

HARBOR-UCLA MEDICAL CENTER

SUBJECT: MEDICAL GAS CYLINDER STORAGE
IN PATIENT CARE AREAS

POLICY NO. 437C

PURPOSE:

To establish a standard procedure for the storage of oxygen cylinder storage in patient care areas.

POLICY:

At Harbor-UCLA Medical Center, all free-standing oxygen cylinders must be stored in a secure manner, in one of the following methods of storage: in a rack, on a cart, in a portable cylinder holder, in a gas cylinder storage cabinet, or secured with a chain to protect the tank from falling.

DEFINITIONS:

“Full” Cylinder Fill Status: A “full” cylinder has pressure of 1800-2200 pounds per square inch (PSI) and the gauge indicator is in the “green” shaded area, per the U.S. Department of Transportation guidelines.

“Not Full” Cylinder Fill Status: Any cylinder for which the gauge indicator is **not** in the green-shaded area, is considered “not full” and should be placed in the “Not Full” storage rack. If in doubt, staff should assume the cylinder is “not full” and store it accordingly.

“E” Cylinder: A small medical gas cylinder with the capacity of approximately 25 cubic feet.

“H” Cylinder: A large medical gas cylinder with the capacity of approximately 250 cubic feet.

In-Use: A cylinder placed in a patient room or attached to patient apparatus (e.g., bed, wheelchair, gurney, transporter, etc.) is considered to be “**immediate use**”.

Gas Storage Room: A gas storage room is an enclosed room that is accessible only to hospital personnel that is constructed of non-combustible or limited combustible materials (e.g., concrete or sheet rock, respectively) and is either partially or fully devoted for gas cylinder storage.

Smoke Compartment: The area of the floor or unit that is separated by a smoke barrier wall.

EFFECTIVE DATE: 04/17

SUPERSEDES:

REVISED:

REVIEWED: 04/17

REVIEWED COMMITTEE:

APPROVED BY: _____

Kim McKenzie, RN, MSN, CPHQ
Chief Executive Officer

Anish Mahajan, MD
Chief Medical Officer

Patricia Soltero Sanchez, RN, BSN, MAOM
Chief Nursing Officer

Signature(s) on File.

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PROCEDURE:

1. **Gas Storage in Patient Care Areas:** All cylinders must be stored with some type of physical support or restraint, such as a stand, cart, or cylinder storage rack located in the Gas Storage Room.

Cylinders that are not in-use are to be stored inside a designated gas storage room. The Gas Storage Room must have a precautionary sign posted, and that is readable from a distance of five (5) feet, that identifies it as such, including the following warning **“Caution, Oxidizing Gas(es) Stored Within: No Smoking”**.

Gas cylinders must be maintained at a minimum distance of 20 feet from combustible materials; unless the area has an automatic fire sprinkler system, in which case the distance is reduced to five (5) feet.

No more than 300 cubic feet of compressed gas (12 **“E”** cylinders) may be stored in each smoke compartment, unless it is *“in-use”* or stored in the Gas Storage Room.

2. **Quantity Limitations:** If the unit/area using gas cylinders is located in a single smoke compartment, the under of **“E”** cylinders is 12 or fewer. Cylinders should be used on a first-in, first-out basis.
3. **Segregation and Signage:** **“Full”** cylinders must be kept separated from **“Not Full”** cylinders. Each cylinder storage rack or cart shall have signage that designates the storage of either **“Full”** or **“Not Full”** cylinders. For consistency, **“Full”** cylinders will be located on the left side of the storage rack and **“Not Full”** will be located on the right side of the storage rack.
4. **Transporting Cylinders:** **“E”** cylinders may be carried or transported on a cart, but must always be stored in a rack or stand that provides physical support or restraint to prevent damage to the cylinder. **“H”** cylinders must be transported on a hand truck or cart designed for moving cylinders that is self-supporting and has a chain to retain the cylinder in place.
5. **Contaminated Cylinders:** If a cylinder becomes contaminated with blood, body fluids, or other potentially infectious materials, it should be decontaminated following Harbor-UCLA Medical Center Infection Prevention and Control policies for cleaning and disinfection of non-critical items (See Policy ICP.11).

REFERENCES: NFPA 99-1999, Section 9.4.2,
NFPA 99-1999, Section 9.5.3.1
NFPA 99-1999, Section 4-3.5.2.2(b),
The Joint Commission EC 02.05.09, EP 6