Don’t put patients in egress halls when ED over crowds
Joint Commission is against such actions

Those who plan to move patients into exit corridors when routine emergency department (ED) overcrowding occurs may want to reconsider, given what a Joint Commission official said about the matter.

Patients on gurneys and chairs cannot be parked in egress corridors because of Life Safety Code® (LSC) requirements for minimum clear widths, George Mills, FASHE, CEM, CHFM, senior engineer at The Joint Commission (formerly JCAHO), said during a Joint Commission Resources audio conference May 6.

Even if state regulators order healthcare facilities to get patients out of EDs and hold them in inpatient unit corridors, The Joint Commission doesn’t feel this is the best approach, Mills said.

Instead, facility managers and ED directors should review ED traffic flow and come up with better ways to manage overcrowding.

An exception to this requirement is a disaster-related influx of patients to a healthcare facility, during which corridor treatment of patients may be the only way to deal with a sudden surge of patients.

Larger group supports Joint Commission

The Joint Commission’s position has wider backing. The Healthcare Interpretations Task Force, an influential group of authorities that reviews NFPA provisions for medical settings, developed an informal policy on the matter that frowns upon having patients staging in egress corridors (see “Healthcare Interpretations Task Force’s policy on patients in egress corridors” on p. 3).

“We determined this was not compliant with the expectations of the Life Safety Code,” Mills said.

The policy appeared in the online minutes of the task force’s December 2008 meeting but isn’t one of the group’s listed interpretations.

The task force includes a group of authorities and industry trade associations—including The Joint Commission, the Centers for Medicare & Medicaid Services, the American Society for Healthcare Engineering, and the U.S. Department of Veterans Affairs—that issue interpretations on NFPA code matters.

The decisions aren’t formal NFPA interpretations and don’t change the language in the standards or codes. However, the task force’s members agree to abide by the group’s decisions to the extent practical.

The NFPA serves as the organizer of the healthcare task force’s activities.
Egress halls  < continued from p. 1

An exception: Disaster influxes

The task force indicated the policy doesn’t apply to ED surges caused by disasters that result in a large influx of victims to a facility.

The thinking is that such events are difficult to plan for, and the immediate need for medical services may temporarily trump exit corridor requirements in the LSC.

Others agree with this reasoning. “No one, including The Joint Commission, is going to cite you for issues of life safety if you have the activation of your [emergency operations plan],” said Joseph Cappiello, chair of Cappiello & Associates in Elmhurst, IL, who spoke during HCPro’s 3rd Annual Hospital Safety Center Symposium May 14–15 in Las Vegas.

The Joint Commission’s viewpoint makes sense from a clinical perspective, Cappiello said.

Hospitals must be able to provide the same level of appropriate care to all patients. If you parked patients who needed ICU services in corridors, he said, how would you provide these services?

Suites may be an option to pursue

There is a potential solution from a design perspective. If an ED is designated as a suite, corridors within the suite are exempt from minimum width provisions, said James Lathrop, vice president at Koffel Associates, Inc., in Niantic, CT. This is one of the biggest advantages of using suites in healthcare occupancies.

“Where an ED is set up as a suite, the halls within the suite are not a corridor, and the corridor restrictions do not apply,” Lathrop said. Thus, facilities could park patients in gurneys in suite corridors without violating the LSC.

The LSC notes this arrangement as an exception to 19.2.3.3, which sets the requirement for existing hospitals to have unobstructed corridors at least 4 ft. wide. The exception permits exit corridors within a suite of rooms that complies with 19.2.5 to forgo 19.2.3.3’s requirements.

A bigger debate is at hand

The issue of what to do about overflowing EDs is contentious. The Massachusetts Nurses Association clashed earlier this year with Saint Vincent Hospital in Worcester, MA, about putting patients awaiting discharge in hallways to make room for ED patients waiting to be admitted.

Saint Vincent’s move came in reaction to the state Department of Health’s edict in January that hospitals can’t divert ambulances to other healthcare facilities to avoid ED overcrowding.
Saint Vincent’s policy of moving patients awaiting discharge into hallways has been used at least once this year. “A patient who was awaiting discharge was moved from his room to the hallway adjacent to the nurses’ station in order to make his bed available for an admitted ED patient who required treatment on the inpatient telemetry unit,” the hospital said in a statement.

