CMS, ASHE resources and NFPA Code Update

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Overview

• Changes to the LSC 2012 Edition
• Changes to the IBC 2012 Edition
• Recent CMS compliance issues
• ASHE resources
Fire Extinguishers in Operating Rooms

• AORN Guidance Statement: Fire Prevention in OR
• ECRI Emergency Procedure: Extinguishing a Surgical Fire
  • Recommends CO\textsubscript{2} extinguisher
    • No Class A rating
Fire Extinguishers in Operating Rooms

- **NFPA 99 2018 §16.9** “Clean agent– or water mist–type fire extinguishers shall be provided in operating rooms.”
- **NFPA 10 Clean Agent Definition**
  - “Electrically non-conducting, volatile, or gaseous fire extinguishant that does not leave a residue upon evaporation.”
Combustibles in Mechanical / Electrical Rooms

• **NFPA 1 2018 §10.18.5.1** “Combustible material shall not be stored in boiler rooms, mechanical rooms, or electrical equipment rooms unless the rooms comply with NFPA 101 for storage rooms.”

• Filters, belts and materials used to maintain equipment in room is generally permitted
Smoke Compartment Area

- **NFPA 101 2018 §18/19.3.7.1**
  - Permits 40,000 sq ft smoke compartments where sleeping rooms (where provided) are configured for a single patient
  - Nursing Homes and LTC limited to 22,500 sq ft
  - Atrium area is not limited provided separated per §8.6.7
Notable Changes to LSC 2012

• Basis for equivalent measures
Atrium Used as an Occupancy Separation

• LSC 2015 §6.1.14.4.6 atrium permitted to serve as occupancy separation provided:
  • Meets §8.6.7 provisions that apply to new atriums, boundary is constructed as smoke partition and doors positive latch
  • Must be permitted by occupancy chapter
Normally Unoccupied Spaces Opening to an Exit Enclosure

- **LSC 2015 §7.1.3.2.1(9)** Openings in exit enclosure limited to normally occupied spaces and corridors
- Door opening to building service equipment support areas permitted
  - §3.3.21.6 A building service equipment area in which people are not expected to be present on a regular basis
Normally Unoccupied Spaces Opening to an Exit Enclosure

- **LSC 2015 §7.1.3.2.1(9)** Openings in exit enclosure limited to normally occupied spaces and corridors
  - Door opening to vestibule meeting occupancy corridor separation permitted

- **LSC 2015 Handbook**
  - Exhibit 7.10

![Diagram of unoccupied spaces opening to an exit enclosure]
Normally Unoccupied Spaces Opening to an Exit Enclosure

- **LSC 2018 §7.1.3.2.1(9)(e)** Existing normally unoccupied rooms are permitted to open onto an exit enclosure where:
  - Room contains no fuel-fired equipment
  - Room contains no combustible storage
  - Building completely sprinkler protected

OR

- **Room is provided with sprinkler protection and complete smoke detection**
Penetrations in Exit Enclosures

- LSC 2018 §7.1.3.2.1(10)(i) Penetrations for fire alarm, security camera, public address system and fire department emergency communication device circuits, where the circuits are installed in metal conduit and the penetrations are protected in accordance with 8.3.5
Floor Level at Door Openings

LSC 2015 §7.2.1.3.7 Where doors serve spaces that are not normally occupied, the floor level shall be permitted to be lower than that of the door opening but shall be not more than 8 in. (205 mm) lower.
Door Leaf Encroachment

LSC 2015 §7.2.1.4.3.2 When fully open, any door leaf in a means of egress shall not project more than 7 in. (180 mm) into the required width of an aisle, a corridor, a passageway, or a landing, unless the door leaf is equipped with an approved self-closing device and is not required by the provisions of 7.2.1.4.2 to swing in the direction of egress travel.
Door Leaf Encroachment

- **LSC 2015 §A.7.2.1.4.3** The requirements of 7.2.1.4.3 are not intended to apply to the swing of cross-corridor doors, such as smoke barrier doors and horizontal exits. Neither are the requirements intended to apply to doors from rooms that are typically unoccupied, such as janitor’s closets, electrical closets, or telecommunications closets.
Access Controlled Egress Door Manual Release Device

• LSC 2018 §7.2.1.6.3(a)(i) The requirement to locate the manual release device within 60 in (1525 mm) of the door opening shall not apply to previously approved arrangements in health care and ambulatory health care occupancies.
Stair Identification

