Recently, the American Society for Healthcare Engineers (ASHE) presented a webinar on changes that hospitals will face with the new 2012 *Life Safety Code*® (LSC). The new LSC has yet to be adopted by CMS, but once it is, the four organizations that accredit hospitals (The Joint Commission; the Healthcare Facilities Accreditation Program; Det Norske Veritas Healthcare, Inc.; and the Center for Improvement in Healthcare Quality) will follow suit and do likewise.

The presenter for the ASHE webinar was Michael Daniel, president of Daniel Consulting, Ltd., Washington D.C. In the webinar, Daniel shared many changes that will affect many hospital facility managers when the new LSC is finally adopted. [Editor's note: See the October 2013 issue of HLSC on the adoption date.]

“In the past you have had some doors to offices or other spaces where you installed dead-bolt locks that resulted in two releasing mechanisms from inside the area,” said Daniel. “The 2000 LSC requires you to egress with one motion to operate the door. There are a lot of facilities that have been retrofitted with add-on dead-bolt locks and require two motions to operate the door. The 2012 LSC allows for two releasing actions to operate a door in the path of egress under certain circumstances: The door has to serve an area with an occupant load not exceeding three, and it must not require simultaneous operation. In those situations where you were not compliant in the 2000 LSC, you would be able to take advantage of these provisions in the 2012 LSC.”

Daniel did not mention, however, that these provisions in the 2012 LSC only apply to existing door...
Suites of rooms are limited in size (5,000 square feet for suites containing sleeping rooms and 10,000 square feet for non-sleeping suites), but rooms that qualify by having their path of egress through an intervening room as described in section 7.5.1.7 are not limited in size. Where would that situation be present in a hospital? Possibly in an auditorium that is over 10,000 square feet and exits through a vestibule to get to the exit access corridor. It’s understandable that you would not want to identify such a room as a suite on the life safety drawings, since it exceeds the allowable square footage for a suite. But it still qualifies under section 7.5.1.7 and is compliant with the Life Safety Code®.

PFIs on Inaccessible Fire Dampers

There seems to be much discussion lately on how to manage the Joint Commission Statement of Conditions when it comes to inaccessible dampers. Joint Commission has instructed healthcare organizations to write a Plan for Improvement (PFI) for inaccessible fire or smoke dampers, and place a projected completion date of six years on them.

Anyone who has any questions or concerns should contact the Standards Interpretation Group at Joint Commission directly and ask them—call 630-792-5900 and select option 6.

Read the complete post at: http://keyeslifesafety.com/pfis-on-inaccessible-fire-dampers/
hardware. This means you are not permitted to add a second lock or latching device that requires two releasing operations to operate the door after the new LSC is adopted. That’s okay though, as the current (2000) LSC does not permit it either, for new or existing doors.

That may sound like a catch-22—if having two releasing motions is not permitted now, why change the code to say it’s permissible on existing applications?—but there’s a reason for it. Specifically, some authorities have not been writing citations on dead-bolt locks in hospital doors even though the current LSC does not permit these locks. So when the new LSC is adopted, these doors with two releasing operations will be allowed to remain if they meet the provisions of the code. This is an example of the technical committee for the LSC taking into account the actual goings-on in the world of hospitals and making minor changes to the code to help facility managers.

In the world of the LSC, occupant loads are not counted by noses, chairs, or beds; they are calculated based on area, unless the code says otherwise. So in this situation, we need to measure the area (in square feet) of the room where we have the existing dead-bolt lock. Once the square footage is determined, it is divided by the Occupant Load Factor for that particular occupancy, which can be found in Table 7.3.1.2 in the 2012 LSC. For healthcare occupancies, there are two Occupant Load Factors to consider: 120 square feet per person for patient sleeping areas, and 240 square feet per person for inpatient treatment areas. So we take the area of the patient sleeping room, divide it by the Occupant Load Factor, and the result is our occupant load for that room. Many older patient sleeping rooms in hospitals were sized around 250 square feet, so if you divide 250 by 120, you get an occupant load of 2.08 persons, which is less than the maximum of three. So, by this example, an existing dead-bolt lock that requires two releasing actions (but are not required to be operated simultaneously) would be permitted on a patient sleeping room that is no larger than 360 square feet.

Fire alarm systems

Daniel also discussed other changes under the 2012 LSC, including those that affect the fire alarm system.

