

## Life Safety Tips April 2021

CMS require participating skilled nursing facilities to comply with the requirements of the NFPA 101-2012 Edition, commonly referred to as the Life Safety Code as well as the NFPA 99 – 2012 edition known as the Health Care Facilities Code. These codes are a comprehensive set of requirements, which provide a high level of safety.

Facility maintenance is challenging and is as much more than fixing ‘everything’ and requires the inspection, testing and maintenance of the many features of fire and safety. The tips below are for individual deficiencies which have been frequently cited. The K tags address both LSC and HCFC requirements pertaining to the physical environment, life and fire safety. All of the tips provided are intended for reference only. If you have further questions, refer to the applicable NFPA Code manuals.

### Leading Life Safety Code deficiencies for US skilled nursing centers.

\*QCOR FFY 2020 October 2019 through September 2020

Tag	Description	# Cites	Percentage of Providers
K0353	Sprinkler System - Maintenance and Testing	2,443	42.8%
K0918	Electrical Systems - Essential Electric System	1,764	30.9%
K0363	Corridor - Doors	1,472	25.8%
K0321	Hazardous Areas - Enclosure	1,340	23.5%
K0920	Electrical Equipment – Power Strips and Cords	1,297	22.7%
K0712	Fire Drills	1,280	22.4%
K0345	Fire Alarm System - Testing and Maintenance	1,236	21.7%
K0324	Cooking Facilities	1,007	17.6%
K0372	Subdivision of Building Spaces - Smoke Barriers	981	17.2%
K0211	Means of Egress - General	823	14.4%
K0923	Gas Equipment - Cylinder and Container Storage	817	14.3%
K0511	Utilities - Gas and Electric	774	13.6%
K0761	Maintenance, Inspection and Testing - Doors	765	13.4%
K0222	Egress Doors	729	12.8%
K0914	Electrical Systems - Maintenance and Testing	678	11.9%
K0521	HVAC	677	11.9%
K0355	Portable Fire Extinguishers	670	11.7%
K0351	Sprinkler System - Installation	627	11.0%
K0291	Emergency Lighting	619	10.8%
K0741	Smoking Regulations	600	10.5%

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### **K353 Sprinkler System Maintenance and Testing:**

- Ensure that facility has quarterly inspection by certified individual
- Complete an annual inspection of all sprinkler heads. Sprinkler heads that are found to be dirty, grimy, rusted or have paint on them should be cleaned, such as with compressed air or vacuum, or if necessary replaced.
- Confirm that there is a supply of spare sprinkler heads – 6 per type of sprinkler head in the facility with the installation wrench
- Confirm that the automatic sprinkler and standpipe systems are inspected, tested, and maintained in accordance with NFPA 25.
- Confirm that the facility has conducted an internal pipe inspection every 5 years. NFPA 25 (2011 edition) 14.2.1 states: “An inspection of piping and branch line conditions shall be conducted every five years by opening a flushing connection at the end of one main and by removing a sprinkler toward the end of one branch line for the purpose of investigating for the presence of foreign organic and inorganic material.”
- Confirm that facilities with dry pipe sprinkler systems have conducted system pressure testing every three years as defined in NFPA 25 13.4.4.2.9.
- Confirm the main drain tests are completed and compared to previous tests.

NFPA 101 9.7.5, 9.7.7, 9.7.8, and NFPA 25

### **K363 Corridor Doors:**

Substantial construction to resist smoke

- 1¾ inch solid-bonded core wood
- 20-minute fire rated, or capable of resisting fire for at least 20 minutes.
- CMS S&C-07-18
  - In a smoke compartment that is fully sprinklered, a gap between the face of a corridor door and the door stop should not exceed 1/2-inch, provided that the door latch mechanism is functioning.
- Confirm that no non-approved hold-open devices are being used i.e. wedges, copy paper boxes, fire extinguishers and alike to keep doors open.
- Facility should establish a periodic schedule for inspection, testing and maintenance of all smoke-type doors in the facility according to S&C Notice 17-38-LSC.

NFPA 19.3.6.3

### **K918 Electrical Systems:**

- Ensure that the Generator is maintained according the manufacturer and/or NFPA requirements for weekly visual inspection and monthly exercising.
- Ensure that the generator Monthly exercise documentation includes the time that is took to transfer from pole power to generator power (10 sec maximum).
- Ensure for diesel generator which do not minimally run 30% or greater of its nameplate rating the facility has had an annual load bank test which is at least 90 minutes.
- For Natural Gas generators - letter confirming from natural gas supplier of the reliability including the following elements:
  - A statement of reasonable reliability of the natural gas delivery

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- A brief description that supports the statement regarding the reliability
- A statement that there is a low probability of interruption of the natural gas
- A brief description that supports the statement regarding the low probability of interruption
- The signature of technical personnel from the natural gas vendor.

