

NorthEast Ohio Neighborhood Health Services, Inc  
**NITROUS OXIDE PROCEDURES & GUIDELINES**  
7/2010

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**Purpose:**

To provide uniform guidelines for the safe use and maintenance of nitrous oxide tanks located in OB/Gyn clinical areas.

**Affirmation:**

All Nitrous Oxide tanks shall be maintained in designated OB/GYN locations in NEON sites and shall be checked by the nursing staff on a weekly basis for proper storage and supply of nitrous oxide.

**Responsibility:**

Nursing staff is responsible for ensuring that nitrous oxide tanks are maintained, stored, and utilized properly. It is the responsibility and duty of nursing staff to maintain appropriate skills necessary for use of Nitrous Oxide and to assure that all equipment is functioning properly.

**Procedures:**

See below

**Using an Nitrous Oxide Tank**

1. To turn on the nitrous oxide tank- turn the valve key counter clockwise. You only need to turn the valve one rotation.
2. Turn regulator to the on position-the tank is now ready to use.
3. To discontinue use:
  - a. Turn the valve key clockwise until you can no longer turn the key.
  - b. Note the lbs/pressure level on the gauge
  - c. **Release the nitrous oxide from the gauge. Do not be alarmed:** some will escape from the regulator when you turn it off.
  - d. Check your gauge: it should be reading at zero lbs/pressure if the tank is off and all Nitrous Oxide is released from the regulator. ***The tank valve and the gauge should always be in the off position when not in use to prevent nitrous oxide from continually leaking from the tank.***

### **Changing Tank Regulators**

It is the responsibility of nursing staff to remove regulators from the non-functioning/empty tanks to the replacement tanks. It is not the responsibility of maintenance staff. All nursing staff should be capable of changing regulators from tanks.

**Procedure:** Taking off the regulator off a tank

1. Make sure the tank is **OFF**
2. Loosen/disconnect the regulator by turning the regulator metal fitting connection forward (towards you).
3. Remove the regulator from the tank and send the tank to storeroom

**Procedure:** Attaching a regulator to a tank

1. Place the regulator on the nitrous oxide tank
2. Attach the regulator metal fitting connection to the tank and turn it backwards (away from you) until it is tight and secure.
3. Turn on the tank to check for any leaks. After assuring there is no leaks, turn the tank and gauge off and release the nitrous oxide from the gauge.

### **Nitrous Oxide System Maintenance Procedure**

It is critically important that the nitrous oxide tank supply is always readily available and functioning properly. Patients depend upon nursing staff to maintain equipment and be proficient in the use of any equipment.

#### **Maintenance of Nitrous Oxide System**

1. The policy of NEON states that nursing staff must check the nitrous oxide tank weekly. Additionally the tank must be checked after any usage
2. The policy of Neon states that nursing staff must document weekly the lbs/pressure on the gauge in your department.
  - **The gauge indicates the amount of nitrous oxide in the tank.**
  - **The tank pressure must be in the blue area for OB procedures.**
3. Procedure for weekly maintenance check of Nitrous Oxide tank:
  - a. **YOU MUST TURN ON THE TANK.**
    - Do not just read the gauge.
  - b. Check the lbs/pressure on the gauge and document your findings on the form.
    - The gauge should always be in the designated blue area.

- c. Note any leaks in the regulator.
- d. Turn the GAUGE AND THE TANK OFF.
  - **NEVER LEAVE A NITROUS OXIDE TANK ON AND ALWAYS RELEASE THE PRESSURE FROM THE REGULATOR.** Failure to do so will either result in nitrous oxide escaping from the tank or the tank gauge displaying an inaccurate reading of the amount of nitrous oxide in the tank.
- e. Immediately order a new tank from storeroom when the gauge level reads **650 lbs or less**.
- f. All nitrous oxide tanks must be in a carrier and have a cylinder status tag. The cylinder status tag should be placed on the tank in storeroom prior to delivery of tank.

#### **Actions in the event of Malfunctioning Equipment or Identifying Need to Replace**

1. Regulator leaks:
  - a. Check to make sure the tank is off.
  - b. Check to make sure the regulator is on the tank correctly and securely.
  - c. If the tank is off and regulator on correctly and you are experiencing leakage do the following:
    - Move the tank to a secure location,
    - Mark the tank as **DO NOT USE** and contact the Maintenance department (Payne) immediately.
2. Tank level is below 650 lbs of pressure: Immediately order a new tank from storeroom