

ASHE

ADVOCACY

REPORT



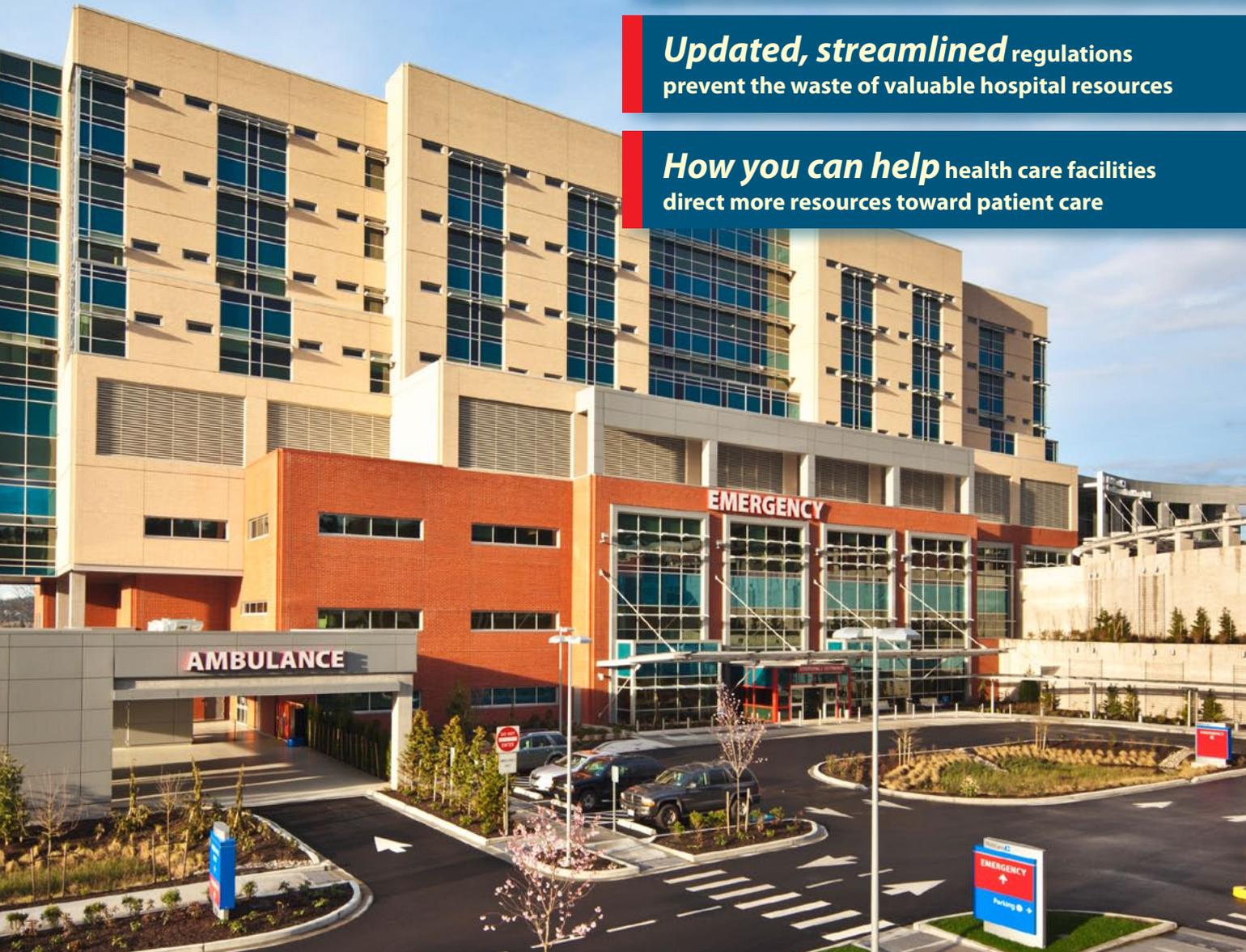
2013 EDITION

An update on the quest for responsible regulation of **health care facilities**

Codes regulating health care facilities must consider the unique hospital environment

Updated, streamlined regulations prevent the waste of valuable hospital resources

How you can help health care facilities direct more resources toward patient care



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The American Society for Healthcare Engineering (ASHE) is a personal membership
group of the American Hospital Association. More than 11,000 members rely on ASHE as
a key source of professional development, industry information, and advocacy, including
representation on key issues that affect their work in the physical health care environment.
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Letter to Readers

Dear Reader,

Imagine that construction has just been completed on your dream house. You have worked with architects and contractors to ensure this will be the perfect residence for your family. But when you move into your new home, you find an inspector there waiting for you with a clipboard, pointing out a few dozen items that indicate your home is unsafe to occupy.

You and your architect are frustrated by the citations, which came from a rule (called a code or standard) that doesn't reflect current construction standards. So you spend every penny you can find to make the necessary modifications to comply and are glad when you can put the unpleasant experience behind you and start unpacking boxes. The next day, however, a different inspector shows up with clipboard in hand, saying you have to change it all back to your original design before you can occupy your new home. Imagine the frustration and the waste of your time and money.

This is a story hospitals face on every construction project. Inspectors are only doing their jobs—ensuring that hospitals comply with the codes required by their organizations—but unfortunately these requirements often conflict. The health care industry spends billions of dollars annually trying to comply with code requirements that conflict, are outdated, or are not based on science.

The American Society for Healthcare Engineering (ASHE) of the American Hospital Association has embarked on a quest to help unify the codes that are enforced by the many different agencies regulating hospitals. As part of this quest, we are asking organizations that create codes and standards—including the Facility Guidelines Institute, the National Fire Protection Association, and the International Code Council—to use a process that promotes data-driven decision making. We are working with states and federal agencies to ensure that the latest editions of all of these codes and standards are adopted so that hospitals are not burdened with conflicting, outdated codes.

This effort is especially critical because every dollar spent complying with unnecessary requirements is a dollar that could otherwise go toward patient care. We must be mindful not to needlessly siphon resources away from health care's main mission of caring for patients.

This report is a collection of articles that outline the challenges and the opportunities we have to improve our health care system.

- **Conflicting, outdated codes cause waste:** When hospitals have to comply with multiple codes written by different organizations, those codes often include different, conflicting requirements. Even codes and standards written by a single organization can conflict because codes are updated every few years, but some jurisdictions lag behind in adopting the latest editions. This causes conflicts between various editions of the same code. Codes written in 2000 may not seem that old, but we have learned lessons from the 2001 terrorist attacks, Hurricane Katrina, and other major events that should be incorporated into health care requirements.
- **Codes must be based on science and provide real benefits:** Some regulations have vastly improved the safety and health of hospital patients, such as those requiring quick-response sprinklers that save lives. Yet some codes seem to protect a company’s bottom line more than patients. We should avoid codes that do not advance safety but simply allow companies to promote their “required” products or services.
- **The health care physical environment matters:** The health care physical environment is unique because hospitals operate around the clock, include complex medical systems not found in other types of buildings, and house a vulnerable population. Health care facility managers help keep patients, staff, and visitors safe. They also impact patient satisfaction scores, energy efficiency ratings, and budget goals.
- **Help us improve health care codes:** Improving health care codes is a major undertaking that requires support from many people. The last page of this report shows ways you can get involved to help improve the codes and standards regulating health care facilities.

By joining us in our quest for improved hospital codes and standards, you can help us direct more hospital resources where they belong: patient care.

Thank you,



Dale Woodin
ASHE Executive
Director



Chad Beebe
ASHE Director of
Codes and Standards

Who Is ASHE?

The American Society for Healthcare Engineering (ASHE) is the largest association devoted to optimizing the health care physical environment. ASHE is a personal membership organization of the American Hospital Association and has more than 11,000 members. ASHE members design, build, and operate hospitals. Our members are involved in improving the health care physical environment from the time hospital blueprints are drawn throughout the lifespan of a hospital. Members rely on ASHE for continuing education, professional information, and advocacy efforts focused on pushing for up-to-date, science-based codes and standards that keep patients and staff safe.

ASHE members include:

- Architects and other design professionals
- Contractors
- Facility management professionals
- Consultant engineers
- Clinical and biomedical engineers
- Health care construction managers
- Infection control practitioners
- Maintenance engineers
- Plant management services personnel
- Safety and security professionals
- Support service personnel

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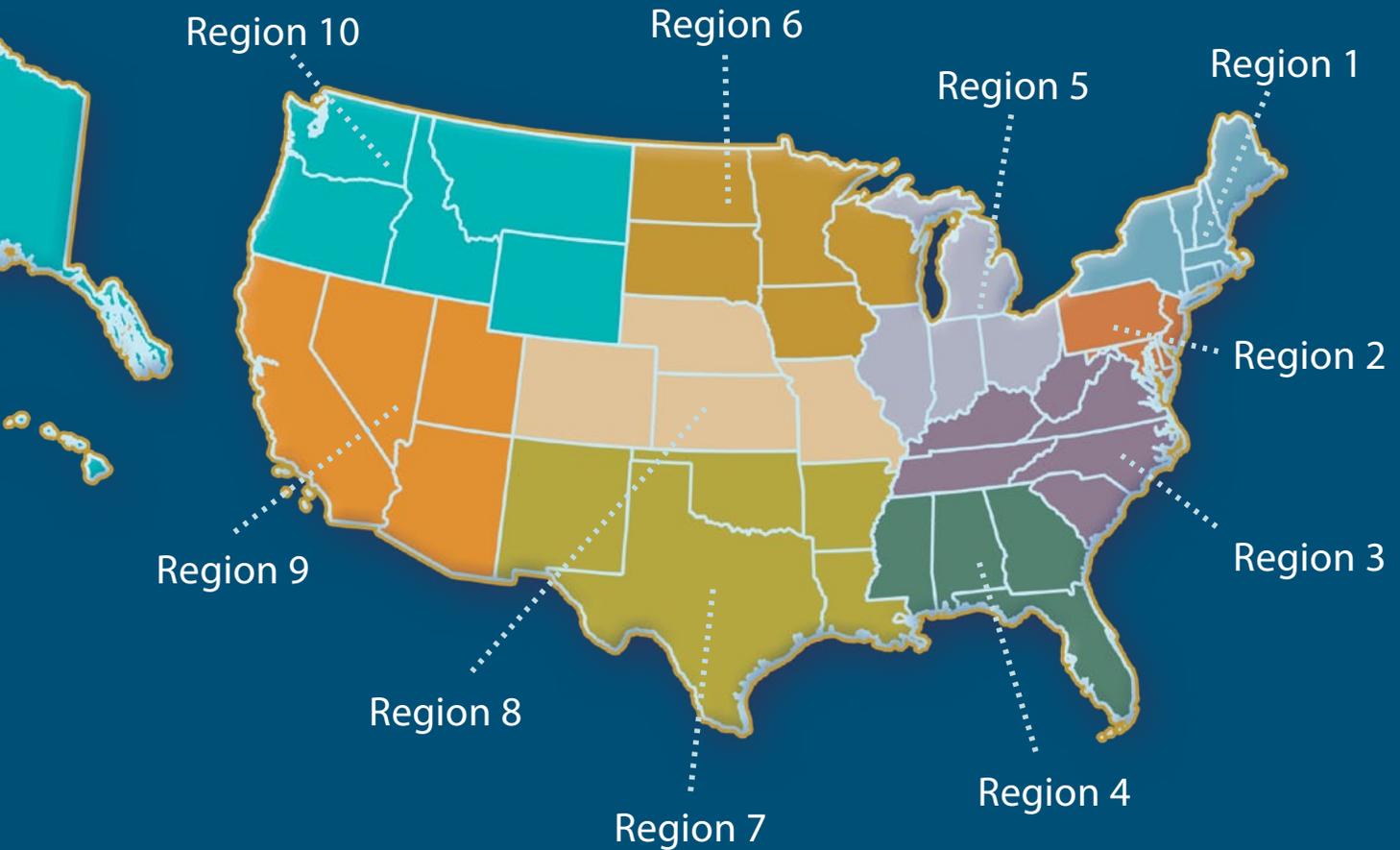
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Hospitals Are Heavily Regulated

By Lynn Kenney

ASHE Senior Analyst for Advocacy

Hospitals are an around-the-clock hub of activity ranging from diagnostic and treatment functions to food preparation, business operations, and community services for patients, staff, and visitors. The infrastructure behind these functions includes complex telecommunications, life safety, mechanical, and electrical systems as well as medical equipment and device technology that is constantly evolving. Hospitals and the systems in them are subject to regulation from more than 25 state and federal agencies (see chart on next page).

A History of Hospital Regulation

Hospital regulation as we know it began in 1918, when the American College of Surgeons began inspecting hospitals using a single-page document called *The Minimum Standard for Hospitals*. In 1951, the American College of Physicians, the American Hospital Association, the American Medical Association, and the Canadian Medical Association joined forces to create the Joint Commission on Accreditation of Hospitals (now called the Joint Commission) as a way to provide voluntary inspection and accreditation of hospitals.