“In the past, for protection of the fire alarm systems, if the area was sprinklered, then you did not have to have smoke detectors to cover certain equipment, such as control panels,” said Daniel. “That sprinkler exemption is gone now in the 2012 LSC, so you will need smoke detection in unattended areas containing control panels, notification appliance circuit extender panels, or supervising station transmitting equipment. This would not apply to existing locations that were previously approved.”

Out of service fire alarm systems

For required fire alarm systems that are out of service for more than four hours in a 24-hour period, the same requirement as before still applies: You must notify the authority having jurisdiction (AHJ) and perform a fire watch in the areas affected by the impairment. But this language has been stricken from the 2012 LSC when it concerns sprinkler impairments.

“Sprinkler system impairments are now referenced to comply with NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2011 edition,” said Daniel. “Even though the language has been removed from the new 2012 LSC, impairment procedures must still be followed and a fire watch must be implemented.”

The 2011 edition of NFPA 25 says when the required fire protection system is out of service for more than 10 hours in a 24-hour period, a fire watch must be implemented. This change allows the sprinkler system to be impaired up to 10 hours, instead of just four, before implementing a fire watch. This will be a huge break for repairs to the sprinkler system that only last one shift at a time, as long as they are not conducted on consecutive days.

But there’s a downside: This change may also affect how the AHJ views the fire watch, which could have a significant impact on hospitals when the impairment procedures found in NFPA 25 are strictly enforced. The Annex section of NFPA 25 describes a fire watch as consisting of trained personnel who continuously patrol the affected area. During the patrol, the person should not only look for fire, but also make sure that the other fire protection features of the building, such as egress routes and alarm systems, are available and functioning properly.
The phrase “continuously patrol the affected area” has already been interpreted by the CMS as meaning a designated individual should walk around the affected area, beginning again once he or she has completed a circuit of the area. In other words, the individual should not leave the patrol of the affected area until the fire watch is completed or the person is relieved of duty. [Editor’s note: See the July 2012 issue of HLSC for additional information on CMS’ interpretation.]

Fortunately, it does not appear that the accreditation organizations have adopted this stringent interpretation of fire watches, but one can presume it will only be a matter of time before CMS strong-arms the organizations into requiring it.

High-rise structures

Changes are in store for healthcare facilities that qualify as high-rise structures, as Daniel explained. “Compressors for the dry pipe valves and pre-action fire protection systems are now required to be connected to your emergency standby power system in high-rise facilities,” said Daniel. “This also includes the jockey pump as well for your sprinkler system.”

The requirement for emergency standby power is retroactive to existing and new high-rise facilities. A high-rise facility is defined as a building where the floor of an occupiable story is greater than 75 feet above the lowest level of fire department vehicle access. The 75-foot dimension is derived from the average reach of a fire department ladder truck.

In addition, existing high-rise buildings containing healthcare occupancies will be required to be fully sprinklered within 12 years of the adoption of the 2012 LSC. These new changes for high-rise structures make it very important for facility managers to be sure if their buildings qualify as such.

Locking of special units

The locking of special units for security purposes has been a thorny issue with many AHJs. Some authorities will allow the use of “clinical needs” locks in nursery units, pediatric units, and ICUs, and some will not. The 2012 LSC makes it very clear that these locks are only permitted on units with psychiatric, dementia, and Alzheimer’s patients, and not for any other purpose. However, the technical committee has created a new category of locks, as explained by Daniel. “Age is not a criterion for clinical needs,” he said. “If you really want to lock the egress doors in newborn or pediatric areas, then you will need to lock them under the provisions with the new section on patient special needs for safety.”

The requirements that your facility must comply with for this new provision are:

- Staff can readily unlock doors at all times
- A smoke detection system is provided throughout the entire locked space
- The building is fully protected by an automatic sprinkler system
- The locks used are electrical that fail-safe to release upon loss of power
- The locks release upon activation of the smoke detection system and the automatic sprinkler system

Changes to the 2012 LSC involving delayed egress locks were also high-lighted by Daniel. “The 2000 LSC says you can only have one delayed egress lock in any egress path,” said Daniel. “The 2012 LSC has eliminated that requirement to allow you to have more than one delayed egress lock in the path of egress.”

Corridor clutter

Corridor clutter has been a problem for hospitals for decades. The technical committee for the 2012 LSC has taken a very bold stand on what is allowed to be left unattended in egress corridors.

