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Briefings on Hospital Safety

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Volume 21 Issue No. 4 **APRIL 2013**

GHS training: Drilling down to the who, what, and how

As December 1 deadline looms, safety officers should have a detailed training plan

Nine months ago, when OSHA officially revised its Hazard Communication Standard to adopt the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals, the first compliance date of December 1, 2013, seemed so far way. But now that we're well into a new year, the deadline is inching closer, meaning safety officers should be thinking about how they plan to implement a training program to introduce hospital employees to the nuances of the new system.

The Hazard Communication Standard is already one of the most cited and penalized OSHA standards. According to OSHA, from October 2011 to September 2012, hazard communication was the third most cited standard among general medical and surgical hospitals. It was the second most cited standard among offices and clinics of doctors of medicine, racking up more than \$13,000 in fines.

OSHA expects the revised standard to prevent roughly 585 injuries and illnesses each year, and improve productivity for businesses that regularly handle, store, and use hazardous chemicals, with a cost savings of \$32.2 million for businesses that periodically update safety data sheets

TRENDSPOTTING



OSHA expects the Globally Harmonized System to prevent roughly 585 injuries and illnesses each year.

\$32.2 million

OSHA predicts a cost savings of \$32.2 million for businesses that periodically update safety data sheets and labels.

12/1/13

The deadline for facilities to comply with OSHA's adoption of the Globally Harmonized System of Classification and Labeling of Chemicals.

SOURCE: OSHA

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QUICK HITS

ONLINE

Researchers urge reevaluation of influenza control guidelines

Current recommendations for influenza control may not adequately protect providers during routine patient care, according to a study published recently in the Journal of Infectious Diseases. Researchers found that patients with influenza released the virus into the surrounding air; small particles containing the virus were found up to 6 feet from patients.

http://www.hospitalsafetycenter.com

CDC reports improvements in fight against HAIs

The Centers for Disease Control and Prevention (CDC) recently issued a report that noted progress in efforts to prevent healthcare-associated infections (HAI) such as central line-associated bloodstream infections and surgical site infections. The report compares data from the National Healthcare Safety Network to data from 2010 as well as a national baseline.

http://www.hospitalsafetycenter.com

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Contact Senior Managing Editor Jay Kumar at jkumar@hcpro.com or 781-639-1872, Ext. 3144.

FROM THE FIELD

"What they really want to see is that you've covered what the new pictograms look like, what the new labels look like, and then how the SDS will be in the standard format."

Marge McFarlane, PhD, CHSP, CHFM, HEM, MEP, CHEP

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(SDS) and labels.

"It has always been one of the top two or three OSHA-cited fining elements, so this is just going to ratchet it up a little bit," says **Ken Weinberg**, **BA**, **MSc**, **PhD**, consultant in environmental health, safety, and toxicology for Safdoc Systems, LLC (www.safdocsystems.com) in Stoughton, Mass. "They aren't going to be happy with people who are ignoring the laws."

Fortunately, OSHA has given healthcare facilities plenty of time to prepare. Those that have already begun the training process are ahead of the game, and those that haven't started yet still have time to implement a plan of action and train staff members before the deadline (see the sidebar on p. 5 for a full list of implementation dates).

The other good news is that training should be relatively straightforward in terms of what staff members need to know and how they should receive training.

"The final rule requires that training include the details of the hazard communication program developed by the employer, including an explanation of the labels received on shipped containers and the workplace labeling system used by their employer; the safety data sheets, including the order of information and how employees can obtain and use the appropriate hazard information," the final rule reads. In simpler terms, employees need a basic understanding of how the new system communicates chemical hazards.

"Essentially, everyone needs awareness training by December 1," says **Marge McFarlane**, **PhD**, **CHSP**, **CHFM**, **HEM**, **MEP**, **CHEP**, principal of Superior Performance, LLC, in Eau Claire, Wis. "What they really want to see is that you've covered what the new pictograms look like, what the new labels look like, and then how the SDS will be in the standard format."