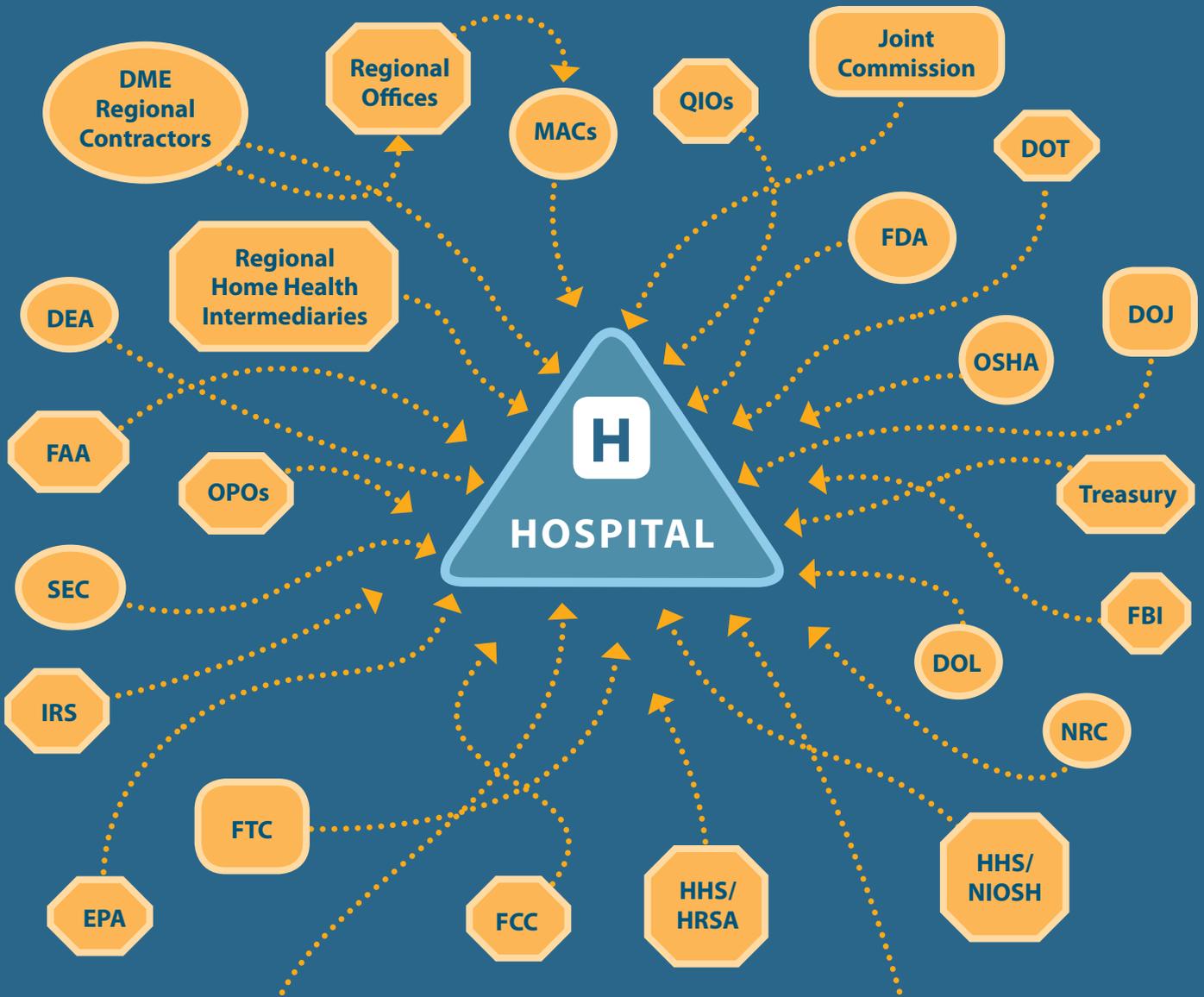
In 1965, the federal government established the Centers for Medicare & Medicaid Services (CMS). Hospitals that were accredited by the Joint Commission were deemed to be in compliance with the Medicare Conditions of Participation and therefore qualified for Medicare and Medicaid reimbursement. This gave the Joint Commission accreditation authority over all hospitals. In 2010, the federal government (via CMS) began accepting applications to consider deeming authority for other accrediting organizations.

Hospital Regulation Today

Today, CMS grants deeming authority to a total of seven accrediting organizations, three of which accredit hospitals: the Joint Commission, DNV Healthcare, Inc., and the American Osteopathic Association's Health Facilities Accreditation Program. The organizations measure everything from patient care and infection prevention to life safety and emergency management. CMS also approves accreditation programs for critical access hospitals, home health agencies, hospices, ambulatory surgical centers, psychiatric hospitals, outpatient physical therapy, and rural health clinics.

THE UNIQUE HOSPITAL ENVIRONMENT

Agencies Regulating Hospitals



Payer

Medicare	Employer-Sponsored Insurance
Medicare Advantage	Patient Self-Pay
Medicaid	Worker's Compensation
CHIPs	Other Public Insurance
TRICARE (DoD)	Other Private Insurance
Uncompensated Care Pool	

State

Survey & Certification	Health Care Authority
Courts	Department of Labor and Industries
Attorneys General	Public Disclosure Commission
Medicaid	Office of the Insurance Commissioner
Board of Health	
Medical Boards	
Local Governments	
Licensure	

CMS verifies that accreditation programs meet or exceed the CMS requirements by conducting validation surveys. This is usually done by surveying a representative sample of facilities that are accredited by each accrediting organization. Validation surveys include all the criteria in a standard facility accreditation plus a rigorous review of how the accrediting organization administers its program. Validation survey results are published annually in the *CMS Financial Report*.

Why Hospitals Comply with Rigorous Regulation

Medicare accounts for 41 percent of hospital revenue, on average, according to the American Hospital Association. Because of the direct tie to Medicare and Medicaid funds, CMS compliance is rigorously enforced in hospitals and is critical to a facility's fiscal success. If a facility fails to comply and loses certification, the financial implications are staggering. In 2013, a hospital in Maryland temporarily lost its certification. After only two weeks, the reported financial loss totaled more than \$5 million, according to the *Baltimore Sun*.

A facility can demonstrate compliance with the federal survey and certification requirements via CMS certification or via accreditation by an approved accrediting organization. Most hospitals choose to pay an approved, private accrediting

organization to survey and accredit their facility. There are several reasons for this. First, accreditation by a private accrediting organization demonstrates that the hospital has voluntarily gone beyond the minimum standard to meet national health and safety requirements. Second, for the 1,400 teaching hospitals in the United States, accreditation is mandatory for practicing interns. Third, it helps the facility meet the necessary criteria for CMS reimbursement.

Even hospital systems that do not participate in the CMS reimbursement program (such as international facilities and facilities of the Indian Health Services, Veterans Administration, and Department of Defense) seek private accreditation to demonstrate compliance with best practices for health, safety, and quality.

The CMS federal survey and certification process is currently based on the 2000 edition of NFPA 101: *Life Safety Code*[®], though CMS has indicated it will be proposing a move to the 2012 edition. In addition, hospitals must comply with state licensure requirements which vary by state and may include requirements, from different editions of the *Life Safety Code* along with varying editions of building codes. As a result, state and local codes often differ from federal requirements, resulting in increased costs to hospitals.

ASHE is dedicated to providing resources, education, and advocacy to help reduce costly regulatory confusion while ensuring patient safety.

Hospitals Have a Long History of Regulation

By Chad Beebe

AIA, SASHE, ASHE Director of Codes and Standards

In 1946, the Hospital Survey and Construction Act, also known as the Hill-Burton Act, was created to improve the nation's health care infrastructure. The program would be funded and enforced nationally by the Public Health Service, which needed to ensure that all of the projects funded were created equally on a level playing field.

Hospitals are one of the more complex types of institutions to design and build, and the Public Health Service needed a single comprehensive code that could be used equally in all states to ensure that a minimum standard would be met for the design and construction of nearly 9,000 health care facilities partially funded by the federal government. Of primary concern was the ongoing protection of patients from hazards such as fire.

There were multiple model building codes being used in different states across the country, including codes from the Building Officials Code Administrators International, the International Conference of Building Officials, and the Southern Building Code Congress International. All three codes contained similar but differing requirements. Complex building codes may have the same goal—limiting loss of

life during a catastrophic event—but they can use a different philosophical approach to reach that goal.

The Public Health Service, the enforcement agency at the time, wanted consistency across the nation but couldn't interpret regional building code differences and resolve the conflicts between various codes. So the agency chose the *Building Exits Code*, the forerunner of what is now known as the National Fire Protection Association's NFPA 101: *Life Safety Code*®, to apply to health care facilities across the nation. The Building Exits Code contained the balance desired between minimum life safety requirements and minimum





Multiple model building codes were once used in various parts of the country, including codes from the Building Officials Code Administrators International (BOCA), the International Conference of Building Officials (ICBO), and the Southern Building Code Congress International (SBCCI). The three codes united to form the *International Building Code* in the 1990s.

ongoing maintenance and performance requirements.

Nearly 50 years after the Hill-Burton Act, the three building codes, referred to as the model building codes, united to form the *International Building Code*. The International Code Council was formed in 1995 to oversee this code, and the other model codes were dissolved.

This daunting effort to merge several codes into one code was backed by the American Institute of Architects (AIA). The AIA contended that creating a comprehensive national code would improve efficiency and ultimately safety, especially since more design teams were working more often across state lines. The opposition to this effort contended that regional differences in construction would be too difficult to manage in one code. Yet today, there seems to be agreement from both sides that creating one code was a good idea, and any anticipated problems have not been an issue.

The merging of these codes eliminates one of the initial reasons why Public Health Services opted for what would become the *Life Safety Code*. There is now a single comprehensive building



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code used across the nation that could easily be enforced by the federal government and applied consistently throughout the Medicare and Medicaid system.

Over the past decade, the *International Building Code* has incorporated the minimum maintenance and performance requirements through the *International Fire Code* and portions of other codes that apply to existing buildings, not just new construction.

Currently the *International Building Code* has been adopted in every state. Almost any permit for construction—whether it’s a large storage shed or hospital building—is issued in compliance with that code or a locally amended code based on it, such as the Florida State Building Code. Yet once hospitals open, they must meet *Life Safety Code* requirements in order to receive Medicare and Medicaid reimbursements.

The philosophies behind the *International Building Code* and the *Life Safety Code* are slightly different. The International Code Council historically uses preemptive safety strategies in the design and construction of facilities, while NFPA uses proactive measures in design



and construction along with outlined responsibilities for the building owner to maintain and prevent incidents. The differences in the two approaches have led to conflicts between the documents.

However, in the most recent code development cycle, the two codes seem to be becoming more aligned. Some feel that the provisions are similar enough that the Centers for Medicare & Medicaid Services (CMS) should accept the *International Building Code* as a viable alternative standard for compliance. Federal requirements give CMS the flexibility to allow this to happen, and CMS wouldn’t have to endorse either standard. Allowing this change could be another way CMS can help hospitals by promoting more consistent regulations.

Hospitals Contain Unique Safety Features

By Deanna Martin

ASHE Senior Communications Specialist

Most hospital patients and visitors are unaware of the various protections surrounding them in the facility. Hospitals use many fire protection features—including quick-response fire sprinklers, fire-rated doors, and compartmentalized construction—to keep patients, visitors, and staff safe. Hospitals also have a well-trained staff dedicated to protecting patients. All of these features contribute to the safety record of hospitals, and all of these features must be taken into account by code development organizations creating health facility regulations.

Hospitals are certainly unique facilities. When a fire alarm goes off in most buildings, people instinctively head toward the nearest door. But in clinical facilities such as hospitals, nursing homes, and other health care facilities, many building occupants lack the ability to get up on their own and leave during an emergency. Patients with limited mobility or cognitive challenges, those confined to beds, and patients on vital monitors or life support need special consideration during a fire or other life safety situation. The impracticality of completely evacuating health care facilities has led to decades of advancements in fire safety systems and emergency procedures that allow people to remain safely within

the building during an emergency. This approach, called “defend-in-place,” has a long history of success in preventing injuries and deaths.



Hospitals are able to use defend-in-place because of the additional protections hospital structures offer. Hospitals include advanced fire suppression systems, compartmentalized construction and fire-resistant building materials, intense staff training, carefully drafted emergency preparedness plans and life safety protocols, and coordination with fire and emergency officials.

Sprinkler systems are critical because they reduce fire size and smoke development. Hospital sprinkler systems often contain locks, monitors, and alarms to prevent systems from being turned off, which can be a cause of sprinkler failure in other types of buildings.

Compartmentation also helps hospitals keep patients safe. Medical facilities are constructed into isolated compartments that can restrict the passage of smoke or flame from adjacent spaces or floors. These separate compartments retain their structural integrity even if an adjacent section fails. If a fire occurs in one compartment, patients and staff can move to an adjacent compartment on the same floor with little difficulty and remain safe.

Smoke barriers and advanced air handling systems are used to provide an additional layer of protection, keeping smoke from traveling to other compartments in the event of a fire.

Staff training and emergency plans are a key aspect of hospital safety. Hospital staff train regularly on emergency procedures and are dedicated to protecting patients. Staff members move patients when needed, close the fire-rated doors, and take steps necessary to keep patients safe. Hospitals also have detailed emergency plans coordinated in advance with emergency officials.

Experts in life safety and hospital engineering say health care buildings are among the most controlled and protected of any structure class in terms of fire protection, which helps explain the relatively low number of fires at hospitals. Since 1980, fires in U.S. medical facilities have

dropped by 71 percent, according to the National Fire Protection Association's (NFPA) Fire Analysis and Research Division. A 2012 NFPA report on structure fires from 2006–2010 found no hospital deaths.

