Success and revelations come with a first-time infant security fair

Security officials at Brigham and Women’s Hospital in Boston faced a conflict.

On one hand, the prevention of infant abductions is a hospitalwide concern that every employee must recognize. However, much of the training and education to that end took place only with staff members in the maternity and pediatric units.

“We just sort of forgot about the rest of the hospital,” recalls Robert Chicarello, assistant director of security and parking.

The solution was simple and turned out to be a hit: The hospital held its first ever infant security fair. “We even came up with a slogan: ‘Infant security is everyone’s business,’ ” says Chicarello, who helped organize the two-day event in May.

The fair was inexpensive, entertaining, and perhaps most importantly, it rooted out some training concerns.

Organizers set up the fair outside the hospital’s main cafeteria from 11:30 a.m. to 1:30 p.m. on two consecutive days to take —INSIDE—

Safety officers can act as a bridge between nurses and contractors

Any kind of project—whether it’s a new addition, a renovation to a wing, or smaller work in the corridor of your building—requires contractors working at the site to remain in harmony with your hospital’s safety policies and staff members.

“It is the interaction of the project manager and the safety manager that will provide the bridge—and the direct contacts and resources—to ensure the smooth operation of a project,” Weinberg says.

It’s easy for safety officers to share information if they put some thought into spreading the word among all affected parties, says Ken Cates, a principal at Northstar Management Company in St. Louis, which provides project planning services. The following ideas can help...
Infant security

advantage of the lunchtime crowd. People enjoyed getting photographs with McGruff the Crime Dog, and an infant cardiopulmonary resuscitation doll caught some folks by surprise.

“People walked by and did a double-take because they thought it was a real baby in a bassinette,” Chicarello says.

Free stuff? All right!
Volunteers who staffed the tables handed out custom pens and one-page fliers. On one side of the sheets were facts about infant security, and on the other side were quiz questions. Employees took the quizzes and turned them in for raffle drawings, which included 10 prizes of free lunch at Au Bon Pain restaurant, and a grand prize of a $300 DVD player.

All the prizes were donations. Chicarello convinced one of his security vendors to contribute the DVD player.

He knows that prizes and simple items such as pens are an incentive to get people to attend a fair. “I go to [trade] shows,” he says. “The booths that have things—even if they’re little handouts—people tend to go to those.”

Keeping up with demand
Organizers printed 500 quizzes for the first day and ran out. The next day, they brought another 1,000 copies and gave away 750, so the quizzes made it into the hands of about 12.5% of the hospital’s 10,000 employees. In the end, 775 staff members turned in their quizzes for the raffles, which Chicarello considers a success.

The quiz offered multiple-choice answers on topics such as the following:

- Typical abductor profiles
- The number of ways in and out of the building
- What to do if you suspect someone kidnapped a baby
- The people responsible for infant security in the hospital

Other sites can easily adapt these questions and answers for their own settings. More help is also available from the National Center for Missing and Exploited Children by downloading tips for health care professionals at www.missingkids.com/en_US/publications/NC05.pdf.

This isn’t ‘Final Jeopardy!’
The quizzes weren’t brainteasers. Organizers wanted the questions to be easy to answer and fun to read, Chicarello says.

For example, one question asked what an employee should do if he or she saw a suspected infant abductor enter a car outside the hospital. Should the worker

- check out the cool vehicle?
- take down the make of the car and the plate number?
• jump onto the hood like a movie star?

The second bullet is of course the right choice. “We tried to make the answers obvious” to help staff members remember their training, Chicarello says.

The need to reinforce
One question in particular stumped many people and provided a training opportunity. The question asked where people should go if they hear a “code pink” paged for an infant abduction.

“The problem is everyone responds to the [newborn unit] floor,” Chicarello says. “We don’t want you to go to that floor.” Instead, upon hearing a code pink, staff members should look around their own area, particularly watching exit doors and elevators for unusual behavior or suspicious people.

“More people got [that question] wrong than got it right, so it’s something we should focus on,” he says. He plans to talk to the public affairs office to see whether he can get a refresher brief on this training published in the hospital’s internal newsletter.