**Hospital moves with state approval**

The Joint Commission’s stance is a surprise to Dennis Irish, spokesperson for Saint Vincent, especially given that the Massachusetts Department of Health and the state fire marshal have stated that patient boarding in hallways can work within fire safety requirements.

In a letter to local fire chiefs that was posted online, the Massachusetts fire marshal notes the Department of Health’s new overcrowding policy. The letter asks chiefs to work closely with hospitals in their communities to understand defend-in-place and egress strategies in the event patients are boarded in corridors.

Saint Vincent’s policy is to put boarded patients in wheeled chairs, not gurneys, in the hallways on the rare occasions when the ED is in danger of being overpopulated, Irish said.

“It’s a last resort,” he added. “It’s only happened once.”

Before boarding patients in corridors, the hospital takes other steps, such as attempting to open more beds on care units.

Saint Vincent’s efforts have met with approval from state regulators, Irish said. It’s possible this issue will come to a head the next time The Joint Commission surveys the facility based on the differences between the state’s and the commission’s stances, he said.

Generally, The Joint Commission expects facilities to observe the stricter of two approaches when there is a conflict in requirements. Given how controversial ED overcrowding has become in the industry, it is worth comparing The Joint Commission’s opinion to the overcrowding procedures your facility currently engages in.

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**Healthcare Interpretations Task Force’s policy on patients in egress corridors**

The Healthcare Interpretations Task Force—a group of authorities and industry trade associations that issues opinions about NFPA standards—developed an informal policy about not putting patients in egress corridors during routine emergency department overcrowding. The policy states:

- ❯ By having patients staged in the corridor, you introduce corridor clutter, which can greatly hamper emergency response to a fire event. Where would patients be moved during a fire event? Where would patients in a room be relocated to and what would the impact of the delay be if other patients, related medical equipment, and beds were in the way?
- ❯ This practice would slow search and rescue efforts of first responders.
- ❯ This practice introduces additional combustible materials into the corridor, including use of medical gases.
- ❯ This practice removes the first line of defense from a fire event for the patient, that being the ability to simply close a patient room door.
- ❯ This practice exposes a greater patient population to a fire event that would involve a fire originating in the corridor.
- ❯ This practice would have an impact on the mandated space required in adjacent smoke compartments for horizontal evacuations.

This position is not intending to prohibit an organization to plan for declared surge emergency situations that might occur as result of manmade or natural disaster events.

Source: Online minutes from the December 2008 meeting of the Healthcare Interpretations Task Force. The full minutes are available by searching for the term “HITF” at www.nfpa.org.
### Sampling of Medicare fire safety citations in hospitals

The following fire safety deficiencies occurred in Wisconsin hospitals and were noted during Medicare inspections by the state on behalf of the Centers for Medicare & Medicaid Services (CMS) from January 1 through March 31. The Wisconsin Department of Health and Family Services posted these violations on its Web site (dhfs.wisconsin.gov).

**Healthcare Life Safety Compliance**'s editors and advisors provided the potential solutions below.

NFPA references come from the following:

K-tags refer to CMS violation categories as noted in the agency’s *Fire Safety Survey Report* (form CMS-2786). The deficiencies stem from section 482.41 of CMS’ *Conditions of Participation* for hospitals.

<table>
<thead>
<tr>
<th>Problems</th>
<th>K-tags</th>
<th>NFPA references</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital wasn’t compliant with its listed Type I (332) construction, as steel structural beams weren’t protected properly</td>
<td>K12</td>
<td>LSC: 19.1.6.2, 19.1.6.3, 19.1.6.4, and 19.3.5.1 (construction requirements)</td>
<td>Spray additional fire protective material on the steel beams to achieve Type I (332) construction&lt;br&gt;Reassess the hospital’s listed construction type to better reflect existing building features</td>
</tr>
<tr>
<td>Corridor walls lack 30-minute rating&lt;br&gt;Damaged acoustical ceiling tiles in corridors didn’t limit the transfer of smoke</td>
<td>K17</td>
<td>LSC: 19.3.6.1, 19.3.6.2.1, and 19.3.6.5 (corridor construction)</td>
<td>Repair or rebuild walls to provide a 30-minute rating&lt;br&gt;Replace damaged ceiling tiles</td>
</tr>
</tbody>
</table>
| Corridor doors didn’t close and latch properly | K18 | LSC: 19.3.6.3 (corridor doors) | Install proper latches or repair the existing latches<br>Remove any roller latches on corridor doors<br>