ASHE Director of Codes and Standards Chad Beebe, AIA, SASHE, said it is vital that the codes and standards that regulate hospitals accommodate the special circumstances of health facilities. He said codes should allow for use of fire protection features such as sprinklers and compartmentation as well as the removal of extra doors and barriers that can inhibit staff ability to perform defend-in-place techniques.

For those unfamiliar with the health care environment, it can be surprising to learn how common defend-in-place is and how well hospital staff members perform this proven approach.

"Every time I have been in a hospital and a fire alarm is activated, it has been encouraging to see all the staff spring into action," Beebe said. "As if it's instinctual, they grab fire extinguishers, start closing all the doors, and check on patients. Even after many false alarms in these very large and very complex buildings, staff continually have the same response without hesitation. Maybe this comes from their clinical training and the Hippocratic oath—they do whatever it takes to protect their patients' safety."

Portions of this article originally appeared in the Winter 2012 edition of *Inside ASHE* magazine

Hospital Regulation

Hospitals are among the most regulated of all industries. Health care facilities are unique because they house vulnerable patients, operate around the clock, and contain complex medical and safety systems not found in other types of commercial buildings. The numerous codes and standards regulating health care facilities help keep patients, staff, and visitors safe. To prevent these codes from unnecessarily diverting hospital resources away from patient care, codes should be updated regularly, should be based upon science, and should not conflict with other requirements.

Defend-in-Place Techniques

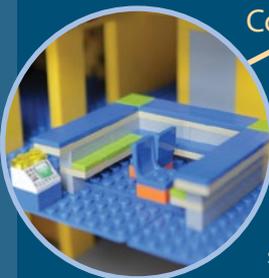
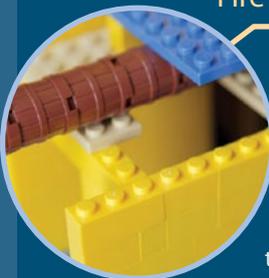
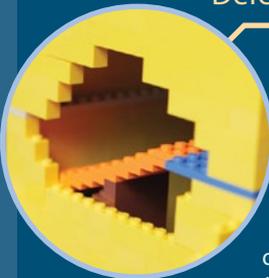
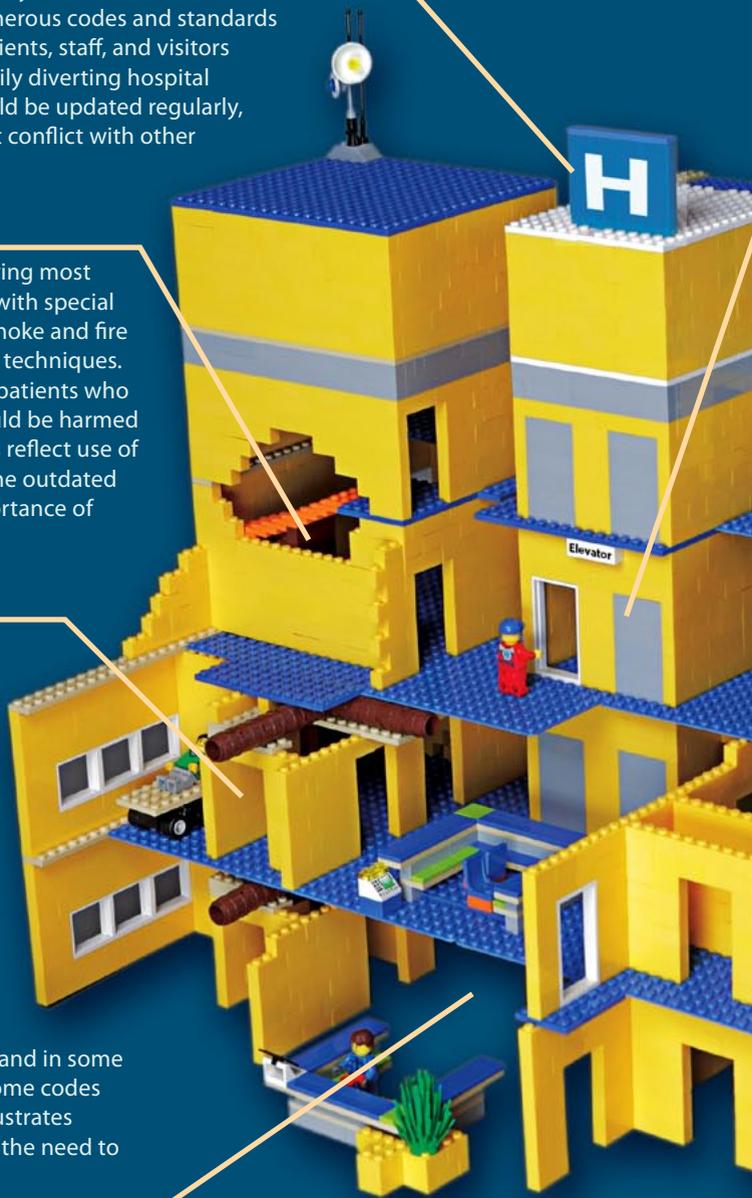
Hospitals do not typically evacuate patients during most emergencies. Instead, hospitals are designed with special features, including compartmentation and smoke and fire protection, to accommodate defend-in-place techniques. This prevents the unnecessary movement of patients who rely on life-sustaining equipment or who would be harmed by a sudden evacuation. Recent code changes reflect use of defend-in-place techniques in hospitals, but some outdated codes do not accommodate this, showing the importance of adopting updated codes.

Fire Protection Systems

Hospitals use multifaceted systems for fire protection. Recent code developments require hospitals to be fully sprinklered, which means putting sprinklers in spaces such as offices and data storage centers that are often the last areas to gain sprinkler protection. ASHE supports the requirement to fully sprinkler all hospital areas. Hospitals also use smoke and fire dampers to prevent the spread of fire. Some previously required equipment is no longer needed because of technological advancements in fire protection, and codes need to reflect these changes to prevent the unnecessary wasting of resources. For example, duct smoke dampers are not needed once quick response sprinklers are installed in hospitals with fully ducted HVAC systems, and in some situations duct dampers can actually hamper safety efforts. While some codes recognized this fact, others still required them until recently. This illustrates why it is important for codes to mesh together well, and also shows the need to adopt the most up-to-date versions of codes and standards.

Compartmentation

In addition to active fire protection such as sprinklers, hospitals use passive protection such as compartmentation to keep patients safe in the event of an emergency. Each compartment is separated from other areas by fire-rated walls and doors. Recently codes were changed to allow a larger compartment size, which accommodates the expanding size of hospital rooms while keeping patients safe. This is another reason for authorities to adopt the most recent versions of codes and standards.



Hospitals Contain Unique Safety Features

Conflicting Codes

Requiring elevator lobbies can pose a significant hazard to patients in the event of an evacuation. The addition of extra doors and limited space slows the evacuation process and are not needed in hospitals, which are built using fire-rated separate compartments to provide added safety. Some regulations recognize that hospitals are a unique environment and do not require the lobbies, but other codes do require them—an example of conflicting codes.



Safety and Security

One recent code change provides greater protection against the threat of child abduction from hospitals. Previously, codes conflicted over whether doors had to automatically unlock if the fire detection system is set off, a security concern in areas where special door systems are used to prevent the abduction of infants and children. One code allowed a delayed egress system that would provide for emergency evacuations while still slowing the progress of an abduction, but another code did not allow that until recently—showing the importance of codes that do not conflict and the value of adopting the most updated codes available.



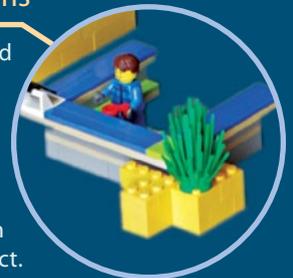
Highly Trained Staff

In addition to active and passive protection, hospitals also have another resource to help keep patients safe during emergencies—a highly trained staff that takes an oath to protect patients. Hospital staff members train regularly for various emergencies and are well prepared for the defend-in-place techniques accommodated by updated codes.



Decorative Items

Even the types of decorations in hospitals are regulated by codes. Codes and standards regulate live trees and fake plants, fire retardants on other decorations, and limit the amount of decorative material on walls. As science develops and the industry learns about certain items, codes should change to reflect the latest developments. For example, one set of guidelines for hospital construction will soon ban open waterfalls and fountains in new hospitals for fear of waterborne disease, a proposal ASHE supports. Data supports the fact that bacteria can live in water features and cause illnesses to patients, and updated codes reflect this fact.



Conflicting Codes Waste Resources

By Deanna Martin

ASHE Senior Communications Specialist

Overlapping codes regulating health care facilities would be manageable if they included similar practices that hospitals could follow. But conflicts between various codes—and various editions of codes—can cost hospitals millions of dollars.

Conflicting and unnecessary building and fire code requirements lead to needless frustration, delays, and expenses every year. The American Society for Healthcare Engineering (ASHE) of the American Hospital Association estimates that health care organizations waste potentially billions of dollars annually because of overregulation, unjustified code enforcement, misinterpretations, and conflicting codes and standards. That's an astonishing amount that otherwise could be spent on infection prevention, upgrades to medical technology, more nursing care, or other expenses that would directly benefit a hospital's patients.

"We've plateaued at a level of safety where adding more regulations doesn't necessarily improve patient safety," said ASHE Director of Codes and Standards Chad Beebe, AIA, SASHE. "In fact, wasting money on unnecessary regulations uses resources that could otherwise improve patient care."

One of the ways ASHE hopes to address this problem is by working with the International Code Council to create the ICC Ad Hoc Committee on Health-care. The committee—a diverse group that includes fire officials, architects, building officials, hospital leaders, facility managers, and engineers from around the country—is taking a fresh look at current codes in light of modern practices.

They are recommending appropriate updates to the International Codes, including the *International Building Code* and *International Fire Code*, and others, through the ICC code development process.

"This is really a groundbreaking opportunity for health care professionals to work side by side with code enforcement officials to collectively craft codes that address the unique needs of health care facilities," said ASHE Executive Director Dale Woodin, CHFM, FASHE. "We are thrilled by the committee's use of research and data to support code changes and to determine the optimal level of safety."

Many ad hoc committee members hope the group's efforts are a first step toward the long-term goal of having hospitals built and reviewed under one set of uniform requirements. They eventually want

to have one set of codes that do not conflict, that are created using the best science available, and that provide optimal levels of patient safety without burdening hospitals with unnecessary capital expenditures.

“That’s the ultimate goal,” said committee chair John Williams, CBO, plans reviewer with the Washington State Department of Health. “If we can sing out of the same songbook, it’s going to make it easier for authorities having jurisdiction, for designers, and for health care facilities as well.”

The committee’s goal of providing high levels of safety without wasting resources requires a comprehensive examination of code concepts developed decades ago. In recent years, hospitals have had exemplary fire safety records largely due to the shift toward fully sprinklered buildings; improved construction practices; the reduction of flammable liquids; better electrical, medical gas, and ventilation systems; more staff training; and the proliferation of nonsmoking policies.

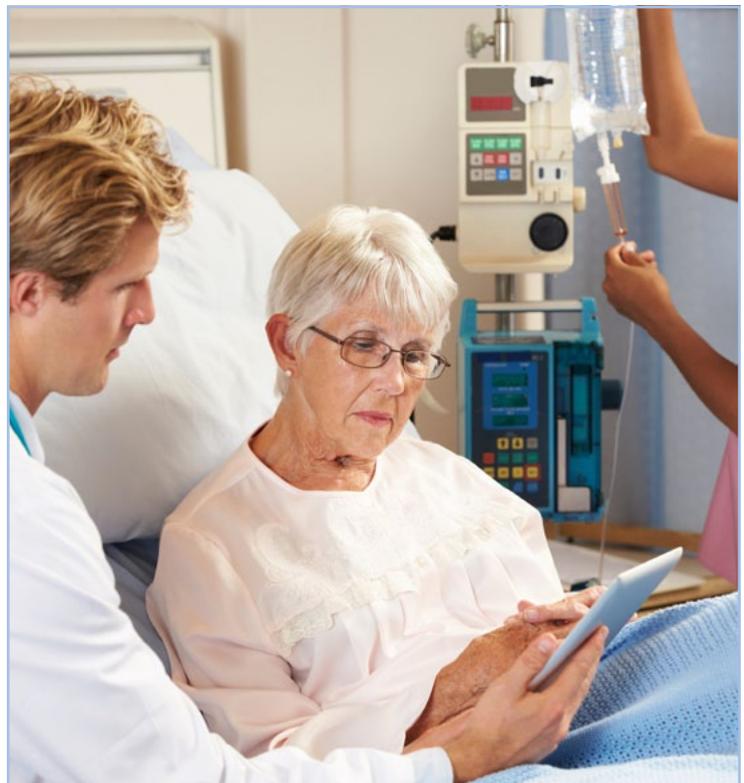
While those changes have drastically improved hospital safety, other code requirements added over the years have done little to protect hospital patients, health care workers, and first responders.

And many involved with the code process fear that certain requirements are being written into codes simply to advance a product line and protect a company’s bottom line without providing significant improvements to safety.

Jon Nisja, with the Fire Marshals Association of Minnesota, wrote in an editorial published in the spring 2011 edition of *Fire*

Marshals Quarterly that code development is approaching a crossroads.

“Will it continue to be a tool to save lives, reduce fires, and minimize property damage or will it transition into a process that favors profits, turf, and market share over protecting society as a whole from the ravages of fire?” he wrote. “Will it continue to be a valuable resource for a community wishing to positively influence fire and life safety, or will it become a book of confusing and incongruent regulations that cost billions of dollars and provide minimal benefit?”