A bunch of positives
The fair raised infant security awareness, which for a hospital the size of Brigham and Women’s—the facility houses 719 beds—is a worthy result. “We’re just so big and there’s so many ways to get out of this place, so the more eyes and ears you have,” the better chance employees have to foil an abduction, Chicarello says.

The fair wasn’t a budget buster by any means. As mentioned earlier, companies donated the prizes and the people who staffed the fair were volunteers. It cost some money to print the quizzes, and about $800 to order and ship the custom fair pens. “You can be as creative as you can afford to be,” Chicarello says.

The fair also acted as a social event, bringing employees together. “It was fun. You got to talk to people you don’t see that often and educate them, too,” he says.

Such efforts look good to surveyors, particularly in light of the restructured environment of care (EC) standards from the Joint Commission on Accreditation of Healthcare Organizations. The renumbered EC.2.10 (security risks)—effective January 1, 2004—includes a new, specific reference to carrying out responses for infant abductions. (For more about the standards changes, see the story on p. 8.)

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Use these tips to prevent infant abductions

If a “code pink” announcement for an infant abduction goes out over the paging system, all staff assume the responsibility to stop suspicious individuals, question them, and inspect their bags.

If these suspicious people don’t comply with employee requests, what should workers do? The safety of the infant or child is the first priority, so don’t take any action that could cause a potential abductor to harm the baby. Don’t touch or grab the suspect, or use a loud or threatening voice. Instead, when reacting to any alarming situation, stay calm and take the following steps:

- Approach the suspicious person in a non-threatening manner; facing the person at a safe distance.
- Speak with a calm, steady voice. Explain that the hospital is on alert for a possible infant abduction and that staff members are stopping everyone.
- Instruct the nearest coworker or bystander to immediately call for security assistance.
- Attempt to delay the suspect by keeping him or her in front of you—even walk backward slowly if necessary. If you can’t prevent the person from leaving, don’t physically touch him or her and don’t do anything that could possibly endanger the infant.
- Make note of any of the suspect’s identifying features and any bags or bundles he or she carries.

Safety officers

smooth the communication between nurses and construction teams:

1. Warn affected staff members about any planned utility/operations shutdowns. Imagine the argument a project team will have if nobody lets the nurses on a unit know about a scheduled water pipe shutdown for the area.

It’s not hard to get that word out. “Planning for shutdowns? Anybody worth a flip can do that,” says Cates, who spoke during the American Society for Healthcare Engineering’s International Conference on Health Facility Planning, Design, and Construction in Phoenix earlier this year.

The key is once you know a shutdown is necessary, start planning for it well ahead of time. That doesn’t mean calling a meeting among clinicians two days before the water goes off, he says.

2. Let the nurses know whom to call. The safety officer should work with contractors to post emergency contact information in the hallways. These signs alert nurses and other caregivers about what to do if something in a project area goes awry.

For example, this preplanning helps cover situations such as a third-shift nurse hearing water running out of a pipe at 2 a.m., Cates says. Hospitals should expect any contracting firm they work with to take that kind of urgent phone call.

“If you don’t want to be woken up at night, go build a Wal-Mart,” he tells contractors. “[Health care is] a different kind of business.”

3. Widely distribute meeting summaries. If, for example, your hospital decides to increase positive airflow rates into a construction area, the safety officer should pass that information on to nurses, project supervisors, contractors, and even subcontractors.

“Summarize the points and the decisions needed, and communicate them,” Cates says.

This step should occur after any type of progress meeting, too. E-mail is an easy way to quickly reach all the people who need to know what discussions took place.

4. Make preconstruction meetings mandatory. These get-together help establish the general conditions under which subcontractors work. Areas to cover include the following:

- Security requirements, such as identification badges and employee access to project areas
- Procedures for deliveries and trash removal from the construction site
- No-smoking polices
- Limits on personal items, such as radios
- Acceptable bathrooms for contractors to use and places where they can eat

Ignoring these items can taint a project. A great relationship between a hospital and a construction firm will sour the moment that nurses complain about a trash removal problem, Cates says.

“This is the stuff that leaves a bad taste in the mouth,” he adds.