- **LSC 2015 §7.2.2.5.4.1** – new provisions
  - Signage 4 – 7 ft above the floor landing
  - Previously approved, existing signage shall not be required to comply with lettering size requirements for:
    - Stair ID, Floor level, upper and lower terminus, NO ROOF ACCESS
Discharge from Exits

• **LSC 2015 §7.7.2(1)** Not more than 50 percent of the required number of exit stairs serving normally occupied areas of each floor, and not more than 50 percent of the exit stair capacity required for normally occupied areas of each floor, shall discharge through areas on any level of discharge, except...
Discharge from Exits

• **LSC 2018 7.7.2(3)** The interior exit discharge shall lead to a free and unobstructed way to the exterior of the building, and such way shall be readily visible and identifiable by exit signage from the point of discharge from the exit.

• **IBC requires exterior exit door to be visible and identifiable from interior exit discharge**
Fire Barriers

• Fire-Door Assembly Labels
  
  LSC 2015 §8.3.3.2.3.1 Labels on fire door assemblies shall be maintained in a legible condition.
  
  LSC 2015 §8.3.3.2.3.2 In existing installations, steel door frames without a label shall be permitted where approved by the authority having jurisdiction.

• Inspection and Testing of Fire-Rated Door Assemblies
  
  LSC 2015 §8.3.3.13 Fire-rated door assemblies shall be inspected and tested in accordance with NFPA 80, *Standard for Fire Doors and Other Opening Protectives*. 
Damper Identification

- **LSC 2015 §8.5.5.5.3** Access points to fire and smoke dampers in new construction shall be permanently identified by one of the following:
  - (1) A label having letters not less than ½ in. (13 mm) in height and reading as one of the following:
    - (a) FIRE/SMOKE DAMPER
    - (b) SMOKE DAMPER
    - (c) FIRE DAMPER
  - (2) Symbols as approved by the AHJ
Patient Care Non-Sleeping Suite Size

- **LSC 2015 §18/19.2.5.7.3.2**
  - ≤ 12,500 ft² when smoke compartment provided with standard response sprinklers and complete smoke detection or fast response sprinklers
  - ≤ 15,000 ft² when suite is provided with fast response sprinklers and complete smoke detection
Suite Travel Distance

• LSC 2015 §18/19.2.5.7.2.4(A) & 18/19.2.5.7.3.3(A) Travel distance within a suite to an exit access door to another suite, and exit access corridor door, or horizontal exit door from the suite shall not exceed 100 ft
Areas not Separated from Corridor

• **LSC 2018 §A.18/19.3.6.1** The omission of smoke detection does not pertain to nurses’ stations that are not continuously staffed as there would not be early detection by staff in such areas during “off” hours.
Nurse Servers and Pass-thru Openings

- **LSC §18.3.6.3.1.** Doors, including doors or panels to nurse servers and pass-through openings, protecting corridor openings shall be constructed to resist the passage of smoke, and the following also shall apply:
  - For other than doors protecting pass-through openings, a clearance between the bottom of the door and the floor covering not exceeding 1 in. (25 mm) shall be permitted.
  - For doors protecting pass-through openings, a clearance between the bottom of the door and the sill not exceeding 1/8 in. (3 mm) shall be permitted.
Smoke Barriers

• **LSC 2015 §18.3.7.2** The smoke barrier subdivision requirement 18.3.7.1 shall not apply to any of the following occupancies:
  • Areas on _health care floors_ that do not contain a health care occupancy and that are separated from the health care occupancy by a fire barrier complying with 7.2.4.3
  • Stories that do not contain a health care occupancy and that are _more than one story_ below the health care occupancy
Sprinkler Protection in High-Rise Buildings

- **LSC 2015 § 19.4.2.2** Where a jurisdiction adopts this edition of the *Code* and previously adopted the 2012 edition, the sprinklering required by 19.4.2.1 shall be installed within 9 years of the adoption of this *Code*.