*Note: If a door in question is within a suite, it doesn’t have to latch, but if the door serves the suite entrance, it does have to latch.*|
| Elevator and mechanical shafts not enclosed with one- or two-hour-rated construction | K20 | LSC: 8.2.5 and 19.3.1.1 (protection of vertical openings) | Repair or rebuild enclosures to provide the required rating |
| Smoke barriers had unprotected penetrations<br>Smoke barrier walls didn’t have 30-minute rating | K25 | LSC: 8.3, 19.3.7.3, and 19.3.7.5 (smoke barriers) | Properly fill unprotected penetrations with an approved firestopping system and determine why penetrations weren’t originally protected<br>Determine whether the LSC requires a smoke barrier in the area<br>Upgrade the construction of the wall to achieve its required rating |

Sources: Wisconsin Department of Health and Family Services, CMS, and Healthcare Life Safety Compliance’s editorial advisors.
### Sampling of Medicare fire safety citations in hospitals (cont.)

<table>
<thead>
<tr>
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<th>K-tags</th>
<th>NFPA references</th>
<th>Possible solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>➤ Smoke compartment doors didn’t have a 20-minute rating or weren’t at least 1¾-inch-thick, solid, bonded wood core</td>
<td>K27</td>
<td>LSC: 19.3.7.5, 19.3.7.6, and 19.3.7.7 (smoke barrier doors)</td>
<td>➤ Repair or replace the doors to provide a 20-minute rating</td>
</tr>
<tr>
<td>➤ Smoke compartment doors had astragals that didn’t properly cover door meeting edges</td>
<td></td>
<td></td>
<td>➤ Replace the doors with 1¾-inch-thick, solid, bonded wood core doors</td>
</tr>
<tr>
<td>➤ Adjust or replace the astragals to properly fit the meeting edges of the doors</td>
<td></td>
<td></td>
<td>➤ Adjust or replace the astragals to properly fit the meeting edges of the doors</td>
</tr>
<tr>
<td>➤ Hazardous storage room enclosures not protected by self-closing and positive-latching doors</td>
<td>K29</td>
<td>LSC: 8.4.1, 19.3.2.1, and 19.3.5.4 (hazardous areas)</td>
<td>➤ Repair or replace closers and latches on doors to hazardous areas</td>
</tr>
<tr>
<td>➤ Gift shop not protected as a hazardous area</td>
<td></td>
<td></td>
<td>➤ Construct a proper enclosure for the gift shop or evaluate whether the gift shop can be reconfigured so it is not a hazardous area</td>
</tr>
<tr>
<td>➤ Doors to a hazardous area were held open by foot-stops</td>
<td></td>
<td></td>
<td>➤ Remove foot-stops and other items that hold doors open and institute a system to monitor for these items</td>
</tr>
<tr>
<td>➤ Chairs were stored in a vertical exit enclosure</td>
<td>K38</td>
<td>LSC: 7.1 and 19.2.1 (means of egress general requirements)</td>
<td>➤ Remove chairs in vertical exit enclosures and institute a system to monitor for these items</td>
</tr>
<tr>
<td>➤ Security door into the nursery had a delayed egress lock on it in an area without full sprinkler protection</td>
<td></td>
<td></td>
<td>➤ Remove the delayed egress lock and consider installing an alternative locking method as allowed by the LSC</td>
</tr>
<tr>
<td>➤ Keep the delayed egress lock and install sprinklers or a smoke detection system in the building</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ There was no exit sign above a cross-corridor door to direct people to an exterior exit</td>
<td>K47</td>
<td>LSC: 7.10 and 19.2.10.1</td>
<td>➤ Install exit signs at appropriate locations</td>
</tr>
<tr>
<td>➤ Exit signs weren’t continuously illuminated and served by the emergency lighting system</td>
<td></td>
<td></td>
<td>➤ Verify that exit signs are continuously illuminated when required</td>
</tr>
<tr>
<td>➤ Connect all exit signs to emergency power or battery-operated backup power as outlined in the LSC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Storage blocked sprinkler discharge patterns</td>
<td>K56</td>
<td>LSC: 19.3.5 (extinguishing systems)</td>
<td>➤ Remove storage that blocks sprinklers and institute a system to monitor for excess storage</td>
</tr>
<tr>
<td>NFPA 13: 5-5</td>
<td></td>
<td></td>
<td>➤ Keep storage at least 18 inches below the sprinkler heads (storage can go up to the ceiling along room walls)</td>
</tr>
<tr>
<td>NFPA 25: 2-2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>➤ Toilet room door space was only 24 inches in clear width, not 28 inches</td>
<td>K130</td>
<td>LSC: 7.2.1.2.3 and 19.2.2.2 (doors in means of egress)</td>
<td>➤ Install a new toilet room door that meets proper clear width requirements</td>
</tr>
<tr>
<td>➤ Critical branch outlets in the operating room, ED, and nursery weren’t labeled</td>
<td>K147</td>
<td>LSC: 9.1.2</td>
<td>➤ Verify and label critical branch outlets</td>
</tr>
<tr>
<td>An active electrical junction box was left open</td>
<td></td>
<td>NFPA 70: 517-33</td>
<td>➤ Close the electrical junction box and determine why it was left open</td>
</tr>
<tr>
<td>➤ Alcohol-based hand gel dispensers were within 12 inches of light switches (i.e., ignition sources)</td>
<td>K211</td>
<td>LSC: 19.3.2.7 (protection from hazards)</td>
<td>➤ Relocate gel dispensers to keep them at least 12 inches away from ignition sources</td>
</tr>
</tbody>
</table>