5. Hold contractor safety orientations. This is not new advice, but it still bears repeating, even for workers who will just be in the building for two hours, Cates says.

Successful orientation requires time and good people skills from the hospital representative and the project superintendent, he says. Contractors who resist this type of education risk saddling themselves with a poor image in a competitive environment.

Hospitals are “more sophisticated with whom they
hire,” Cates says. Contractors “can’t show up in a pickup truck with a magnetic sign [that says] ‘low bidder.’”

Staff members will feel more comfortable knowing contractors received this important information, too. Consider issuing hardhat stickers or badges that say a construction worker went through safety orientation, Cates says.

Hospitals may also find it useful to share regulatory documents with contractors that the facilities already have to complete.

One such example is the Statement of Conditions, an idea we look at more in the related story below.

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**Share your SOC with project teams**

Designers and contracting firms can take a wealth of knowledge about your hospital from the basic building information in Part 2 of the Statement of Conditions (SOC).

“It’s right there, ready for you to look at,” says Ken Cates, a principal at Northstar Management Company in St. Louis.

For example, Part 2 requires hospitals to include a sketch, drawing, or floor plan for each occupied floor.

These drawings must show exterior exit doors, exit stairs, smokeproof enclosures, horizontal exits, exit passageways, fire barriers, fire compartments, smoke barriers, and linen and trash chutes—all potentially useful information for contractors and designers.

**Keep an eye open**

By familiarizing contractors with your SOC, it allows you to raise the expectation level for these workers. For example, contractors may be more likely to find life safety deficiencies if they know what to watch for, Cates says. The same idea goes for any plans for improvement (PFI) your hospital files with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) through Part 4 of the SOC.

Hospitals should also find out whether contractors own a copy of the 2000 Life Safety Code (LSC), which the JCAHO and Centers for Medicare & Medicaid Services adopted this year.

“I think it’s important for field people to understand [the LSC],” Cates adds.

**Information overload?**

Speaking of the PFI, avoid putting too much information in that form. That’s a common mistake hospitals and other health care facilities make, says A. Richard Fasano, manager of the Western office for Russell Phillips & Associates in Elk Grove, CA.

If the issue in question isn’t a requirement in the LSC, don’t include it on the PFI, says Fasano, who spoke during a May audioconference sponsored by The Greeley Company, a division of HCPro, Inc., in Marblehead, MA. HCPro publishes **BHS**.

For example, Fasano once saw a facility identify a landscaping problem on its PFI. He asked an official why he included the item. “His reply was, ‘If it’s on the SOC, we’ll get money for it,’” Fasano recalls.

**Skip the flora**

While that strategy may have some merit from a budget standpoint, it offers little advantage during a survey.

“One obviously, the Joint Commission doesn’t care about the shrubs outside your building,” because there is likely no LSC deficiency related to it, Fasano says.

Editor’s note: Find more information about LSC requirements in our special insert included with your issue. We look at how the LSC regulates mixed occupancies, something many hospitals deal with.
New CDC recommendations

Health officials strengthen the ICRA’s foundation

After awaiting their release for more than two years, what can hospitals immediately take from the new environmental infection control (IC) recommendations from the Centers for Disease Control and Prevention (CDC)?

Perhaps most importantly, the Guidelines for Environmental Infection Control in Healthcare Facilities throw its support behind the use of an infection control risk assessment (ICRA), which is a series of steps designed to prevent exposure to common environmental hazards championed by the American Institute of Architects (AIA).

The CDC “reaffirms and provides supporting literature for doing an [ICRA],” says Judene Bartley, MS, MPH, vice president of Epidemiology Consulting Services in Beverly Hills, MI.

Staying ‘in sync’
“[The ICRA] began with the AIA, but many individuals communicated [with the CDC] during this review to ensure that we were ‘in sync’ and placing the ICRA on a sound basis,” says Bartley, who helped review the CDC recommendations. The agency’s guidelines provide “excellent material for carrying out an ICRA for both ventilation and water-associated issues.”

Federal health officials encourage hospitals to conduct ICRA before starting
• construction, demolition, renovation, or repair activities to the building
• any other activities expected to generate dust or water aerosols

Throughout its 470-plus recommendations, the CDC makes many references to requirements found in the AIA’s 2001 Guidelines for Design and Construction of Hospitals and Health Care Facilities.