“Yes, you can have wheeled equipment in the corridor as long as you meet all of the criteria in the code,” said Daniel. “Certain wheeled equipment items are permitted to be left unattended in the corridor.” The following criteria must be met:

- You cannot reduce the width of the corridor to less than five feet
- The fire plan and training must address the relocation of the wheeled equipment
- The items are limited to equipment and carts in use
- Allowable items are limited to equipment and carts in use, medical emergency equipment not in use, and patient lift and transport equipment

Suite compliance

Many hospitals have struggled with LSC compliance
when it comes to the issue of suites. Unfortunately, many suites were designed and constructed either too large (exceeding the maximum allowable area) or without the proper separation from the egress corridor. The 2012 LSC has come to the aid of facility managers in resolving some of these issues, as Daniel explained.

“One of the biggest benefits in healthcare at this time is the suite provisions have been revised substantially,” he said. “The new 2012 LSC will provide for a patient sleeping suite, a patient care non-sleeping suite, and a non-patient care suite. The 2000 LSC limited patient sleeping suites to 5,000 square feet. However, that can be increased with the provisions of the new 2012 LSC.”

Under the 2012 LSC, the allowable area for patient sleeping suites will increase to 7,500 square feet provided the smoke compartment where the suite is located is protected throughout with automatic sprinklers and smoke detection, or with automatic quick-response sprinklers. In addition, patient sleeping suites may be as large as 10,000 square feet as long as there is direct supervision by staff, the suite is protected with automatic smoke detection, and the entire suite is protected with quick-response sprinklers.

The limitation with the travel distance to exit the suite has eliminated the intervening room requirement, and has set all travel distances to be 100 feet. If the suite is required to have two separate exits, one of the exits may be into and through an adjoining suite, provided the separation between the suites complies with the requirements for corridors. The 2012 LSC also allows one of the two exits in the suite to be to an exit stairwell, through a horizontal exit, or directly to the outdoors.

**Alcohol-based hand rubs**

Alcohol-based hand-rub (ABHR) dispensers have also undergone some changes that will make life easier for the typical healthcare facility.

“The new 2012 LSC will give you one ABHR dispenser per room that is not included in the aggregate total per smoke compartment,” said Daniel.

Previously, the LSC had limited the aggregate total of ABHR product in dispensers to be no more than 10 gallons per smoke compartment. This means if your dispenser contained 1 liter of product, you could not have more than 37 ABHR dispensers per smoke compartment. In larger smoke compartments, this meant hospitals had to be very selective in their dispenser placement, resulting in inadequate coverage for some areas. Under the 2012 LSC provision, one dispenser in each room does not add to the aggregate total, which will allow for additional and more strategic allocation of dispensers.

“Another exception placed in the 2012 LSC is sprinklers are not required in clothes closets in patient sleeping rooms in hospitals only,” said Daniel. “This exception does not apply to nursing homes. These closets are so small in hospitals, and as long as they do not exceed 6 square feet, you can eliminate the sprinkler as long as the distance limitations to the back wall of the closet are met.”

The 2012 LSC even changes certain long-standing design requirements.

“The requirement for outside windows in patient rooms were essentially taken out of the new 2012 LSC,” said Daniel. “That is for life safety fire protection purposes. You will find that other standards and guidelines will still require these outside windows, though.”

Gas-fired fireplaces have been permitted in healthcare occupancies, but the 2000 LSC only allowed them in areas that are separated from patient sleeping rooms by one-hour fire-rated barriers. Daniel explained the changes concerning fireplaces under the 2012 LSC.

“Direct-vent fireplaces are permitted in smoke compartments containing patient sleeping rooms, but not in the sleeping room themselves,” said Daniel. “Also, solid-fuel fireplaces will be permitted in areas that are separated from patient sleeping areas by one-hour fire-rated barriers.”

Combustible decorations have been a challenge for facility managers, who often end up being compared to Scrooge when assessing them for compliance with the LSC. The 2012 LSC, in contrast, offers many leniencies. In non-sprinklered smoke compartments, up to 20% of the wall, ceiling, and door area may be covered with combustible decorations, and this may be increased to 30% in smoke compartments fully protected with sprinklers.

For patient sleeping rooms located in smoke compartments that are fully protected with sprinklers, the combustible decorations may cover up to 50% of the wall, ceiling, and door area.
Potential modifications to NFPA 25

Inspection, testing, and maintenance of a healthcare facility’s water-based fire protection system form an ongoing process—one that accreditation organizations are taking a long, hard look at to ensure all standards are in compliance. According to information released by The Joint Commission, failure to meet the EC.02.03.05 standard on inspection and testing of fire safety systems has been in its top 10 findings since the agency began using life safety surveyors in 2005.