Note: The LSC and CMS don’t officially list a mandated distance between dispensers and ignition sources, so the citation for 12 inches appears to be an inspector’s interpretation (The Joint Commission sets the distance at 6 inches).
Discrepancy in EC.02.03.05?
Joint Commission test appears to conflict with NFPA 25

As some of you may have noticed, The Joint Commission’s provisions for main drain tests appear to go beyond what is required by NFPA 25, *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*.

The conflict centers on whether a main drain test can occur at sprinkler system risers *and* the system low point—as The Joint Commission (formerly JCAHO) allows under element of performance (EP) 9 of standard EC.02.03.05—or only at system risers, as required by the 1998 edition of NFPA 25, which the commission references.

The bigger question may be what other authorities think about the matter.

Divergent opinions arise

After numerous discussions with *Healthcare Life Safety Compliance*, representatives from The Joint Commission and the NFPA remain steadfast in their respective positions.

EC.02.03.05, EP 9 states:

*For automatic sprinkler systems: Every 12 months, the hospital tests main drains at system low point or at all system risers.*

“The Joint Commission will accept the performance of the required test at EC.02.03.05, EP 9 at either the individual sprinkler risers or from the low point in the system for the standpipes, which would be the main drain test,” says Elizabeth Zhani, spokesperson for The Joint Commission.

“I cannot speak for the JCAHO, nor will I comment on what their testing requirements are for sprinkler systems,” says James Lake, senior fire protection specialist at the NFPA. “What I will tell you is that low-point drains are just that: drains for low points in the sprinkler system, that is all. There is no purpose, nor any relevant information that would be attained, by testing a low-point drain other than the fact that the low-point drain in fact

What will other regulators think?

As with most NFPA standards, an authority such as The Joint Commission “is given the latitude to modify the stated requirements,” says A. Richard Fasano, manager of the Western region office of Russell Phillips & Associates, LLC, in Elk Grove, CA. NFPA 25 indicates as much in section 1-2.1.

However, Fasano offers an important caveat: If The Joint Commission accepts the low-point test in lieu of a test at a system riser, that doesn’t necessarily mean other authorities, such as the Centers for Medicare & Medicaid Services or state fire inspectors, will accept the alternative test.
Test tracks potential pipe obstructions

Main drains are installed on sprinkler system risers to drain water from overhead piping, which allows a maintenance worker or contractor to perform work on the system, according to NFPA 25.