- **LSC 2015 § 19.4.2.3** Where a jurisdiction adopts this edition of the *Code* and previously adopted the 2009 edition, the sprinklering required by 19.4.2.1 shall be installed within 6 years of the adoption of this *Code*. 
Soiled Linen and Trash Receptacles

- LSC 2015 §18/19.7.5.7(2) A capacity of a 32 gal shall not be exceeded within any 64 ft² area.
- 64 ft² area requirement deleted from LSC 2018
Ambulatory Health Care Occupancies

- **LSC 2015** Chapters 20 and 21 are now stand-alone chapters for Ambulatory Health Care Occupancy requirements
  - Chapter 38 and 39 are no longer referenced
Number of Means of Egress – Amb HC

- **LSC 2012 §20/21.2.4.3** Any patient care room and any patient care suite of rooms of more than 2,500 ft² shall have not less than two exit access doors remotely located from each other.
- Requirement removed from LSC 2015
Egress from Smoke Compartment – Amb HC

- LSC 2015 §20/21.2.4.4 Egress from smoke compartments addressed in 20/21.2.4.3 shall be permitted through adjacent compartments provided that the two required egress paths are arranged so that both do not pass through the same adjacent smoke compartment.
International Building Code
IBC Group I-2 Care Suites

- **IBC 2015 §407.4.4.3** Access to corridor
  - Limited to passage through 3 doors and travel distance ≤ 100 ft
  - Travel ≤ 125 ft if complete smoke detection is provided in suite
2015 IBC §717 – Dampers

• IBC 2015 §717.5.5 Exc. 2
  • Smoke dampers are no longer required in smoke barriers in I-2 Condition 2 facilities where the HVAC system is fully ducted and protected throughout with quick response sprinklers
LSC 2021 Possible Changes

• **18/19.7.1.4** Fire drills in health care occupancies shall include activation of the fire alarm system for the transmission of a fire alarm signal and simulation of emergency fire conditions.

• **18/19.7.1.4** Fire drills for fire alarm systems using public mode notification shall include activation of the fire alarm system in the area conducting the fire drill. Fire drills for fire alarm systems using private mode notification shall not require activation of the fire alarm system.
LSC 2021 Possible Changes

• **18.7.1.7** When drills are conducted between 9:00 p.m. and 6:00 a.m. (2100 hours and 0600 hours), a coded announcement shall be permitted to be used instead of audible and visual alarms.
LSC 2021 Possible Changes

• **4.6.12.3** Existing life safety features obvious to the public, if not required by Code, shall be either maintained or removed.

• Where a door that is not required to be fire protection-rated is equipped with a fire protection listing label, it is not the intent of 4.6.12.3 to require such door to be subject to the annual fire door inspection and testing requirement of Chapter 8 or require such door to be self- or automatic-closing due merely to the presence of the label.
LSC 2021 Possible Changes

• **18/19.2.2.2.6** Doors that are located in the means of egress and are permitted to be locked under other provisions of 18.2.2.2.5 shall comply with both of the following:
  
  • (b) Keying of all locks to keys carried by staff responsible for relocation of patients at all times
  
  • (c) Other such reliable means available to the staff responsible for relocation of patients at all times
LSC 2021 Possible Changes

• **18.2.2.2.4**

• (2)* Delayed-egress electrical locking systems complying with 7.2.1.6.1 shall be permitted.

(a) Signage is not required by 7.2.1.6.1.1(4) where the clinical needs of the patient require specialized security measures or where patients pose a security threat
LSC 2021 Possible Changes

• **7.7.1.1.1** New exit discharge paths to a public way shall not less than 36 inches in width and existing exit discharge paths to a public way shall not be less than 32 inches in width.
NFPA 99 2021 Possible Changes

• Do exterior medical gas storage rooms require two exits?????

• 5.1.1.5 The following sections of this chapter shall apply to
  • the operation, management, and maintenance of Category
  • 1 medical gas and vacuum systems in both new and existing
  • facilities:
  • (1) 5.1.2
  • (2) 5.1.3.1
  • (3) 5.1.3.2
  • (4) 5.1.3.3.4
NFPA 99 2021 Possible Changes

• **16.9.1.3*** Clean agent– or water mist– type fire extinguishers shall be provided in operating rooms.

• **A.16.9.1.3** Dry chemical fire extinguishers should not be provided in operating rooms. A carbon dioxide fire extinguisher meets the NFPA 10 definition of a clean agent fire extinguisher. The clean agent extinguishers selected should have a Class A rating of some form.
NFPA 99 2021 Possible Changes

• **11.3.10.1** Storage locations for oxidizing gases meeting the requirements of 11.3.4 or 11.3.5 shall have precautionary signage, readable from a distance of 1.5 m (5 ft), displayed on each door or gate of the storage room or enclosure.