Codes and standards regulating hospitals should protect patients, not simply add costly requirements that do little to improve safety.



Portions of this article originally appeared in the Dec. 2011 edition of *Health Facilities Management* magazine.

Beebe said it's critical for health care professionals and others who have a stake in hospital regulations to get involved with the process of improving codes. The last page of this Advocacy Report contains ways to get involved and contact information.

"This is a great chance for people to make their voices heard and have a real impact on codes," Beebe said. "We know all too well about the problems with conflicting codes, and now we have a chance to do something about it."

Hospitals Seek Adoption of the Latest Edition of the *Life Safety Code*

By Deanna Martin

ASHE Senior Communications Specialist

It's important for authorities to adopt the most recent editions of codes and standards regulating hospitals. But sometimes getting new versions adopted is a process that can take years. One example of this involves the Centers for Medicare & Medicaid Services (CMS).

Recently, CMS indicated that it plans to propose moving to an updated edition of a major code affecting hospitals: the National Fire Protection Association's NFPA 101: *Life Safety Code*[®]. Currently, CMS requires hospitals to comply with the 2000 edition of this document. CMS is expected to propose a switch to the 2012 edition later in 2013, and ASHE applauds this move to more updated standards.

In the meantime, CMS has issued several waivers that allow hospitals to take advantage of some aspects of the newer code (see sidebar on the following page).

Codes regulating the health care physical environment are updated every three to four years. Federal and state agencies adopt the codes as they see fit. Some states have adopted legislation that automati-

cally requires hospitals to comply with the latest versions of required codes, while others revisit legislation periodically and update to newer versions. Some states have started skipping revision cycles, adopting every other new edition, which means that codes reflecting new safety and technological advancements may not be updated for eight years. CMS goes through the lengthy federal rulemaking process to adopt codes once the agency decides it wants to move to a new edition.

An updated edition of a particular code may include major changes, or it may include only a few differences. Regardless, it's important to adopt the new code because waiting for years to adopt the latest editions means the amount of changes pile up, making it more difficult to train both code enforcers and those in hospitals responsible for compliance.

Codes issued in 2000 may not seem that old, but the 2000 edition of the *Life Safety Code* was written before the September 11, 2001, terrorist attacks and Hurricane Katrina in 2005. The 2012 edi-

Waivers help hospitals inch slowly toward newer codes

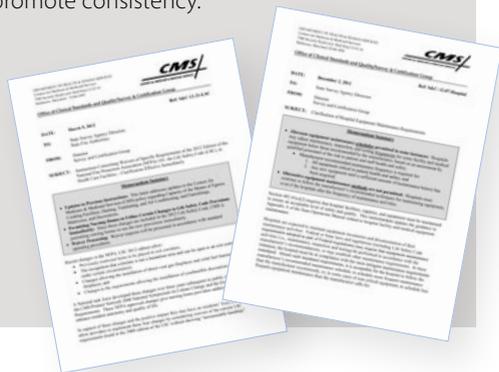
Although the Centers for Medicare & Medicaid Services (CMS) still requires hospitals to comply with the 2000 edition of NFPA 101: *Life Safety Code*®, the agency does have some leeway in allowing hospitals to comply with some aspects of newer codes. CMS issues waivers allowing health care facilities to comply with certain specific rules included in newer editions of the code.

For example, in 2012 CMS offered waivers that allow hospitals to place certain items in corridors, including medical emergency equipment such as crash carts and patient transportation devices. A CMS waiver issued in 2013 allowed a change in the humidity required for operating rooms. The burdensome previous requirement was contained in older codes as a carryover from the days of flammable anesthetics, but the waiver allowed facilities to comply with newer, less burdensome requirements.

The waivers issued by CMS can be very helpful to health care facilities, but the process of acquiring them can be confusing and time consuming. To use some waivers, hospitals must be cited first and then apply for a waiver that shows unreasonable hardship. In other instances, CMS has eased the waiver process and does not require hospitals to show an unreasonable hardship. And in other cases, health care facilities do not need to wait to be cited to take advantage of the waiver—they simply need to document their decision to do so.

Simply adopting the latest codes would simplify this process, reduce confusion, and promote consistency.

CMS is still requiring hospitals to comply with the 2000 edition of the *Life Safety Code*, although the agency has issued memos taking a favorable approach to several portions of the 2012 edition.



tion of the *Life Safety Code* incorporates the lessons learned in those tragedies and other events that have occurred over the last decade.

The 2000 edition of the *Life Safety Code* also references more than 50 other technical codes and standards. When the 2000 edition was written, these reference codes were current. But the reference standards have been updated over the years, and some have undergone major changes. Yet hospitals are stuck using reference codes from as far back as 1995 because they are mandated by the 2000 edition the *Life Safety Code*.

In particular, NFPA 99: *Health Care Facilities Code* has undergone dramatic changes since the 1999 version referenced in the 2000 edition of the *Life Safety Code*. Allowing hospitals to comply with the latest version of NFPA 99 would save facilities significant resources through updates to medical gas, smoke control, power, and other systems.

Using old codes is especially problematic given the speed of advances in safety and technology over recent years. The widespread use of quick-response sprinklers, adoption of non-smoking policies, a variety of code advancements, and other efforts have led to tremendous progress in lowering the number of hospital fires. Hospitals and hospice facilities now average about one fire death a year, according to the National Fire Protection Association. Older codes do not reflect the technical advances behind these trends, however.



Older codes can also cause conflicts. New hospitals are built to comply with up-to-date codes, such as the 2012 *International Building Code* that will be used by most local municipalities and code officials to regulate the design and construction of health care facilities. About 98 percent of U.S. jurisdictions use this code. But once hospitals open, they are surveyed using the outdated 2000 edition of the *Life Safety Code*, and the codes can conflict.

The 2012 edition of the *Life Safety Code* is more closely aligned with the *International Building Code* and other codes published by the International Code Council. Adopting the 2012 edition of the *Life Safety Code* will save hospitals money and time because they will have to deal with fewer instances of conflicting codes.

The 2012 edition of the *Life Safety Code* provides added levels of patient safety compared to the 2000 edition. For example, the 2012 edition allows hospitals to keep critical equipment in corridors outside patient rooms so it can quickly be

accessed for patient care, diagnostics, and patient movement. Older versions of the *Life Safety Code* don't allow that.

The 2012 edition is also superior to the 2000 edition because it:

- Recognizes that hospitals use defend-in-place techniques and clarifies that authorities cannot require full evacuations during fire drills. This protects patients who would be harmed by a sudden evacuation.
- Allows controlled exit access doors, limiting the number of infant abductions and instances of patient wandering.
- Allows an increase in suite sizes from 5,000 square feet to 7,000 square feet, making nursing units more efficient and improving staff communication and patient care.

ASHE can provide more information on the numerous other changes in the 2012 edition of the *Life Safety Code* and explain how they will help hospitals. ASHE applauds CMS for moving toward an updated version of the *Life Safety Code* and is hopeful this change will come soon. CMS's adoption of the 2012 edition will make a real difference for hospitals and their patients.

Coalition Advocates for Current Codes

By Sara C. Yerkes

Senior Vice President of Government Relations for the International Code Council

The Coalition for Current Safety Codes (CCSC) is a broad-based, volunteer-oriented coalition of like-minded nonprofit organizations, local governments, code officials, industry leaders, schools, and concerned individuals who believe in advancing safety by advocating for the adoption of current building, sustainability, electrical, and life safety codes. The coalition serves to create more public awareness and broader support for the adoption of the codes that protect the health and welfare of our society. All participants in the coalition endeavor to explain the benefits of public/private sector partnerships that provide the United States with a robust system of codes and standards development involving industry, manufacturers, code administration professionals, and the public.

The Coalition is co-chaired by the International Code Council (ICC) and the National Fire Protection Association (NFPA), two predominant and well-known model code and standards developing organizations in the United States. Together, they decided to leverage resources by joining together and providing a strong, unified force willing to stand up for public safety and demonstrate their

support for the consistent adoption of model codes as they are updated. Codes and standards are updated on regular cycles to benefit from new science, lessons learned from disasters, and new technologies and products. Both associations are among a number of organizations that develop standards and provide support to government by engaging in public/private sector collaboration to develop codes that support health, safety, and the environment. As a result, government does not take on the high cost of developing its own codes and benefits from code uniformity that enables safe and affordable construction growth.

Economic challenges and state and local budget cuts have at times obscured the benefits of updating building, sustainability, electrical and life safety codes and standards in a timely manner. This environment has made it more challenging to convey the fact that delaying the adoption of codes leaves jurisdictions in the position of eventually having to catch up for the sake of public safety, an endeavor which is labor intensive, requires more training, delays innovation, delays removal of outdated provisions from existing codes, and prevents

new products from entering the market on a timely basis.

The Coalition's primary goal is to educate legislators, federal and state agencies, and other key decision-makers about these crucial issues as well as other concerns that arise from allowing building, sustainability, electrical, and life safety codes to lapse, which may impact public safety and local economies. The mission is to create

broad support beyond traditional stakeholders and industry insiders about an issue that affects everyone and the built environment. Adopting and enforcing the latest codes and standards is the most efficient and effective method of creating safe, sustainable, and affordable communities.

Learn more and join the coalition at www.coalition4safety.org.



Coalition for Current Safety Codes

Health Care Codes Should Strive for “Minimum”

By Ed Avis

for ASHE

All your life you've been encouraged to strive for the maximum and be all you can be. But if you're writing codes for health care facilities, that's suddenly bad advice. In that job, you should instead be striving for the minimum, because codes are intended to provide minimum standards, not best practices.

“Codes are typically minimum standards, and if you take a look back to 50 or 60 years, you see that the scope then was exactly the same as today,” said ASHE Director of Codes and Standards Chad Beebe, AIA, SASHE. “But now the volume of the text has increased exponentially. Given that the scope of the codes hasn't changed, it makes you wonder: Why were we able to say things in so many fewer words then?”

There are likely many answers to that question, ranging from the possibility that those working on code revisions may want to contribute something to the code, to the fact that society is more litigious today, prompting some code writers to spell out every detail.

But Beebe said a major contributor to the ever-increasing code books is the disconnect between minimum standards and ideals.

“When you start digging into it, you find that we've started to develop standards around idealistic scenarios,” Beebe said. “In the case of health care, we tend to think of an ideal hospital and say that's the minimum. Well that's the ideal, not the minimum. You tend to forget that you can provide great care in a desert in a war zone in a MASH tent. Somewhere between a MASH tent and an ideal hospital lies the hospital that meets the minimum standards.”

Consider the example of staff resting rooms, commonly called nap rooms. Many hospitals use staff nap rooms, particularly if they are a teaching hospital where resident physicians work long hours.

“You may decide that providing an area for staff to get some rest is good for the safety of the patients, and works well with your staffing model,” Beebe said. “But I don't believe that we should mandate that nap rooms should be provided for all hospitals.”

The idea of maintaining minimum code language is on the minds of those involved in the code development processes of organizations such as the National Fire Protection Association, the International Code Council, and the Facility Guidelines Institute.

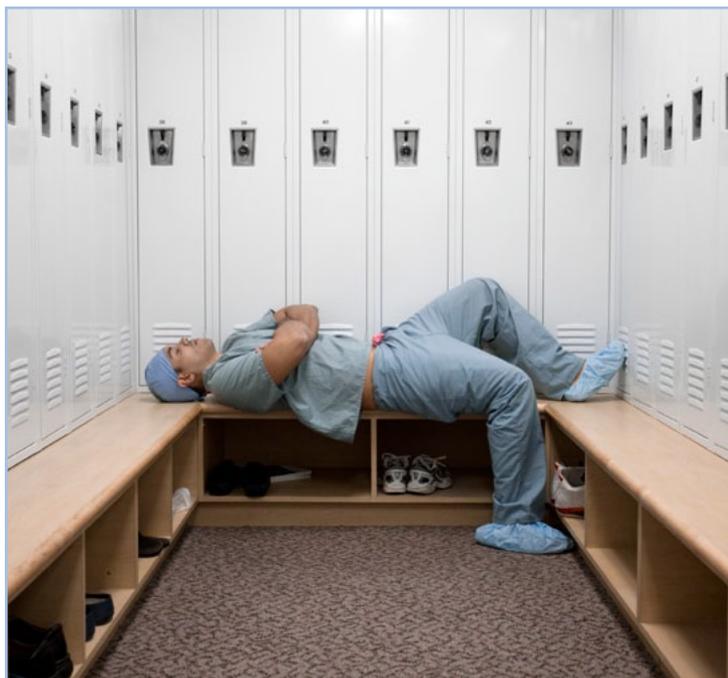
For example, the Facility Guidelines Institute’s Health Guidelines Revision Committee met in St. Louis in April 2013 to make final decisions on what would be included in the 2014 edition of the *Guidelines for Design and Construction of Hospitals and Outpatient Facilities*. The committee considers proposals submitted by members of the public, many of which extended beyond minimum requirements.

For example, one proposal suggested that a shower be required in each patient toilet room. Of course most patients would enjoy a convenient, private shower. But in reality it may not be practical, or needed, in every situation. It certainly is not a “minimum standard.” The idea was struck.