Section 9-2.6 of NFPA 25 requires an annual main drain test at each system riser. The intent of the test is to measure whether there has been any noticeable drop in water pressure of the main drain compared to previous tests, which could indicate a blockage in the system or a valve problem. For years, the EC standards only allowed main drain tests to occur at system risers. A change occurred in 2007 when The Joint Commission alerted its life safety specialists that it would also allow main drain tests to occur at system low points in lieu of system risers, with facilities free to choose which option to use.

There was never a public announcement of this policy change until EC.02.03.05’s language was published as part of the Standards Improvement Initiative for 2009. The Joint Commission revised the wording for main drain tests “to make it clearer that both approaches are acceptable to The Joint Commission,” Zhani says.

By allowing the low-point test, The Joint Commission has made it easier for facilities to comply with EC.02.03.05, says Joshua W. Elvove, PE, CSP, FSFPE, a fire protection engineer in Aurora, CO.

However, a facility that opts for the low-point option may not discover a blockage in a sprinkler pipe, which is the intent behind the NFPA’s main drain test, Elvove says.

Standpipes can use low-point drains

Some confusion may be coming from language in the explanatory annex of NFPA 25.

“The test for standpipe systems should be done at the low-point drain for each standpipe or the main drain test connection where the supply main enters the building,” states annex note A-9-2.6.

However, that language only applies to standpipes. “Standpipe systems are permitted to be tested at the low-point drain of the system or the main drain. This is not the case for sprinkler systems,” Lake says. “For sprinkler systems, you do not test low-point drains.”

Some facilities will get life safety specialists for three days

Large healthcare facilities now face the possibility of hosting a life safety specialist for three days, according to The Joint Commission.

The specialists review Life Safety Code® (LSC) compliance by conducting roof-to-basement building tours.

“For larger organizations, with inpatient space covering more than 1.5 million square ft., a third survey day by a single LSC specialist is considered,” says Elizabeth Zhani, spokesperson for The Joint Commission.

Life safety specialists will continue to use the following schedule for smaller sites:

- Two days for hospitals with 750,000 square ft. or more of inpatient area
- One day for hospitals with less than 750,000 square ft. of inpatient area

The square footage in question is based upon areas classified as healthcare occupancies, not upon the total area of the building. In other words, a medical office wing, which is likely classified as a business occupancy, would not count toward the thresholds for life safety survey days. Your facility’s electronic Statement of Conditions and electronic accreditation application should reflect this figure in terms of inpatient care areas.

There are no plans to have two specialists tour hospitals at the same time, Zhani says. However, a safety professional posted on the American Society for Healthcare Engineering’s online chat group in April that his 3-million-square-foot hospital was scheduled to be visited by two life safety specialists at the same time. It was not clear whether one of the specialists in that particular case was a mentor training a new life safety surveyor.
Sample main drain test checklist for NFPA 25

The following checklist will help you conduct or otherwise track annual main drain tests as required under paragraph 9-2.6 of NFPA 25, *Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems*. The checklist is based on nonmandatory material in annex note A-9.2.6, so this approach is only a suggested one.

**Steps to take** | **Recorded pressure** | **Step completed?** | **Initials of person completing step**
---|---|---|---
1. Record the static pressure indicated by the water supply gauge | | |
2. Close the alarm control valve on alarm valves | N/A | |
3. Fully open the main drain valve | N/A | |
4. After the flow has stabilized, record the residual (i.e., flowing) pressure indicated by the water supply gauge | | |
5. Close the main drain valve slowly | N/A | |
6. Record the time taken for the supply water pressure to return to the original static (i.e., nonflowing) pressure | | |
7. Open the alarm control valve | N/A | |

**Riser location:**

**Date of test:**

**Observations, including significant drops in full-flow pressure* and slow returns to static pressure#:**

*A significant drop in the full-flow pressure of the main drain compared to prior tests might indicate a reduced water supply caused by an obstruction or a valve almost fully closed, according to NFPA 25.*

#A slow return to normal static pressure might indicate an obstruction, according to NFPA 25.