Combine your training

The problem that has always existed with hazard communication training is that hospital employees don't always appreciate the importance of training that helps them recognize hazards in chemicals, McFarlane says. Fortunately, many of the bad chemicals that

existed when the standard was first created have been removed from the healthcare environment. Even though there is a new standard, this attitude hasn't necessarily changed.

"Even the lab is safer because you aren't mixing reagents anymore," McFarlane say. "It all comes prepackaged now, so the hazards have reduced. People say, 'Don't worry about hazardous chemicals because it won't happen to me,' but it's because there just aren't many horror stories anymore."

Fortunately, the switch to the GHS system may make training easier since the pictograms are easier to interpret than the symbols in the old system.

"I don't think they are going to be very forgiving on letting you correct what you haven't done."

-Ken Weinberg, BA, MSc, PhD

Weinberg suggests coupling hazard communication training with annual required fire safety training for all employees. This would include a portion of time devoted to recognizing the new pictograms, understanding the new SDS and labels, and interpreting any new language or terminology. Although very few manufacturers have begun printing the new SDS forms, safety directors can at least familiarize staff members with the new standardized format (see sidebar on p. 5).

Because frontline staff members are so busy, it may be a challenge to get them to comply with the training requirement, but tying it into annual retraining such as fire safety will minimize the extra training time.

Safety directors should also consider prioritizing certain groups depending on the amount of chemicals they routinely come in contact with.

For example, lab employees may need longer or more isolated training than a unit secretary or a nurse. Employees in the laboratory, maintenance department, environmental services, and the receiving department should be top priorities since they handle chemicals routinely.

"Depending on the size of your facility, you have to start thinking about how you're going to implement training and evaluate who are the top priority people to start first," Weinberg says. "I don't always like to prioritize it that way, but you can't train everyone at once and different people need different training."

Incorporate training as SDSs become available

In addition to basic training, safety officers can gradually integrate new SDS forms as they become available from manufacturers, McFarlane says. Safety officers should track incoming SDS materials and use them as a form of ongoing training.

"The moment you see you have products with the new symbols on them, that would be an opportunity to show those new hazard symbols and labeling to the departments using that product," she says. "It would kind of be a systematic reminder of the new pictures, language, and precautionary statements."

This approach will also allow employees to gradually acclimate themselves to the new language and terminology of GHS.

Although the chemical hazards haven't changed, the way those hazards are explicitly defined is slightly different than the old model.

"It's sort of a different paradigm of how people are thinking about those chemicals, and it's hard to change people from the old way to the new way," Weinberg says.

"But if they accept this and adopt it, they will actually know more about the chemicals and be more informed and prepared."

Reviewing the new safety data sheets

Although few companies have started printing chemical safety data sheets (SDS) under the new formula, hospitals can at least start training employees on what the new format will look like. By June 1, 2015, all manufacturers will need produce an SDS for each chemical using the same sections and headers listed below:

- Section 1, Identification: This includes product identifier; manufacturer or distributor name, address, and phone number; emergency phone number; recommended use; restrictions on use
- Section 2, Hazard(s): This identification includes all hazards regarding the chemical; required label elements
- Section 3, Composition/information on ingredients:
 This includes information on chemical ingredients;
 trade secret claims
- Section 4, First-aid measures: This includes important symptoms/effects, acute, delayed; required treatment
- Section 5, Firefighting measures: This lists suitable extinguishing techniques, equipment; chemical hazards from fire
- Section 6, Accidental release measures: This lists emergency procedures; protective equipment; proper

methods of containment and cleanup

- Section 7, Handling and storage: This lists
 precautions for safe handling and storage, including
 incompatibilities
- Section 8, Exposure controls/personal protection:
 This lists OSHA's permissible exposure limits (PEL); threshold limit values (TLV); appropriate engineering controls; personal protective equipment
- Section 9, Physical and chemical properties:
 This lists the chemical's characteristics
- Section 10, Stability and reactivity: This lists chemical stability and possibility of hazardous reactions
- Section 11, Toxicological information: This includes routes of exposure; related symptoms, acute and chronic effects; numerical measures of toxicity
- Section 12, Ecological information*
- Section 13, Disposal considerations*
- Section 14, Transport information*
- Section 15, Regulatory information*
- Section 16, Other information: This includes the date of preparation or last revision

*Note: Since other agencies regulate this information, OSHA will not be enforcing Sections 12 through 15 (29 CFR 1910.1200[g][2]).

