Regulators and Cylinders

Purpose

To provide an outline for safe use of Gas Oxygen (O_2) cylinders and regulators.

Audience

All Respiratory Care Services Employees.

Scope

Respiratory Care Services supplies O_2 cylinders and related equipment for area of the hospital and for special services where piped in oxygen is not available.

Note:

In the absence of piped oxygen, O_2 cylinders may be used. Oxygen regulators are used on cylinders of oxygen to reduce the cylinder pressure (up to 220 psi) down to an operable pressure (50 psi to be used with respiratory therapy equipment. The NFPA code will be adhered to at all times when using cylinders and regulators.

Procedure

Step	Action
1	Secure cylinder cart with chain.
2	Remove cylinder cap.
3	"Crack" cylinder valve by turning valve handle counterclockwise sharply and return to the off position. Position valve away from you when "Cracking" it.
4	Attach regulator **with proper CGA fitting**: • To "H" cylinder by screwing the nut on the regulator clockwise on the valve. Tighten snugly with a wrench • To "E" cylinder by matching pins on regulator to those on cylinder head**, applying a new gasket**, and tightening screw on regulator.
5	Use care to take cylinder to patient's room.
6	Leave cylinder in stand and stand cart up straight. have wheels down flat.
7	Do not place cylinder close to heat source such as heating system.
8	Turn valve handle on (counter clockwise) slowly with face of pressure gauge pointed away from everyone.

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Procedure Continued

Step	Action
9	Turn valve fully counterclockwise.
10	Turn flow meter on and adjust flow by placing ball at the center of the number of LPM desired.
11	Note pressure in cylinder.
12	When cylinder is not in use, turn cylinder valve fully clockwise, leaving flow control device in an operational mode.
13	When a cylinder stand or cart is not available, lay the cylinder down. Do not stand cylinders upright without a cart

Equipment

CGA Fittings:

Air **590/346/677**
Oxygen **540**
Helium **580/677**
Carbon Dioxide **320**

Mixed Gases CGA Fittings

CO_2/O_2 **296**
He/O_2 **296**
NO/N **660**

References

UTMB Institutional Handbook of Operating Procedures Emergency Shut-Off of Oxygen Zone Valves in UTMB Hospitals Policy # 9.13.23 http://www.utmb.edu/policy/ihop/search/09-13-23.pdf

UTMB Emergency Procedures Manual: Loss of Medical Gas and/or Medical Air http://webb.utmb.edu/envcare/epm.htm

UTMB Institutional Handbook of Operating Procedures: Sentinel Events Policy # 9.13.16, http://www.utmb.edu/policy/ihop/search/09-13-16.pdf

JCAHO: Management of the Environment of Care; EC.1.7, Medical Gas Management http://www.utmb.edu/JCAHO/