Many other proposals addressed by the committee in St. Louis dealt with similar issues—things that would be nice to add to a hospital, but shouldn’t be a minimum requirement. The argument ended in favor of minimum requirements most of the time.

Of course, these issues are not black and white. What seems like a minimum in one situation may seem extravagant in another. Sometimes the situation is exacerbated by external circumstances, such as changing demographics.

For example, the needs of bariatric patients was a frequent topic during the St. Louis meetings, and sometimes these discussions illustrated the fine line between minimums and ideals. Should all railings in stairwells be designed to handle 1,000 pounds of downward pressure? If a very large person leans heavily on a railing in a



Separate resting rooms for hospital staff are popular for those tired of trying to rest in uncomfortable spaces, but are these resting rooms truly a necessary requirement for a hospital?

hospital stairwell, of course hospital staff want the rail to bear the weight. On the other hand, how likely is it that a person of that size will be using the stairs? And is the added cost of creating such a strong railing justified by the slim possibility that it will be needed?

Another issue affecting code minimums is differing opinions about whether requirements should be performance or prescriptive. If requirements are truly minimum standards, should the details be left up to designers and owners? Or do specifics make the minimum standards easier to follow and more predictable? For example, one proposed change



Somewhere between a field hospital and the Taj Mahal is a hospital designed with minimum standards, which keep patients safe without adding unnecessary requirements. Finding the right balance of minimum standards is a topic of discussion among code development organizations.

provided rather specific measurements for the required personal storage space in a patient room: “The storage shall have minimum clear dimensions of 1 foot 10 inches (55.88 centimeters) in depth by 2 feet 6 inches (76.20 centimeters) in width.” In contrast, the requirement regarding storage in a laundry facility simply says, “Storage shall be provided for laundry supplies.”

Which of these is a minimum standard? Is the requirement for the patient room better because there’s no room for interpretation? Or is the laundry storage requirement better because it doesn’t burden the designer with specifics that may not fit a hospital’s situation? If requirements are more vague, how will a hospital or designer know they have

achieved the minimum level of storage to obtain approval?

These types of questions, and the ways they get answered, will help shape code development in years to come.

“There’s a national struggle right now about whether it’s better to have best practices or minimum standards,” Beebe said.

Health care facility managers are not the only ones affected by expansive codes. Jon Nisja, a supervisor in the Minnesota State Fire Marshal Division, said he’s a big believer in fire and life safety codes.

“They have been very effective in saving thousands of lives over the years,” Nisja said. “But in the past couple of decades the code process, in my opinion, has become too complicated and confusing.”

Exacerbating the problem, Nisja said, is the fact that over time, fire code revisions have created contradictory requirements; requirements that have drifted from their original intent; and requirements that appear to benefit vendors more than fire safety.

“Most fire marshals, fire protection contractors, and building managers/engineers are not fire protection engineers,” Nisja said. “We rely on the codes

to give us clear and concise answers that will provide a high level of fire and life safety for the people we protect.”

Something similar can be said of hospital engineers and managers. They don’t need codes that dictate design issues or ideal accoutrements for every patient room. They just need concise, easy-to-follow codes that help them create safe, effective health care facilities. They need the minimum.

ASHE Urges Adoption of Latest FGI *Guidelines*

By Chad Beebe

AIA, SASHE, ASHE Director of Codes and Standards

While many codes and standards apply to existing hospitals, there are also requirements that apply primarily to new hospital projects. Many states have adopted the *Guidelines for Design and Construction of Health Care Facilities* to regulate the construction of new hospital facilities. This document, which is a minimum standard based on research and data, offers requirements that states can easily customize to fit local conditions.

The *Guidelines* document covers the design and construction of clinical and support areas of hospitals and other health care facilities. It includes recommendations on patient handling, infection prevention, and architectural details as well as engineering design criteria for mechanical, electrical, and plumbing systems.

The *Guidelines* document has had a long history. Originally called the *Public Health Service Minimum Requirements*, it was written by the federal government until the early 1980s, when the administration of President Ronald Reagan eliminated many government regulations. Shortly thereafter, a handful of interested and concerned individuals wanted to continue development of the document. They

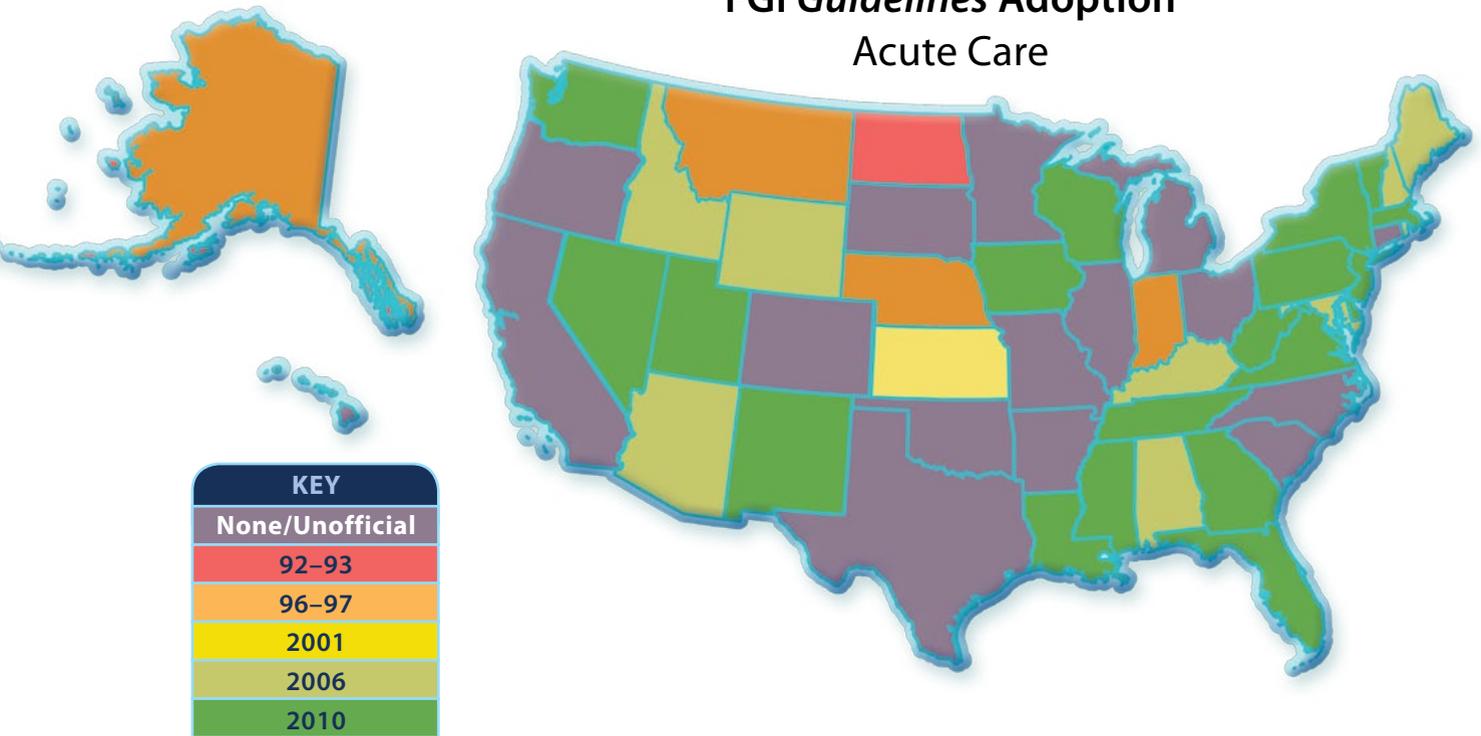
won a federal grant and worked with the American Institute of Architects (AIA) to revise and publish the document, which became the 1987 edition of the *Guidelines*.

Currently, the document is overseen by the Facility Guidelines Institute, a nonprofit organization dedicated to regularly updating the requirements through the efforts of a large group of multidisciplinary experts. The group carefully weighs the associated costs of potential changes with their potential benefit (see page 31 for more information on how the group does this).



The 2014 *Guidelines for Design and Construction of Hospitals and Outpatient Facilities* will be available in 2014 at the ASHE Store at www.ashestore.com.

FGI Guidelines Adoption Acute Care



The *Guidelines* document is updated every four years, but not all jurisdictions automatically adopt the latest edition. This leads to different editions being used in different states, which can cause confusion (see map above).

The American Society for Healthcare Engineering of the American Hospital Association encourages states to adopt the latest edition of the document. This will ensure that all states are meeting minimum requirements for physical environments that address new technologies and changes in health care delivery.

It also allows for more efficiency since hospital design teams increasingly contain consultants from multiple states.

The next edition of the *Guidelines* will be published in 2014. This edition splits the regulations into two documents: one for hospitals and outpatient facilities and another for nursing homes and long-term care facilities. This change reflects the shift away from a hospital environment in the long-term care industry. The 2014 edition of the hospital document will be renamed the *Guidelines for Design and Construction of Hospitals and Outpatient Facilities*.

Codes Must Be Updated Regularly

By Rich Umbdenstock

President of the American Hospital Association



Hospitals across the country are striving for excellence and are improving patient care based on state-of-the-art science and best practices from the field. In the codes and standards that regulate the health care physical environment, we should also strive for excellence and to reflect the latest scientific developments.

The codes and standards that regulate hospitals help keep our patients, staff, and visitors safe. But it's important to keep these requirements updated so they reflect the changing health care environment and incorporate the latest science. Outdated, obsolete codes can pose problems for hospitals, often causing resources to be needlessly diverted away from patient care for requirements that have been changed in newer editions of the code. By adopting the latest codes and standards, authorities regulating hospitals can ensure a safe environment without unnecessarily diminishing scarce health care resources.

The organizations that create codes and standards update these important documents on a regular basis. For example, the Facility Guidelines Institute recently completed work on the 2014 edition of the *Guidelines for Design and Construction of Hospitals and Outpatient Facilities*, which is published by ASHE. We encourage the adoption of this updated document in all states.

Codes and standards help keep our hospital physical environments safe, but they need to be updated regularly. By applying the latest codes and standards to the health care physical environment, regulators can help hospitals across the country in their journey toward excellence.

Group Weighs the Costs and Benefits of Health Care Requirements

By Tom Gormley

Associate Professor at Middle Tennessee State University, Healthcare Services Consultant for URS Corporation, and Co-Chair of the Cost-Benefit Subcommittee of the Facility Guidelines Institute's 2014 Health Guidelines Revision Committee

The hospital industry is one of the most highly regulated of all public services. The typical rules that apply to all businesses—such as sound accounting practices, safety practices regulated through the Occupational Safety and Health Administration, labor and employment laws, and many others—apply to medical facilities. In addition to these, hospitals must also comply with the Emergency Medical Treatment & Labor Act, which regulates emergency treatment; the Health Insurance Portability and Accountability Act, which protects patient privacy; and now the new Affordable Care Act. Other organizations that have a significant impact on hospitals are the Joint Commission, DNV Healthcare, Inc., and the Healthcare Facilities Accreditation Program, all of which provide accreditation that enables hospitals to qualify for Medicare and Medicaid program reimbursement. The Centers for Medicare & Medicaid Services manages these reimbursement funds and has an extensive set of additional requirements for hospitals. The physical plant or facility is required to meet numerous local

and state building codes, along with the National Fire Protection Association's NFPA 101: *Life Safety Code*® and NFPA 99: *Health Care Facilities Code* as well as other standards referenced by NFPA 101 and NFPA 99. Additionally, state licensing and public health departments impose design and construction requirements on hospitals. These agencies typically reference the *Guidelines for Design and Construction of Health Care Facilities (Guidelines)*, although some states write their own regulations.

While a good argument can be made for the need to heavily regulate hospitals given the importance and potential consequences of their services, there is also increasing pressure to control the cost of health care in our country. The United States currently spends more per capita on health care than other modern countries. The complex balance between quality, access, regulation, and cost is challenging the many parties involved in our health care system, including hospitals, physicians, insurance providers, state and federal governments, the public, and various regulators.

The committee that develops the *Guidelines* has recognized this challenge and implemented a process to help weigh the difficult choices involved in making continuous requirement improvements while balancing the cost implications of such proposals.

Every four years the *Guidelines* are updated to reflect changes in the health care industry, such as new thinking regarding ways to improve quality and safety and changes in clinical practice, as well as to refine requirements that may have become outdated. The revision process presents a significant challenge for the 130-member Health Guidelines Revision Committee, which reviews more than 3,000 public proposals and comments along with the current document language. The committee implements appropriate changes to provide the industry with a practical and achievable minimum standard for new hospitals as well as renovations and additions to existing facilities.

The committee consists of a diverse mix of professionals from numerous health care disciplines and a range of federal and state authorities. Membership includes physicians, nurses, infection prevention experts, security and safety consultants, health care administrators, health care facility managers, authorities having jurisdiction from federal and state departments, planners, architects, engineers, builders, and medical equipment experts. All have a passion for health care and most have committed their entire careers to their given field. These members work to evaluate current requirements and develop proposed

changes to the previous edition. In addition, the *Guidelines* revision process is open to the public in two ways: a public proposal period and a comment period.

During the 2010 revision cycle, several committee members proposed developing a formal process for evaluating the costs and benefits of proposed changes. This led to the formation of a cost-benefit subcommittee for the 2014 revision cycle.



