

ASHE 2017 Advocacy Report

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



Contents

- 1 Letter to Readers
- 3 The Importance of the Physical Environment
- 4 Unifying the Codes: We've Come a Long Way
- 8 Conditions of Participation Changes May Lead to Major Building Changes
- 10 Working to Remove Barriers Toward Better Community Health
- 12 An Advocacy Story: How ASHE Worked to Improve Emergency Preparedness Rules
- 15 Keeping Your Focus on Compliance
- 17 Advancing Health and the Patient Experience
- 20 Getting Involved

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The American Society for Healthcare Engineering (ASHE) is a personal membership group of the American Hospital Association. More than 12,000 members rely on ASHE as a key source of professional development, information, and advocacy, including representation on key issues that affect their work in the health care physical environment. For more information about ASHE, contact 312-422-3800 or visit www.ashe.org.

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Letter to Readers

ASHE's advocacy program advocates for change, but hospital physical environment regulations do not need major sweeping changes. Compared to many places in the world, the United States has world-class health care physical environments. In fact, our health care environment is often emulated in other countries; many other countries are adopting our regulations. Still, there is room to improve our physical environment by refining the current regulations. We must analyze our existing regulations on a continuous basis to ensure they keep up with the times. Looking back at the requirements that were in place to safeguard patients three decades ago, we can see that the technology used in medicine is much safer, the materials used and the procedures performed are more routine, and the mobility and mortality rate has improved.

We can do better. We are learning every day. Through the efforts of many researchers, we are learning at a pace like never before. We are learning more about health care-associated infections, both how patients get infections and ways to prevent infection through a better physical environment.

We are learning about human behavior, staff behavior, and patient needs, and how to better situate the environment to improve communications, improve staff flow, and increase staff time with the patient. We are using research to improve patient satisfaction. We are looking at the therapeutic benefits of these strategies and developing best practice documents to assist hospitals and design teams. ASHE works with the Center for Health Design supporting the Knowledge Repository, a go-to database of research dedicated to improving the health care physical environment. The Knowledge Repository is a collection of articles and research

papers, many of which have key point summaries that provide an overview of the paper for easy reference. Armed with this information, designers and hospitals have volumes of information (more about the Knowledge Repository can be found in the summer 2017 edition of *Inside ASHE*).

We reduce readmissions to hospitals by reducing risks to patients through a better physical environment. We focus on design that promotes hand-washing and separation of clean and dirty functions and materials and improves staff circulation to allow them to focus on the current tasks at hand. We design to create a better environment for dispensing medications for staff, one that limits the potential for disruption by others and limits the potential for medication errors.

As we move forward, ASHE will continue to encourage learning through certification in different areas. Individuals designing, constructing, and managing health care facilities must understand the complexity of the systems, the consequences of failures, and the sensitivities of patient care and privacy. There is no way to confirm that anyone entering the facility to perform work has met this minimum requirement without some type of credential. We ask for credentialed workers through our position descriptions, requests for proposals, and bid specs to ensure that a minimum level of safety is provided from the design to the occupancy of a project.

These endeavors to improve the health care physical environment need many people to explore ideas and help influence regulations. Who does this work? In many cases, ASHE members. ASHE is the largest group of dedicated individuals who work to improve the health care physical environment.

(continued)

As you read this *Advocacy Report*, you will find articles that highlight many improvements that have already occurred as well as some of the current challenges we face. We hope that you will get involved in these changes, either by becoming actively involved in advocacy at a national or local

level, or by implementing these changes within your practice and facilities. Together, we can continue to improve the health care physical environment for the patients served by our health care organizations.



Sincerely,

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The Importance of the Physical Environment

Health care in America is transforming rapidly. Hospitals and health systems face a shifting political landscape, new technological advancements, and an expansion of care outside the traditional hospital walls. But amidst all this change, one constant remains: the commitment of hospitals to serve their patients and their communities.

Part of this service involves keeping patients, staff, and visitors safe in an environment that can adapt to patients' changing needs. The regulations for the health care physical environment play a key role in the delivery of health care. As the health care delivery model shifts over time, so too must the standards that regulate the built environment. Codes and standards are updated regularly through a public consensus process every three years. But when authorities delay adopting these updates, it can lead to a reliance on outdated codes.