Source: OSHA.

Document, document, document

As always, the way hospitals will verify training to an OSHA inspector is with thorough documentation. Many hospitals accomplish this through computerbased training that creates a record of every employee upon completion.

At a minimum, safety directors should document what kind of training is taking place related to GHS and who has received that training.

Although OSHA inspectors typically only investigate a facility following a complaint, it's unlikely they will be lenient on this standard since facilities have had so much time to figure out their plan for compliance.

"I don't think they are going to be very forgiving on letting you correct what you haven't done," Weinberg says.

Possible roadblocks

Although staff training should be relatively straightforward, there are a few potential roadblocks that safety directors might face at one point or another:

• Updating your written plan. In addition to training, safety directors need to ensure they update their written hazard communication plan to reflect the transition to the GHS system. Some hospitals may opt to hire a third party to rewrite their plan, but Weinberg warns against companies that will produce standard hazard communication plans that aren't specific to the unique risks of your facility.

• Consider foreign language workers. OSHA stipulates that hazard communication training needs to be done in a language that is appropriate.

"I interpret that two ways: One is the way the people understand it, so for some people that may mean simpler language, but more importantly you need to start thinking about what you're doing with foreign language workers," Weinberg says. "There are many people who speak Spanish and you need to start thinking about how you're going to train them."

Safety directors may need to build two separate training programs or hire a separate contractor to train foreign language employees. For example, in southern California there are a large number of Spanish-speaking employees.

"You'd love to have everyone speak English, but that's just not the reality," Weinberg says.

• Archiving old MSDS forms. OSHA's Hazard Communication Standard stipulates that old MSDS forms that are no longer in use need to be archived for 30 years. This rule was instituted to protect employees who may have suffered long-term health effects; for example, from carcinogens. Facilities that utilize an electronic MSDS filing system may have an option for storing old files, but as all MSDSs are replaced with SDS forms, hospitals need to consider how they will approach this potential issue.

"I don't think people that are managing the MSDS system are thinking, 'Where do I archive that information for 30 years?' "McFarlane says.

Implementation dates for GHS

The implementation dates for the new Hazard Communication Standard are as follows:

- December 1, 2013—Employers must train all employees on the new label elements and SDS format.
- June 1, 2015—Chemical manufacturers, importers, distributors, and employers must comply with all modified provisions of the law, except distributors, who have until December 1, 2015 to ship products labeled
- by the manufacturer under the old system.
- **December 1, 2015**—Distributors are required to comply with all modified aspects of the law.
- June 1, 2016—Employers must update alternative workplace labeling and hazard communication programs as needed, and provide additional training to employees for newly identified health or physical hazards.

Source: OSHA.

OSHA HazCom Pictograms



Hazard Communication Standard Pictogram

As of June 1, 2015, the Hazard Communication Standard (HCS) will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

HCS Pictograms and Hazards

Health Hazard Exclamation Mark Flame • Carcinogen Irritant (skin and eye) Flammables Pyrophorics Mutagenicity Skin Sensitizer Reproductive Toxicity Self-Heating Acute Toxicity (harmful) Respiratory Sensitizer • Emits Flammable Gas Narcotic Effects Target Organ Toxicity Self-Reactives Respiratory Tract Aspiration Toxicity • Organic Peroxides Hazardous to Ozone Layer (Non-Mandatory) Gas Cylinder **Exploding Bomb** Corrosion • Skin Corrosion/ Explosives Gases Under Pressure • Self-Reactives Burns Eye Damage • Organic Peroxides Corrosive to Metals Flame Over Circle **Environment** Skull and Crossbones Oxidizers Aquatic Toxicity Acute Toxicity (fatal or toxic)

For more information:



Occupational Safety and Health Administration

U.S. Department of Labor

www.osha.gov (800) 321-OSHA (6742)

Source: OSHA.

