Emergency Shut-Off of Oxygen Zone Valves in UTMB Healthcare Areas

**Policy**

It is the responsibility of the unit charge nurse (unless otherwise assigned to a specific healthcare professional for that location) to shut off the oxygen zone valves in the event of a fire event/emergency that would potentially allow oxygen to escape into the immediate area or room intensifying the fire hazard.

When respiratory therapy equipment is in use, the only practical means of stopping the flow of piped oxygen (which enable a fire to continue to burn) into a patient room is by closing the pipeline zone valve(s). Zone valves typically control gas flow to several rooms: closing a valve may affect patients in more than one room. Residual pressure in the pipeline allows a short time before gas flow stops completely. Each zone valve must be labeled with the area it controls (e.g., "Oxygen Valve: Controls Rooms 901 through 906").

If a fire occurs in a room in which oxygen is in use, the zone valve(s) controlling that room must be closed, and affected patients requiring respiratory support must be immediately assisted. Failure to close the zone valve(s) risks intensifying and spreading the fire and smoke, placing more lives at risk.

The charge nurse will receive training relevant to:
- the effects of oxygen and fire
- patient care and oxygen delivery equipment
- zone valve location and areas controlled on unit
- who to notify when oxygen has been shut off
- the location of back-up oxygen tanks on unit.

Once the valve has been shut off, the decision to turn the valve back on will be made by the following:

**During normal working hours**
Occupational Safety and Fire Prevention (OS&FP) Personnel
Facilities Maintenance/Utilities Personnel

**After hours, weekends, and holidays**
Galveston Fire Department
Facilities Maintenance/Utilities.
Responsibility

Unit Charge Nurse (or specific assigned healthcare professional):

1. Makes an assessment of the risk presented by the problem (i.e., risk of free-flowing oxygen intensifying the fire, which could rapidly involve most of the combustible or flammable objects in the room) to the patient. If necessary, consults with faculty anesthesiologist or ICU attending physician.

2. Provides for patient oxygen needs as appropriate. Maintains emergency supplies for patient evacuation. These supplies should enable respiratory support of patients during transport from the affected area to a safe haven.

3. If danger of fire is imminent, shuts off the oxygen zone valve immediately. If danger of fire is not imminent, consults with Pulmonary Care Services, the Fire Department, Occupational Safety & Fire Prevention (OS&FP), and Facilities Maintenance/Utilities.

4. Communicates shut off of oxygen on unit to Facilities Maintenance/Utilities, Pulmonary Care Services, OS&FP, and Nursing Service Director or designee.

5. Prepares patients for evacuation if indicated.

Unit Charge Nurse/Nursing Service Director (or designee):

1. Calls the UTMB Fire Phone (Ext. 21211) or Angleton Danbury Operator (Ext. 3333) and gives the following information to UTMB Police Dispatch or Operator (who in turn will convey the information to Local Fire Department):
   - Name and title
   - The O2 zone valve that was shut off
     - building
     - floor/unit
     - time

Occupational Safety & Fire Prevention (OS&FP):

1. Train and drill all hospital staff in execution of this plan

References

The National Fire Protection Association (NFPA)
The Joint Commission
UTMB Emergency Preparedness Plan