What Does Code Compliance Mean to a Hospital?

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by

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Presentation Agenda

• Review Multiple Codes & AHJs for Health Care

• Conflicts Between NFPA 101 & IBC
  – Significant Health Care Conflicts
  – Options for Uniform Compliance

• Addressing Unusual Interpretations from AHJs
  – Sample Unusual Health Care Interpretations
  – How to Handle Unusual Interpretations

• CMS Code Adoption Status & ASHE/ICC Ad Hoc Updates
## How many Codes?

<table>
<thead>
<tr>
<th>Local</th>
<th>State</th>
<th>National</th>
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</thead>
<tbody>
<tr>
<td>Building Code</td>
<td>Electrical provider</td>
<td>Center for Medicare &amp; Medicaid Services (CMS)</td>
</tr>
<tr>
<td>Fire Code</td>
<td>Insurance Carrier</td>
<td>The Joint Commission</td>
</tr>
<tr>
<td>Health Department</td>
<td>Health Department or Hospital Licensing</td>
<td>DNV Healthcare</td>
</tr>
<tr>
<td>(Kitchens)</td>
<td></td>
<td>American Osteopathic Association (AOA)</td>
</tr>
<tr>
<td>Zoning</td>
<td></td>
<td>VA, DOD, FBOP, etc.</td>
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<tr>
<td>Traffic</td>
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<td>Water and Sewer</td>
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AHJs & Common Codes

• Many AHJs
• But only a few common codes:
  – IBC – Various editions. We will use 2009 for this presentation.
NFPA 101 Scope

• Scope “… minimize the danger to life from fire…” (§1.2.1)

• Healthcare Goals and Objectives “…limiting the development and spread of a fire emergency to the room of fire origin…” (§18.1.1.2)
Major Focus of NFPA 101

- Protect the persons not intimate with the fire
- Provide multiple safeguards
- Defend occupants in place
- Minimize the effects of fire on other parts of a structure
2009 IBC

• Scope  – All construction, alteration, movement, of every building or structure

• Purpose

  Establish minimum requirements to safeguard the public health, safety, and general welfare

  Provide safety to firefighters and emergency responders

• Terminology – Occupancy & Construction Type
• Vertical Openings
• Areas Open to the Corridor
• Suite Arrangements
• Smoke damper requirements
• Travel distance
Terminology

- NFPA 101 - Healthcare
  - Hospital
  - Nursing Homes
  - Ambulatory Care
- IBC – Institutional Group I-2
  - Hospitals
  - Nursing Homes
Terminology

- **Ambulatory Care**
  - NFPA 101 Ch. 20 & 21
    - 4 or more incapable of self preservation.
  - IBC
    - Section 422 - New occupancy group to match this use.
      Healthcare classified as Group B. Or not meeting the healthcare definition

- **Construction Type**

<table>
<thead>
<tr>
<th>NFPA101</th>
<th>I(442)</th>
<th>I(332)</th>
<th>II(222)</th>
<th>II(111)</th>
<th>II(000)</th>
<th>III(211)</th>
<th>III(200)</th>
<th>IV(2HH)</th>
<th>V(111)</th>
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<td>VB</td>
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<td>3A</td>
<td>3B</td>
<td>4</td>
<td>5A</td>
<td>5B</td>
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Vertical Openings

• 2-stories open
  – IBC - Not permitted for I-2
  – NFPA 101 – Allowed §8.2.5.8

• Elevator Lobbies
Vertical Openings

Atriums

– Allowed by both. Area is an issue.
  • NFPA 101 allows unlimited atrium area.
  • IBC does not address modifications for atriums to smoke zone size.

