

The Top Five Hot Button Issues in EC

Joint Commission Life Safety Code® Surveyors name the most common compliance problems

Joint Commission *Life Safety Code*®* Surveyors (LSCS) met in January to discuss hot button issues in the environment of care (EC). Based on field experience and 2013 survey information,¹ there are five common problem areas in hospitals and health care facilities that need to be better addressed. Here's the lowdown on what Joint Commission LSCS will be focusing on in the coming year and what you can do to make your buildings safer for patients and staff.

1. Corridor clutter

In the event of an emergency, clutter can not only make it difficult to move patients, it can hinder emergency responders who need to access parts of your building quickly. Keeping corridors unobstructed also happens to be standard and regulation. The National Fire Protection Agency (NFPA) 101: *Life Safety Code*®* requires a corridor to be free of items and equipment to the original design width, which is typically 8 feet. Some equipment—such as crash, chemo, and isolation carts—is allowed in corridors at all times, as long as it is “in use.” The Joint Commission defines “in use” as being used at least every 30 minutes. Unfortunately, LSCS typically find a variety of items, like C-arms and laundry carts, which sit untouched by staff for much longer.

Advance thinking and strategy go a long way toward maintaining clutter-free corridors. Designating a team to walk around and identify alternative storage locations in your building, such as storage rooms or dead-end spaces, should be a priority. As long as these storage



Cluttered corridors are dangerous, so remind staff to keep them clear.

areas do not exceed 50 square feet, The Joint Commission has no problem with items being stored there. Reducing the amount of unused equipment in corridors is also extremely helpful. Take C-arms back to the x-ray department, or with appropriate permission, place them in a seldom-used space. Returning these kinds of items to their original locations or placing them in alternative spots will keep them from piling up in corridors. Educating or reminding staff about corridor safety on a regular basis is also a good way to help prevent clutter.

NFPA 101: *Life Safety Code* (Section 18.2) offers guidelines for corridor clutter. See <https://www.inkling.com/read/life-safety-code-handbook-ron-cote-8th/chapter-18/section-18-2-means-of-egress>.

2. Penetrations

Penetrations are literally holes in the wall. They are typically found above the drop-in ceiling tiles that transverse fire or smoke walls. These walls (or barriers) support compartmentation—that is, the division of a health care facility into compartments to limit the spread of fire and restrict the movement of smoke. Holes in the smoke or fire walls lining these compartments can allow smoke,

and potentially flames, to shoot through to adjacent areas that would otherwise be safe areas of refuge.

According to Joint Commission standards compliance data, nearly half of the hospitals surveyed in 2013 did not have adequate building and fire protection “designed and maintained to minimize the effects of fire, smoke, and heat.”¹ So this is a serious problem that needs to be solved at many facilities. Preventing penetrations and ensuring the integrity of walls can be achieved by simply having a quality barrier management program (*see EC News*, July 2012, pages 5–7). A good program will do the following:

- Have qualified staff who are trained to recognize unsealed penetrations and know how to apply the appropriate firestopping system.
- Take into consideration the firestopping system being used. The type, size, and conduit used in penetrating the wall should all contribute to your selection of firestopping material. Materials used to plug holes should be Factory Mutual (FM) or Underwriters Laboratories (UL).
- Document where penetration repairs are made. Have the contractor annotate penetrations on life safety drawings or take photographs of

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repaired penetrations. This will allow you to follow up on any work done by an external contractor. You can more easily check to see if the right material was used and whether it was applied correctly, according to the manufacturer's recommendations.

- Limit access to barriers. If you notice somebody up above a ceiling with a ladder, check to see if that person has a barrier management permit—usually a tag hanging on the ladder with the current day's date on it. If not, report the encounter so it can be investigated.

Consult NFPA 101: *Life Safety Code* (Section 8.3) for information on smoke barriers and penetrations. See <https://www.inkling.com/read/life-safety-code-handbook-ron-cote-8th/chapter-8/section-8-3-smoke-barriers>.

3. Door issues (latches, closures, and gaps)

Door issues go hand-in-hand with penetrations, since they both fall under your barrier management program. If your building has fire and smoke walls, it typically has fire and smoke doors. Doors that fail to close and latch can be dangerous in the event of a blaze. A door that has inappropriate clearances between the door leaves or underneath the door will be ineffective against smoke. Some common problems include staff removing closers to keep doors open and the removal of other hardware to accommodate a newly carpeted floor.

