CMS adoption of the 2012 Life Safety Code

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Effective Date

- The Centers for Medicare & Medicaid Services (CMS) has adopted by regulation the 2012 LSC (NFPA 101) and the 2012 Health Care Facilities Code (HCFC or NFPA 99).
- The regulation effective date is July 5, 2016.
- CMS will begin surveying for compliance with the 2012 LSC and HCFC on **November 1, 2016**.

Key Changes

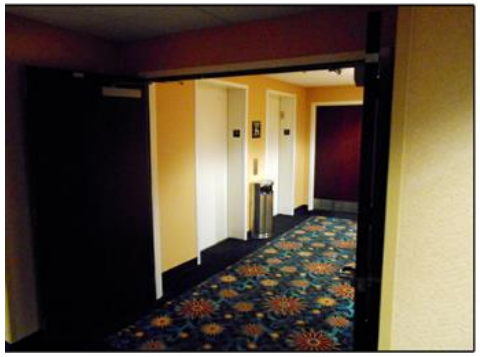
- Would require all doors to hazardous areas to be self-closing or automatic closing;
- Would address the issue of placing alcohol based hand rub dispensers in corridors;
- Would require a fire watch or building evacuation if **sprinkler system** is out of service for more than 10 hours; Smoke detectors four hours.
- Emergency preparedness; and
- Changes to medical gasses, clarifications to electrical

Existing vs New

- There are two chapters for ASC's. New or existing.
- Facilities certified before July 5th are an "existing" facility under the Life Safety Code. Chapter 21.
- ASC's certified after July 5th, 2016 will be new
- The references used today will be for existing facilities under chapter 21.

21.2.2.3 New Provision

- Locking of the elevator lobby doors.
- There are 14 provisions you have to meet
- This applies to door assemblies separating the elevator lobby from the exit access required by another chapter.



21.2.2.4 self closing doors

- Previous language was any door in an exit passageway, horizontal exit, smoke barrier, stairway enclosure, or hazardous area shall be permitted to be held open only by an automatic release device that complies with 7.2.1.8.2. The fire alarm shall release the door.
- The 2012 code was changed to any door required to be self-closing.

Alcohol based hand rub (ABHR)

- 21.3.2.6 When installed in a corridor the corridor width shall be 6 feet.
- The individual dispenser capacity shall be .32 gal (1.2 L) in rooms and corridors and .53 gal (2 L) in suites of rooms.
- When aerosol containers are used they shall be limited to 18 oz.
- Dispensers shall be separated from each other by 48 inches.

Alcohol based dispensers cont.

- Not more than 10 gallons in a smoke compartment outside of a storage cabinet except as in #6 which says one dispenser in a room meeting the size requirements does not count towards the total.
- Storage quantities of greater than 5 gallons must meet NFPA 30. (describes type of sprinkler protection)

ABHR's continued

- Dispensers shall not be installed to the side, or beneath an ignition source within one inch. Shall not be installed above an ignition source within a one inch horizontal distance from each side of the ignition source.
- Dispensers in carpeted areas shall be only in sprinkler protected areas.
- If a dispenser is automatically operated it shall not dispense more than needed, not be operated more than one time by items placed nearby, and activated only when within 4 inches.

CMS memo S&C 16-38

- **Guidance for Surveyors, Providers and Suppliers Regarding the New Emergency Preparedness (EP) Rule**
- On September 8, 2016 the Federal Register posted the final rule *Emergency Preparedness Requirements for Medicare and Medicaid Participating Providers and Suppliers.* The regulation goes into effect on November 16, 2016. Health care providers must comply and implement all regulations one year after the effective date, on **November 16, 2017**.

Emergency procedures

NFPA 99 now also requires that facilities develop procedures for dealing with emergencies within the surgical suite or operating room. Procedures must be developed to address:

1) Alarm Actuation
2) Evacuation
3) Equipment shutdown
4) Detailed plans for emergency control operations by the facility's emergency control group or the public fire department
5) Control procedures in the event of a chemical spill
6) Extinguishing procedures in the event of a drapery, clothing or equipment fire

NFPA 99 Section 15.13.3.9

Disaster Drills Q43

- A disaster drill should be performed once per year. This may be tornado, earthquake etc.
- You are required to make contact with local or state authorities about disaster preparedness. Q43 under the CMS regulations.
- Outpatient providers and suppliers such as Ambulatory Surgical Centers and End-Stage Renal Disease Facilities will not be required to have policies and procedures for provision of subsistence needs.

