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Top Six Life Safety Issues for Hospital Surveys

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Life Safety Top Six Issues in Hospitals

- **Gas Equipment - Cylinder and Container Storage NFPA 99 (2012, 2015 editions)**
- **Electrical Equipment - RPTs, extension cords**
- **Electrical Systems - Essential Electrical System Maintenance and testing.**



Life Safety Top Six Issues in Hospitals

cont.

- **Fire Alarm System - Maintenance and Testing.**
- **Sprinkler System - Maintenance and Testing.**
- **CMS Emergency Preparedness Requirements**



Survey Preparedness

- **Lets talk a little about why a facility has compliance issues.**
- **Required Inspections, Testing and Maintenance of all systems**
- **Following up when a system has an issue and make repairs.**



#1. Gas Equipment - Cylinder and Container Storage

- **NFPA 99 (2012, 2015 editions)**
- **11.3 Cylinder and Container Storage Requirements.**
- **11.3.1* Storage for nonflammable gases equal to or greater than 85 m³ (3000 ft³) at STP shall comply with 5.1.3.3.2 and 5.1.3.3.3.**



#1. Gas Equipment - Cylinder and Container Storage Cont.

- **11.3.2* Storage for nonflammable gases greater than 8.5 m³ (300 ft³), but less than 85 m³ (3000 ft³), at STP shall comply with the requirements in 11.3.2.1 through 11.3.2.8.**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.3.2.3 Oxidizing gases such as oxygen and nitrous oxide shall be separated from combustibles or flammable materials by one of the following:**
- **(1) Minimum distance of 6.1 m (20 ft)**



#1. Gas Equipment - Cylinder and Container Storage cont.

- (2) Minimum distance of 1.5 m (5 ft) if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13, *Standard for the Installation of Sprinkler Systems*



#1. Gas Equipment - Cylinder and Container Storage cont.

- (3) A gas cabinet constructed per NFPA 30, *Flammable and Combustible Liquids Code*, or NFPA 55, *Compressed Gases and Cryogenics Fluids Code*, if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.3.3 Storage for nonflammable gases with a total volume equal to or less than 8.5 m³ (300 ft³) shall comply with the requirements in 11.3.3.1 and 11.3.3.2.**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.3.3.1 Individual cylinder storage associated with patient care areas, not to exceed 2100 m² (22,500 ft²) of floor area, shall not be required to be stored in enclosures**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.3.4 Signs.**
- **11.3.4.1 A precautionary sign, readable from a distance of 1.5m (5 ft), shall be displayed on each door or gate of the storage room or enclosure.**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.3.4.2 The sign shall include the following wording as a minimum:**

CAUTION:

**OXIDIZING GAS(ES) STORED WITHIN
NO SMOKING**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.5.2.1 Qualification and Training of Personnel.**
- **11.5.2.1.1* Personnel concerned with the application and maintenance of medical gases and others who handle medical gases and the cylinders that contain the medical gases shall be trained on the risks associated with their handling and use.**



#1. Gas Equipment - Cylinder and Container Storage cont.

- **11.5.2.1.2 Health care facilities shall provide programs of continuing education for their personnel.**
- **11.5.2.1.3 Continuing education programs shall include periodic review of safety guidelines and usage requirements for medical gases and their cylinders.**



#2. Electrical Equipment - RPTs, extension cords

- **NFPA 99 (2012, 2015 editions)**
- **10.5.2.1 Testing Intervals.**
- **10.5.2.1.1 The facility shall establish policies and protocols to identify what patient care-related electrical equipment requires periodic inspection and, where applicable, the type of test and intervals of testing.**



#2. Electrical Equipment - RPTs, extension cords cont.

- **6.3.2.2.8.4* Operating rooms shall be considered to be a wet procedure location, unless a risk assessment conducted by the health care governing body determines otherwise**



#3. Electrical Systems - Essential Electrical System Maintenance and testing

- **NFPA 99 (2012, 2015 editions)**
- **6.4.4 Administration (Type 1 EES).**
- **6.4.4.1 Maintenance and Testing of Essential Electrical System.**
- **6.4.4.1.1 Maintenance and Testing of Alternate Power Source and Transfer Switches.**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **6.4.4.1.1.1 Maintenance of Alternate Power Source. The generator set or other alternate power source and associated equipment, including all appurtenance parts, shall be so maintained as to be capable of supplying service within the shortest time practicable and within the 10-second interval specified in 6.4.1.1.11 and 6.4.3.1.**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **6.4.4.1.1.3 Maintenance shall be performed in accordance with NFPA110, *Standard for Emergency and Standby Power systems*, Chapter 8.**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **6.4.4.1.1.4 Inspection and Testing. Criteria, conditions, and personnel requirements shall be in accordance with 6.4.4.1.1.4(A) through 6.4.4.1.1.4(C).**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **(A)* Test Criteria.** Generator sets shall be tested 12 times a year, with testing intervals of not less than 20 days nor more than 40 days. Generator sets serving essential electrical systems shall be tested in accordance with NFPA 110, *Standard for Emergency and Standby Power Systems*, Chapter 8.