Maintaining latches, closures, and gaps starts with staff education on the importance of properly working doors and the safety they provide. Having an inventory of doors in your building will help make sure you have the right protection in place. Door type should be based on the type of fire or smoke barrier in the room or corridor. For example, if you have a one-hour fire barrier wall,

you need a door with a ¾-hour fire protection level (a ¾-hour “fire-rated” door). See the article “Ensuring Full Compliance with the *Life Safety Code*” (*EC News*, July 2013, pages 5, 6, 9) at <http://www.ingentaconnect.com/content/jcaho/ecn/2013/00000016/00000007/art00003/> for more information.

Performing door inspections on a regular basis will help mitigate problems. Inspections should be based on your inventory and the level of risk associated with barrier levels. The *Life Safety Code* 2000 and the 1999 edition of NFPA 80 (Chapter 15, Care and Maintenance, Paragraph 15-2.1.1) state, “Hardware shall be examined frequently and any parts found to be inoperative shall be replaced immediately.” The Joint Commission recommendation is that annual inspections should be considered for doors that are critical to protecting occupants and for doors in high-traffic areas. It's also a good idea to keep a record of your door repair history. This can help you determine how often you need to make inspections.

A guide to door inspections (including a checklist) is available from the Firestop Contractors International Association at <http://www.fcia.org/articles/KeyBiscayneNov09/documents/DHIFireMarshalPrintVersionSept1.pdf/>.

For more information on fire door requirements, take a look at NFPA 80: *Standard for Fire Doors and Other Protective Opening Protectives* at <http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=80>.

4. Ventilation

Maintaining proper ventilation is extremely important in certain critical areas because you want air to move from clean to less clean areas. This keeps spaces that must be sterile, like operating rooms (ORs) or sterile processing

areas, free of possible contaminants that could potentially cause infection. The flow of air from one room to another is based on pressure relationships: The air in the clean area should have positive pressure so it moves out to the adjacent area where the pressure is less positive. When LSCS visit a facility, they refer to the Facility Guidelines Institute's (FGI's) *2010 Guidelines*, which recommend what rooms should have positive, negative, or neutral pressure. LSCS often use a simple tissue test to start a discussion regarding the appropriate pressure relationships. By placing the tissue in front of a door, they can immediately see if the tissue is sucked in or blown out. It's a good idea for you to perform this same test at your health care facility at the time of a Joint Commission visit—specifically, when the overhead announcement is made, welcoming The Joint Commission to your organization.

Ensuring a correct pressure relationship means making sure your ventilation systems are operating as designed and that all the components, such as filters and Variable Air Volume (VAV) boxes, are working well. Many organizations have an HVAC company or internal staff perform routine balance tests. Over time, any number of problems can occur that affect the ventilation system. For instance, vibration might close a VAV, something could block an area intake on the roof, or a fan belt might break. As with the first three hot button issues, it is important to establish a regular process of inspection to minimize problems and to service any components that do break down.

Keep in mind that LSCS will use the code and year in which the space was built to determine the appropriate pressure relationship.

The same 2010 FGI *Guidelines for Ventilation* that LSCS use are available as a free, read-only document at <http://www.fgiguideines.org/guidelines2010.php>.

5. Documentation issues with fire alarm systems

The fifth and final hot button issue concerns missing documentation of an installed fire alarm system. Many organizations lack an inventory, miss annual tests, or fail to record the results of testing based on the requirements provided with the system. Proper documentation of your fire alarm system should include the following:

- The manufacturer's instructions covering all system equipment
- Life safety drawings that depict the installed system. In most cases, the way the system is installed in your building is not exactly the same as the original designs. Make sure your drawings match what you actually have installed. Keep an accurate set

of drawings on site. You should also share the information with your local fire department.

- A record of completion by the installing contractor. The document should state that the system has been installed as designed and has been tested.
- Documented inspections and testing, along with a written plan that covers both per NFPA 72 requirements.

For more information on fire alarm documentation requirements, take a look at NFPA 72: *National Fire Alarm and Signaling Code* at <http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=72>.

As you can see, addressing these top five issues is very doable. Simply taking the time to create a plan that addresses these concerns at your hospital or health care organization goes a long way toward securing your facility and protecting everyone in it. 

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Reference

1. The Joint Commission. Top Standards Compliance Issues for 2013. *Joint Commission Perspectives*. 2014;34(4):1, 3–8.