The CDC also makes numerous mentions of the Joint Commission on Accreditation of Healthcare Organizations’ (JCAHO) requirements for emergency planning for power and utility failures and the Occupational Safety and Health Administration’s bloodborne pathogens standard.

Online poll results

Has your facility performed an infection control risk assessment in the last six months for a construction or renovation project?

<table>
<thead>
<tr>
<th>Yes</th>
<th>79%</th>
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<tbody>
<tr>
<td>No</td>
<td>21%</td>
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</table>

Source: Compiled on healthsafetyinfo.com in July 2003. Our sampling is not scientific.

August program digs into ICRA

If you need help analyzing your patient safety risks before construction activities, join us for an upcoming audioconference that looks at the American Institute of Architects’ infection control risk assessment (ICRA).

During our live program on August 13—called “How to create and implement an ICRA”—you’ll learn the latest about infection control regulatory requirements, receive advice on how to monitor your hospital’s ICRA, and see how to apply it to daily maintenance duties.

For more information, go to www.healthsafetyinfo.com or call our Customer Service Center at 800/650-6787.
Updates and unions
The CDC guidelines, released in part on June 4, combine provisions from several older publications and update them with the latest recommendations from federal health officials.

They describe steps to take to prevent infections to patients and health care workers caused by organisms in the air, water, and other environmental areas. They also discuss for the first time IC concerns related to animals in hospitals and water quality in hemodialysis settings.

Further, the recommendations complete an alliance of quasi-regulatory documents that delve into health care IC. First, the AIA’s guidelines mandate that sites undergoing new construction and major renovations complete an ICRA.

Meanwhile, under its environment of care standards, the JCAHO requires hospitals to complete a preconstruction risk assessment that includes how a project affects IC. The JCAHO also references—but doesn’t mandate adherence to—the AIA guidelines, and the accreditor will likely encourage people to use the revised CDC recommendations.

All for one
The provisions of the CDC, JCAHO, and AIA share a theme of halting patient infections due to environmental causes, says Wayne Hansen, PE, REA, CEM, director of engineering at Mintie Corporation in Los Angeles.

The CDC guidelines are important because “the CDC has immense credibility, and this document was in the works for so long by so many notable professionals,” Hansen says. In other words, expect authorities to endorse it.

A key discussion centers around waterborne bacteria Legionella, including treatments for decontaminating hospital water systems, IC strategies for preventing Legionnaires’ disease, potential sampling sites, and an appendix that looks at sampling strategies.

“The guidelines should be a major help for everyone across all geographic regions with major or minor problems with Legionella,” says Bartley, who sits on a JCAHO panel that is reviewing the accreditor’s IC standards.

The data is coming
At this point, the released guidelines only contain the recommendations from the CDC. The agency plans to publish the scientific background for these suggestions and other appendices, though that could be months away, says Joan Wideman, MT(ASCP) SLS, MS, CIC, owner of JMW Consulting in Clawson, MI.

“It is very important for [hospital staff members] to remain up-to-date on this new information as it becomes available,” Wideman says.

Go to www.cdc.gov/ncidod/hip/enviro/guide.htm to read the CDC’s recommendations online.

A look at the hot spots
The Centers for Disease Control and Prevention’s Guidelines for Environmental Infection Control in Health Care Facilities offer recommendations about the following concerns:

- Air-handling systems
- Construction, renovation, and demolition
- Ventilation requirements for protective environment rooms that feature positive airflow, isolation rooms, and operating rooms
- The spread of waterborne microorganisms, including specific discussion of Legionella
- Water system repairs
- Cleaning and disinfecting surfaces
- Cleaning spills of blood and body fluids
- Carpeting and cloth furnishings
- Air, water, and environmental surface sampling
- Handling laundry and bedding
- Animals in health care facilities, including those for research and those that might need emergency treatment in a human medical center
- Handling, transporting, and treating regulated medical waste
The renumbered environment of care (EC) standards look a little different than a draft version released a few months back, but for the most part the requirements remain the same.