Previously categorical waivers

- Since 2013 CMS allowed categorical waivers for some LSC items. The items were changes based on the 2012 code so you won't need those categorical waivers after November.

Categorical waivers cont.

- Diesel generators- Monthly is tested (amount of power supplied) at less than 30% of full load capacity of the generator, the annual load bank is now 1.5 hours not 2 hours.
- Your sprinkler system has waterflow alarms. If these are of a vane type or pressure switch type (not mechanical) the testing will be semiannual and not quarterly. There are still visual inspections due quarterly.
- Many companies who do smoke detectors may also test the waterflow alarm.

Categorical waivers

- NFPA 99 the Health Care Facility Code (HCFC) under anesthetizing locations used to require a minimum 35% humidity level and that conflicted with many of the national guidelines allowing for a 20-60% range. The 20-60% range is acceptable under 2012 and no longer requires a waiver.
- There were changes to power strips in 2012 code.

Hazardous areas

- 21.3.2.1 Doors to hazardous areas shall be self-closing or automatic closing in accordance with 21.2.2.4.
- Hazardous area is defined as an area of a structure or building that poses a degree of hazard greater than that normal to the general occupancy of the building or structure.
- Self closing not to be circumvented by wedges.

New for smoke compartments

- 21.3.7.2 has been revised to state every story of a facility must be subdivided into two smoke compartments.
- Applies to non-sprinkled facilities larger than 5000 sq ft and sprinkled facilities larger than 10,000 sq ft.
- 21.3.7.5 states required smoke barriers shall be in accordance with 8.5 and minimum one half (1/2) hour fire resistant construction.
- Doors in smoke barriers shall be self-closing or automatic closing solid doors.

Furniture

- 21.7.5.2 Newly introduced upholstered furniture shall comply with 10.3.2.1 and also meet either 10.3.3 or be in a building protected by sprinklers.
- 10.3 talks about resistance to cigarette ignition or the ability to not burn more than a little when exposed to a source of ignition.
- Side note, infection control or cleaning of the fabric is a consideration too.

Mattresses

- Newly introduced mattresses shall meet 10.3.2.2 and also either 10.3.3 or facility is sprinkled.
- Must meet limited burn length rates and meets either the requirement for a limited heat release rate or in a sprinkled building.

Decorations

- K753- Combustible decorations shall be prohibited unless they meet one of the fire resistant codes or in existing facilities are in such limited quantities that a hazard of fire is not present. 21.7.5.4

Soiled linen and trash

- K754- Soiled linen or trash collection receptacles shall not exceed 32 gallons in capacity.
- A total container capacity of 32 gallons shall not be exceeded within any 64 square foot area.
- Mobile soiled linen or trash collection receptacles with capacities greater than 32 gallons shall be located in a room protected as a hazardous area when not attended. 21.7.5.5

Flammable antiseptics

- The facility must develop policies and procedures specific to safety precautions when using flammable products and electrocautery or a laser
- Flammable products are packaged in nonflammable packaging of single units
- Ensure the product is completely evaporated before draping or conducting procedures.
- Conduct a pre-operative time out to make sure all steps have been accomplished

Inspection of med gasses

CATEGORY 1: INSPECTION AND MANAGEMENT

The 2012 edition of the *Code* has added extensive requirements for the maintenance of a medical gas or vacuum system for new, altered and existing systems.

Inspection and maintenance schedules and procedures are based on the risk assessment process that is completed by the facility, with considerations by the equipment manufacturer.

Persons maintaining systems shall be qualified to perform maintenance by one of the following:

- Training and certification through the health care facility
- Credentialed by ASSE 6040, Professional Qualification Standard for Medical Gas Maintenance Personnel
- Credentialed by ASSE 6030, Professional Qualification Standard for Medical Gas System Verifiers

Category 1 systems

CATEGORY 1: MAINTENANCE AND RECORD KEEPING

Maintenance and record keeping procedures have been updated in the 2012 edition of NFPA 99, as well.