One of our first challenges for the cost-benefit subcommittee was to develop an analytical tool for evaluating changes proposed for the 2014 *Guidelines*. We quickly realized we could not assign absolute dollars and cents to proposed changes due to the wide range of hospital construction costs across the country. For example, California may have per-square-foot costs of more than \$800 for a new hospital, while it may be closer to \$300 per square foot in Tennessee. We faced the same challenge with qualitative measures for the expected benefits. For example, we

struggled to evaluate the benefit to patient safety or quality of care for a proposal that would require an intensive care unit room to have an additional foot of space near the head of the patient. The additional cost to design, build, operate, and maintain this extra space was quantifiable, but the benefit was much more ambiguous.

Given the challenges of providing absolute data, we developed a relative scale that evaluates important benefits, such as patient safety and quality of care, as well as costs, including capital and operating expenses. We felt the comparative analysis of all proposed changes would give the committee guidance regarding the impact of requirement modifications. It also allowed committee members to easily recognize changes that would have a very significant cost impact on hospitals, evaluate the clinical and safety benefits, and determine if further evaluation should be considered.

Some of the proposed changes to the 2014 edition were easy to categorize as just “word-smithing” that had little impact. For example, one proposal suggested modifying a requirement concerning the light over a patient bed that was worded oddly and could be interpreted by authorities as requiring a light that did not produce any heat, which did not seem practical in application.

Other proposals were significant changes that would increase the cost of

construction in the future without tangible or measurable benefits. For example, one proposed change would prevent the storage of linen carts in alcoves in corridors. Our subcommittee found that removing the ability to store linen carts in alcoves could lead to larger storage rooms and increased travel distances for staff to retrieve supplies. Costs would increase due to the need for larger storage spaces.

There were also proposed changes that offered potential improvements with minimal costs. For example, one proposed change involved window treatments with apparent benefits in terms of maintaining cleanliness. Our subcommittee found the change could lead to improved patient safety and clinical care.

The cost-benefit subcommittee created realistic and objective evaluations of the proposed changes in requirements for the design and construction of hospitals. These analyses will help committee members as they vote in 2013 on the final language for the 2014 *Guidelines*.

In my opinion, the formal process of evaluating the cost and benefit of additional requirements is a progressive step forward in developing health care regulations. The hospital industry is being pressured from all fronts to reduce costs. We can only hope the numerous other regulators will also accept fiscal responsibility as part of their task so health care will be affordable for all in the future.

For more detailed information about this topic, read the Fall 2013 edition of *Inside ASHE* magazine.

Hurricane Sandy and Other Events Show the Need for Updated Regulations

By Jonathan Flannery

CHFM, FASHE, MBA, ASHE Senior Associate Director of Advocacy

Major events—including natural disasters, terrorist acts, security threats, and fires—are unfortunately part of modern life. It's important that the codes and standards regulating hospitals are updated regularly (and that the most up-to-date editions are adopted) to incorporate emergency planning lessons learned from these tragedies.

In 2012, Hurricane Sandy was responsible for 110 deaths. The storm destroyed or damaged more than 650,000 homes and left more than 8 million people without power. At least 23 states felt the direct effects of the hurricane, while millions of other Americans felt the indirect effects of the storm. Some of the direct effects of Sandy were:

- The subway system in New York City suffered the most extensive damage in its 108-year history.
- More than 12,000 commercial airline flights were grounded.
- The New York Stock Exchange closed for two consecutive days.

- The U.S. Army Corps of Engineers and others involved with FEMA recovery efforts reported that they drained more than 470 million gallons of water from the New York City metro area, enough to fill all 843 acres of Central Park with roughly two feet of water.
- Damage estimates put the cost of the storm around \$50 billion, the second costliest storm in the history of the United States.
- Two hospitals closed prior to the storm and three evacuated after the storm made landfall.

Because of the enormous impact of this type of storm—and the ever-growing concern about large-scale events happening more often in the United States—it is vital that the health care industry reflect on current emergency management practices and the vital role that health care plays in responding to disasters.



Large parts of Manhattan lost power after Hurricane Sandy hit. It's important for authorities to adopt the latest editions of codes, which incorporate lessons learned from storms and other events.

Emergency management is covered by the National Fire Protection Association's NFPA 99: *Health Care Facilities Code*. NFPA 99 is a wide-reaching code that is referenced by NFPA 101: *Life Safety Code*®, which is a requirement of certification through the Centers for Medicare & Medicaid Services (CMS). Therefore, both NFPA 101 and NFPA 99 are necessary for Medicare and Medicaid reimbursement.

Under NFPA 99, the key function of an emergency management program is to “assess, mitigate, prepare for, respond to, and recover from emergencies of any origin.” Emergency management programs are primarily prepared by a multidisciplinary committee that should consist of representatives from key areas within the health care organization, including senior management, physicians, nurses, infection control specialists, facility engineers, safety/industrial hygiene professionals, security staff, and other key individuals. The emergency management committee is responsible for the

emergency operations plan, which is to be based on an incident command system in coordination with federal, state, and local emergency response agencies.

The importance of this coordination was truly highlighted in the successful efforts during Hurricane Sandy. Susan C. Waltman, executive vice president and general counsel of the Greater New York Hospital Association, emphasized this teamwork during the storm. “The fact that not one patient died or was seriously injured as a result is a testament to the incredible work done by teams of dedicated people who communicate regularly throughout the year on how to prepare for a host of potential emergency situations,” Waltman said. “Communication, cooperation, and collaboration are critical elements to the success of any emergency preparedness plan.”

The emergency management program required by NFPA 99 must address four stages: mitigation, preparedness, response, and recovery. This is achieved primarily

through a hazard vulnerability analysis, often called an HVA, and an emergency operations plan, often called an EOP. The hazard vulnerability analysis is used to identify and assess the potential risk of hazards that are most likely to impact a facility and the services provided. When performed properly, this analysis addresses the mitigation and preparedness phases of potential emergencies. The emergency operations plan documents the command structure to be used during an emergency and addresses the procedures for handling necessary critical functions, addressing the response and recovery phases of an emergency. Taking the time and effort to thoroughly analyze hazards and document operations plans prior to an emergency is critical and was another key success factor to the responses during Sandy.

“Some of the encouraging things I’ve seen (in hospitals affected by Sandy) is that in some situations where a facility lost power, they didn’t have to evacuate because they had plans in place for that event,” said Chad Beebe, director of codes and standards for ASHE and a member of the committee that is responsible for NFPA 99. “I think that’s a testament to their planning and the care for their patients.”

After the storm, ASHE conducted a survey regarding essential electrical systems and had responses from 390 health care facilities located within the area impacted by Hurricane Sandy. The survey found that 138 facilities lost normal utility power, ranging from a loss of less than one hour (experienced by 10 percent of



facilities) to an outage of 168 hours (experienced by 1 percent of facilities).

Of the 138 facilities that lost normal utility power, 13 reported that critical equipment did not transfer to emergency backup power within the 10 second time frame required by codes, and 24 others reported a problem with the backup power system before normal power was restored. Nine of these unanticipated outages were due to fuel system failures, while four were due to failures of cooling systems. Sixteen of the 24 unanticipated outages lasted for less than one hour, while four lasted longer than 96 hours.

Yet despite these issues, not one of the 138 facilities surveyed required an evacuation due to the loss of the power. This shows the importance of detailed emergency management planning. Even when backup systems didn’t work as expected, the hospitals successfully managed the situation and provided the needed care for their patients, remaining a viable resource to the communities they serve during a desperate time.

By adhering to the emergency management requirements of NFPA 99 and adequately analyzing and preparing for

emergencies by taking steps including regular practice drills, these medical services were available at a time when they were desperately needed. Lives were saved.

The procedures worked, and the ASHE survey numbers help confirm that fact.

Hospitals may be taking the correct steps in planning, but many are going above and beyond code requirements. That's because the edition of NFPA 99 currently required by CMS is the 1999 edition, an outdated code. The 1999 edition—written before major events such as the 2001 terrorist attacks and Hurricane Katrina—contains significant differences from the current 2012 edition.

For example, the 1999 edition requires that emergency planning shall be based on realistic conceptual events and operating capacity thresholds that necessitate

activation of the plan—but no mention is made of a hazard vulnerability assessment or an emergency operations plan. These two documents are vital pieces of any emergency management program, and are required by the 2012 edition. CMS has indicated that it may soon move toward updated codes, and ASHE applauds this shift. Authorities should regularly adopt the most up-to-date editions of codes so that lessons learned and technological advancements can be incorporated.

Fortunately, health care organizations are voluntarily accepting and applying the latest emergency management protocols even without a mandate to do so. Because of their efforts, hospitals are better prepared to provide vital services during difficult times when health care services are most needed.

Hospital Codes Should Be Based on Science

By Chad Beebe

AIA, SASHE, ASHE Director of Codes and Standards

Codes and standards reflect the time period in which they were written. What made perfect sense in the 1960s may no longer be appropriate in modern hospitals. Code development organizations should use science and data, not assumptions or claims, to make decisions on requirements affecting the health care physical environment.

One example of using science to properly change codes is found in the humidity requirements for operating rooms. The requirement for at least 35 percent relative humidity in operating rooms was first added to National Fire Protection Association standards to reduce the probability of static discharge—an important precaution decades ago, when flammable anesthetics were in use. At the time, humidity control was one of several safeguards, including conductive flooring, that were applied to limit the possibility of explosion. Now that flammable anesthetics like ether are no longer used, this requirement is no longer needed. And the requirement costs hospital resources in humidification equipment and energy costs to keep humidity at required levels. Simply by shifting from 35 percent to 20 percent, the health care industry is expected to save more than \$200 million

in the next decade without jeopardizing patient outcomes.

However, code writing organizations studied the issue closely before making the change.

ASHRAE Standard 170: *Ventilation of Health Care Facilities* and the Facility Guidelines Institute's *Guidelines for Design and Construction of Health Care Facilities* are two documents that require a minimum humidity of 20 percent instead of 35 percent. The justification behind the 20 percent minimum was based on data. Code development committees considered the National Institutes for Health's scientific literature review on the potential impacts of lowering relative humidity to 20 percent on surgery outcomes as well as on expert testimony from professionals in infection prevention and control, health care epidemiology, perioperative care, mechanical engineering, and health care engineering. (There is also a maximum relative humidity limit of 60 percent in operating rooms—data supported the idea that exceeding this amount could be a variable that could lead to increased surgical site infections, so no adjustment was made to the long-standing upper limit of 60 percent for relative humidity.)

The National Fire Protection Association, which included its humidity requirement in fire safety codes at the time of flammable anesthetics, eventually realized that operating room humidity was no longer a fire safety issue but strictly a clinical one. The latest edition of NFPA 99: *Health Care Facilities Code* refers to the ASHRAE Standard 170, which is at 20 percent minimum humidity.

Although science helped drive the decision-making process regarding this issue, it's important to note that it took years and years to get this burdensome requirement removed from the fire and life safety codes. As technology and trends change, sometimes the people who serve on code development committees are not aware of the reasons certain requirements were included in previous editions, so when the technology that precipitated the requirement changes, they do not know to go back and update the code. In the case of the humidity requirement, the committee working on this code was under the misconception that there were clinical benefits to maintaining a relative humidity of at least 35 percent and for years kept the requirement.

Even though the National Fire Protection Association code has now been changed, hospitals are required by the Centers for Medicare & Medicaid Services to comply with an older version of that code that still requires 35 percent relative humidity in operating rooms. In 2013, however, the agency issued a waiver



During the time of flammable anesthesia, codes required at least 35 percent humidity in operating rooms to help reduce the chance of static sparks.

allowing hospitals to comply with 20 percent relative humidity requirements instead of 35 percent requirements. Yet some hospitals still have to comply with the 35 percent level because state regulators have adopted outdated editions of the standard. The Centers for Medicare & Medicaid Services has indicated it hopes to adopt more updated codes soon, and the waivers would no longer be needed once newer codes are required.

The lengthy process to get requirements changed both in the code books and in practice—and the hospital resources spent on unnecessary operating room humidity requirements over the years—are reminders of why it's important to adopt up-to-date codes and standards that are based on science and data.

Q&A: A Balanced Approach



Chad Beebe



William Koffel

ASHE recently discussed a balanced approach to health care codes and standards with ASHE Director of Codes and Standards Chad Beebe, AIA, SASHE, and William Koffel, PE, FSFPE, President of Koffel Associates, Inc., a fire protection and life safety engineering design and consulting firm.

How is the approach to fire and life safety in hospitals different than in other facilities?

Beebe: There are several factors that need to be considered in health care that are not applicable to other types of facilities. Our buildings are occupied 24 hours a day, seven days a week, and we house vulnerable patients. We have a highly trained staff that takes the Hippocratic Oath and is there to protect patients.

Koffel: Another unique thing about hospitals that not everyone realizes is the in-depth survey process that is used. On a regular basis, someone is surveying the facility, looking above the ceilings to check the integrity of fire barriers or smoke barriers. That level of scrutiny doesn't occur in most types of buildings.

Beebe: Not only are surveyors looking at the physical environment aspects

of health care facilities, they are also interviewing staff and looking at records such as fire alarm drills to make sure they are routinely drilling each shift, each quarter and they check to make sure all staff have met minimum training requirements.

Koffel: In hospitals and in all types of buildings, we have some very reliable fire protection systems that we can use to design facilities, but none of those have 100 percent reliability. So there is a need to have some level of balance or redundancy in the various fire protection features and systems that we have in the building. But we also have to consider the unique aspects of health care. Balance doesn't mean you have to have one of everything.