OSHA 3491-02 2012

NFPA makes changes to the 2012 edition of the *Life Safety Code*

The 2012 edition of NFPA 101: *Life Safety Code*® (*LSC*) is only 18 months old, and already the NFPA has issued changes to its new standard.

A Tentative Interim Amendment (or TIA as NFPA refers to them) is an amendment to one of the current or previous codes or standards, and if approved will automatically become a proposal for the next edition of the document. The process for a TIA to become accepted includes gaining approval from the appropriate technical committee, the correlating committee for that document, and finally approval from the Standards Council.

The TIA that has impacted the 2012 edition of the *LSC* is TIA 12-2, effective as of November 19, 2012.

This TIA alters the conditions with which hospitals and nursing homes must comply when they choose to have a cooking facility open to the corridor.

Although no national accreditation organization for hospitals and nursing homes has adopted the 2012 edition as yet (they are still using the 2000 edition), CMS issued a memorandum last year allowing healthcare occupancies to adopt certain sections of the 2012 edition. These latest changes by NFPA will affect one of those sections allowed by CMS.

Sections 18/19.3.2.5.3 in the 2012 edition of the *LSC* are located in the new and existing healthcare occupancy chapters and outline specific procedures that organizations must follow concerning cooking facilities. The code permits small cooking facilities that are used to prepare meals for 30 or fewer persons to be open to the corridor, provided the facility meets multiple conditions.

One of those conditions requires the installation of not less than two AC-powered photoelectric smoke alarms in the area of the cooking equipment, and the smoke alarms must be interconnected. Interconnected means when the audible signal on one smoke alarm goes off, it activates the audible signal on the other smoke alarms as well.

But according to the code, the smoke alarms cannot be any closer than 20 feet to the cooktop or range. In its Annex section, NFPA explained that the intent of requiring smoke alarms rather than smoke detectors was to prevent false alarms from initiating the building's fire alarm system and notifying the fire department. It is believed that the use of smoke alarms that are photoelectric rather than ion sensing would reduce the number of nuisance alarms in cooking areas.

The TIA now requires organizations to provide AC-powered photoelectric smoke alarms that have battery backup. According to the TIA, the new code language states that the smoke alarms are permitted to be located outside the kitchen area where such placement is necessary for compliance with the 20-foot minimum distance criterion.

The TIA explains it is more important to maintain the 20-foot minimum spacing criterion between the smoke alarm and the cooktop or range, than to ensure that the smoke alarm is located within the kitchen area itself.

The TIA continues on to say that a single system smoke detector will be permitted to be installed in lieu of the smoke alarms provided the following criteria are met:

- The detector is located not closer than 20 feet and not further than 25 feet from the cooktop or range
- The detector is permitted to initiate a local audible alarm signal only
- The detector is not required to initiate a buildingwide occupant notification signal
- The detector is not required to notify the emergency forces
- The local audible signal initiated by the detector is permitted to be silenced and reset by a button on the detector or by a switch installed within 10 feet of the system smoke detector

The TIA further explains that system smoke detectors that are required to be installed in corridors or spaces open to the corridor by other sections of the code are not permitted to be used to meet the requirements stipulated above, and they cannot be located any closer than 25 feet to the cooktop or range.

Published accounts from NFPA on the rationale for this change indicate there was an urgent need to approve this TIA based on the CMS memo published last year. **Thomas Jaeger, PE,** president of Jaeger and Associates, LLC, in Great Falls, Va., who submitted the TIA, wrote in his substantiation that the March 9, 2012 S&C Letter 12-21-LSC indicates that CMS will immediately accept waivers for healthcare occupancies to use certain requirements of the 2012 edition of the *LSC*. One of those requirements is the open kitchen to the corridor.

"This is an interim step by CMS to allow the construction of 'household units' prior to the adoption of the 2012 *LSC* by CMS," wrote Jaeger.

