Changes to the Life Safety Code that the 2012 Edition Will Bring

Here is a summary of the changes that you need to be aware of, that the 2012 Life Safety Code brings:

Means of Egress

- Existing openings into exit enclosures from unoccupied mechanical rooms permitted, provided the room does not contain fuel-fired equipment; the room does not have any combustibles stored; and the entire building is protected with sprinklers. [7.1.3.2.1(9)(c), 2012 LSC]

- 'Electrically' locked hardware allowed on egress doors, to be similar to mechanically locked doors. [7.2.1.5.6, 2012 LSC]

- Existing dead-bolt locks are permitted on a door to a room serving not more than 3 occupants, provided it does not require simultaneous operations to unlock the door. [7.2.1.5.10.6, 2012 LSC]

- Door assemblies separating an elevator lobby from an exit access are permitted to be electrically locked, provided the building is protected throughout by a fire alarm system (this does not mean fully protected with smoke detectors) and fully protected with sprinklers; the elevator lobby is protected with smoke detectors; a two-way communication system is provided for communication between the elevator lobby and a central point that is constantly staffed who are capable, trained, and authorized to provide emergency assistance; delayed egress locks and access-control locks are not permitted. [7.2.1.6.3 and 19.2.2.2.4(4), 2012 LSC]

- All fire door assemblies, including side-hinged swinging fire doors must be tested and inspected annually (but this does not apply to smoke barrier doors). [7.2.1.15.2, 2012 LSC]

- Identification signs now required in new stairwells 3 stories or more in height, and in existing stairwells 5 stories or more in height. Signs must: Indicate the floor level in tactile 5 inch tall letters, in the middle of the sign; Indicate the terminus of the top and bottom of the stairs, and the identification must be located at the bottom of the sign in 1 inch tall letters; Indicate the stair identification in 1 inch letters at the top of the sign; Indicate the floor level and direction to the exit discharge; Be mounted 60 inches above the floor in a position that is visible when the door is open or closed; Be illuminated with light connected to emergency power; If stairwell does not have roof access, then ‘NO ROOF ACCESS’ in 1 inch letters must be placed underneath the stairwell identification. [7.2.2.5.4.1, 2012 LSC]
- Doors in the path of egress equipped with delayed egress locks are no longer limited to just one in the path of egress to the public way.  [Deleted requirement, 2012 LSC]

- Locked doors now permitted where the specialized protective measures are required for the safety needs of the patient, provided the staff is capable of unlocking the doors, the entire locked space is fully smoke detected or there is a remote switch to unlock the doors in a constantly attended location on the unit (NOTE: a typical nurse station is not considered constantly attended), the door unlocks on a power failure or activation of the sprinkler system or by a smoke detection system, and the building needs to be fully sprinklered.  [19.2.2.2.5.2, 2012 LSC]

- Horizontal sliding doors do not have to be side-hinged and break-away if they serve an occupant load fewer than 10 people.  [19.2.2.10.2, 2012 LSC]

- Corridor projections are limited to 4 inches instead of 6 inches.  [CMS Final Rule, May 4, 2016]

- Certain wheeled equipment is permitted to be left unattended in 8 foot wide corridors provided the remaining clear width is 5 feet, and the fire safety plan addresses the relocation of the wheeled equipment out of the corridor during a fire emergency.  [19.2.3.4 (4), 2012 LSC]

- Furniture secured to the floor or wall is permitted in 8 foot wide corridors provided the remaining clear width is 6 feet, the fixed furniture is grouped on one side of the corridor and is not more than 50 square feet, there is at least 10 feet clearance between groupings of fixed furniture, the fixed furniture does not block access to building functions, the corridor is fully smoke detected or the grouping of fixed furniture is arranged to allow direct supervision by staff, and the smoke compartment is fully protected with sprinklers.  [19.2.3.4 (5), 2012 LSC]

- Suite perimeter walls and doors must meet the requirements for corridor walls and doors.  [19.2.5.7.1.2, 2012 LSC]

- Spaces in operating room suites that are protected with sprinklers containing sterile surgical supplies limited to a one-day supply are permitted to be open to the remainder of the suite without separation.  [19.2.5.7.1.3(D), 2012 LSC]

- Suites may use a horizontal exit as one of their two required exits.  [19.2.5.7.2.1(A), 2012 LSC]