– Travel Distance reduced to 200’ by IBC
Areas Open to the Corridor

- NFPA 101 “Spaces shall be permitted to be unlimited area....”
- IBC “Waiting area and similar spaces.”
- Wording is different but the requirements are similar.
- Patient Lounge
  - NFPA 101 would allow.
  - IBC is open to interpretation, however, usually not allowed.
Suite Arrangement

• NFPA 101
  – Second exit required:
    • Over 2,500 square feet non sleeping
    • Over 1,000 square feet sleeping
  – Travel distance within the suite
    50 to 100 feet depending on the number of rooms
  – No walls required within the suite
  – Maximum suite size
    • 10,000 square feet non sleeping
    • 5,000 square feet sleeping
Suite Arrangement

• IBC has similar suite allowances
  – Second exit required when common path of exit exceeds 100 feet
  – No regulations on the walls or number of rooms to a corridor
  – No maximum size of suite

[Image of a suite arrangement]
Common Suite Issues

- Is it a room, suite, or a corridor?
- Corridor door requirement within a room or suite.
- When does it become a corridor?
Smoke Dampers

• NFPA 101
  – Smoke dampers can be omitted in fully ducted HVAC with QRS sprinkler system
  – Smoke dampers not required in most shaft configurations

• IBC
  – Smoke dampers can be omitted in fully ducted systems with openings in only one smoke compartment
  – All penetrations to shafts, horizontal exits, and smoke barriers require smoke dampers
Smoke Dampers Issues

- For US Government building NFPA 101 & NFPA 90A could be accepted. Limited smoke dampers
- All IBC buildings will be difficult if not impossible to remove or reduce the number of smoke dampers.
Travel Distance

• IBC – 200 feet
• NFPA 101
  – Maximum 50 feet in a room (except suites)
  – Maximum 150 feet from any room door to an exit
• NFPA 101 is almost always the most restrictive except in suites
Equivalencies, Modifications & Alternate Methods

- **NFPA 101**
  - Section 1.5 in 2000 edition
  - Section 1.4 in the 2009 edition
- **IBC 2009**
  - Section 104.10 Modifications, or
  - Section 104.11 Alternate materials, design and method of construction and equipment
Items in NFPA 101
Newer Editions

• Security needs of patients and staff
• Travel distances
• Increased suite sizes
Can we use these new requirements?

It depends on:

• AHJ
• Cost of negotiations
• Time for approval
• Repeat for other AHJs
CMS March 2012 Memo

• Allows NFPA 101 2012 for:
  – Corridor clutter (5 feet clear)
  – Fixed furniture
  – Direct vent fireplaces
  – Cooking surfaces open to the corridor.
  – Decorations on the corridor walls.

• Waiver is required for each request.
How Should A Corrective Action Be Addressed?

- Risk assessment & Interim Life Safety Measures (ILSM)
- Magnitude of the effect
- Time needed to correct
- Cost of the correction
- Cost to negotiate
Options

• Local Building Code
  – Alternate method of compliance
  – Code modification

• Center for Medicare and Medicaid Services (CMS)
  – Waiver
Options

- State Licensing
  - Waiver
  - Equivalency
  - Alternate method of compliance

- Joint Commission
  - Traditional equivalency
  - Fire Safety Evaluation System (FSES)
Justifications should include:

- Egress safety for patients, visitors and staff
- Hardship or constraints to compliance
- Timing for corrective measures
- Long term impact
- Upcoming (new edition) Codes
- Recent testing
- New technology
Documentation

- Waiver
  - CMS renewals are required
- FSES
  - TJC no renewal, periodic reviews
- Equivalency
  - TJC, VA, COE no renewal, Code for the building
Documentation

- Alternate Methods, Code Modifications etc.
  - Local Building & Fire Departments – no renewal. These become code for the building.

KEEP THESE DOCUMENTS IN A SAFE ACCESSIBLE PLACE
Codes

Code language is not black & white.

If it was, I wouldn’t have a job.
Code Interpretations

- AHJs are given the authority to enforce a code.
- AHJs can apply the code as they see fit.
- These applications of the code can and do:
  - Vary from location to location.
  - Vary from person to person.
  - Cause unusual designs and construction changes.
Sample Issues

- Sprinklers above ceilings
- Smoke barriers/partitions
- Sprinkler clearances
- Exit Signage
- Sprinklers in storage cabinets, wardrobes, small closets, etc.
- Suite Configurations
How to Handle An Unusual Interpretation

1.) Document the exact item being cited
How to Handle An Unusual Interpretation

2.) Request the relevant code section(s) for the deficiency

5-6.6* Clearance to Storage (Standard Pendent and Upright Spray Sprinklers). The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater.
How to Handle An Unusual Interpretation

3.) Research/request local amendments or directives
How to Handle An Unusual Interpretation

4.) Code Research
   – Annex

Example
Sprinkler Clearances – applied to all storage
   – NFPA 13 5-6.6 requires min. 18” clearance between deflector and top of storage
   – Not intended to limit the height of shelving on a wall not directly below sprinklers.

