbook of Operating Procedures Policy 09.13.48	
Section: Clinical Policies	Responsible Vice President: Executive Vice President and CEO Health System
Subject: General Clinical Policies and Care	Responsible Entity: Blocker Burn Unit

I. Title

Management of Nitronox for Analgesia on the Blocker Burn Unit

II. Policy

To develop guidelines for the safe care of patients receiving Nitronox to achieve analgesia for mild to moderately painful procedures on the Blocker Burn Unit.

Exclusions

Nitronox for analgesia is intended to be administered independently from any other potentially sedating medications. If the use of Nitronox is unsatisfactory at any stage, the procedure will be stopped, and the Licensed Independent Practitioner (LIP) will be contacted. If co-administration of other anesthetics/sedatives is anticipated during the use of Nitronox, the procedure will transition to a moderate sedation procedure. The Procedural Sedation (Moderate and Deep Sedation) Policy will be referenced and adhered to thereafter

Contraindications

- Inability to hold own face mask, impaired oxygenation, or hemodynamic instability.
- Acute drug or alcohol intoxication
- Impaired consciousness
- Psychologic impairment
- Recent use of sedatives
- Vitamin B12 deficiency requiring supplement use.

Personnel Roles and Responsibilities

Licensed Independent Practitioner

- The LIP is responsible for maintaining Advanced Cardiac Life Support Certification (ACLS), must successfully complete the online Moderate Sedation course and final assessment each fiscal year, and must be granted the moderate sedation privilege by the UTMB Credentialing Office.
- The LIP is responsible for completion of the patient's electronic medical record of history and physical and progress note.
- The LIP is responsible for ordering procedural medication.

Registered Nurse (RN)

- The RN is responsible for maintaining ACLS certification and completing competency training for the administration of Nitronox.
- The RN must ensure that equipment is immediately available and functioning properly.
- The RN must ensure that the Nitronox unit is maintained in a secured area when in use.
- The RN is responsible for patient monitoring and assessment and will request extra assistance if and when it is needed.
- The RN is responsible for procedural documentation with Nitronox use.

Equipment

All necessary equipment will be available and checked for proper function prior to administration of procedural medications. The equipment must be appropriate for the patient's weight and height. Equipment includes:

- Equipment to assess vital signs
- Pulse oximeter
- Oxygen, including delivery system with appropriate supplies and a positive pressure oxygen delivery system
- A functional suction apparatus
- A code cart must be readily available.

The setup of Nitronox equipment and scavenging system will be performed by trained personnel.

The Nitronox unit will be kept in a secure area.

Nitronox is classified as a pregnancy risk group Category C medication. It is recommended that pregnant women (patient and staff) avoid exposure to Nitronox. Appropriate signage will be posted in areas where Nitronox is in use to prevent unintended exposure.

III. Procedures

Assess patient's last ingestion of food. NPO status will be confirmed prior to the procedure.

- Unplanned procedure requiring immediate attention must have minimal fasting period of at least 2 hours.
- Planned procedure:

Ingested Material	Minimum Fasting Period
Fatty meal	8 hours
Light meal	6 hours
Milk, formula	6 hours
Breast milk	4 hours
Clear fluids	2 hours

Provide patient education and instruct the patient on the proper use of Nitronox equipment.

Discontinue the Nitronox delivery and notify LIP if the following are observed:

- Prolonged inspirations, irregular breathing, involuntary eye movements, swallowing/gagging, dilated pupils, or rigid muscles.
- Patient cannot tolerate side effects (nausea, vomiting, dizziness, dysphoria, etc.).
- Nitronox is not effective in managing the patient's pain.

Contact the LIP if the following occurs:

- Vital signs have not returned to the patient's normal baseline.
- The patient is suffering from nausea, vomiting, or dizziness.
- Pain is not adequately controlled.

IV. Definitions

Licensed Independent Practitioners (LIP): Any individual permitted by law and UTMB Bylaws to provide care, treatment, and services without direction or supervision. A licensed independent practitioner operates within the scope of the individual's license, consistent with individually granted

clinical privileges. LIPs include physicians (M.D.s and D.O.s), nurse practitioners (NPs), physician assistants (PAs), and midwives.

Minimal Sedation (Anxiolysis): A drug-induced state during which a patient responds normally to verbal commands. Cognitive functions and coordination may be impaired, but ventilatory and cardiovascular functions are unaffected.

Moderate Sedation (Conscious Sedation): A drug-induced depression of consciousness during which a patient responds purposefully to verbal commands, either alone or accompanied by light tactile stimulation. No interventions are required to maintain a patent airway and spontaneous ventilation is adequate. Cardiovascular function is maintained. Reflex withdrawal from a painful stimulus is NOT considered a purposeful response.

V. Related UTMB Policies and Procedures

Procedural Sedation (Moderate and Deep Sedation)

VI. Additional References

Elsevier. (2020). *Nitrous oxide – CE.* Elsevier Performance Manage, Clinical Skills. https://point-of-care.elsevierperformancemanager.com/skills/303/quick-sheet?skillId=EN_180#scrollToTop

IBM Micromedex. (2021). *Nitrous oxide.* *https://www.micromedexsolutions.com/micromedex2/librarian/CS/6FF7C9/ND_PR/evidencexpert/ND_P/evidencexpert/DUPLICATIONSHIELDSYNC/47A9CA/ND_PG/evidencexpert/ND_B/evidencexpert/ND_AppProduct/evidencexpert/ND_T/evidencexpert/PFActionId/evidencexpert.IntermediateToDocumentLink?docId=0769&contentSetId=31&title=NITROUS+OXIDE&servicesTitle=NITROUS+OXIDE#*

Parker Hannifin Corporation. (2017). *Nitronox HD user's manual/instructions.*

VII. Dates Approved or Amended

Originated: 11/29/2021	
Reviewed with Changes	*Reviewed without Changes*

VIII. Contact Information

Blocker Burn Unit
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