- For suites that require two means of egress, one means of egress may be to an exit enclosure or a direct exit to the outdoors.  [19.2.5.7.2.1(B), 2012 LSC]

- Sleeping suites have to have constant supervision by staff.  [19.2.5.7.2.1(C), 2012 LSC]

- Sleeping suites must allow direct supervision of the patient sleeping rooms by staff, or the entire suite must be fully smoke detected.  [19.2.5.7.2.1(D), 2012 LSC]
For suites that require two means of egress, one means of egress may be to adjoining suite, provided the barrier between the suites meets the requirements for corridor walls and doors. [19.2.5.7.2.2(C), 2012 LSC]

Sleeping suites may be 7,500 square feet if the entire smoke compartment where the suite is located is protected with standard response sprinklers and smoke detectors; or the entire smoke compartment where the suite is located is protected with quick response sprinklers, then smoke detectors are not required. [19.2.5.7.2.3(B), 2012 LSC]

Sleeping suites may be 10,000 square feet provided the patient sleeping rooms are arranged for direct supervision, the entire suite is protected with smoke detectors, and the entire suite is protected with sprinklers. [19.2.5.7.2.3(C), 2012 LSC]

Provision from Hazards

- Soiled linen and trash rooms containing less than 64-gallon capacity containers no longer have to be considered hazardous areas. [19.3.2.1.5(5),(6), 2012 LSC]

- Gift shops no longer have to be considered hazardous areas. [Deleted requirement, 2012 LSC]

- Residential cooking equipment used for food warming or ‘limited cooking’ (i.e. staff break rooms) do not have to comply with NFPA 96 for exhaust hoods, and are not considered a hazardous area. [19.3.2.5.2, 2012 LSC]

- Small cooking areas that are limited to preparing meals for no more than 30 persons are permitted to be open the corridor (with heavy restrictions on how the cooking equipment is arranged and used), or the cooking equipment is not required to comply with NFPA 96 (but still needs to be separated from the corridor). [19.3.2.5.3, 2012 LSC]

- Kitchens no longer have to be considered hazardous areas if the cooking exhaust hoods are fitted with fire suppression systems. [19.3.2.5.5, 2012 LSC]

- Aerosol foam dispensers of ABHR product are permitted, up to 18 oz. in size. [19.3.2.6 (3), 2012 LSC]

- One ABHR dispenser located in each patient room or suite does not contribute to the aggregate total of 10 gallons of ABHR product in dispensers per smoke compartment. [19.3.2.6 (6), 2012 LSC]

- ABHR dispensers are required to have a 1-inch clearance, measured side-to-side to ignition sources (i.e. electrical outlets, switches, fixtures, etc.), and are not permitted to be mounted over ignition sources. [19.3.2.6 (8), 2012 LSC]

- Existing laundry chutes shall be permitted to discharge into the same room as rubbish discharge chutes provided the room is protected with sprinklers. [19.5.4.5, 2012 LSC]

- ABHR dispensers are now permitted in ambulatory health care occupancy corridors, but are still prohibited in business occupancies corridors. [21.3.2.6, 2012 LSC]
• A change in use of a space in an existing healthcare occupancy does not have to meet new construction requirements for hazardous areas, provided the space does not exceed 250 square feet and the entire building is protected with sprinklers, but the space does have to meet the requirements for hazardous areas for existing conditions.

[43.7.1.2(2), 2012 LSC]

Fire Alarm Systems
• Off-site monitoring transmission equipment for fire alarm systems has to be tested annually, rather than quarterly.

[Table 14.4.5 (22), and Table 14.4.2.2 (18), NFPA 72-2010]

Sprinkler Systems
• Water-flow switches may be tested semi-annually instead of quarterly.

[5.3.3.2, NFPA 25-2011]

• Electric-driven fire pumps are now permitted to be tested monthly rather than weekly for the no-flow test. Engine-driven fire pumps still have to be tested weekly.

[8.3.1.2, NFPA 25-2011]

• In sprinkler systems where the sole water supply is through a backflow preventer and/or pressure reducing valves, a main drain test of at least one system downstream of the device must be conducted on a quarterly basis.

[13.2.5.1, NFPA 25-2011]

• Sprinkler system pressure gauges must be inspected monthly to verify they are still in good condition and that normal pressure is being maintained. [13.2.7.1, NFPA 25-2011]

• Fire hose valves are now required to be inspected quarterly to ensure the caps are in place and not damaged; the hose threads are not damaged; the valve handles are present and not damaged; gaskets are not damaged; there are no leaks; there are no obstructions to the valves; and ensure any restricting devices are in place.