Until last year, for example, hospitals were held to life-safety and emergency-preparedness standards written before Hurricane Katrina and Hurricane Sandy. ASHE and the AHA supported the move to update these codes, and we continue to support the adoption of the most up-to-date codes available.

Hospitals across the country are working to advance health in America. By adopting updated standards, regulators can help health care organizations reach this goal. That's good for all of us—hospitals, patients, and communities alike.



Richard J. Pollack
President and CEO
American Hospital Association

Unifying the Codes: We've Come a Long Way

By Chad Beebe, AIA, FASHE, ASHE deputy executive director

If you're like most health care facility professionals, you know that conflicts in building codes can be a real headache. ASHE works to reduce code conflicts and advocate for the elimination of unnecessary codes and regulations. About five years ago, ASHE raised this issue to a strategic imperative and began additional work to unify codes.

Unnecessary and conflicting codes and regulations can be costly, and the resources spent dealing with them can be put to better use. The goal of the unified codes imperative is to improve quality and increase access to health care services by upgrading or replacing aged health facilities and infrastructure using cost savings resulting from the elimination of such codes and regulations.

These efforts have led to successes over time. This article summarizes some of the code improvements brought about by ASHE's work.

Successes

Patient corridors

ASHE challenged regulations regarding the width of the patient corridor and supported changes that allow movement aids and seating in the corridors. These two items were most often cited on surveys as concerns, and they are necessary for the effective delivery of quality patient care. When I was a state authority having jurisdiction, I often joked that when surveyors would show up an announcement was made to welcome the survey team; the announcement was code to bring the moving trucks around back and clear the halls. As we analyzed the reason this had become such a prevalent situation, we discovered a real need to have certain items in

the corridor. Patient lifts, wheelchairs, and other movement aids need to be convenient so staff can use the equipment instead of potentially manhandling the patient. We also listened to clinical staff explain that when patients leave their rooms to walk, they often need areas to rest or sit if they get dizzy after spending a couple of days confined to a bed. As we looked at the 8-foot corridor, defend-in-place strategy, and exit strategies, we found that we could support some items within this corridor such as movement aids and sitting areas.

Suite size

ASHE supported the increase of suite size from 7,500 square feet to 10,000 square feet to better accommodate the growing needs within the patient room. The larger size accommodates the increased amount of equipment in rooms and provides more space for features that make the suite more home-like and family friendly.

Humidity requirements

ASHE successfully proposed eliminated conflicting humidity requirements from the NFPA documents. Previously the NFPA humidity requirements, which were designed to reduce the risk of fire back when hospitals used flammable anesthetics, conflicted with the requirements in ASHRAE/ASHE/ANSI Standard 170: *Ventilation of Health Care Facilities*.

Air change requirements

ASHE evaluated and continues to evaluate air change requirements to ensure that the "sweet spot" is being met, which means we are providing

the clinical benefits of bringing in fresh air while minimizing the energy required to do that. For example, it was long believed that the more frequently the air is changed in an operating suite, the better. However, subsequent research showed that too many air exchanges can increase surgical site infections, because of the more frequent disruption of particulates in that new air. Furthermore, air has to be conditioned before it enters the operating suite, so changing the air more frequently than necessary wastes energy. ASHE is seeking the level of air exchange that provides maximum clinical benefit that will concurrently reduce excess energy consumption.

Operating room smoke exhaust

ASHE supported the elimination of a requirement for smoke exhaust in operating rooms. This requirement was added to NFPA 99: *Health Care Facilities Code* more than two decades ago, but since that time we have learned more about the complexity of such a system and the proper procedures for dealing with surgical site fires. The requirement was introduced into the code when there was concern over the addition of fire sprinklers within the operating room. Since then, those concerns have diminished, and operating rooms are now required to have sprinklers. With the limited amount of smoke from a surgical site fire, the large volume of air being moved in an operating room, and the potential infection control risks associated with the shutdown of any HVAC to allow for a smoke exhaust, the exhaust requirement was determined to be unnecessary and leftover from a previous era.