The state survey agencies for CMS and healthcare accreditation organizations such as The Joint Commission, the Healthcare Facilities Accreditation Program, Det Norske Veritas, and the Center for Improvement in Healthcare Quality do not provide a thorough reevaluation of water-based fire protection systems. With the limited time that their surveyors are on-site, the best they can offer is a snapshot view of what the sprinkler system looks like during the survey building tour. While certain deficiencies may be observed, this is not a complete evaluation of the system design or compliance with NFPA 13, Standard for the Installation of Sprinklers.

Now, though, the question of who will be responsible for the reevaluation of the water-based fire protection system and how frequently it needs to be conducted may soon be decided by one of the NFPA technical committees.

One of the main documents used in the inspection and testing process referenced by The Joint Commission is NFPA 25, Standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems. Currently, the accreditor references the 1998 edition of NFPA 25, but that will change to the 2011 edition once the 2012 Life Safety Code® (LSC) is adopted. However, the NFPA, which writes and publishes all its codes and standards, is reviewing the scope of NFPA 25, and this may impact how healthcare facilities inspect their sprinkler systems.

Considerations by NFPA

During a recent NFPA “Office Hours” webcast to its members, Matt Klaus, principal fire protection engineer for the systems department of the NFPA, discussed some of the items brought up during a December 2013 symposium in Chicago. Klaus works on the NFPA standards for all water-based sprinkler systems and their inspection, testing, and maintenance.

The symposium examined a range of issues related to the overall effectiveness of NFPA 25. It is anticipated that the technical committee on the inspection, testing, and maintenance of water-based systems will consider the results of the symposium, along with public input, in the development and scope of the next edition of NFPA 25.

“NFPA 25 looks at all the water-based systems in the existing building: the sprinkler system, the fire pump, the standpipe system, fire hydrant, underground service mains, anything that will transport water through your building in aid if ever there were a fire,” said Klaus. “That’s what we’re dealing with in NFPA 25, and we want to make sure that if you install it correctly, it continues to work right.”

He explained that NFPA 25 is a misunderstood document because people think it calls for an inspection of the entire design of the sprinkler system (it does not). It is often confused as a recommissioning document as well.

“The scope of NFPA 25 is fairly tight,” said Klaus. “We’re actually looking at wear and tear issues, not design evaluation or hazard evaluation issues. We’re focusing on issues like: Is it corroded? Is it rusting? Or is it leaking? We are now considering whether we need to go further in NFPA 25; should we be looking at design evaluation as part of that process as well?

“We asked the question ‘Does the design evaluation need to be conducted?’” he continued. “A lot of people said, ‘Yes, it does, but it probably does not belong in NFPA 25.’ Some thought it should be in other NFPA codes or standards, or placed in occupancy-specific sections of an existing standard.”

Many in the industry think it’s important to reevaluate or recommission the fire protection systems in buildings since many changes could have occurred since their design and installation. Ceiling-mounted signs and devices can end up too close to the sprinklers after the fire protection system has been installed, or water could be trapped in a dry-pipe system used in an area that freezes. A system to manage these changes is not present in the existing NFPA codes and standards.
“There is nothing in NFPA 25 that says you need to reexamine or recommission the system to make sure it works after changes are made,” said Klaus. “There is a section that says the owner has to make sure that it happens, but it’s just not part of the inspection. NFPA 25 just says that any changes to the design or the installation have to be taken care of by the owner. Well, a lot of owners don’t know what the sprinkler system is; they don’t know how storage systems work and what the various protective options would be, so they assume that they are fine.”

Klaus explained that while everyone feels it is important to have a standard on the recommissioning of existing systems, the general consensus was that it did not belong in NFPA 25.

“The Fire Protection Research Foundation will put a report together identifying the findings of the symposium and special groups,” he said. “We’re looking at providing the NFPA 25 technical committee with that report and have them review it and determine what can be included in NFPA 25. If there is something that does not belong in the inspection testing and maintenance document, then this group will send it to another NFPA technical committee for their review.”

Testing forms usable by owners and contractors have been added to the 2014 handbook for NFPA 25.