[13.5.6.1, NFPA 25-2011]

• Fire hose valves sized 2½ inches are required to be tested annually by opening and closing the valves (full flow of water is not required).

[13.5.6.2, NFPA 25-2011]

• Fire hose valves sized 1½ inches are required to be tested once every 3-years by opening and closing the valves (full flow of water is not required).

[13.5.6.2, NFPA 25-2011]

• Annual fire pump flow tests still require the pump to be operated at a no-flow condition (churn), but it is no longer required to be 30-minutes. The length of time is not specified.

[Deleted requirement, NFPA 25-2011]

• Once every 5 years an internal inspection must be conducted of the sprinkler piping (non-metallic pipe excluded) at two locations: 1) At the end of one main (drain system and remove end cap) and 2) Remove one sprinkler at end of branch line. If the presence of foreign material is found, then a thorough obstruction investigation (as described by NFPA 25) is required, and then every 5 years thereafter. If slime is found, then it must be tested for Micro-biological Influenced Corrosion (MIC).

• Sprinkler impairments do not require fire watches until the sprinklers are impaired for 10 hours in a 24 hour period. [NOTE: This does not apply to fire alarm system impairments which remain at 4 or more hours in a 24 hour period.] [15.5.2, NFPA 25-2011]

• Fire watches are now required to have a designated individual who performs no other duties to continuously monitor the impaired locations, looking for fire, fire hazards, and situations that could develop into a fire situation. The individual must have ready access to portable fire extinguishers and the ability to promptly notify the fire department. [A.15.5.2(4)(b), NFPA 25-2011, and CMS Final Rule, May 4, 2016]

• Existing high-rise healthcare occupancies must be fully protected with sprinklers by July 5, 2028. A high-rise facility is one where the floor of an occupiable story is greater than 75 feet above the lowest level of fire department vehicle access. [19.4.2.1, 2012 LSC]

**Building Services**
• Direct-vent gas fireplaces are permitted in the same smoke compartment as patient sleeping rooms as long as they are not located in patient sleeping rooms. Additional restrictions apply. [19.5.2.3(2), 2012 LSC]

• Solid-fuel fireplaces are permitted in healthcare occupancies as long as they are separated by a 1-hour fire rated barrier from patient sleeping areas. Additional restrictions apply. [19.5.2.3(3), 2012 LSC]

• Generator annual load test is only required for 90 minutes rather than 2 hours. The test starts at 50% load for 30-minutes and increases to 75% load for 60-minutes for a 90-minute continuous test. No longer is the generator required to operate at 25% load for 30 minutes. [8.4.2.3, NFPA 110-2010]

• The weekly inspection of the emergency generator permits battery conductance testing in lieu of specific gravity testing when applicable and warranted. [8.3.7.1, NFPA 110-2010]

• A fuel quality test must be performed annually on the fuel supply for the emergency power generator, in accordance with ASTM testing methods. [8.3.8, NFPA 110-2010]

**Operating Features**
• Fewer restrictions on the display of combustible decorations: 20% of walls, non-fire rated doors, and ceilings may be covered with combustible decorations in unsprinklered smoke compartments; 30% of walls, non-fire rated doors, and ceilings may be covered with combustible decorations in sprinklered smoke compartments; 50% of the walls, non-fire rated doors, and ceilings may be covered with combustible decorations in patient sleeping rooms having a capacity of not more than four persons in a sprinklered smoke compartment. [19.7.5.6, 2012 LSC]

• Waste container up to 96-gallon capacity for the disposal of clean waste (i.e. patient records awaiting destruction) are permitted outside of a hazardous room provided the container is FM Approval 6921, or equal. [19.7.5.7.2, 2012 LSC]
- Temporary construction barriers are required to be 1-hour fire rated, with ¾ hour fire rated doors assemblies if the construction area is not fully protected with sprinklers. 1-hour barriers are typically steel studs with 5/8-inch thick gypsum board on both sides, with all seams taped and mudded and all screw heads mudded. If the construction area is protected with sprinklers, then the temporary construction barrier is permitted to be non-rated, but construction ‘tarps’ are not permitted as the non-rated barrier. At this time (and until further notice) flame retardant plastic sheeting (i.e. Visqueen) will be permitted as a temporary construction barrier where the construction area is fully protected with sprinklers. [8.6.2, NFPA 241-2009]