• **11.3.10.2** Sign(s) shall include the following wording as a minimum:
  • CAUTION
  • OXIDIZING GAS(ES) STORED WITHIN
  • NO SMOKING
Recent CMS Issues
Fire Door Inspection & Testing

• LSC 2012 §7.2.1.15.2 Fire doors and smoke door assemblies require annual inspection & testing
  • S&C Letter 17-38-LSC requires compliance by 1/1/18
  • Annual inspection and test not required in health care / Amb HC occupancies for doors below:
    • Doors with panic/fire exit hardware
    • Doors with special locking arrangements or electrically controlled egress doors
Corridor Door Positive Latching

- LSC 2012 §19.3.6.3.5 and §18/19.3.6.3.7 permit a means for keeping corridor doors closed (in lieu of positive latching) that is acceptable to AHJ

- Acceptable to CMS? - NO
Ligature Risks

• CMS identified need to determine what constitutes a ligature risk
  • Guidance expected in approx. 6 months
    • How will risks be surveyed
    • What deficiency level should be cited
    • Elements required for an appropriate POC
    • What constitutes a suitable mitigation plan
  • TJC guidance on their website
Emergency Preparedness Interpretive Guideline & Survey Procedures

- **S&C Letter 17-29-ALL**
  - Guidance provided for all 17 provider types (LTC, CAH, etc.)
  - Details survey procedures to assist in compliance
  - Links to frequently asked questions
ASHE Resources
# CMS K-tag Crosswalk

## Hospital Conditions of Participation / Accreditation Crosswalk

This document provides a comparison of the regulations applicable to most hospitals. It is important to verify the editions of the codes and standards that are applicable in your jurisdiction. Some jurisdictions may have adopted a different edition of the building code for construction. Many states have adopted other editions of the NFPA’s Life Safety Code®. For additional information, contact your state agency responsible for licensing hospitals. This resource represents CMS form 2786R Fire Safety Survey Report 2012 Code – Health Care, available at the time of this publication (April 2017). Errors in the CMS form have been identified and CMS has been notified. CMS is currently working on updating this form, but has not projected a time frame for the release of an update.

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<tbody>
<tr>
<td>K100</td>
<td>General Requirements – Other: List in the REMARKS section, any LSC Section 18.1 and 19.1 General Requirements that are not addressed by the provided K-tag, but are deficient. This information, along with the applicable Life Safety Code or NFPA standard citation, should be included on Form CMS-2567.</td>
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<td>K111</td>
<td>Building Rehabilitation</td>
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<td>Repair, Renovation, Modification, or Reconstruction</td>
<td>L.S.02.01.10: EP 2</td>
<td>NFPA 101</td>
<td>IFC</td>
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<td>Any building undergoing repair, renovation, modification, or reconstruction complies with both of the following: Requirements of Chapter 18 and 19, Requirements of the applicable Sections 43.3, 43.4, 43.5, and 43.6 18.1.1.4.3, 19.1.1.4.3, 43.1.2.1.</td>
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<td>Change of Use or Change of Occupancy: Any building undergoing change of use or change of occupancy classification complies with the requirements of Section 43.7, unless permitted by 18.1.1.4.2 or 19.1.1.4.2 18.1.1.4.2 (4.6.7 and 4.6.11), 19.1.1.4.2 (4.6.7 and 4.6.11), 43.1.2.2 (43.7)</td>
<td>L.S.02.01.10: EP 2</td>
<td>NFPA 101</td>
<td>IFC</td>
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<td>Additions: Any building undergoing an addition shall comply with the requirements of Section 43.8. If the building has a common wall with a nonconforming building, the common wall is a fire barrier having at least 2-hour fire resistance rating constructed of materials as required for the addition. Communicating openings occur only in corridors and are protected by approved self-closing fire doors with at least a 1 1/2-hour fire resistance rating. Additions comply with the requirements of Section 43.8 (additions): 18.1.1.4.1.1 (additions): 18.1.1.4.1.2, 19.1.1.4.1.1 (8.3), 19.1.1.4.1.2, 19.1.1.4.1.3, 43.2.3(43.8)</td>
<td>L.S.02.01.10: EP 2</td>
<td>NFPA 101</td>
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Updated FSES Tool per NFPA 101A 2013
Business vs. Amb Health Care Crosswalk

Comparison chart of business and ambulatory occupancy requirements

ASHE offers the following comparison for facilities that will be required to upgrade their facility occupancy from business to ambulatory to comply with the new Conditions of Participation from the Centers for Medicare & Medicaid Services. In this comparison, an asterisk indicates explanatory information can be found in Annex A of NFPA 101: Life Safety Code®. For additional information, see NFPA 101.