Compartment size and travel distance

ASHE supported changes in the regulations that increased the maximum smoke compartment size from 22,500 square feet to 40,000 square feet, and

travel distance to an exit from 150 feet to 200 feet. These changes make sense because patient rooms have grown in size because of the increase in technology in the rooms and the desire for more space for homelike features and family areas. Studies have shown that this increase in compartment size and travel distance has no safety impact. Furthermore, from a design perspective, the 22,500 square feet size does not accommodate an efficient number of patient rooms. For example, a typical unit with 18 patient rooms may locate 16 of those rooms in one compartment and the remaining two in another. The double door separating the compartments, even though it is open all day, creates a psychological barrier that separates the two outlying patient rooms from the rest of the unit. Some evidence reveals that patient satisfaction scores are lower for patients in those rooms, evidently because they feel somewhat excluded from the community feeling of the unit. The International Code Council has shifted its codes to reflect the 40,000 square foot maximum, and NFPA 101: *Life Safety Code*[®] has matched the requirement.

Fire suppression systems

ASHE supported the removal of a retroactive requirement for fire suppression systems in hospitals that was found in the *International Fire Code* and simultaneously supported a more sensible addition of a fire suppression system for high rise hospitals (that is not retroactive) to the *Life Safety Code*. The new requirement has a nine-year implementation time frame, which will allow hospitals to add the systems in a sensible fashion and will not overburden contractors in the field. The requirement also removes the risk of hospitals suddenly being cited for not having sprinklers installed, which could have happened with the retroactive requirement in the *International Fire Code*. This case is a

good example of the coalition meeting in the middle regarding a difficult issue, demonstrating that ASHE's mission is not simply to remove regulation.

Defend in place

The concept of "defend in place" has been understood and practiced in hospitals for many years, but it has never been included in the codes. Many new fire inspectors questioned why hospitals weren't evacuating during a fire alarm. ASHE worked to help remove this ambiguity by creating the first formal definition of "defend in place" and supporting its inclusion in NFPA 99 and NFPA 101.

Level of risk

ASHE supported changes that clarify who is responsible for making decisions about the level of risk. In some instances, authorities were challenging hospitals and requiring them to meet higher requirements without fully understanding the risk to the patient or capabilities of the hospital. In some instances, these policies placed patients in jeopardy. ASHE supported a change that clarifies that the hospital's governing body is ultimately responsible for the decisions they make.

Risk regulation methodology

ASHE supported a new method of determining the risk level of hospital spaces that is based on the actual risk to patients in that room, rather than just what the name of the room is. For example, previously every procedure room had to meet the most stringent risk requirements, even if the room was used only for minor treatments. In one case cited, a university hospital wanted to add a Mohs clinic in an outpatient wing. Because the clinic is a procedure room, the code required the hospital to run copper medical gas lines a quarter mile from their source to this room, even though patients undergoing the Mohs procedure have no requirement for

medical gases. Under the new methodology, such a clinic's risk level and consequent requirements would be determined based on the actual risks to patients being treated there, not just the fact that the space is a procedure room.

Controlled egress locking to prevent infant abduction

ASHE supported changes that allow hospitals to be locked down in case of an infant abduction from the nursery or obstetric areas of a Group I-2 hospital. For obvious reasons, fire marshals resist entire building lockdowns, but this change clarifies that a building can be locked down as long as the hospital can demonstrate the need for the lockdown for a clinical or security need of the patient. For example, systems in place to prevent infant abductions are now permitted.



The Work Is Not Done

Of course, ASHE alone did not do all of this work. Hundreds of people were involved, including those who supported our positions, those who helped us craft the language, and those who opposed our positions and caused us to sharpen our arguments.

Although much progress has been made to help improve codes and standards, many objectives have yet to be met:

Adoption of current codes

State and local jurisdictions continue to delay the adoption of current codes and standards. Furthermore, the federal government, represented by CMS, does not have a process to update its requirements to current codes and standards. With all of these changes being made to improve the codes and standards, it's more important than ever that the updated codes be adopted as they are released.

More member advocacy

More ASHE members need to get involved in advocating. At a local level, everyone should advocate for current codes, and when jurisdictions amend adopted codes, members should speak up.

Continued work on changes

ASHE has done much work coordinating, clarifying, and eliminating outdated requirements, but we are not done yet. Since codes change over time, we may never be done! Even if we make all of the changes we want to make, we still need to be on top of any new changes proposed by others.

Get involved

Code changes start with a problem. I often hear people say, "Why does the code make us do this? It makes no sense!" The next step should be: Submit a code change proposal to the appropriate standards

development organization. Submitting the proposal will at least lead to clarity for you. If the change makes sense, the committee will probably accept it. If they have an issue with it, they will explain why they can't accept it. In any case, you will have played a role in this important process. Flip to the end of this *Advocacy Report* to find other ways to get involved with advocacy efforts.