**NFPA 99 Health Care Facilities Code**
- NFPA 99 now requires healthcare facilities to conduct a risk assessment to determine what category of risk their facility falls under. The hospital may use whatever form or template they wish to conduct this assessment. The risk assessment is not forwarded to the AO or to CMS but is retained for review by surveyors during a survey. [4.2, NFPA 99-2012]

- The plastic wrapping used in shipping compressed gas cylinders must be removed before the cylinders are placed in storage. [5.1.3.2.5, NFPA 99-2012]

- Walls surrounding compressed gas storage rooms containing 3,000 cubic feet (or more) of compressed gas, and walls surrounding gas manifold rooms must be 1-hour fire rated, and doors in the 1-hour barriers must be 1-hour fire rated as well (3/4 hour fire doors not permitted). [5.1.3.3.2(4), NFPA 99-2012]

- Electric heaters are not permitted in compressed gas cylinder storage areas, or in gas manifold rooms. Only indirect heaters (i.e. steam or hot water) are permitted. [5.1.3.3.2(6), NFPA 99-2012]

- All storage racks for compressed gas cylinders must be non-combustible; wooden racks are no longer permitted. [5.1.3.3.2(9), NFPA 99-2012]

- Electrical devices (i.e. switches and outlets) are not required to be mounted 60 inches above the finished floor if there is adequate protection (i.e. wire cage) around the device. [5.1.3.3.2(10), NFPA 99-2012]

- Medical gas shut-off valves must be situated so there is a wall between the valves and the outlets they serve; the valves cannot be in the same room as the outlets; the valves must be readily operable from a standing position in a corridor on the same floor they serve; valves cannot be installed behind normally closed or open doors, or otherwise hidden from view; and valves cannot be located in a closed or locked room. [NOTE: This applies to existing conditions as well as new construction.] [5.1.4.8, NFPA 99-2012]
- A centralized computer system is permitted to be used in lieu of one of the required master alarms for medical gas systems. [5.1.9.2.2, NFPA 99-2012]

- Non-stationary medical gas booms and articulating assemblies utilizing flexible connectors for medical gas outlets in procedure rooms must be tested for leaks per the manufacturer’s recommendations every 18 months. [5.1.14.2.3.2, NFPA 99-2012]

- Circuit breaker panels serving Category 1 and Category 2 rooms must be limited to just authorized individuals and cannot be located in public access areas (new construction only). This means circuit breaker panels must be locked for Cat 1 & 2 rooms. [6.3.2.2.1.3, NFPA 99-2012]

- Operating rooms must be considered ‘wet procedure locations’ unless a risk assessment conducted by the health care governing body (i.e. board of directors) determines otherwise. This means wet procedural locations need to be protected with ground-fault circuit interrupters, or isolated power systems. [6.3.2.2.8.7, NFPA 99-2012]

- Humidity limits in anesthetizing locations are 20% to 60% RH. A risk assessment is still required to determine if any equipment or supplies are not suitable for use or storage in less than 30% RH. [9.3.1.1, NFPA 99-2012]

- Mechanical ventilation used in medical gas manifold rooms, or storage rooms containing compressed gas in quantities greater than 3,000 cubic feet is no longer required to be dedicated but cannot be shared with an exhaust system that also serves flammable or combustible materials (which is nearly every exhaust system). Mechanical exhaust must be at the rate of 1 cubic feet per minute (cfm) per 5 cubic feet of gas designed to be stored in the space, but not less than 50 cfm and not more than 500 cfm. Exhaust inlet still must be mounted no more than 12 inches above the floor. Mechanical exhaust fans must be supplied with emergency power. [9.3.7.5.3, NFPA 99-2012]

- Plumes created from medical procedures (laser and electrosurgical use) must be removed and discharged outdoors, returned or exhausted through HEPA filtration, or returned to the space by means of chemical and thermal sterilization. [9.3.9, NFPA 99-2012]

- Written procedures are required for operating room and surgical suite fire emergencies. The procedures are to include alarm actuation, evacuation, and equipment shutdown, and for extinguishing drapery, clothing, or equipment fires. [15.13.3.9, NFPA 99-2012]

- Fire exit drills must be conducted annually in operating rooms and surgical suite locations. [15.13.3.10.3, NFPA 99-2012]