NFPA 110 , NFPA 99

#### **K321 Hazardous Areas:**

- Hazardous areas shall be enclosed by a fire barrier having a 1-hour fire resistance rating or shall be provided with an automatic extinguishing system in accordance with 8.7.1. The door to a hazardous space is required to closed and latch and have automatic closer.
- Confirm that there is an automatic door closer on all doors to hazardous areas.
- Hazardous areas shall include, but shall not be restricted to, the following:
  - Boiler and fuel-fired heater rooms
  - Central/bulk laundries larger than 100 ft.<sup>2</sup>
  - Paint shops
  - Repair shops
  - Rooms with soiled linen in volume exceeding 64 gal
  - Rooms with collected trash in volume exceeding 64 gal
  - Rooms or spaces larger than 50 ft.<sup>2</sup>, including repair shops, used for storage of combustible supplies and equipment in quantities deemed hazardous by the authority having jurisdiction

NFPA 101 18/19.3.2.1, 7.2.1.8, 8.4, 8.7, 9.7

#### **K920 Electrical Equipment Power Strips**

- Power strips (relocatable power tapes (RPT)) used within 6' of patient bed must be certified UL 1363A or UL 10601-1 and may only be used of patient care related electrical equipment (PCREE)
- No non-PCREE may be plugged into a power strip within 6' of patient bed.
- Power strips for non-PCREE in the patient care rooms (outside of vicinity of patient bed) must meet UL 1363.
- Power strips cannot be interconnected "Daisy-chained" to increase length.
- Confirm that the power strip is not attached to the wall or furniture as it cannot be used as permanent wiring.

NFPA 99 10.2.4. 10.2.3.6, 10.2.4; NEC 517

#### **K712 Fire Drills:**

- Facility should conduct, at a minimum, one fire drill per month, per shift, per quarter
- Confirm that fire drills conducted are at varying times and conditions, i.e. vary by more than an hour apart, held on different days of the week, different weeks in the month with

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the times varying by more than 1 hour.

- A fire drill conducted at shift change only counts as one drill.
- When fire drills are conducted between 9:00 PM and 6:00 AM, a coded announcement may be used instead of audible alarms and the fire alarm must be tested the following day.

NFPA 101 18.7.1.4 through 18.7.1.7, 19.7.1.4 through 19.7.1.7

### **K345 Fire Alarm Testing and Maintenance:**

- Confirm Monthly that the fire alarm transmits signal to monitoring company or fire station within 90 seconds.
- Ensure that facility complete the required quarterly, semi-annual and annual inspections
- Ensure that all records for the inspection, testing and maintenance of the fire alarm system and all related components are readily available
- Check the inventory list of tested devices match from year to year.

NFPA 70, NFPA 72, and NFPA 25

### **K372 Subdivision of Building spaces:**

- Confirm that all penetrations in the smoke or fire barrier have been appropriately filled to resist the passage of smoke or fire.
- Facilities must use appropriately UL listed products.
- In some CMS Regionals the use of spray foam sealants are not permitted

NFPA 19.3.7.3 and 8.6.7.1(1)

### **K761 Fire Doors**

- Ensure all fire door assemblies are annually inspected and tested
- Doors tested include:
  - Fire rated labeled doors located in fire resistance rated wall assemblies
  - Fire rated labeled Doors in exit enclosures - typically stairwells
  - Fire rated labeled Doors in other fire resistance rated walls such as hazardous areas and fire pump enclosures

NFPA 18/19.2.2.1, NFPA 80 8.3.3.2

### **K324 Cooking Facilities:**

- The cooktop or range is protected with a fire suppression system listed in accordance with UL 300
- Ensure that the cooktop and/or range is secured to the wall or floor to make certain that it does not move and thereby damaging the gas line.

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- Ensure that the fire suppression system is inspected, tested and maintained semi-annually according to NFPA standards
- Moving appliances without manufacturer guidance and building authority approval is not permitted
- Ensure that the kitchen has one or more K type extinguishers (within 30' of employees at all times.
- Ensure that K-type extinguisher has appropriate notice signage
- Ensure that there is appropriate heat detection in kitchen as required.
- Ensure staff know that in the event of a fire under the range hood to engage cooktop fire suppression system.
- Ensure that staff do not use unapproved door hold open devices such as wedges, boxes, etc.