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) in June posted an online copy of the “prepublication” EC standards, which will chop the current list of requirements from 40 standards to 24. Also on the Web is a crosswalk from the JCAHO detailing how the current and upcoming standards interconnect. The renumbered standards take effect on January 1, 2004.

There are changes in a few of the standards’ elements of performance (a term that replaces intent statements). They include the following:

- The no-smoking standard (new EC.1.30) requires hospitals to identify ineffective policies and make appropriate changes, rather than having a program with absolute enforcement of no-smoking rules
- A new element under the security standard (EC.2.10) specifically requires procedures in the event of an infant or pediatric patient kidnapping
- The JCAHO consolidated interim life safety measures (EC.5.50) and medical gas and vacuum requirements (EC.7.50) into their own individual standards

The exact scoring of the standards remains unofficial as of early July. Earlier this year, the JCAHO indicated the scoring would change from a five-point scale to a three-point system, but that may not be the final version, says Dean Samet, CHSP, associate director of standards.

At press time, JCAHO committees were making final adjustments to the scoring system, which will likely get its first public showing when the updated Comprehensive Accreditation Manual for Hospitals comes out in a few months, Samet says.

Editor’s note: Go to www.jcaho.org/accredited+organizations/2004+standards.htm and click on the “hospitals” link to read the 2004 standards.
An effort to make a hospital truly smoke-free

In some hospitals, the term “smoke-free” isn’t entirely accurate because the facilities still permit people to light up in certain sections in the building or outside.

But Ryan Gruber, BS, RRT, coordinator of education and research at University of Missouri Health Care in Columbia, hoped to persuade administrators at his facility to go totally smoke-free on the premises.

“I felt our smoking policies were a little bit dated,” says Gruber, citing that physicians could write orders allowing patients to smoke in their rooms. “One of the hospital committees I was on—the quality committee—thought the policies were a little bit lax and wanted to tighten them up a little.”

So he set out to change his hospital’s smoking policy.

(Somewhat) smoke-free
Gruber conducted an Internet survey to find out just how smoke-free other academic hospitals were. He read official hospital policies, sent e-mails to administrators, and posted questions to appropriate e-mail lists. Gruber presented his research results during the American Association for Respiratory Care’s International Respiratory Congress held in Tampa in 2002.

It turns out that 60% of the hospitals Gruber surveyed consider themselves smoke-free and state this in their official institutional policies. However, a whopping 85% allow smoking in a designated area. That’s hardly smoke-free; rather, it is a stance popularized by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), if you ask Gruber.

“Smoke-free is a JCAHO term. It’s not a layman’s definition, but a regulatory definition,” Gruber says. In this case, smoke-free doesn’t mean people can’t smoke anywhere on the premises.

Instead, “smoke-free to the JCAHO means you’re not walking down the hall lit up,” he adds. “You can have quite a bit of smoking in or around your institution and still be smoke-free by their terminology.”

To be fair, the JCAHO doesn’t require hospitals to ban smoking outright, but rather mandates that they develop policies that prohibit smoking except under certain circumstances, such as a patient’s clinical needs. Staff members and visitors can never smoke in the building, according to the JCAHO.

Wanting to aim for the best no-smoking policy possible, Gruber used as his model the smoke-free policy of the Mayo Clinics located in Jacksonville, FL, Scottsdale, AZ, and Rochester, MN, which provide smoking cessation services in their nicotine dependence programs.

According to the Scottsdale hospital’s Web site, the clinics’ policy seeks to set an example for patients: “The building and grounds of Mayo Clinic Hospital are designated as smoke-free. Smoking is not permitted in the hospital, on the grounds, or in vehicles on the grounds because Mayo Clinic is committed to the prevention, as well as diagnosis and treatment, of disease.”

Still selling the plan
Finding out that most other hospitals consider themselves smoke-free while allowing smoking somewhere on their premises didn’t help reinforce Gruber’s case with his own administration. However, finding data demonstrating that eliminating smoking in the workplace helps employees kick the habit provided a strong argument in his favor.

Gruber succeeded in moving up smoking on the facility’s agenda. The hospital posted more signs to remind employees of smoking-related rules, such as the one stating that smoking areas begin 20 ft away from entrances.