The rationale for the urgency of this TIA is that since CMS has already issued a memo indicating its willingness to accept the 2012 *LSC* on kitchens open to the corridor (with limitations), the 2012 *LSC* should reflect the proper conditions that the kitchen must meet.

Jaeger continued on to write:

The changes in the proposed TIA are needed to implement CMS's policy to immediately allow open kitchens that comply with the 2012 LSC. The TIA puts back in the 2012 LSC the language the Technical Committee developed and approved for the 2012 LSC at the comments period that brings attention to the fact that the 20 foot clearance requirement for smoke alarms from cooktops or ranges is permitted to fall outside the kitchen area. This necessary guidance to designers and AHJs was lost when the LSC was amended due to the acceptance of a [notice of intent to make a motion] that was not intended to cause the loss of the item. The publication of this TIA would allow CMS to include the needed modified language into the federal rule making process for the adoption of the 2012 LSC.

According to NFPA documentation, the members of the Technical Committee on Health Care Occupancies voted to either approve the TIA or to not approve it. Of 29 eligible members, 25 voted to accept the TIA on technical merit, but only 23 voted to accept the TIA on emergency nature.

One dissenting member wrote, "It appears to me that CMS can implement this policy without a TIA and the justification for emergency nature does not meet any of the evaluation factors."

Another member wrote, "The only reason for not waiting for the next cycle to implement this change appears to be the concern that CMS will adopt the

2012 edition but not later editions of NFPA 101. I am conflicted as to whether this is an appropriate reason for issuing a TIA and hope the Standards Council will address this issue in their deliberations."

Another member of the Technical Committee, **Henry Kowalenko**, supervisor of the Design Standards Unit, Office of Health Care Regulation, Illinois Department of Public Health in Springfield, believes the emergency nature of the TIA was valid. He wrote:

The determination criteria of whether a TIA is of an emergency nature states the reasons "may include, but are not limited to," which leaves a lot of leeway for committee members to decide on their own whether the TIA is of an emergency nature or not. Regardless of the fact that the justification for the emergency nature of the change mentioned CMS, the change makes a lot of sense. The 2012 code permits the cooking equipment to be open to the corridor.

"The committee intended to add the smoke alarms in order to avoid the nuisance false alarms. The committee also specified a minimum of 20 feet from the stovetop. The committee's intent was obvious: Do not put the smoke alarms too close to the stove to avoid false alarms.

"At the time, the committee did not anticipate smoke alarms would be placed at a distance that would, in effect, render them useless for their intended purpose. So this TIA makes sense to clear up the intent of the placement of the smoke alarms.

The final vote from the Technical Committee members in September 2012 provided the necessary majority required for passage by a wide margin, more than 3:1. The TIA was then forwarded to the Standards Council for approval.

Whatever concerns the Standards Council had, they apparently were not sufficient to prevent the TIA from being issued. According to the announcement from NFPA, the Standards Council issued the TIA 12-2 on October 30, 2012, with an effective date of November 19, 2012.

EDITOR'S NOTE

You may download the entire TIA 12-2 at www.nfpa.org/assets/files/aboutthecodes/101/tia101-12-2.pdf.

Partnering with the accreditation organizations

BHS' sister newsletter, Healthcare Life Safety Compliance, recently received an email from a reader who offered the opinion that accreditation organizations are ineffective partners with their respective hospitals when it comes to ensuring a safer environment. Although HLSC did not necessarily endorse the reader's position, the newsletter approached The Joint Commission and the AOA/Healthcare Facilities Accreditation Program (HFAP) and asked them a couple questions on the subject. The replies from each accreditor were from their respective official spokespersons.

What processes have you taken to work with (or partner with) healthcare organizations to assist them in meeting Environment of Care or Life Safety standards?

The Joint Commission's response

The Joint Commission actively partners with its accredited organizations in many ways. Two of the most visible ways this partnership takes place is through the *Statement of Conditions*TM and the electronic Plan for Improvement (PFI) process, which was developed to assist facility managers in managing any building deficiencies. If a deficiency is identified, an accredited organization may create a PFI to identify its management strategies.