“We have always considered NFPA 25 to be an owner’s document,” said Klaus. “The owner of the property is responsible to make sure the requirements of NFPA 25 are accomplished. The owner may designate this responsibility to others, or bring in a contractor who will conduct the inspection and testing, but ultimately the owner is responsible.”

Finding deficiencies

There were some concerns raised during the NFPA webcast. One question asked why the fire marshal isn’t the one responsible for finding the deficiencies with the fire protection system.

“NFPA 25 does not ask that the fire department personnel to go into a building and find these deficiencies,” said Klaus. “They are there to make sure if a deficiency is found, it gets corrected. We put that responsibility on the owner to make sure their buildings are safe.”

Another question asked why a service provider shouldn’t record an observed sprinkler system deficiency in its report.

“If you put on your NFPA 25 inspection report that you observed a deficiency with the design or installation of the sprinkler system, it gives the owner in a lot of cases a false sense of security,” said Klaus. “They may think, ‘Oh, they did do a design evaluation,’ where you only observed it in that one location, and there may be five other areas with similar deficiencies that you did not see.”

The NFPA is concerned that should such a scenario play out, the service provider may find itself in a legal or liability situation.

“We don’t want to be misleading the depth and scope of the work that we are doing,” said Klaus. “I encourage service providers to have a form ‘B’ that says, ‘This is not part of the inspection that I am contracted to do, but here are some of the concerns that I have that are design related that you may want to look into.’ That way the service provider brings these issues to the attention of the building owner without implying a complete evaluation of their system was conducted.”

Some say the current requirement of NFPA 25 places too much responsibility on the owner of the building to determine when a complete evaluation and recommissioning is necessary. An existing building can change quickly after the fire protection system is designed and installed, which could lead to unseen deficiencies. Should NFPA 25 require a reevaluation to verify the responsibilities assigned to the owners are being met?

Members of the symposium committee suggested that other codes, such as NFPA 1, Fire Code, or NFPA 101, the LSC, should mandate such reevaluations rather than allowing the building owners to decide when they are necessary. According to published reports, the need for reevaluation of the design and installation of the sprinkler system is an issue currently being considered for a new standard: NFPA 4, Integrated Fire Protection and Life Safety System. Some individuals commented that other parties, such as fire officials or insurance company representatives, can provide the necessary oversight by conducting thorough inspections and surveys.

The next edition of NFPA 25 should be released in 2017. Hopefully at that point we’ll have some more clarity on who is responsible for what.
New life safety surveyors at HFAP

The nation’s oldest accreditation organization with deeming authority from CMS to survey acute care and critical access hospitals has made a major step forward. The Healthcare Facilities Accreditation Program (HFAP) announced in December 2013 that it would be adding one life safety surveyor to each hospital survey beginning in January of this year.

HFAP is authorized by CMS to survey all hospitals for compliance with the Medicare Conditions of Participation and Conditions for Coverage. Originally created in 1945 to conduct an objective review of services provided by osteopathic hospitals, HFAP has maintained its deeming authority since the inception of CMS in 1965. It meets or exceeds the standards required by CMS and Medicare to provide accreditation to all hospitals, ambulatory care/surgical facilities, mental health facilities, physical rehabilitation facilities, clinical laboratories, and critical access hospitals. HFAP also provides certification reviews for primary stroke centers.

The new life safety surveyors will be assigned to a hospital survey based on the hospital’s size in square feet and number of licensed beds. For hospitals that have less than 50 licensed beds and less than 100,000 square feet of healthcare occupancy, a life safety surveyor will be assigned one survey day. For hospitals with 50 or more licensed beds, or 100,000 square feet or more of healthcare occupancy, a life safety surveyor will be assigned two survey days. Additional days will be assigned for each off-campus facility designated as a healthcare occupancy.

Why, after all these years, is HFAP now bringing on surveyors that specialize in the Life Safety Code® (LSC)?

“Times have changed,” says Beverly Robins, RN, BSN, MBA, director of accreditation services for HFAP. “Ten years ago, CMS didn’t have such a strong agenda as they do now concerning the physical environment. Enforcement of the Life Safety Code is a much higher priority with all hospital accreditation organizations today.”

This change is consistent with the other accreditation organizations. Joint Commission has its Life Safety Surveyors, and Det Norske Veritas Healthcare, Inc. (DNV) has the Physical Environment surveyors who also do double duty on life safety compliance.