5-6.6 Clearance to Storage (Standard Pendent and Upright Spray Sprinklers). The clearance between the deflector and the top of storage shall be 18 in. (457 mm) or greater.

A.5-6.6 The 18-in. (457-mm) dimension is not intended to limit the height of shelving on a wall or shelving against a wall in accordance with 5-5.6. Where shelving is installed on a wall and is not directly below sprinklers, the shelves, including storage thereon, can extend above the level of a plane located 18 in. (457 mm) below ceiling sprinkler deflector. Shelving, and any storage thereon, directly below the sprinklers cannot extend above a plane located 18 in. (457 mm) below the ceiling sprinkler deflector.
How to Handle An Unusual Interpretation

4.) Code Research
   - Handbooks/Commentary

Example
Suite Configuration
- How many exits required?
- How many intervening rooms?
- Where do you measure travel distance to?
How to Handle An Unusual Interpretation

4.) Code Research
   – Check newer editions for clarifications

Example
Requiring sprinklers above ceiling space
- Noncombustible concealed spaces can omit sprinklers (NFPA 13, 5-13.1)
- Cabling is more clearly addressed in later editions.
- Combustible cabling may be an issue.

NFPA 13 – 1999 Ed.

5-13.1 Concealed Spaces.

5-13.1.1* All concealed spaces enclosed wholly or partly by exposed combustible construction shall be protected by sprinklers.

NFPA 13 – 2007 Ed.

8.15.1.2 Concealed Spaces Not Requiring Sprinkler Protection.

8.15.1.2.1* Concealed spaces of noncombustible and limited-combustible construction with minimal combustible loading having no access shall not require sprinkler protection. The space shall be considered a concealed space even with small openings such as those used as return air for a plenum. (For additional information on combustible loading, see A.8.15.1.2.1.)

A.8.15.1.2.1 Minor quantities of combustible materials such as but not limited to cabling, nonmetallic plumbing piping, non-structural wood, etc. can be present in concealed spaces constructed of limited or noncombustible materials but should not typically be viewed as requiring sprinklers (see 8.15.1.1).
How to Handle An Unusual Interpretation

5.) Use Other Resources
   – HITF

   Example
   Penetrations above ceilings in smoke barriers/partitions cited for lack of listed firestopping.
   - Smoke partitions are non rated. Listed material is not required by code.
   - Existing 30-min smoke barriers - sealed with noncombustible/limited combustible materials.
   - 1-hr smoke barriers - Require listed firestopping.
How to Handle An Unusual Interpretation

5.) Use Other Resources
   – Network contacts
     • Consultants, Active Members
   – NFPA/ICC Staff Interpretations
     • Available to members
   – Articles/Newsletters
     • NEHES Newsletter – Code Creep
     • NFPA, SFPE Magazines
   – ASHE website
How to Handle An Unusual Interpretation

- Compliance options
  1.) Follow AHJ direction
  2.) Submit letter justifying position
  3.) Equivalency, waiver, or alternate method of compliance

- Document resolution
Sometimes the Code Needs Work

- Code change process is long but can make the difference in the future.

Example - Travel distance
  - 200’ total
  - 150’ from room door
  - 50’ to a room door
- Why the 150 feet?
- Research – Could not locate a reason. 2009 edition dropped the 150’ requirement.
ASHE – ICC Effort

• ASHE and ICC have agreed to develop one health care code.

• An Ad-hoc Health Care committee has developed changes to the International Building Code and International Fire Code.

• Purpose: To reduce the number of Codes that impact the health care facility.
ASHE – ICC Effort

- Major goal is to have one family of codes.
- ICC codes are used in a majority of US local jurisdictions; it’s time for a one Code solution.
- 2015 is the proposed date of publishing.
- IBC and IFC will address new and existing.
- Provisions are being made to be compatible with CMS and Existing K Tags.
Compliance

• Full time effort.
• Constant updating of trends.
• Proactive approach is the best.
• The fire record is showing the positive results.
Closing

- Compliance is not a place.
- It is the journey that never ends in healthcare.