Want more compliance information?
Visit ASHE's On Demand webpage.
www.ashe.org/ondemand

Conditions of Participation Changes May Lead to Major Building Changes

By Chad Beebe, AIA, FASHE, ASHE deputy executive director

A change to the Centers for Medicaid & Medicare Services (CMS) Conditions of Participation may require building changes in many hospital outpatient surgery departments. Thousands of locations may be affected by the change, which may require additional building exits, replacement of key structural materials, or the addition of emergency generators.

The change, which was announced in 2016, states that outpatient surgery departments will be classified as ambulatory surgical occupancies as defined by the 2012 edition of NFPA 101: *Life Safety Code*[®] regardless of the number of patients served.

What Is Included?

Some confusion remains about whether outpatient surgery departments can be classified as ambulatory surgical occupancies or health care occupancies—which have even stricter requirements—and ASHE has attempted to clarify this with CMS headquarters. Some CMS surveyors have cited hospitals for providing ambulatory care services within a health care occupancy, which seems odd since the requirements of a health care occupancy are more strict. CMS headquarters states that the intention was not to limit ambulatory services to ambulatory surgical occupancies. This statement implies that outpatient surgery departments can be classified in either category.

Interpretation of the change indicates that all existing services that meet the definition of ambulatory surgery by NFPA with one or more patients who are incapable of self-preservation and that meet the definition of ambulatory surgery by NFPA must now be classified at a minimum as ambulatory

health care occupancies. This includes spaces used for treatments that render patients incapable of taking action for self-preservation under emergency conditions without assistance of others; spaces where anesthesia is used that renders patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; and emergency or urgent care departments for patients who, because of the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others.

Change Affects Small Services

For many years, common practice in health care has been to design buildings intended for the treatment of three or fewer patients who are incapable of self-preservation and designate those buildings as business occupancies. NFPA 101 permits the business occupancy designation to be used in these limited situations. The NFPA committee responsible for the content of the *Life Safety Code* has commented that, “The level of risk when there are fewer than four (4) patients is less because of the high staff-patient ratio. Staff can assist the small number of patients with evacuation so as not to need the defend-in-place strategy applicable to (ambulatory) health care occupancies.”

With the adoption of the new Conditions of Participation in 2016, CMS will apply the ambulatory surgical occupancy requirement to all departments providing ambulatory care regardless of the number of patients who are incapable of self-preservation. This provision is likely to affect,



for example, hyperbaric, MRI, and endoscopy services in which patients require staff assistance before they are capable of self-preservation. Many outpatient surgeries that require anesthetics will also be affected.

Emergency Departments Designated Health Care Occupancies

Other discussions ongoing with CMS include an interpretation that all emergency departments are now required to be classified as health care occupancies. Any emergency department—freestanding or otherwise—that is providing services under the hospital provider number will have to be considered a health care occupancy.

In the past, emergency departments with only a single trauma bay and a few exam rooms have been considered solely outpatient services and did not need to meet all of the additional requirements of a health care occupancy—requirements that are in place to protect sleeping patients. Such spaces were designated as business or ambulatory health care occupancies, not health care occupancies.

Expensive Change

The decision to use the business or ambulatory health care occupancy designation provided con-

siderable savings to health care organizations without reducing safety. The national cost for health care occupancy construction ranges from approximately \$400 per square foot to \$1,200 in some market areas, according to a ASHE and a *Health Facilities Management* magazine construction survey. On the other hand, business occupancy construction (such as a medical office building) averages \$240 per square foot in many large market areas, according to an article in *Becker's Hospital Review*.

The primary differences in cost can be attributed to the increased construction requirements of health care and ambulatory health care occupancies, as well as the support systems and redundancy of systems built into those occupancies. Hospitals intended for sleeping patients are built with these features because more time is needed in an emergency to relocate patients to safety with a limited number of staff. These safety measures are not as critical in outpatient or emergency treatment areas, because those areas typically have a high staff-to-patient ratio, and many of the patients in those areas are ambulatory and able to exit with verbal direction from staff.

A full listing of the changes required is available at www.ashe.org/hopd.

Working to Remove Barriers Toward Better Community Health

By **Deanna Martin**, ASHE membership and communications director

Hospitals and health systems are increasingly focused on improving the health of the communities they serve, not just individual patients. ASHE applauds these efforts to create healthier communities and advocates to remove regulatory barriers to improved community health.