**Note:** The performance of successful main drain tests aren’t substitutes for valve checks on 100% of the fire protection valving, according to NFPA 25.

**Source:** Based on material in NFPA 25.
Confessions of a former life safety specialist

The early points of a Joint Commission building tour

Editor’s note: This is the first in a series of articles about how to stay prepared for a Joint Commission life safety survey. It is authored by Brad Keyes, CHSP, safety consultant at The Greeley Company, a division of HCPro, Inc., in Marblehead, MA, and a former life safety specialist for The Joint Commission.

When Joint Commission life safety specialists arrive to survey hospitals, they will likely want to get started on the building tour. The Joint Commission has identified the building tour as the primary purpose for having specialists who are knowledgeable about the Life Safety Code® (LSC).

Prior to 2005, members of the regular survey team conducted the building tour. After a very public criticism of The Joint Commission (formerly JCAHO) by other authorities for poor performance in assessing hospitals for compliance with the LSC, The Joint Commission decided to hire life safety specialists.

The commission turned to hospital facility managers, safety officers, and project leaders who have extensive knowledge and experience with the LSC and hired them as part-time surveyors. The response from hospitals after the addition of these surveyors was overwhelmingly positive, as facility managers appreciated being assessed by one of their own.

A snapshot assessment by specialists

The building tour is not intended to be a thorough inspection of your facility, but rather a sampling to determine whether you maintain your building in compliance with the LSC.

When building tours begin, life safety specialists typically start at the top of the hospital and work their way down to the lower floors. Surveyors look in penthouse equipment rooms for appropriate fire-rated wall separation between the elevator equipment room (i.e., the top of the shaft) from the rest of the equipment room. They also look for unsealed penetrations in the floor around conduits and piping to the floors below.

On the top occupied floor, they inspect smoke compartment barriers for unsealed penetrations. Although they look at the smoke compartment barrier above the corridor doors, the specialists will also attempt to inspect the barrier as it continues toward the outside wall. Be sure to have done this inspection yourself before your survey begins.

Surveyors will also inspect fire-rated barriers, such as ventilation shafts, elevator shafts, stairwells, and walls surrounding hazardous rooms.

Cylinders, decorations, and storage

As the tours progress, the life safety specialists will verify compliance with general storage of compressed gas cylinders. Once you have accumulated more than 300 cubic ft. of compressed gas in cylinders in any one smoke compartment, you must store the excess cylinders in a designated room.

The surveyors also check for a clean patient environment. Any dirt or dust in a patient care area will likely be cited. Combustible decorations are another LSC issue surveyors will take a close look at. A general rule on decorations: If they are made from dried vegetation and aren’t flame-retardant, they don’t comply.

The specialists will take a particular interest in hazardous areas. By definition, a soiled linen room is considered a hazardous area. Any storage room greater than 50 square ft. that contains combustibles in quantities deemed hazardous by an authority is also considered a hazardous room.

Be conservative when you assess your storage rooms. The Joint Commission is not lenient on combustible items in a storage room. If the room is storing quantities of paper, cardboard, plastic, linen, or mattresses, it will most likely be considered a hazardous room. The key word here is “storing.”
Smoke detectors in hospitals

Are smoke detectors required to be installed in hospital corridors? I attended a seminar recently during which the instructor said we did not need them in corridors. We have them in corridors and patient sleeping rooms in our hospital and I thought the code required them.

Generally, the 2000 edition of the Life Safety Code® (LSC) does not require smoke detectors to be installed in hospital corridors or patient sleeping rooms. Make sure you know what your state and local codes require for smoke detection, as those building codes may have a different requirement than the LSC.

For hospitals, smoke detectors are required only in strategic locations to satisfy specific needs of fire safety features and to compensate for other deficiencies where an equivalency is being sought. In particular, the LSC requires detectors:

- Within 5 ft. of a fire-rated or smoke compartment door that is held open by a mechanical device (see 19.2.2.2.6 in the LSC).
- In elevator lobbies and machine rooms where Phase I elevator recall has been installed (see 9.4.3.2).
- In areas permitted to be open to the corridor that do not have direct supervision (see 19.3.6.1). In certain applications of 19.3.6.1, the corridor may need smoke detectors installed.