The basics of the changes are:

- Permanent records of all tests required must be maintained by the facility
- Suppliers of bulk cryogenic systems must provide, upon request, documentation of vaporizer(s) sizing criteria
- Non-flammable central supply systems must:
  1. Have a periodic testing schedule
  2. Be inspected annually
  3. Be maintained by qualified representative of equipment owner
- Maintenance program for air compressor supply systems
- Maintenance program for medical-surgical vacuum systems
- Maintenance of waste anesthetic gas disposal (WAGD) systems
- Audible and visual alarms are tested periodically
- When medical gas systems are breached, testing (an installer and verification) is applicable to the downstream portions of the medical gas piping system
- Routine maintenance program for Category 1 piped medical gas and vacuum systems

NFPA 99 Section 5.1.14

Types of systems

K903	**Gas and Vacuum Piped Systems – Categories**	Medical gas, medical air, surgical vacuum, WAGD, and air supply systems in which failure is likely to cause major injury or death are designated Category 1. Systems in which failure is likely to cause minor injury to patients are designated Category 2. Systems in which failure is not likely to cause injury, but can cause discomfort is designated Category 3. Deep sedation and general anesthesia are not administered when using a Category 3 medical gas system. 5.1.1.1, 5.2.1, 5.3.1.1, 5.3.1.5 (NFPA 99)
K904	**Gas and Vacuum Piped Systems – Warning Systems**	All master, area, and local alarm systems used for medical gas and vacuum systems comply with appropriate Category warning system requirements, as applicable. 5.1.9, 5.2.9, 5.3.6.2.2 (NFPA 99)
K905	**Gas and Vacuum Piped Systems – Central Supply System Identification and Labeling**	Containers, cylinders and tanks are designed, fabricated, tested, and marked in accordance with 5.1.3.1.1 through 5.1.3.1.7. Locations containing only oxygen or medical air have doors labeled with "Medical Gases, NO Smoking or Open Flame". Locations containing other gases have doors labeled "Positive Pressure Gases, NO Smoking or Open Flame, Room May Have Insufficient Oxygen, Open Door and Allow Room to Ventilate Before Opening. 5.1.3.1, 5.2.3.1, 5.3.10 (NFPA 99)

Chapter 11 cylinders

- K906- Cylinders are handled in accordance with 11.6.2. Only cylinders, reusable shipping containers, and their accessories are stored in rooms containing central supply systems or cylinders.
- No flammable materials are stored with cylinders. Cylinders are kept away from sources of heat. Cylinders are not stored in tightly closed spaces.
- Cylinders in use and storage are prevented from exceeding 130 degrees Fahrenheit and nitrous oxide and carbon dioxide cylinders are prevented from reaching temperatures lower than 20 degrees Fahrenheit.

Inspection programs

- K907- Medical gas, vacuum, WAGD or support gas systems have documented maintenance programs. Inspection and maintenance schedules are established through risk assessment considering manufacturer recommendations.

Maintain your records

- K908- Records of the inspections and testing are maintained as required.

Facility staff and med gas

- NFPA 99 2012 edition has added requirements for personnel who maintain or handle medical gasses. Personnel are required to be trained on the application and risks associated with their handling and use.
- This includes, but is not limited to, nurses, physicians, engineers, respiratory therapist and technicians.
- Continuing education must be provided by the facility to personnel, and the training must include a periodic review of safety guidelines and usage requirements.
- NFPA section 11.5.2.1.2 and 11.5.2.1.3

Liquid oxygen systems

- If bulk cryogenic systems are utilized, the supplier must provide annual training on how the system works.
- NFPA section 11.5.2.1.4 and 11.5.2.1.5

A few additional comments

- If you renovate or have a construction project in mind it's a good idea to let us know and we can review the plans.
- New paint and carpet are not usually considered a renovation but when you start re-purposing rooms, adding or demolishing areas we like to know especially if it affects a larger area.
- Any new area or addition needs to have an onsite survey before it can be used for patient care.

When you expand to other areas

- Sections of ASC's may be considered as another type of occupancy if they are not for treating patients. And separated from the ASC by one hour construction.
- Other tenants shall be separated from the ASC by one hour construction. That's usually a double layer of dry wall from the floor to the roof or floor above.
- There should be no unsealed penetrations in this rated wall. Keep an eye on anyone running cables and wires.
- Facilities of over 5000 sq ft with no sprinklers and 10,000 sq ft with sprinklers will have a smoke wall dividing the facility.

Fire drills

- Fire drills are to be held quarterly for ALL staff.
- Don’t forget those part time staff, new staff, and medical professionals that rotate in and out.
- ASC fire drills shall include the transmission of an alarm and simulation of emergency fire conditions. Don’t forget drills are to be unannounced. Patients do not need to participate, staff education only.