“The new life safety surveyors will be responsible for assessing the hospital’s compliance with the Life Safety Code” says Robins. “We are expanding the over-all number of surveyor days to the agenda in order to allow the new life safety surveyor the amount of time to evaluate the hospital’s level of compliance.”

The new life safety surveyors are experts on compliance with the LSC in their daily professional careers and come from diverse backgrounds. They are employed as healthcare professionals in the following capacities:

- Facility managers
- Construction mangers
- Project managers
- Safety officers
- Architects
- Engineers
- Consultants
- Administrator

The new life safety surveyors have an average of 23.4 years of experience working in healthcare organizations. Every life safety surveyor has additional certification in his or her area of expertise, and over 70% have achieved the designation of Certified Healthcare Facilities Manager.

“When we interviewed candidates for the position of life safety surveyor, knowledge and expertise in the Life Safety Code was only one of the required prerequisites,” says Robins. “The ability to interact with the staff of our client hospitals with empathy and understanding was considered to be just as important to maintain the style of collegiate survey process that our hospitals have come to expect and love. The expectation is the new life safety surveyors will be received well by the hospitals as facility managers will appreciate being surveyed by one of their own.”

The new life safety surveyors received training at the HFAP central office in Chicago last December on the survey process and procedures. Currently, HFAP accredits over 200 hospitals in the continental United States.
Editorially Speaking …

Editor’s note: This month, Senior Editor Brad Keyes, CHSP offers his thoughts, concerns, and comments on issues pertaining to healthcare life safety.

I find that in many cases across the country, people don’t know how to engage in effective conversation anymore. When I started my career in healthcare, I was hired to be the plant maintenance supervisor at the hospital where I worked. I was excited to have the position, and I was eager to prove that I could make a positive difference for the department.

The old man that I worked for was a seasoned director of engineering. In a staff meeting early in my career, he went around the table asking the same question to all of my peers: “What do our customers want?” (Our customers are basically all of the other units in the hospital.) The bio-med supervisor said they want their medical devices repaired and tested. The boss said “No!” He asked the same question of the plant operations supervisor, who replied they want a comfortable environment that is warm in the winter and cool in the summer. Again the boss said “No!” When asked, the environmental services supervisor said they want a clean environment. “No!” said the boss. When he asked me, I was afraid to say anything, as I thought those were pretty good answers. Whatever I said, the boss said “No! That is not what the customers want.”

So what do the customers want? The boss said they simply want to be heard and understood, and to make sure that we (the ones who will provide the solution to their problems) fully understand them.

Many years later, when I became the safety officer for the hospital, I was having a lot of problems with nurses and nurse managers creating corridor clutter. I would go on to their units and explain to them that they could not leave EKG machines, blood pressure cuff machines, IV pumps, and other medical equipment in the corridor. They would all nod their heads, say sorry, and put the equipment in the utility room, but the next time I visited the unit it was all back in the corridor. It seemed like they weren’t listening to me. I explained that the rules didn’t come from me, but from The Joint Commission and IDPH (the state agency who surveys on behalf of CMS in Illinois); it didn’t seem to make any difference. The medical equipment was always parked in the corridor.

I complained to a social worker at the hospital who I had turned to for support, and she told me this: “It’s not about you and your rules; it’s about the patient.” She explained to me that the nurses felt they needed the medical equipment in the corridor in order to provide excellent care for the patient. The nurses didn’t care about Life Safety Code® (LSC) rules concerning corridor clutter because they were solely focused on patient care and felt the LSC was my problem, not theirs. The social worker, however, said it was my job to get the nurses to care about LSC compliance.

After thinking this over and remembering what my old boss told me, I realized I was not paying attention to the concerns of the nurses and how they felt they needed to have these items in the corridor. In other words, the nurses were not listening to me because they felt I was not listening to them. And they were right.

My first move to correct this was to spend time on each unit, shadowing a couple of the nurses. I spent days observing them and learning how they went about performing the duties of their job. At first, the nurses were reluctant to allow this—they saw me as the enemy. But once they realized I was sincere in wanting to learn from them and hear what they had to say, they were very enthusiastic and cooperative.

To my surprise, within days, the nurses started to listen to me when I explained that life safety and patient safety are the same thing, and how corridor clutter can put the patient at risk in the event of evacuation. Once they felt I was listening to them, they listened back and cooperated.

In fact, they cooperated so well, I rarely saw anything left unattended in the corridor for the remainder of the time that I worked at the hospital. It was all due to the fact that I was not listening to what my customers really wanted. They just wanted me to understand what their needs were, not what I thought they were.