Also, NFPA 72, National Fire Alarm Code, requires a smoke detector above the fire alarm control panel.

Equivalencies, such as traditional equivalencies and the Fire Safety Evaluation System under NFPA 101A, Guide on Alternative Approaches to Life Safety, frequently rely on smoke detectors to be installed throughout a smoke compartment to compensate for a deficiency to a life safety feature.

When an equivalency is accepted by an authority, the compensating changes (e.g., installation of smoke detectors) must remain until the equivalency is no longer valid.

Limited-care facilities, which are not hospitals, have a requirement for smoke detectors in corridors (see 19.3.4.5.1), and new nursing homes must have smoke detectors in corridors (see 18.3.4.5.3), but neither of these requirements applies to hospitals. The logic behind this LSC decision is that a fire will be discovered quickly in hospitals, where the staffing level is much higher.

Remember, the requirements of the LSC are minimum provisions, and it is perfectly acceptable to exceed them.

Video equipment storage

Is there a specific fire code requirement for an equipment room containing electronic video conference equipment? I have been told there are specific requirements for electrical and mechanical rooms, but I cannot find anything specific for video equipment.

Let’s first look at the provisions for electrical and mechanical rooms.

Electrical rooms have specific requirements in the 1999 edition of NFPA 70, National Electric Code, including the following:
Access to the rooms must be locked or have other approved means, such as constant supervision (see 110.31 in NFPA 70)
Minimum clearances around electrical equipment as described in table 110.34(A)
Transformer rooms can’t have any combustible items stored in them (see 450.23[A])

By definition, mechanical rooms that do not contain fuel-fired heating equipment are not considered to be hazardous rooms (see 19.3.2.1 in the LSC) and therefore are not required to have sprinklers or fire-rated walls and doors.

Many authorities do not permit general storage, including video equipment, in a mechanical room because the room is intended for mechanical equipment. However, several authorities allow you to store one change of air filters in a mechanical room without it being designated as a hazardous room.

All that being said, your question asks about specific fire codes for an equipment room where items are stored for a video conference center. The answer is no, there are no specific codes for that room, but there is a general requirement for hazardous rooms under 19.3.2.1 of the LSC.

If the room is greater than 50 square ft. and contains combustible items in quantities deemed hazardous by an authority, it must be protected with sprinklers or one-hour construction.

However, if the room was not originally a storage room (e.g., if it was formerly an office or patient room or was used for any purpose other than storage) and you are now converting it to a storage room, and if it is greater than 100 square ft., then you must meet new construction requirements by providing sprinklers and one-hour fire-rated walls, as well as a ¾-hour-rated, self-closing, and positive-latching door (see 18.3.2.1 in the LSC).

It wouldn’t hurt to also get your local authority’s view on the situation.

Locked doors for soiled utility rooms
Do soiled utility room doors have to be locked at all times? I was informed by our vice president of quality assurance that all soiled utility room doors must be locked, but I do not see any requirement for this in the LSC.

Soiled utility rooms are defined as hazardous rooms, according to 19.3.2.1 in the LSC. There are many requirements for hazardous rooms, such as one-hour fire-rated walls or sprinkler protection and a door that has a closer on it. But there is no requirement in the LSC that says you must lock a soiled utility room door or a door to a hazardous area.

However, that is not the end of the discussion. An authority may expect you to lock any room that is considered hazardous unless you have conducted a risk assessment.

An example of a soiled utility room that should be locked is one which contains hazardous items accessible to unauthorized individuals. This could occur near a pediatrics department or in a location that is not constantly supervised by staff members.

All potentially hazardous rooms, including soiled utility rooms, should be assessed on a case-by-case basis to determine whether they should be locked.

Send us your questions
If you have a question about life safety compliance, fire codes and standards, or the EC, pass it along to us and we’ll include it in one of Healthcare Life Safety Compliance’s future “Questions & Answers” columns.