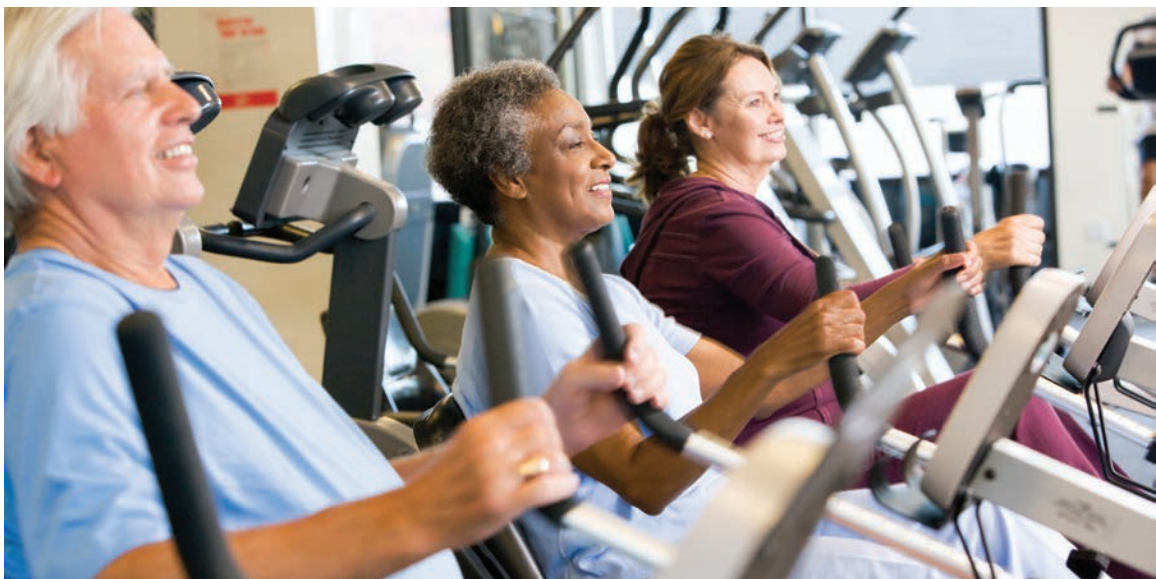
Understanding the Shift to Community Health

Hospitals are developing convenient models of care that work to serve both patients and the community as a whole. This shift to greater community health was a focus at the 2016 International Summit & Exhibition on Health Facility Planning, Design & Construction (PDC Summit). “We’re not just talking about buildings,” Robert Ivy, FAIA, CEO of the American Institute of Architects, said at the

PDC Summit. “We’re talking about a network, a community.”

Many health care leaders are taking this approach. The American Hospital Association’s mission statement, for example, is to advance the health of individuals and communities. The AHA’s strategic plan notes that the blue and white “H” sign found along highways is a well-known symbol of hospitals. The hope and healing associated with the “H” will not change, but hospitals are redefining the “H” as they shift from episodic to continuous patient engagement and as they partner with the community to improve health.

Kaiser Permanente states in its mission statement that it seeks to improve the health of its members and the communities it serves. Kaiser Foundation Health Plan’s Vice President for Facili-



ties Planning & Design–National Facilities Services, John Kouletsis, AIA, EDAC, said at the 2016 PDC Summit that Kaiser embodies that mission statement when planning facilities.

“We’re not just designing an efficient, effective, cost-effective hospital,” Kouletsis said. “We’re designing a system of community wellness and community connection.”

The location of a hospital can contribute to a community’s well-being, and so can the design of a health care facility. As outlined in the spring 2017 edition of *Inside ASHE* magazine, active design is an approach to designing new facilities or improving existing buildings with the goal of boosting users’ physical activity levels. This type of design often means creating inviting stairways, fitness centers, and walking paths that integrate with community green spaces.

These active design elements lead communities by example. A health care facility or hospital campus focused on active design can integrate those elements into the community along with other community health services such as outreach programs.

Removing Roadblocks to Community Health

The focus on community health is relatively new, and health care facilities are often restricted by regulations that were first created long before this shift. Designers and architects may not always be able to incorporate active design elements into their plans because of restrictions within various building codes. For example, until recently designing a place for rehabilitating patients to sit down while walking in hospital corridors was prohibited by many building codes. On this issue, ASHE worked with code development organizations to allow small rest areas of up to 50 square feet within hospital corridors.