<table>
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<tr>
<th>Provision</th>
<th>Code Section</th>
<th>Existing Business Occupancy (Chapter 30)</th>
<th>Existing Ambulatory Health Care Occupancy (Chapter 21)</th>
<th>Differences</th>
<th>Frequency and Cost Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed/Multiple Occupancies</td>
<td>31.3 and 21.3</td>
<td>All multiple occupancies shall be in accordance with 31.14 and 21.3, 31.1.6.7.2. Where there are differences in the specific requirements in this chapter and provisions for mixed occupancies or separated occupancies as specified in 31.1.4.2 and 31.1.4.4, the requirements of this chapter shall apply.</td>
<td>21.3 Multiple Occupancies.</td>
<td>Ambulatory health care is required to be separated from assembly occupancies by 2-hour fire resistance rating, while business occupancies only require a 1-hour separation.</td>
<td>High frequency. Constructing new fire-resistant rated barriers poses a high cost impact.</td>
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<td>21.3.2.1 Multiple occupancies shall be in accordance with 31.14.</td>
<td>Ambulatory health care facilities shall be permitted to be classified as other occupancies, provided that they meet both of the following conditions:</td>
<td>Most notable ambulatory health care occupancies will have to be separated from adjacent business occupancies by 1-hour fire resistance-rated construction.</td>
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<td>21.3.3 Sections of ambulatory health care facilities shall be permitted to be classified as other occupancies, provided that they meet both of the following conditions:</td>
<td>1) They are not intended to serve ambulatory health care occupants for purposes of treatment or temporary stays by patients incapable of self-protection.</td>
<td>2) They are separated from areas of ambulatory health care occupancies by construction having a minimum 1-hour fire resistance rating.</td>
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<td>21.3.3.1 All means of egress from ambulatory health care occupancies that traverse nonambulatory health care spaces shall conform to the requirements of the Code for ambulatory health care occupancies, unless otherwise permitted by 21.3.3.4.</td>
<td>21.3.3.4 Exit through a horizontal exit into other occupancies shall be permitted, provided that they do not conform with ambulatory health care egress provisions and that do comply with requirements set forth in the appropriate occupancy chapter of the Code.</td>
<td>Any area with a tenant of classified higher than that of the ambulatory health care occupancy and located in the same building shall be separated as required in 21.3.2.21.3.3.4. Non-health care-related occupancies classified as containing high hazard contents shall not be permitted in buildings housing ambulatory health care occupancies.</td>
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<tr>
<td>Minimum Construction Requirements</td>
<td>21.1.6 and 21.1.6</td>
<td>Minimum Construction Requirements (all requirements)</td>
<td>Minimum Construction Requirements (all requirements)</td>
<td>Ambulatory health care occupancies constructed of Type II, Type II, and Type V construction greater than one story in height are required to be sprinkler protected unless the authority having jurisdiction chooses to permit a different construction type provided an evaluation is conducted.</td>
<td>Moderate frequency. Some buildings over one story in height would have to be sprinkler protected of any noncombustible materials. Sneaking a floor assembly is costly and may not be practical and poses a high cost impact.</td>
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<td>21.1.6.1 Ambulatory health care occupancies shall be limited to the building construction types specified in Table 21.1.6.1, unless otherwise permitted by 21.1.6.3.</td>
<td>Any interior walls between ambulatory health care facilities and other occupancies shall be separated by 2-hour fire resistance-rated floor assembly.</td>
<td>21.1.6.3 Interior nonbearing walls in buildings of Type I or Type II construction shall be constructed of noncombustible or limited combustible materials, unless otherwise permitted by 21.1.6.4.</td>
<td>Low frequency. Sneaking a floor assembly poses a high cost impact.</td>
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<td>21.1.6.2 Any interior walls located between ambulatory health care facilities and other occupancies shall be separated by 2-hour fire resistance-rated floor assembly.</td>
<td>Interior nonbearing walls shall be noncombustible or made of materials of limited combustibility.</td>
<td>Ambulatory health care occupancies constructed of Type II, Type II, and Type V construction greater than one story in height are required to be sprinkler protected unless the authority having jurisdiction chooses to permit a different construction type provided an evaluation is conducted.</td>
<td>Moderate frequency. Some buildings over one story in height would have to be sprinkler protected of any noncombustible materials. Sneaking a floor assembly is costly and may not be practical and poses a high cost impact.</td>
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Questions?

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