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **(B) Test Conditions.** The scheduled test under load conditions shall include a complete simulated cold start and appropriate automatic and manual transfer of all essential electrical system loads.



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **(C) Test Personnel. The scheduled tests shall be conducted by competent personnel to keep the machines ready to function and, in addition, serve to detect causes of malfunction and to train personnel in operating procedures.**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **6.4.4.1.2 Maintenance and Testing of Circuitry.**
- **6.4.4.1.2.1* Circuit Breakers. Main and feeder circuit breakers shall be inspected annually, and a program for periodically exercising the components shall be established according to manufacturer's recommendations.**



#3. Electrical Systems - Essential Electrical System Maintenance and testing cont.

- **A.6.4.4.1.2.1 Main and feeder circuit breakers should be periodically tested under simulated overload trip conditions to ensure reliability.**



#4. Fire Alarm Systems Inspection and Testing

- **NFPA 72**
- **14.3 Inspection.**
- **14.3.1* Unless otherwise permitted by 14.3.2 visual inspections shall be performed in accordance with the schedules in Table 14.3.1 or more often if required by the authority having jurisdiction.**



#4. Fire Alarm Systems Inspection and Testing cont.

- **14.4.3.2* Systems and associated equipment shall be tested according to Table 14.4.3.2.**
Table 14.3.1



Fire Alarm System

A. System operational test & central station notification	Annually	72 (2010) 14.4.5
B. All manual pull stations	Annually	72 (2013) 14.4.5
C. All indicating smoke detectors – operational test	Annually	72 (2013) 14.4.5
D. All smoke detectors – sensitivity test	Within 1 year of install & then every other year thereafter	72 (2013) 14.4.5.3
E. Restorable Heat Detectors	20% Annually or 100% in 5 years	72 (2013) 14.4.5.5 72 (2013) 14.4.5.5.4
F. Non-restorable Heat Detectors	After 15 years test 2 for every 100 or replace all	72 (2013) 14.4.2.2, Table 14.4.2.2(14)(2-3)
G. Remote Annunciators	Annually	72 (2013) 14.4.5, Table 14.4.5(14)
H. Fire Panel inspection, certification & tag	Annually	72 (2013) 14.4.5, Table 14.4.5(1)
I. Alarm Supervisory & Trouble Signals	Annually	72 (2013) 14.4.5, Table 14.4.5(9)
J. Duct Detectors (differential pressure)	Annually	72 (2013) Table 14.4.2.2 14 (6) Table 14.4.5 15 (a)



#5. Sprinkler System - Maintenance and Testing

- **NFPA 25 (2011 edition for Federal Surveys)**
- **NFPA 25 (2014 edition for State Surveys)**



#5. Sprinkler System - Maintenance and Testing cont.

- **4.1.4* Corrections and Repairs.**
- **4.1.4.1 The property owner or designated representative shall correct or repair deficiencies or impairments that are found during the inspection, test, and maintenance required by this standard.**



#5. Sprinkler System - Maintenance and Testing cont.

- **4.1.4.2* Corrections and repairs shall be performed by qualified maintenance personnel or a qualified contractor.**



CMS Emergency Preparedness Appendix Z

- **The “Medicare and Medicaid Programs; Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers”**



CMS Emergency Preparedness Appendix Z

- **Final Rule (81 FR 63860, Sept. 16, 2016) (“Final Rule”) establishes national emergency preparedness requirements for participating providers and certified suppliers to plan adequately for both natural and man-made disasters, and coordinate with Federal, state, tribal, regional and local emergency preparedness systems.**



CMS Emergency Preparedness Appendix Z, cont.

- **Emergency Preparedness Program: The Emergency Preparedness Program describes a facility's comprehensive approach to meeting the health, safety and security needs of the facility, its staff, their patient population and community prior to, during and after an emergency or disaster. The program encompasses four core elements:**



CMS Emergency Preparedness Appendix Z, cont.

- **An Emergency Plan that is based on a Risk Assessment and incorporates an all hazards approach; Policies and Procedures; Communication Plan; and the Training and Testing Program.**



Questions



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