Making a Difference

By working together, those involved in designing, creating, operating, and regulating the health care physical environment can make a direct contribution to the health of their communities. ASHE’s advocacy team works to improve codes and standards, including ones that restrict efforts toward greater community health. ASHE stands ready to partner with your efforts to lead your communities to health.



An Advocacy Story: How ASHE Worked to Improve Emergency Preparedness Rules

By Jonathan Flannery, CHFM, FASHE, MHSA, FACHE, ASHE senior associate director of advocacy

ASHE has a long-standing commitment to optimizing the built environment and advocating for streamlined regulations of health care organizations to improve patient safety. Health care organizations must follow many complex regulations enforced by federal, state, and local authorities. Compliance with all of these regulations can be a difficult task—especially when multiple regulations are written and enforced by different authorities and contain overlapping, often outdated, and sometimes conflicting rules.

ASHE's advocacy team works to help improve these codes and standards. This article underscores the importance of this work by outlining advocacy efforts related to emergency preparedness.

The Centers for Medicare & Medicaid Services (CMS) came forward in 2014 to suggest a new emergency preparedness rule. ASHE and our members had long felt that the previous rules, which were established in 2003 before Hurricanes Katrina and Sandy, did not adequately address the issues necessary for emergency preparedness. Because the older regulations—such as the 2000 edition of NFPA 99—did not incorporate lessons learned from important emergency events, many health care organizations went over and above outdated requirements to protect patients.

ASHE was encouraged that CMS suggested creating updated and streamlined emergency management rules, but had several concerns with the CMS rule as originally proposed. ASHE worked through the public comment process to help improve the proposal rule. ASHE's biggest concerns were:

- The lack of the use of existing consensus-based codes
- The proposed on-site sewage and waste disposal
- The justification used to propose increased generator testing
- The proposed requirements for generator location

Lack of Using Consensus-Based Codes

CMS's proposed rule included several current codes and standards, but also had several distinct requirements not found in those codes. ASHE's public comment suggested that CMS consider adopting existing codes and standards instead of a separate rule. Historically, CMS has been behind the curve when adopting updated codes and standards. Codes and standards are typically updated every 3 or 4 years through an open consensus-making process. Codes and standards that are updated on regular cycles benefit from new science, lessons learned from disasters, and new technologies and products. In addition, codes and standards developed through a consensus allow for the collaboration with experts in the field of health care emergency preparedness, including consultants, accrediting organizations, and hospital representatives who have experienced disasters—allowing for the development of a robust emergency preparedness rule. ASHE recommended to CMS that they consider adopting Chapter 12: Emergency Management of the 2012 edition of NFPA 99: *Health Care Facilities Code* as their emergency preparedness rule.

Proposed On-site Sewage and Waste Disposal

In the proposed rule, CMS appeared to be requiring that hospitals be able to dispose of sewage and waste during a disaster. ASHE felt that the proposed language was too broad and could lead to multiple interpretations. ASHE's main concern regarding this issue was that treating sanitary sewage on-site if the municipal system is disrupted would require the installation of an on-site sewage treatment plant. Logistically, this would be impossible for facilities in dense urban areas. Even rural facilities often have multiple discharge lines. Tying these lines together into an on-site plant and then discharging them into the municipal discharge lines would have proved both costly and sometimes impossible because of the required slopes and similar considerations. ASHE believed that because sanitary lines are underground, the likelihood of the entire municipal system being disrupted was slim unless the municipal plant was destroyed in a disaster. ASHE suggested that a more likely scenario was that a discharge line would be broken or clogged. ASHE proposed that instead of on-site treatment, the rule should require each facility to have a written plan on how they will address disruptions during a disaster. For example, the hospital may relocate patients off-site in some cases or move them to other areas of the hospital not affected by the disrupted service line.

Solid waste disposal was another concern as incinerators may be needed. Changes in the last 20 years in environmental and permitting requirements have caused many hospitals to eliminate on-site incinerators. Expecting hospitals to rebuild these facilities seems unreasonable. ASHE proposed that a more reasonable approach would be to require facilities to have written back-up plans should their primary waste-handling facilities become disabled.