Fire drills

- Don’t be hesitant to have staff take an empty stretcher out different exits so that they know all routes and what may need to be done to evacuate that way.
- Don’t forget if you have automatic signal transmission tell the alarm company and/or fire department that you will be conducting a drill.

Generator

- NFPA 110 states that all testing should be performed by competent, trained individuals.
- Weekly checks should be documented. They include checks to make sure the generator is ready to operate.
- The monthly load has required documentation. Staff performing these checks should be the trained staff mentioned above.
- Do you know what devices are on generator power? You may need to know that for emergency drill assessment.

Why you need the light when you have a generator?

- NFPA 99 section 6.3.2.2.11 requires battery powered lighting wherever deep sedation and general anesthesia is administered. The battery powered light provides sufficient lighting to terminate procedures the room is designed to accommodate.
- This light may be one mounted on the wall or ceiling as a separate unit or it may be built into the lighting in the ceiling and when the light is off you can see the red LED indicating that light has battery backup.

Transfer of emergency power

The 2012 edition of NFPA 99 now clarifies that the 10-second criteria does not apply during the monthly test. If the 10-second criterion is not met during the monthly test, a process shall be provided to annually confirm the capability of the life safety and critical branches to automatically restore operation within 10-seconds of interruption of the normal source.

Yes, it’s always been required

- Just a reminder, doors in barriers such as those between you and the neighbors or in your smoke walls dividing the facility shall normally be kept closed or held open only if they meet the requirements of chapter 21.
- That does not mean held open by a wood or plastic wedge but a magnetic hold open connected to the fire alarm system.

You may need to know your construction type

- ASC's do have to meet a specific construction type described in Table 21.1.6.1.
- The approved type depends on the number of floors and if you have sprinklers or do not have them.
- As an example one of the more common construction types is Type II (000). No sprinklers, can be one story only. If you have sprinkler protection in the entire building you may be two or more stories in height.

Know your code and your type

- These different codes all use their own numbers and letters to say the same thing.
- **NFPA Type II (000) is the same as:**
- **IBC/IFC Type II-B**
- **UBC/UFC Type II-N**
- **BOCA Type 2-C**
- Life Safety uses the NFPA code classifications. You must know the code and the type.

Appendix I from CMS

- *Upon completion of the review of the documentation provided by the facility, the more detailed inspection begins. Using the layout of the building as a guide, begin an observation tour that includes the outside of the building as well as the inside.*
- *At this time determine the type of building construction. This can be accomplished by review of the construction drawings, if available, and must be confirmed by direct observation of the structure and building materials used in constructing the building (exposed areas above the ceilings or vertical pipe shafts may provide insight).*

What is your type and how do you find it?

- I like the blueprints, you know, those things stuck under your desk, behind the door, or next to the water heater.
- If not specified on the blue prints some facilities will have a statement of conditions book.
- The LSC surveyor asks the construction type with every survey. If you renovate, new construction should be the same construction type or more substantial. New projects may require more substantial construction types. And that you add sprinklers.

Multi tap power outlets

2) Power strips are allowed to be used if they are attached to movable equipment and meet the following requirements:

a) Power-tap is attached directly to the equipment
b) Sum of all appliance does not exceed 75% of the rated capacity of the power-tap
c) The power-tap amperage meets NFPA 70 standards
d) The facility has a maintenance program related to verifying the power-tap is being used properly
e) Facility has a way in which the additional or non-medical devices cannot be connected

3) If a power-tap is being utilized for patient care equipment, it must meet the requirements of UL 1363A or 60601-1

For a new facility the OR is a wet location.

The 2012 edition of NFPA 99 helped clarify the issue by mandating that an OR be classified as a "wet procedure location," unless the governing body performs a risk assessment to determine otherwise.

If the OR is classified as a "wet procedure location," the electrical power supply must be protected by either an isolated power system or a ground fault circuit interrupter.

NFPA 99 Section 6.3.2.2.8

Construction

- Ask before a project as correcting it later is even more expensive. You can always email us.
- For renovation, construction or relocation, there may be a plan review by our plan review unit then the final initial licensure visit (that's us).
- New construction must be inspected and approved as a licensed portion of the facility before patient care is provided.

Questions you may have

- BAC@health.mo.gov
- 573-751-6083
- Email one of the surveyors