NFPA 101, 18/19.3.2.5.2, through 18/19.3.2.5.5, NFPA 101, 9.2.3

#### **K511 Utilities Gas and Electric:**

- Ensure that all juncture boxes have appropriate covers installed.
- Ensure that no extension cords are used in the facility.
- Ensure that all generators, fuel tanks and other utility systems are protected when adjacent to parking lots or driveways with protective bollards.

NFPA 54; NFPA 101, 18/19.5.1.1, NFPA 101, 9.1.1, 9.1.2

#### **K211 Means of Egress:**

- Confirm that doors to the corridor do not require more than one action to open and exit door.
- Confirm when utilizing a delay-egress lock on egress door that there is proper signage on the door stating, "PUSH UNTIL ALARM SOUNDS DOOR CAN BE OPENED IN 15 SECONDS."
- Confirm that the any delayed-egress locking system properly releases within 15 seconds.
- Remember that disguising the function of any egress door is not permitted.
- Ensure that doors held open with appropriate devices which release with fire alarm

NFPA 101, , 7.1.10.1, 7.2.4, 18/19.2.1, 18/19.2.2.5.1 through 18/19.2.2.5.

#### **K923 Gas and Cylinder Storage:**

Ensure the proper amount is stored and that all gas tanks are fully supported in metal racks or carts.

- Ensure that Empty and Full tanks are kept separated (even in same storage room).
- Confirm mechanical ventilation is provided where the room contains more than 3000 cubic feet and natural ventilation cannot be provided.
- Ensure that the door to the gas storage closes and latches and must lock.

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- Ensure that the oxygen storage room has appropriate signage stating, “Medical gases Stored Within, No Smoking”

NFPA 99, 5.1.3.3.3, 9.3.7

### **K521 HVAC:**

- Confirm that all smoke dampers have been inspected, tested and maintained individually documented every 4 years. If the damper is equipped with a fusible link, the link shall be removed for testing and/or replacement. All inspections and testing shall be documented indicating the location of the fire damper or combination fire/smoke damper, date of inspection, name of inspector, and deficiencies discovered.
- Ensure HVAC system is designed to not use a corridor as a plenum
- Heating, ventilation, and air conditioning shall comply with NFPA requirements and shall be installed in accordance with the manufacturer's specifications.

NFPA 101, 9.2, 18/19.5.2.1, NFPA 80, 19.4

### **K914 Receptacle Testing (non-Hospital grade):**

Ensure that receptacles not listed as hospital-grade, at patient bed locations must be tested every 12 months, NFPA 99, 6.3.4.1, 6.3.3.2. The inspection must include:

- Visual inspection must confirm the physical integrity of each receptacle;
- The continuity of the grounding circuit in each electrical receptacle must be verified;
- The correct polarity of the hot and neutral connections in each electrical receptacle must be confirmed;
- The retention force of the ground blade of each electrical receptacle (except locking-type receptacles), must be not less than 4 oz.

### **K741 Smoking Regulations:**

- Ensure there are no discarded cigarette butts on the ground outside the facility.
- Ensure that the proper smoking equipment is being used including non-combustible self-closing ashtrays and designed ash can

NFPA 101 18/19.7.4

### **K355 Portable Fire Extinguishers**

- Ensure that each fire extinguisher in the facility is visually inspected every month. Staff person responsible for inspection shall sign and date inspection tag.
- Ensure fire extinguishers are mounted correctly. Normally fire extinguishers shall not be mounted more than 5 feet above the floor and at least 4" off of the floor.
- Annual inspection, testing and maintenance shall be completed and documented.
- Each extinguisher should have 6-year required maintenance to change chemical for dry chemical fire extinguishers
- Conduct the 12-year hydrostatic vessel testing

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NFPA 10 – 2010

#### **K351 Sprinkler Installation**

Ensure the facility is fully sprinklered and meets the requirements of NFPA 13, Installation of Automatic Sprinkler Systems. As of August 13, 2013, all areas of a nursing facilities are required to be protected with automatic sprinkler systems, including:

- Closets
- Combustible overhangs that extend more than 48"
- Room behind dryers
- Elevator machine rooms
- Elevator shaft
- Electrical rooms
- Walk-in coolers/freezers
- Linen/Trash Chutes
- Attics

#### **K291 Emergency Lighting:**

Emergency lighting of at least 1-1/2-hour duration is provided automatically in accordance with 7.9.

- Emergency lighting must be provided all the way to the public way (an area of safety/a street or similar area open to the outside air and dedicated to public use).
- Ensure that battery backed up emergency lighting is tested once a month for 30 seconds and once annually for 90 minutes. The documentation must include an individually itemized device list.

18.2.9.1, 19.2.9.1