Accredited and certified organizations also have free access to The Joint Commission's Leading Practice Library, which provides real-life quality and safety solutions that have been successfully implemented and submitted by healthcare organizations and reviewed by Joint Commission standards experts. By accessing the Library, which can be done through each accredited organization's extranet page, organizations can browse through specific topics of interest that may be relevant to their own organization. These leading practice documents are also cross-referenced to corresponding standards chapters in the Joint Commission manuals.

In addition to these tools, representatives from The Joint Commission Department of Engineering spoke to over 5,000 individuals at conferences, webinars, and other venues during 2012, and they discussed topics

with the field that can help healthcare organizations improve patient safety. The Joint Commission also releases a list of the top 20 standards found noncompliant in the previous year. This list can be used by organizations to assess specific areas and identify needed improvements. Based on 2012's list, for example, if a hospital's corridors are cluttered and do not comply with Joint Commission standards, facility managers can use the list to demonstrate to their leadership that clearing corridor clutter is an important area for improvement.

The Joint Commission's Director of Engineering, George Mills, MBA, FASHE, CEM, CHFM, CHSP, was recognized nationally in 2011 by the American Society for Healthcare Engineering (ASHE) when he received the Professional Service Award, acknowledging his work to communicate directly with accredited organizations and facility managers in many areas. Part of this communication has been achieved by attending and participating in Q&A sessions at annual national conferences, including those hosted by ASHE, the NFPA, and the Association for the Advancement of Medical Instrumentation (AAMI), in addition to Joint Commission Resources events and free Joint Commission events, all of which have helped healthcare organizations better understand the intent of Joint Commission standards and the importance of facility managers.

HFAP's response

The standards that HFAP has developed over the many years of practice are directly based on the CMS *Conditions of Participation (CoP)* and their related standards. It is the philosophy of our organization to ensure our accredited organizations are compliant with the *CoP*s so they do not encounter any problems or issues related to noncompliance when a state agency conducts a validation survey at their facility.

We provide educational sessions in the form of webinars and informational materials on life safety and physical environment issues to our accredited organizations, free of charge. In addition, a new individual has joined our standards interpretation staff with specific education and experience on life safety and physical environment issues and is available every day to our organizations to answer any questions they may have.

Our standards have undergone a thorough review to ensure accuracy and relevancy with today's healthcare environments. Deleting redundant standards or non-relevant standards is our way of ensuring our accredited organizations are not wasting their time and valuable resources complying with meaningless and frivolous standards.

What training have you provided to your surveyors to be more consultative or educational rather than punitive toward the organization during the survey process?

The Joint Commission's response

Joint Commission surveyors are experienced health-care professionals trained to provide expert advice and education during an on-site survey. Surveyors are trained to use a survey process that is data-driven, patient-centered, and focused on evaluating the actual care processes of each organization. In addition, each Joint Commission surveyor is trained not only to evaluate an organization, but to provide education and "good practice" guidance that will help staff continually improve their organization's performance. All Joint Commission on-site surveys are designed to be organization-specific, consistent, and to support the organization's efforts to improve compliance performance to achieve a high level of patient safety and quality of care.

In addition, surveyors are trained to use and implement The Joint Commission's tracer methodology.

Tracer methodology is an evaluation method in which

surveyors select a patient, resident, or client and use that individual's record as a roadmap to move through an organization to assess and evaluate the organization's compliance with selected standards and the organization's systems of providing care and services. Surveyors retrace the specific care processes that an individual experienced by observing and talking to staff in areas that provided care. This process allows surveyors to look for compliance trends that could point to system-level issues within the organization, and can provide opportunities for surveyors to deliver important education to an organization's staff and leaders that includes leading practices from other healthcare organizations.

HFAP's response

Our surveyors are selected from the workforce of healthcare organizations across the country. They continue to work in their selected fields and perform survey duties for HFAP on an interim basis. This approach keeps each surveyor active and current in their chosen profession, which is appreciated by the organizations being surveyed.