Send us your questions in writing by:
➤ Mail to Healthcare Life Safety Compliance, 200 Hoods Lane, P.O. Box 1168, Marblehead, MA 01945
➤ E-mail to swalask@hcpro.com (include “Q&A” in the subject line)
➤ Fax to 781/639-2982 (to the attention of Healthcare Life Safety Compliance)
Quick tip

Overnight drills raise questions about alarms

We recently ran a piece in our free weekly e-newsletter, Hospital Safety Connection, about how the 2000 edition of the Life Safety Code® (LSC) allows hospitals to run coded announcements instead of pulling the alarm during fire drills held between 9 p.m. and 6 a.m.

The intent of this provision in paragraph 19.7.1.2 in the LSC is to not wake patients who are sleeping overnight.

A hospital safety officer alerted us that he used the option for coded announcements but then later received a citation from the Centers for Medicare & Medicaid Services (CMS) for not testing the alarm signal either the day before or after the coded announced.

“I just don’t want anyone to get caught short,” says J.C. Moore, CHSP, CSSD, safety officer at Nebraska Methodist Health System in Omaha, about his facility’s citation. “In further discussion about this, [for us] to accomplish the testing of the alarm, we basically need to do an additional drill to see if everyone in our facility hears it."

The problem is the citation seems to be stretching things, as 19.7.1.2 has no provisions for testing alarms if the facility chooses the coded announcement option. However, the CMS regional office supported the inspector’s citation, Moore says.

Bouncing it off peers

Regardless, Moore talked to other healthcare facilities in his community about conducting fire drills during overnight shifts.

Moore says his peers “preferred to have the alarm sound on the late-night shifts since that disruption lasted only a few seconds, whereas the commotion that is caused by a coded alarm late-night drill followed by a full alarm drill on the day before or the day after [leads to more] disruption because of being compounded."

His facility’s administrators are now debating whether to eliminate the coded announcements during overnight drills.

Although one can argue the LSC’s intent, the reality is the citation mentioned by Moore actually happened. On the surface, it is worth noting this authority’s interpretation of 19.7.1.2.

However, digging deeper, there is also the matter of when and how to challenge a questionable citation. We’ll look more into that topic in a future issue.

Editor’s note: To subscribe to the weekly Hospital Safety Connection for free, go to www.hcmarketplace.com/free/e-newsletters.
Quiz questions

July 2009 (Vol. 11, No. 7)

1. (T) (F) Facilities with more than 750,000 square ft. of healthcare occupancy space will now host life safety specialists for three days.

2. (T) (F) Smoke compartment doors must have a 20-minute rating and be made of at least 1¾-inch-thick, solid, bonded wood core.

3. (T) (F) A Joint Commission engineer has indicated that facilities shouldn’t put patients on gurneys to the side of egress corridors when emergency department overcrowding occurs.

4. (T) (F) The Joint Commission requires hospitals to test main drains at the system low point or at all system risers.

5. (T) (F) The Healthcare Interpretations Task Force issues formal interpretations of NFPA standards.

6. (T) (F) Generally, the 2000 Life Safety Code® (LSC) does not require smoke detectors to be installed in hospital corridors or patient sleeping rooms.

7. (T) (F) Once you have accumulated more than 1,000 cubic ft. of compressed gas in cylinders in any one smoke compartment, you must store the excess cylinders in a designated room.

8. (T) (F) Storing large amounts of linen in a room won’t create a hazardous area, but storing quantities of paper and cardboard will.

9. (T) (F) Facilities must lock the doors to soiled utility rooms.

10. (T) (F) The LSC’s corridor requirements do not apply in suites.
1. False. Facilities with more than 1.5 million square ft. of healthcare occupancy space may host the specialists for three days, as determined by The Joint Commission.

2. False. Smoke compartment doors must have either a 20-minute rating or be made of at least 1¾-inch-thick, solid, bonded wood core.

3. True

4. True

5. False. The task force’s decisions aren’t formal NFPA interpretations and don’t change the language of standards.

6. True

7. False. Once you have accumulated more than 300 cubic ft., you must store the excess cylinders in a designated room.

8. False. If a room is storing quantities of paper, cardboard, or linen, it will likely be considered a hazardous area.

9. False. There is no requirement in the LSC to lock a soiled utility room door.

10. True