Gruber is determined to keep pressing for a more stringent smoke-free policy. “The ultimate goal is to become patterned after the Mayo Clinics. It’s not just their rule; it’s their philosophy. I really agree with it. It’s not that I want to make a lot of rules, [but] it’s the message we send,” he says.
The JCAHO looks at surgical fires

The latest Sentinel Event Alert from the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) offers recommendations on a longstanding life safety concern: surgical fires.

Items such as electrosurgical equipment and lasers often act as heat sources for these fires. Combine that with oxygen-enriched atmospheres and flammable items, such as prepping agents and linens, and it’s easy to understand how fires start in the operating room (OR).

The JCAHO recommends that hospitals make all staff members aware of these risks, develop and test fire response plans in the OR, and report any surgical fires to the accreditor, Food and Drug Administration, state agencies, or the nonprofit research firm ECRI in Plymouth Meeting, PA.

The JCAHO doesn’t score hospitals on Sentinel Event Alert recommendations, though surveyors will look at how hospitals plan to use the suggestions. However, the JCAHO has also indicated that preventing surgical fires may become a National Patient Safety Goal for 2004, which it does score.

To read the Alert, go to www.jcaho.org and click the link under “Latest newsletters.”

No, not that Madonna

It ain’t Mecca, but Milton (MA) Hospital had—get this—about 25,000 unexpected visitors descend upon its parking lot at all hours during a two-week period in June. Why? To view a supposed image of the Virgin Mary on an exterior window.

Once word got out about the sighting, the hospital asked people who wanted to see the image to come between 5:30 p.m. and 8:30 p.m. each day, but that request went nowhere, The Boston Globe reported.

So the hospital covered the window with a tarp except during the noted hours so patients and emergency personnel had easier access to the building. The hospital needed to bring in extra security guards to monitor the area before the tarp tactic began.

It appears the image of the Madonna formed after a seal around the window ruptured and allowed heat and moisture to leave some sort of chemical deposit, the Globe said.

Changes floated for respiratory standard

The Occupational Safety and Health Administration (OSHA) wants to amend two parts of its respiratory protection standard and seeks public comment on the idea.

Specifically, OSHA proposes to do the following:

• Incorporate assigned protection factors—numbers that reflect the level of protection that OSHA expects respirators to provide—into the standard as a way to assist workers and employers with respirator selection

• Approve a new fit test for controlled negative pressure, which would require three different exercises followed by two redonnings on the respirator

Hospital workers interested in commenting on the proposals can find out how to submit their thoughts by going to www.osha.gov/wutsnew.html and scrolling down to the June 5 trade release. OSHA must receive any comments by September 4.

Clean enough to eat off?

June couldn’t have been a good month for Nassau University Medical Center in East Meadow, NY.

The state health department and the JCAHO went to the hospital for an unannounced visit after receiving complaints, and what inspectors allegedly found wasn’t too nice.

Vendors made food deliveries to areas where workers allegedly left trash bins uncovered or stored regulated medical waste for disposal, a health department spokesperson told Newsday. The state cited the
nized the man from an earlier visit and believes he may be a hospital employee.

Patient leaps to his death
Authorities investigated what appears to be a patient suicide at Bayshore Community Hospital in Holmdel, NJ, on June 17.

A man—whom doctors ordered put in restraints for being uncooperative—somehow escaped his fittings, jumped through a fourth-floor glass window, and fell to his death after crashing onto a roof two stories below, the Asbury Park Press reported.

Doctors and critical care nurses made their way to the roof and brought the patient to the emergency room, where staff members pronounced him dead.

Drill critique raises concerns
A review of a chemical weapons drill in June at Deaconess Medical Center in Spokane, WA, brought up some important criticisms that other hospitals might want to heed.