Training is ongoing through educational webinars, quarterly conference calls, and monthly newsletters. Although [surveyors] are provided with the tools they need to evaluate a facility and to make the correct decisions on standards compliance, it is their consultative and educational approach that is carefully honed to ensure a nonpunitive and positive survey outcome.

Although life safety and physical environment deficiencies must be cited for HFAP to continue to have deeming authority from CMS, the positive discussions resulting from the identification of the deficiencies remain the focal point of our surveys.

Preventing penetrations in rated barriers

Fire and smoke barrier management has long been an issue with national accreditors, and rightfully so: Even the smallest unsealed penetration in a smoke compartment barrier may transmit smoke across barriers or between floors.

When a fire develops, the air in the room becomes

pressurized due to the buildup of heat. As the pressure mounts, smoke finds every gap, crack, and hole in the rated barriers and makes its way to other compartments or floors. The spread of smoke is a deadly force in an institution where the patients are unable to rescue themselves.

Ever since The Joint Commission brought on *Life Safety Code*® (*LSC*) experts as surveyors in 2005, the issue of penetrations in fire- and smoke-rated barriers has been close to the top of the list every year in terms of the number of findings. Almost every year, it has been cited on more than 50% of surveys, only outpaced by the problem of corridor clutter.

George Mills, MBA, FASHE, CEM, CHFM, director of engineering at The Joint Commission, speaks each year at the annual convention of the American Society of Healthcare Engineering (ASHE). In San Antonio last summer during ASHE's 49th Annual Conference & Exhibition, Mills shared his thoughts on rated barriers.

"Last year when I spoke with you, I asked you to manage your rated barriers better," said Mills. "The number of findings on penetrations in rated barriers has reduced, but it's still showing up as a high number in our surveys [52% of all surveys in 2011]. You still need to be diligent in managing those barriers."

According to information provided by the accreditor, penetrations in rated barriers declined further in the first half of 2012, but were still cited in 47% of all surveys, keeping their second-place spot behind corridor clutter. That is definitely not the improvement that the accreditor was hoping for.

But The Joint Commission is not the only accreditation agency concerned about rated wall penetrations. Det Norske Veritas, operating as DNV Healthcare, Inc. (DNVHC), has taken action to reduce rated wall penetrations by adding language to its accreditation requirements.

"DNVHC now requires client hospitals to develop a barrier wall and ceiling permit system," says **Randy Snelling,** chief physical officer of DNVHC. "Changes to the Interpretive Guidelines [in] the Physical Environment standard PE.2 requires hospitals to include a written permit system for fire and smoke barrier wall penetrations in their fire control plan."

The actual changes to the Interpretive Guidelines are as follows:

The Life Safety Management system shall include in the elements of SR.4d [related to PE.2] a written plan for the protection of the integrity of hospital smoke and fire barriers. The plan should include:

- Name(s) of responsible hospital staff for barrier protection
- Requirement for written permission for anyone (including all hospital staff, contractors and vendors) to penetrate a smoke or fire barrier wall, ceiling or floor
- Input from infection control and prevention practitioner on critical clinical areas prior to issuance of written permit for performing work on barriers
- Establishment of monitoring process to ensure all work is completed correctly

The reason DNVHC created this interpretive guideline was to help facility managers prevent uncontrolled penetrations. Finding existing penetrations is not an improvement in patient safety if new ones are being created unbeknownst to the appropriate staff. Consequently, it became evident to DNVHC that the hospital would need to develop a process that resulted in controlling the creation of unknown and unrepaired penetrations.

"In an ISO-compliant hospital [all DNVHC Client hospitals must achieve ISO 9001:2008 compliance in three years; ISO is an abbreviation for the International Organization for Standardization], it is unthinkable that these penetrations could be controlled entirely by facility staff alone," says Snelling. "It is essential that this policy includes other departments."

DNVHC physical environment surveyors initially cite failure to follow this Interpretive Guideline as evidence of noncompliance with National Integrated Accreditation for Healthcare Organizations (NIAHO®) standards because this guideline resides in the hospital fire plan (isolation of fire). However, if the policy is not developed through a Corrective Action Plan, then the finding is elevated on the next survey, which requires senior leadership to adequately address the identified issue(s).