Given the unique aspects of hospitals, and the need for overlapping safety precautions, how do those responsible for health care

codes and standards know when hospitals have reached the optimal level of protection so that they don't go overboard with unnecessary requirements?

Koffel: It's a tough question to say exactly how much protection is enough. Typically, code development organizations look at historical fire experience and the lessons that we can learn from those fires. With health care, we have had a low number of fires and do not really have solid or reliable data from which we can assign specific reliability numbers to various protection features. The other approach often used in risk assessment is to look at the incremental benefit we get from each additional layer that is provided. At some point in time, we start to reach a point of diminishing returns.

Beebe: The point of diminishing return exponentially creeps up much faster in health care because of the fact that the goal of health care is to improve people's health and save lives. When you start taking resources away from that mission and putting money into code requirements that go beyond what is necessary for safety, it impacts the delivery of health care. That's where we see the biggest problem, and it comes up quite often: How much money do you spend on protecting lives through fire and life safety with the remote possibility of a fire or event, and how much money do you spend actively saving lives or improv-

ing the health of those that have come to the hospital?

Koffel: In the regulatory environment, we all have our specific areas of focus, so you have folks looking at fire and safety, you have folks looking at energy conservation, you have folks looking at the environment in which we're trying to deliver health care services. And then you have folks that are basically looking at trying to provide the required medical care with the funds that are available. In the regulatory arena, we really don't balance all of those different areas. Rather we all look and say, "Well, we can do this for fire and safety," or "We can do this for energy conservation." And that basically means we're pulling money from one area to another, or potentially at the expense of another. The hospital administration is put in the position of trying to determine how best to spend the money in terms of providing quality care, a quality environment, and a safe environment.

Beebe: I think people often misunderstand and think there's a lot of excess revenue in hospitals. People see the typical doctors and the money that they make as individuals and they attribute that to hospitals as more or less bringing in money. If you've ever been to the emergency department and have seen the cost of a simple procedure, you might think hospitals have a lot of excess revenue. In reality, hospitals are working on a 3 percent margin on average—

that's a very thin line to be working on. And any time there is a financial impact to a hospital, they somehow have to cover the cost. When hospital profits are only 3 percent of revenue, a new code requirement that costs a facility \$30,000 requires the hospital to take in \$1 million in additional revenue to cover the cost without lowering the profit margin. This directly increases the cost of health care.

Given the rapid changes affecting the health care industry right now, how will the balanced approach play out in the future?

Koffel: When the margins get tighter, the level of scrutiny is going to increase as to how the money is being spent: Do we really need to spend it that way? There's another balance within the facility—they need to maintain the existing infrastructure while still meeting current and potentially changing code requirements. For example, if routine infrastructure maintenance is not properly funded in favor of spending the money on

some other “required” activity, there could be problems down the line. If the roof of the building isn't replaced as originally scheduled because money is spent on new code requirements, the roof may subsequently leak or fail in some other way, impacting finances significantly and adding to the cost of health care.

Beebe: Prudent hospital administrators will ask the facility managers how they can help with these challenges. A lot of times we hear the excuse for why something can't be done is because the code wouldn't allow it. And I think there is going to be more pressure to look at whether that's really the case, and if the code really doesn't allow it, why it isn't allowed, and whether the code should allow it. We may need to look at whether the code protects life safety or if it contributes to the inability to provide care and if it can be changed. At ASHE, we are trying to take a look at the big picture and this balanced approach as we work on codes. Let's figure out what the right code balance is for health care.

Misinterpretations That Seem Minor Can Lead to Huge Costs

By Deanna Martin

ASHE Senior Communications Specialist

Codes should be written clearly so their intent and application is easily understood. Vague or unclear codes can lead to poor interpretations of codes and standards, another source of unnecessarily wasted health care resources.

The example given here illustrates some of the issues hospitals have with inappropriate code interpretations. And they show how a directive issued to one hospital with a cost that might seem minor can balloon into an industry-wide expense of millions of dollars.

A citation issued in 2010 by a state fire marshal surveying for the Centers for Medicare & Medicaid Services (CMS) mandated that all wall-mounted operating room supply storage cabinets have automatic sprinkler heads installed inside the cabinets or have holes drilled into their tops to permit sprinkler water to penetrate the cabinets. The facility cited has 40 operating rooms with numerous cabinets in each operating room. No specific information was provided about the size of the cabinets that would be subject to this requirement, but it is understood they are similar to typical cabinets mounted in most operating rooms across the country. No specific



code citation was provided in the fire marshal's final report.

Without a specific code chapter and verse provided by the fire marshal, it is difficult to determine the reason behind the citation. The concern may have been that objects that obstruct the spray of a

sprinkler from reaching the seat of a fire may allow the fire to grow and overwhelm the sprinkler system. However, studies have shown that small enclosures such as wall and base cabinets are not capable of holding a significant fire load. Should a fire originate in these cabinets, tests have shown that sprinklers installed in the room are capable of preventing the spread of the fire beyond the cabinet.

Assuming the cabinets could be protected with one sprinkler in each cabinet, ASHE estimates that eight to ten

sprinklers with appropriate piping could be installed in a day for approximately \$2,600 per sprinkler. When including the costs for taking an operating room out of service for a day and the subsequent clean-up that may be required for infection prevention, the overall cost of response to this interpretation could be approximately \$13,000 per operating room. If states across the country require similar sprinklered cabinets, the estimated cost to the U.S. health care industry would exceed \$425 million.

Facility Professionals Provide Value to Hospitals

By Deanna Martin

ASHE Senior Communications Specialist

The role of facility management professionals has changed and expanded over the years, moving from the boiler room to the board room in many cases.

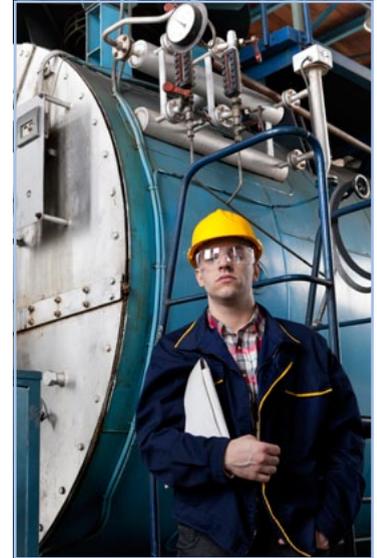
The facility and engineering departments of hospitals help keep patients and staff safe, optimize the health care environment, and keep equipment running as it should. They also work to ensure complex building systems perform as they are designed, help reduce utility costs and improve energy efficiency, and raise patient satisfaction scores. By increasing patient satisfaction and decreasing spending, facility managers are bringing real value to the table and are earning a seat in the C-Suite.

The American Society for Healthcare Engineers (ASHE) offers training for facility management professionals, who come from a wide variety of backgrounds. ASHE offers training for a range of experience levels, from boot-camp style training for new professionals to exam preparation courses for experienced facility managers striving for the designation of Certified Healthcare Facility Manager

(CHFEM). Many health systems find the CHFEM designation especially valuable and are encouraging all facility managers within them to become certified.

ASHE also offers training courses for health care constructors, including an exam preparation course for those striving to earn the Certified Healthcare Constructor designation. These education offerings ensure that constructors entering the health care environment understand the sensitive nature of hospitals and their unique components, including infection prevention requirements, medical gas systems, and medical technology.

Hospitals are increasingly looking for ways to reduce costs and increase patient satisfaction, and ASHE hopes to help facility managers contribute to these important goals. For more information on ASHE education offerings, visit www.ashe.org/learn.



Requiring Commissioning Leads to Savings

By John Dombrowski

PE, HFDP, CPMP, LEED AP, project engineer with H.F. Lenz Company in Erie, Pa.

Commissioning is a term used by the U.S. Navy, which “commissioned” ships prior to sending them out to sea. Ships would often not see land for months after they were launched, so the Navy wanted to verify that all of the systems were operating properly and that the crew was properly trained in the operation and maintenance of the systems before leaving port. Health care facility commissioning is essentially the same process: verifying that the critical mechanical and electrical systems—on which many lives rely—are operating properly and that the staff is properly trained prior to the building being occupied. ASHE supports the commissioning process, and believes codes and standards dictating the construction of new hospitals should include commissioning as a requirement.

In an ideal world, commissioning wouldn’t be needed because facilities would only use good quality contractors with plenty of time and money to install proper equipment and check their work before the space is occupied. In an ideal world, testing firms would have plenty of time to check equipment operations, and the maintenance staff would be well trained on how to operate the systems to

their peak efficiency. But because we do not live in an ideal world—and because building systems are becoming ever more complex—oftentimes a newly built facility is not operating as it was designed to. Commissioning ensures that buildings perform as expected, and the process pays for itself in savings.

Commissioning is becoming more prevalent in all types of construction because of its benefits—including cost benefits, energy savings, and occupant comfort—but the process is even more important in health care facilities, which are different than other types of commercial buildings. Health care facilities are held to very strict codes and standards and must meet stringent air change, temperature, and pressure requirements. In addition, health care facilities house vulnerable populations, including non-ambulatory and infectious patients who rely on the heating, ventilation, and air conditioning (HVAC) systems to not only heat and cool them but to protect them from airborne infections. Patients rely on hospital emergency power for life support systems. Patients need domestic hot water systems that assist in infection control and medical gas systems that



are essential to the survival of some. At a time when patient satisfaction is critical to the success of facilities, commissioning can help stem one prevalent complaint that affects Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) scores: the effectiveness of the HVAC system. Health care facilities are facing increasing competition and pressure from insurance companies to cut costs, so the savings and increased performance that commissioning brings are fueling the popularity of this process among health care leaders.

Commissioning will become even more critical in the future, and many believe this valuable process will be incorporated into more codes and standards as time moves on. Currently, commission-

ing is required by the Facility Guidelines Institute's *Guidelines for Design and Construction of Hospitals and Outpatient Facilities*, and for any Leadership in Energy and Environmental Design (LEED) certified project. Also, as commissioning proves its return on investment in project after project, more municipalities are requiring the process. Some require buildings to be retrocommissioned, a process that verifies that existing facilities are operating as efficiently and safely as possible.

Commissioning is expected to become a bigger part of codes and standards affecting health care facilities as the process becomes more widespread. ASHE welcomes this trend and believes commissioning should be part of every hospital construction project.

Facilities Contribute to Sustainability Efforts



Hospitals have unique energy requirements because of their unique nature. Hospitals operate 24 hours a day, seven days a week, with thousands of people occupying them. Complex heating, cooling, and ventilation systems are needed for both comfort and medical reasons. And hospitals need state-of-the-art medical equipment, sterilization equipment, computers and servers, food service equipment, and laundry facilities to provide services to patients.

All of these factors contribute to the environmental footprint of hospitals. But facilities across the country have made a commitment to reducing their energy use and are meeting sustainability goals that reduce energy use, lower utility bills, and provide greater patient comfort and health.

The American Society for Healthcare Engineering (ASHE) of the American Hospital Association is helping health care facilities meet their sustainability goals in several ways. Recently, ASHE and two other personal membership groups of the American Hospital Association collaborated to expand in-depth resources on projects that provide proven economic, health, and environmental benefits. These

resources are housed on the Sustainability Roadmap website—www.sustainability-roadmap.org—and show hospitals how to implement real-world sustainability projects, enhance existing efforts, and share their environmental successes with other facilities.

The Sustainability Roadmap website features search functions, how-to guides, and other resources. It also provides users the opportunity to share resources and tools, letting other facilities know what's working well and what's not. This sharing of experiences can help focus sustainability efforts on efficient and cost-effective projects. Users can also contribute suggestions, sample documents, and case studies to add to the library of practical information on the site.

The Sustainability Roadmap is useful for hospital managers, hospital staff, and those who design health care facilities. It also provides health care leaders with strategic planning resources to help get sustainability efforts on the radar of complex health care organizations.

ASHE also runs a recognition program celebrating hospitals that slash their energy consumption by 10 percent or more over a 12-month period. Dozens of

By Deanna Martin

ASHE Senior Communications Specialist

IMPACT OF HEALTH CARE FACILITIES

hospitals have already been recognized through the Energy Efficiency Challenge program, with many saving millions of dollars in energy costs that can now be directed toward other hospital priorities.

“Hospitals across the country may face different energy challenges, depending on

their location, age, and other factors,” said ASHE Executive Director Dale Woodin, CHFM, FASHE. “But this program shows that health care facilities can significantly cut energy use regardless of their situation, and the first step is making a commitment to do so.”

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SUSTAINABILITY Roadmap for Hospitals

A guide to achieving your sustainability goals

About Topics Drivers Strategies Implementation Resources

Trip Planner: The Sustainability Roadmap is your total implementation guide to performance improvement measures that will save your organization money, improve your facility’s environmental performance, and respond to your community’s concerns. [Read more...](#)

Sustainability News

- Leadership Summit Workshop – How sustainability can help bend the cost curve. Invite your executives to attend
- Trustee Magazine – The business case for sustainability
- Hospital facilities save money and energy by lower OR humidity requirement
- AHE responds to DEA regarding disposal of controlled substances
- New tools to reach sustainability goals
- AHA News.com – AHA enhances Sustainability Roadmap website

Industry News

- Report shows hospitals have reduced environmental footprints
- EPA recognizes medical centers and universities for emissions reductions and energy savings
- Children’s Hospital of Michigan Specialty Center – Detroit takes top honor for green design
- Hospitals recognized by for slashing energy consumption by up to 30%
- IPM in health care facilities newsletter - From MD H2E

Roadmap Supporters

Interested in being a supporter of the Sustainability Roadmap? Find out more!