The Spokane Spokesman-Review identified the following problems, as told to the paper by hospital employees and drill organizers:

• Caregivers didn’t realize quickly enough the need for medical injections rather than decontamination showers for victims
• Actors playing walk-in victims “contaminated” some emergency rooms
• Hospital workers had difficulty hearing and seeing out of protective suits
• Victims contaminated some employees, such as security guards, who didn’t have protective suits
• Decontamination tent problems included a malfunctioning sump pump and an improperly secured tent, which the wind briefly lifted up
• Wet victims decontaminated earlier by firefighters resisted subsequent showers at the hospital, particularly with cold water
If you don’t already take advantage of the various options the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) offers with medical equipment maintenance, why the heck not?

Under prior versions of environment of care (EC) standards EC.1.6 and EC.2.10.3, hospitals had to perform annual preventive maintenance on all pieces of clinical equipment.

In 2001, the JCAHO revised the standards to allow hospitals more alternatives when it came to maintenance, which is a useful and more realistic approach, says Steven Bryant, practice director of accreditation and regulatory compliance for The Greeley Company, a division of HCPro, Inc., in Marblehead, MA.

Good for another year?
Chances are small that annual preventive maintenance will stop failures in many pieces of equipment. That would be the equivalent of taking your car in for service once a year and expecting nothing to go wrong the other 364 days, Bryant says.

The current version of EC.1.6 lets you choose different ways to approach various pieces. For example, your biomedical folks and maintenance crews might look at defibrillator performance as a high goal, thus giving that equipment more priority for regular preventive maintenance. On the other hand, a broken microscope in the laboratory might not be as big a deal.

“I think there’s a terrific flexibility we now have with medical equipment,” Bryant says.

He offers a broad suggestion that hits the heart of EC.1.6’s intent: Look at the risk of failure for any given piece of equipment and also pinpoint what that failure means to patient safety.

Tip of the month
Be flexible and question your medical equipment maintenance

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Special insert:
How the 2000 Life Safety Code regulates mixed occupancies

Editor’s note: In this excerpt from the 2000 Life Safety Code (LSC) Workbook & Study Guide for Health Care Facilities, published by HCPro, Inc., we explain the idea of mixed occupancies and describe the general approaches for protecting such uses in health care settings.

Almost all health care facilities have mixed occupancies, which occur when two or more areas classified differently under the LSC exist in a building to the extent that separate fire protection safeguards aren’t reasonable.

For example, one floor of a hospital may have an operating suite (a health care occupancy under the LSC), office area (business occupancy), and laboratories and maintenance areas (industrial occupancies). See the illustrations on p. 3 of this insert for more help.

The most restrictive requirements for each occupancy apply (such as those for means of egress, construction, protection, etc.) in a mixed occupancy. However, you can separate the uses by appropriate construction as an alternative.

Read section 19.1.2 of the 2000 LSC for full details and remember to check any annex material indicated by an asterisk notation after specific paragraphs.

Critical issues for mixed occupancies in existing construction

In Chapter 6 of the LSC, which discusses occupancy classifications, section 6.1.14 mandates the following:

• A mixed occupancy occurs when two or more classes of occupancies exist in one building and are intermingled such that separate safeguards are impractical.
• If mixed, the most restrictive requirements of each occupancy apply. An exception to this requirement happens when minor occurrences of certain occupancies show up within another type of setting.

* When other occupancies are present, a mixed occupancy condition occurs unless
  • the facility does not serve health care occupants for housing, treatment, or customary access
  • a two-hour fire barrier separates the occupancies

The LSC considers contiguous ambulatory health care centers and medical office buildings as mixed unless

• they’re used primarily for outpatient services
• fewer than four litter-borne inpatients occupy them
• a two-hour fire barrier separates them

If the section/building in question serves as a required means of egress from the health care occupancy, it must comply with Chapter 19 (existing health care). An exception to this requirement states that the other section/building can use its own occupancy chapter if a horizontal exit separates it.
How the 2000 Life Safety Code regulates mixed occupancies

from the health care occupancy and it contains no high-hazard contents.

If other sections/buildings are not health care occupancies under the LSC, but patients access these areas, then the Code

- bases egress on that other occupancy’s requirements
- permits door locking if required for the clinical needs of patients using the area

* When it comes to hazardous areas, the LSC
  - requires you to protect any hazard greater than typical health care as a hazardous area
  - prohibits high-hazard uses not required for health care

What’s different for new construction?
Section 18.1.2 in the LSC applies to mixed occupancies within new health care construction. The provisions for mixed occupancies within new and existing health care construction are the same.