According to Snelling, when hospital staff must develop a policy that includes different departments, senior leadership will need to be involved. ISO requires that this communication is facilitated by the organization and that appropriate resources are supplied to repair and prevent impairments (in this case, penetrations).

"There must be involvement by the infection control department to ensure this work will not create infection

control hazards," says Snelling. "The purchasing department should be involved to ensure that the purchased product is verified [in this case, the penetration is inspected to ensure it is repaired completely with the correct materials] before payment is made. In-house IT technicians shall be directed [by senior leadership] to adhere to this policy because many penetrations are created by hospital staff and not just outside contractor/vendors. And lastly, the appropriate facility staff must be empowered to ensure all work is allowed only by use of a documented permit system."

But there are solutions to rated wall penetrations that are available to the facility manager and have been talked about for years. One of the best is to have a proactive inspection program, followed up by a permit program (as described by DNVHC), ensuring nobody is above a ceiling without the facilities department knowing about it.

Steven Spaanbroek, MBA, SASHE, CHFM, CHC, managing director of MSL Healthcare Consulting, Inc., of Barrington, Ill., discussed strategies for rated barrier management during a recent ASHE video presentation to its members.

"I see a lot of issues related to fire and smoke barrier penetrations," said Spaanbroek. "One of the things that Joint Commission has said is they want to get this under control. I understand why because this is something that is manageable. When you look back several years ago we had a process that we called the Building Maintenance Program [BMP], which was a proactive approach to managing barriers."

The BMP was developed in the 1990s by George Mills and Doug Erickson on behalf of ASHE and was presented to The Joint Commission for consideration. (Mills was not employed by the accreditation agency at that time.) The Joint Commission liked the BMP so much, it was included in the accreditor's standards as an option for hospitals to consider.

To have a successful BMP, a hospital had to conduct routine inspections that involved 11 different features of life safety, smoke compartment barrier walls being one of them. If a deficiency was found, it would be recorded as such and then resolved. All of the deficiencies for that particular feature were tallied and a percentage of compliance was determined. If the percentage of compliance was 95% or greater, then the BMP was

considered successful, and The Joint Commission said it would not cite the organization for any deficiencies discovered during a survey on that particular feature of life safety. The BMP became very popular with facility managers as well as The Joint Commission. Facility managers liked it because a successful BMP would exempt them from receiving surveyor findings on any of the 11 features of life safety. The Joint Commission liked the program because it got the hospitals to proactively search for their deficiencies and resolve them. Hospitals actually became safer for the patients because of this proactive approach to compliance. It was a win-win situation for everyone.

That is, until the federal government got wind of the program. The basic premise of CMS' *Conditions of Participation (CoP)* is the hospital has to be in compliance with all of the provisions of the *LSC* (2000 edition). The *CoP*s do not allow a hospital to be 5% out of compliance with the *LSC*. Even though the BMP was proven effective in reducing the overall number of deficiencies, The Joint Commission had no choice in the matter.

After much discussion, the accreditor relented and discontinued the practice of not citing an organization for certain life safety deficiencies if it had a successful BMP. Even though the accreditor encouraged hospitals to develop and continue their BMPs, many facility managers dropped the BMP since they no longer receive any protection from survey findings by having one. This may prove to be a shortsighted decision on their part, because findings on rated barrier penetrations continue to be a major problem.

"The BMP has actually helped the situation tremendously," said Spaanbroek. "But in terms of best practice, what I've seen are organizations that have a management program that prevents the penetrations from happening to begin with."

Permit programs, like the one required by DNVHC, track vendors (such as IT cabling contractors) who create a lot of the problems to begin with; they also allow for ongoing prevention rather than just an inspection and correction process. "As we add technology to our hospitals, there are more opportunities to have problems in our facilities," said Spaanbroek. "The way to get this under control is to have a very good policy and procedure program for barrier management."