Can you apply this concept at your hospital?
Questions & Answers

Editor’s note: Each month, Senior Editor Brad Keyes, CHSP, owner of Keyes Life Safety Compliance, answers your questions about life safety compliance. Our editorial advisory board also reviews the Q&A column.

Follow Keyes’ blog on life safety at www.keyeslifesafety.com for up-to-date information.

Spare sprinkler heads

Q How many spare sprinkler heads are we supposed to have in stock at our facility? We had an inspection recently, and the fire marshal said we did not have enough spare sprinklers, but he did not say how many we are supposed to have or where we can find that information.

A Section 9.7.1.1 of the 2000 LSC requires you to be in compliance with National Fire Protection Association (NFPA) 13 Standard for the Installation of Sprinkler Systems, 1999 edition, when the occupancy chapter requires fire protection sprinklers. Section 3-2.9 of NFPA 13 discusses the need and quantities for a supply of spare sprinkler heads. A minimum of six spare sprinklers is required for each type of sprinkler head that you have installed in the facility, when the total quantity of each type is less than 300. If you have between 300 and 1,000 sprinklers installed of the same type, then you must have at least 12 spare sprinklers in supply. And if you have more than 1,000 sprinklers of the same type installed in your facility, then you must have a minimum of 24 spare sprinklers of that particular type. In addition, for each type of spare head that you have in supply, a special wrench used in the removal and installation of sprinklers must also be provided and kept in the cabinet.

For an older facility that has had its fire protection sprinklers installed in stages, you can imagine that there may be many different types, styles, and temperature ratings of sprinkler heads installed. A supply of this magnitude often requires a full-size cabinet to store everything. NFPA 13 does not say where you need to store these spare sprinklers and wrenches, but contractors often install a spare sprinkler box in the fire pump room. The only requirement for storage is that the room cannot exceed 100°F. It should be noted that later editions of NFPA 13 only require two spare sprinklers of each type and temperature rating.

Life Safety Code surveyor

Q Is the life safety surveyor a requirement during a survey, or is the specialist used due to the complexity of the Life Safety Code® (LSC) and various areas of survey?

A No, the LSC surveyor that the accreditation organizations use is not required by CMS or any other arm of the government. It is more of an acknowledgment that evaluating the hospital’s compliance with the LSC requires specialized skills that previous surveyors simply did not have. In 2004, the Government Accountability Office published a report that indicated The Joint Commission needed improvement in its assessment of hospitals for LSC compliance. To its credit, the Joint Commission agreed and decided to put LSC specialists on the survey team. The new LSC surveyors began surveying in January 2005 for hospitals with 200 beds or more, and it was a huge success—hospitals actually liked being inspected by knowledgeable surveyors. In 2008 the LSC surveyors were expanded to survey all hospitals, including critical access hospitals. When Det Norske Veritas Healthcare, Inc., started surveying hospitals in 2008, it immediately recognized the need for surveyors with specialized skills in the LSC and included them in its surveyor complement. As indicated in the article on p. 8, the Healthcare Facilities Accreditation Program has decided to include surveyors with life safety skills as well.
Locked doors for utility rooms?

Q Where is the reference in the *Life Safety Code* that requires the doors to housekeeping or soiled utility rooms to be locked? I have a risk management director that tells me the code requires these doors to be locked.

A There is no *LSC* requirement to lock housekeeping or soiled utility room doors. Nor does The Joint Commission, CMS, or any other national authority require housekeeping or soiled utility room doors to be locked. Where hospitals get into trouble with CMS and the accreditation organizations on this issue is the failure to assess the risk to patient and staff safety when these doors are left unlocked. Each of the national authorities has a standard that requires hospitals either to identify safety and security risks in the environment, or to maintain a safe environment for their patients. An unlocked utility room that contains a risk to patients would certainly be suspicious to a surveyor. For example, a housekeeping room may contain cleaning supplies that could be considered dangerous to unauthorized individuals (such as children). If the door to the room was left unlocked, then people could gain access to the hazardous items and hurt themselves or others. Similarly, soiled utility rooms may contain items considered biohazardous. This does not mean all soiled utility rooms or housekeeping rooms need to be locked. They just have to be assessed for safety or security risks associated with their contents. Most of the soiled utility rooms that I see in hospitals are unlocked, with exceptions for rooms near where children are prevalent. On the other hand, most (if not all) housekeeping janitor’s closets that I see are locked, partly due to the hazardous cleaning chemicals stored in them, but also because housekeeping doesn’t want their other supplies stolen. But, to be sure, there is no direct requirement in the *LSC* or in the accreditation organization standards to keep these doors locked.