### Significant changes for mixed occupancies

The following items compare mixed occupancy requirements between the 1997 and 2000 versions of the Life Safety Code (LSC):

**1997 LSC**—This edition added paragraph 13-1.2.5, which permitted occupancies to apply their specific egress requirements even though health care patients may use the occupancy. The new paragraph also allowed special locking arrangements for egress from non–health care occupancies if justified by the clinical needs of patients.

**2000 LSC**—This edition removed the sections covering ambulatory health care facilities from the end of the traditional health care occupancy chapters and gave them their own chapters (Chapter 20 for new ambulatory and Chapter 21 for existing ambulatory).

Also, the 2000 LSC revised the provisions of Chapter 6 regarding “incidental” occupancies. You can only consider mercantile (gift shops), business (office areas), industrial (mechanical rooms), and storage (small storage areas) as incidental occupancies, based strictly on judgment.

Nonresidential areas with occupant loads below the limits defined in the LSC also qualify as incidental, such as assembly areas (conference rooms) with occupancy loads of less than 50 people.

### Check all requirements before making a choice

With a mixed occupancy, you can take either of the following options:

1. Apply the most restrictive requirements of each occupancy (such as for means of egress, construction, protection, etc.)
2. Separate the uses by appropriate construction and provide independent egress, thus eliminating the mixed occupancy

In defining a mixed occupancy, a common mistake occurs. Many people wrongly assume that the Life Safety Code’s (LSC) health care requirements are the most restrictive, and thus the provisions in Chapters 18 or 19 apply. But you must evaluate each feature of the occupancies involved to see which provisions are more stringent.

Although provisions in health care chapters are often more restrictive than those in other chapters, this isn’t always true.

For example, certain assembly areas require special egress arrangements and door equipment. You would have to carry these requirements throughout the mixed space, at least to the extent that the assembly egress uses another space.

On the other hand, a business space would not require sprinkler protection. But once it mixes with a health care space, the health care provisions may require sprinklers in the business area.
Mixed Occupancy Building

Figure 9.1

Health care occupancy
Outpatient Clinic
Laboratory
Maint.
Cafeteria
Auditorium
Office
Health care
Industrial occupancy
Egress is shared
Egress is shared
Health care occupancy
Egress is shared
Health care occupancy
Health care occupancy
Health care occupancy
Health care occupancy
Health care occupancy

Separate Occupancies in One Building

Figure 9.2

Health care occupancy
Business occupancy
Hospital
Ambulatory health care
Medical Office Building
Horizontal exit
Outpatient Clinic
3 separate occupancies in one building
2-hour separation required for health care
Egress through separated occupancy permitted only if via horizontal exit

Questions from the field about mixed occupancies

Q: I have on-call doctors' rooms in my hospital. Are there any special requirements for these rooms?

A: Usually the Life Safety Code (LSC) considers small areas as incidental uses associated within a health care setting. However, you must evaluate on-call rooms as residential, since the LSC does not permit incidental residential uses.

You should provide local smoke alarms for residential-type rooms because no one supervises these rooms the way a nurses' station might supervise patient rooms. If there are more than 16 rooms, hotel provisions kick in, which will significantly change the requirements that the LSC imposes on this area.

Q: I have a chapel in my hospital that can seat about 75 people. Are there any special requirements for this area?

A: Yes. The LSC considers any area used for a gathering of 50 or more people for certain purposes an assembly use (see 6.1.2 for the complete definition). Therefore, the provisions of Chapter 12 (new assembly) or Chapter 13 (existing assembly) apply to that area.

In general, worship areas in hospitals should not pose any fire protection or life safety requirements not already covered by complying with the LSC's health care facility requirements. Carefully evaluate the exiting arrangements from the assembly space. Assembly areas require a main entrance/exit that provides sufficient capacity for at least half of the entire possible occupant load for the space.

Also, any door in a required means of egress serving an area having an occupant load of 100 or more people requires panic hardware or fire exit hardware. If you have concerns about any assembly area in your hospital, contact your authorities or an appropriate architect or engineer.

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