Feedback

The Roadmap is fundamentally a sharing and learning community. We welcome and encourage your participation. If you have suggestions, materials, case studies, or experiences to share, please contact us.

ASHE American Society for Healthcare Engineering of the American Hospital Association

AHE Association for the Healthcare Environment

AHRMM Association for Healthcare Resource & Materials Management Advancing the Healthcare Supply Chain

American Hospital Association

The Health Care Physical Environment Influences Patient Satisfaction Scores

By Sandra Shield Tkacz

AIA, ACHA, EDAC, Director, Healthcare with URS Corporation

Tom Gormley

Associate Professor at Middle Tennessee State University, Healthcare Services Consultant for URS Corporation

With the advent of the Affordable Care Act, improving patient satisfaction performance is now a business imperative. The Centers for Medicare & Medicaid Services requires all U.S. inpatient hospitals to administer and submit patient survey results. These surveys are measured by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and results are posted on the Department of Health & Human Services website. This effort is focused on increasing transparency around patient experiences and aiding consumers in their health provider and hospital decisions.

The HCAHPS survey measures a hospital patient's perception of their experience. There are 27 questions in the standard form: five questions identify patient general information, two questions relate to facility issues of quietness and cleanliness, two questions rate likelihood to recommend the hospital, and 18 questions address empathy, communication with caregivers, and pain management.

Hospitals have been benchmarking performance measures for decades. However, the Affordable Care Act links HCAHPS levels of patient satisfaction performance to financial reimbursement, creating a new level of risk for U.S. hospitals. This takes scores to another level of importance, and the design community is already seeing cases where their financial reimbursement is being tied to these satisfaction scores.

In the complex health care environment there are many things an organization has to get right. Identifying patient satisfaction performance shortfalls is only a piece of the patient experience puzzle. A sustained commitment to patient-centered care is now a requirement for success.

There are three core elements to the patient experience: people, process, and place. The ideal patient experience and high performance satisfaction is realized when all three elements are in alignment.

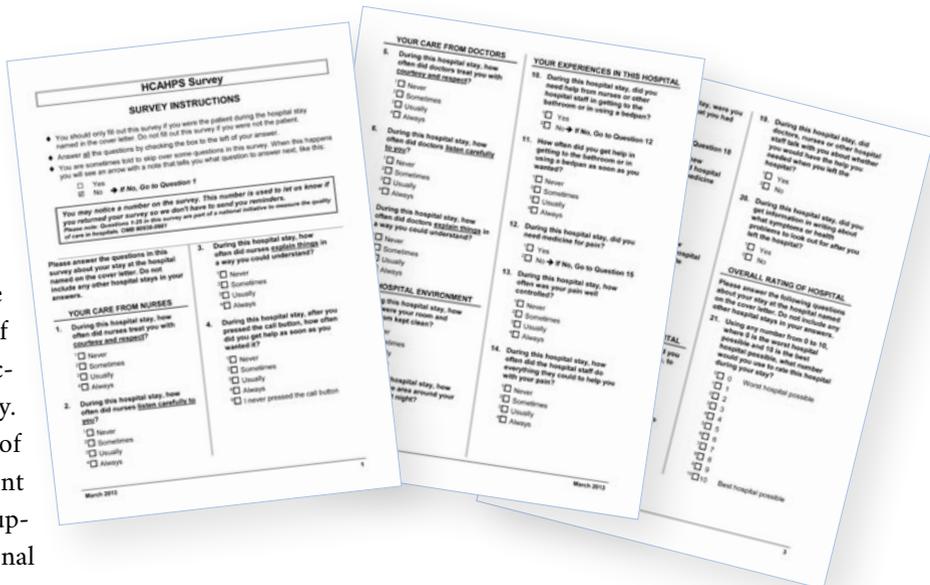
The physical environment—the place to deliver care, to heal, and to promote

good health—is the context for all the interactions in the care continuum. Those interactions create impressions and those perceptions are the basis of satisfaction performance. It is important to consider how the place can impact the core drivers: people and process. Staff engagement is critical to the success of the enterprise in every way. A committed and engaged team of professionals who have an efficient and well-designed facility that supports a high-performance operational culture creates time for care and better engagement with the patients. The design can support better processes with standardization and operational performance, such as access to supplies and reduced travel distances. That time reaps benefits for improved safety measures and patient interaction, ultimately driving both caregiver and patient satisfaction and impacting the bottom line.

Renovation or expansion projects that can impact HCAHPS scores

Noise mitigation projects, including operational flow improvements for service carts and heavy traffic, quiet equipment monitoring solutions, reduction of overhead paging, and flooring and acoustical tile replacements, to decrease high noise levels.

Interior upgrades, including interior finish improvements, furniture upgrades,



and reception and patient waiting areas upgrades, to promote high scores on cleanliness questions.

Patient room improvements, including family sleeping accommodations, bathroom upgrades, staff workspace, lighting upgrades, and overall improvements to facilitate caregiver interaction and promote communication with patients and families.

Caregiver work improvements, including decentralized nurse stations, re-distributed supplies and equipment, and nurse call system upgrades, to promote efficiency and foster communication with patients.

New technology and equipment upgrades specific to Affordable Care Act requirements, including investment in data center upgrades, IT infrastructure, and caregiver workspace and nurse station upgrades, to integrate electronic medical records.

For more detailed information about this topic, read the Fall 2013 edition of *Inside ASHE* magazine.

ASHE Advocacy Highway Fosters Communication

By Deanna Martin

ASHE Senior Communications Specialist

The American Society for Healthcare Engineering (ASHE) of the American Hospital Association has long been involved in helping to revise codes and standards affecting hospitals. Within the last two years, ASHE has made a renewed effort to increase advocacy communications between ASHE and its chapters and to get more people involved in advocacy work.

The effort supports the goal of achieving science-based health care codes that provide an optimal level of patient safety without burdening hospitals with unnecessary expenses.

“This is a grassroots effort,” said ASHE President Mark Kennedy, MBA, CHFM, FASHE. “We’ve been able to bring together from across the nation people we know have an incredible passion for advocacy.”

ASHE leaders regularly hold conference calls with chapter liaisons from around the country, discussing code developments on a national level and also developments in local hospitals, such as inappropriate code interpretations or unnecessary citations.



“ASHE needs to know about what’s happening in states,” said ASHE Director of Codes and Standards Chad Beebe, AIA,

SASHE. “We want to hear about misapplication of codes, inconsistencies among interpretations, and duplicative enforcement activities.”

The ASHE Advocacy Highway was created several years ago as a two-way means of communication on advocacy issues, allowing local issues to quickly gain national attention when needed and allowing chapters to become more engaged in setting national codes and standards. The new initiative to “repave the Advocacy Highway” has sparked more timely communications regarding codes and standards.

David Dagenais, CHSP, CHFM, FASHE, the chair of ASHE’s Advocacy Advisory Committee, said the Advocacy Highway plays into other work the committee is doing to push for better codes and standards.

“Advocacy successes often start at the grass roots level because no one knows the difficulties with current codes better

than hospitals affected by them every day,” Dagenais said. “These are real problems we are working to solve, and by getting involved you can help create a better regulatory environment, reduce the amount of resources wasted, and develop a better physical environment for our patients.”

To help collect information from around the country, ASHE has a webpage (www.ashe.org/advocacyhighway) people can use to inform ASHE about code interpretations at local hospitals and other advocacy issues affecting them. ASHE also urges local advocacy liaisons to engage with their local authorities and network with potential advocates.

ASHE Executive Director Dale Woodin, CHFM, FASHE, said it’s important to note that information ASHE collects from across the country helps support big goals such as more appropriate codes and standards.

“This information helps build the case for uniformly applied and interpreted codes for health care facilities,” Woodin said. “That accomplishment could poten-

“Advocacy successes often start at the grass roots level because no one knows the difficulties with current codes better than hospitals affected by them every day,” Dagenais said. “These are real problems we are working to solve, and by getting involved you can help create a better regulatory environment, reduce the amount of resources wasted, and develop a better physical environment for our patients.”



tially save our industry billions of dollars. That’s a huge amount of resources that could go toward hospitals’ first priority—patient care.”

Advocacy Advisory Committee Action Plans

The ASHE Advocacy Advisory Committee is working on several initiatives to help improve codes and standards. This is an outline of the committee's action plans.

Monitor Pending Regulations

The ASHE Advocacy Advisory Committee is developing a process to continually scan and detect pending regulations that will affect ASHE members. The committee is recruiting a network of people and is using technology to stay aware of all relevant guidelines and state and local activities.

Advocate for the Adoption of Recommended Codes by All States

The committee is working on the development of a recommended package of codes and regulations regarding the design, construction, maintenance, and operation of health facilities for adoption by the states. The committee is also working to facilitate adoption of recommended codes by states and federal agencies.

Promote Evidence-Based Codes

The committee supports the increased use of scientific evidence and cost-conscious decision making in regulatory compliance development. The committee is urging code writers to take a more rigorous approach to ensuring that only fact-based changes are made to their codes and standards.

Support the ASHE Advocacy Highway

The ASHE Advocacy Highway is a two-way means of communication between ASHE advocacy leaders and advocacy liaisons in state and local ASHE-affiliated chapters. The plan calls for quarterly conference calls with chapter advocacy liaisons, the ASHE Advocacy Advisory Committee, and ASHE advocacy staff members. The meetings and discussions are being used to ensure a consistent flow of information about code issues between ASHE and its chapters.

Incorporate Commissioning into FGI Guidelines

This committee is supporting the incorporation of health care facility commissioning standards into the Facility Guidelines Institute's *Guidelines for Design and Construction of Health Care Facilities*.

Urge Adoption of FGI Guidelines

The committee is encouraging states to adopt the 2010 edition of the Facility Guidelines Institute's *Guidelines for Design and Construction of Health Care Facilities*. Many states have adopted the FGI *Guidelines*, but states vary in terms of which edition they use.

Support the Just Ask ASHE Service

The committee is developing a process and timeline for receiving and answering Just Ask ASHE questions from members. This service allows ASHE members to ask code questions and get direct answers from experts.

Review International Code Council Proposals

The committee is reviewing proposed changes to International Code Council codes affecting health care facilities. The committee is tracking codes and proposals and assessing their effect on health care design and construction.



Support Codes Reflecting Minimum Requirements

The committee is working to promote codes and standards based on a philosophy of minimum requirements, which protect patient and staff health and safety without adding unnecessary costs.

Show How Facility Managers Affect Patient Satisfaction

The committee is developing materials that show how health care facility managers can have a positive impact on patient satisfaction survey scorecards.

ASHE members:
Get involved in
advocacy today!
E-mail
advocacyhighway@aha.org
for more information.

ASHE Needs Your Help

The goal of creating streamlined, science-based codes and standards is a major undertaking that requires support from people in a wide variety of professional positions.



Lawmakers: ASHE urges lawmakers to support local and national efforts to streamline codes and standards while protecting patients. Lawmakers at every level can check with local hospitals to see if a facility manager there is an ASHE member, and can encourage hospital leaders to support ASHE advocacy efforts. State lawmakers can urge their legislatures to adopt the most recent edition of the FGI *Guidelines* as soon as new editions are released. Senators and Congresspersons can urge the Centers for Medicare & Medicaid Services to adopt the most recent edition of the Life Safety Code. For more ideas on how lawmakers can get involved and help direct more hospital resources to patients, contact ASHE using the contact information below.



Health care administrators: ASHE encourages health care administrators to ensure that their facility managers, as well as others in related positions, are mem-

bers of ASHE and are actively engaging in ASHE's codes and standards efforts. ASHE is always looking for active volunteers to help promote better codes and standards, and it is important to have health care administrators support these undertakings. Administrators can also reach out to local building officials to discuss code issues and explain the ways hospitals protect their patients. To learn more about the advantages of ASHE membership for hospital employees, contact ASHE using the contact information below.



Code development organizations: ASHE urges code development organizations to develop and maintain procedures to ensure codes are minimum requirements based on science. ASHE is a resource for learning how various proposed changes would affect the health care environment. To learn more about this issue, contact ASHE using the contact information on the following page.



Health care accrediting organizations: ASHE is a helpful resource for accrediting organizations that survey health facilities to ensure compliance with codes. ASHE

wants to work with these organizations to help optimize the health care physical environment. To learn more about this topic, contact ASHE using the contact information below.



State and local building officials: ASHE encourages code officials and those involved in the code development process to learn more about hospitals and the regulations affecting them. Many building officials and other authorities involved in the code development process do not have hospitals in their jurisdictions and may not fully understand the regulatory measures in place to ensure safe operation and maintenance of health care

facilities. ASHE encourages code officials to talk to local ASHE members about the safety measures hospitals take. Officials can contact ASHE using the contact information below.



ASHE members: ASHE members can turn to the weekly electronic newsletter included as part of ASHE membership, the ASHE Insider, for information about upcoming ways to get involved with advocacy efforts, including public comment periods on various codes. ASHE members can talk to their local chapter's advocacy liaison for more information, or contact ASHE using the contact information below.

To get involved,
contact ASHE Director of Codes
and Standards Chad Beebe
at cbeebe@aha.org or
312-422-3824.
Visit www.ashe.org
for more information.

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