Smoke compartments in ASCs

Q We are a freestanding ambulatory surgical center (ASC) and we only perform gastrointestinal (GI) procedures, not surgery. We lease a suite on the ground level in a three story building with multiple tenants. During a recent state inspection, I was asked where our smoke compartments are located. I know that we have a two-hour fire barrier between us and the other suites on our level, but I am not aware that we have any designated smoke compartments. Do we need smoke compartments?

A You did not mention how many patients are incapable of self-preservation at any one time, so I will assume it is at least four or more patients, since that is the threshold to decide if the ASC is required to comply with ambulatory healthcare occupancy requirements, or business occupancy requirements. Ambulatory healthcare occupancy smoke compartment requirements are found in section 21.3.7.2, which requires your ASC to be sub-divided into not less than two smoke compartments. However, there are some exceptions to this requirement:

1. ASC facilities that are less than 5,000 square feet and are protected by an approved smoke detection system do not need to be subdivided.
2. ASC facilities that are less than 10,000 square feet and are protected throughout by an approved automatic sprinkler system do not need to be subdivided.
3. An area in an adjoining occupancy may be permitted to serve as a smoke compartment for the ASC facility, provided all of the following criteria are met:
   - The separating barrier must be at least 1-hour fire rated, and have doors that are self-closing
   - The ASC facility is less than 22,500 square feet
   - Access from the ASC facility to the other occupancy is unrestricted

So, to answer your question, based on the size of your ASC and whether it has smoke detection or sprinkler protection, it may not require a smoke compartment barrier. If a smoke compartment barrier is required, you might be able to utilize the two-hour fire rated barrier between you and your neighbors, if you are less than 22,500 square feet and if there is unrestricted access to the other occupancy.
### Quick tip

**Documentation required for inspection & testing of water-based fire protection systems**

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<tr>
<th>Devices/Function</th>
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Source: NFPA 25, 1998 edition
Quiz questions

1. (T) (F) The new 2012 Life Safety Code will permit add-on dead-bolt locks on new doors in the path of egress but only if the door serves an occupant load that does not exceed three persons.

2. (T) (F) Unless otherwise stated, the occupant load for Life Safety Code purposes is determined by calculation, and not by counting persons or beds.

3. (T) (F) The 2012 LSC will require smoke detection in rooms containing fire alarm control panels, which are not considered attended.

4. (T) (F) The 2012 LSC has changed to now require an organization to notify the local fire department and institute a fire watch if the fire alarm and sprinkler system is out of service for 10 or more hours in a 24 hour period.

5. (T) (F) CMS is on record of requiring fire watches to be continuous, meaning designated individuals patrol the affected areas without leaving the area.

6. (T) (F) Existing high-rise hospitals must be fully sprinklered within 10 years of the adoption of the 2012 Life Safety Code.

7. (T) (F) When the 2012 LSC is finally adopted, sprinklers will no longer be required in hospital patient room clothes closets, provided the closet is no more than 60 square feet in size.

8. (T) (F) NFPA is considering including requirements in future editions of their standards to re-evaluate the design of the sprinkler system in existing buildings.

9. (T) (F) Healthcare Facilities Accreditation Program (HFAP) is the nation’s second oldest accreditation organization.

10. (T) (F) The quantity of spare sprinkler heads that are required to be stored onsite, is determined by the type, style, temperature rating and the number of sprinklers installed.

A supplement to Healthcare Life Safety Compliance
1. False  The allowance for dead-bolt locks on doors in the path of egress only applies to existing conditions, but does apply to doors that serve an occupant load that does not exceed three persons.

2. True

3. True

4. False  Organizations must still notify the local fire department and institute a fire watch if the fire alarm system is out of service for 4 or more hours in a 24 hour period. However, the time requirement for sprinkler systems has changed to 10 or more hours in a 24 hour period.

5. True

6. False  Existing high-rise hospitals must be fully sprinklered within 12 years of the adoption of the 2012 LSC.

7. False  The maximum size of the clothes closet is 6 square feet in order to qualify not needing sprinklers.

8. True

9. False  HFAP is the nation’s oldest accreditation organization.

10. True