Proposed Increased Generator Testing

CMS stated in the rule's commentary that an annual four-hour generator test would more closely reflect the actual conditions that would be experienced during a disaster of the magnitude of Hurricane Sandy. Immediately following Hurricane Sandy, ASHE conducted a member survey that included hospitals in the areas affected by the storm. Of the respondents, 35 percent said they were without power from their electrical provider for some period of time. The average length of the outage was 23 hours, with some outages as short as less than 30 minutes and other outages lasting more than 150 hours. All of these systems had been tested for four hours every three years with at least 30 percent of the nameplate kW rating of the emergency power supply. The ASHE survey yielded no indication that system reliability would be increased with an increase in the frequency of generator testing.

ASHE was also concerned that the proposed rule would conflict with other requirements such as Environmental Protection Agency rules to reduce emissions. Since January 2011, Tier 4 standards have been in effect, limiting the amount of time generators can operate in a non-emergency situations such as testing or maintenance. To reduce potential conflict with other rules and regulations, ASHE recommended that there would be no advantage of increasing the testing frequency.

Requirements for Generator Location

ASHE was concerned that the CMS proposed rule for the location of generators essentially superseded the requirements of current codes and standards and would have required the relocation of many existing hospital generators and fuel tanks. Data from ASHE's Hurricane Sandy survey indicated that 12 percent of the hospital generators were located within current flood plains. Estimated at an average of \$2.5 million to relocate one generator

and associated equipment, it would cost \$1.5 billion to comply with the new rule if 12 percent of hospitals had to move equipment. Although many installations may exist that are within the updated flood plains, the current codes were clear that when those systems are replaced or upgraded that the location of the systems must be reconsidered at that time. ASHE recommended that CMS modify the proposed rule language to apply only to new, replaced, or upgraded essential electrical systems and not to existing systems.

The Results

Although ASHE was not successful in getting CMS to scrap their proposed rule in favor of adopting current consensus-based codes, ASHE's advocacy efforts were successful on the three other issues listed above, improving the rule significantly. Con-

sidering ASHE's Hurricane Sandy survey, CMS removed the annual four-hour testing requirement and instead changed the requirement to match current code requirements. Additionally, CMS revised the final rule to clearly state that the generator location rules would apply to only new, replaced, or upgraded essential electrical systems and not to existing systems. Finally, CMS clarified that the intent of the final rule was only to have hospitals identify and assess their sewage and wastewater systems and solid waste disposal as part of their facility-based risk assessment and make necessary plans to maintain these services.

These changes resulted in more streamlined regulations—illustrating how advocacy work can influence codes and standards. ASHE will continue to work with CMS and code development organizations to help improve patient safety.



Keeping Your Focus on Compliance

By Deanna Martin, ASHE membership and communications director



The ASHE advocacy team works to both create better health care regulations and help members understand and comply with these requirements. One popular ASHE tool developed by the ASHE advocacy team is Focus on Compliance, a website (www.ashe.org/compliance) that provides information, checklists, and other resources to help comply with Joint Commission requirements.

As part of the Focus on Compliance project, ASHE worked with the Joint Commission on top physical environment standards that are frequently cited by accrediting organizations. This article outlines some of the helpful resources included in the Focus on Compliance project.

Utility Systems (EC.02.05.01)

The most common hospital citations related to utility systems are caused by inappropriate room pressurization, failure to label electric panels or utilities, lack of emergency lighting, and inappropriate electrical issues.

The Focus on Compliance project includes excerpts from the *Mechanical Systems Handbook for Health Care Facilities* (ASHE) that explain pressure relationships, outdoor air supply issues, psychrometrics, and other issues related to pressurization. Other resources include:

- A monthly log for special ventilation rooms
- Sample pressure relationships policy and procedures

Accurate utility system control labeling helps hospitals safely shut down or isolate systems during emergencies or for making repairs. Joint Commis-

sion findings in this area are often related to a failure to properly label electrical systems and the areas that they serve. Resources include:

- A sample policy on labeling for emergency shutdowns
- A sample policy on utility mapping

The Joint Commission requires hospitals to have emergency power for alarm systems, means of egress, communications, at least one elevator, and equipment and areas that if lost would cause harm to patients. Emergency lighting in mission critical areas is vital and has been a repeated finding by the Joint Commission. The Focus on Compliance offers a resource to help with this:

- A battery-powered lights inspection log

A common cause for citations related to inappropriate electrical issues is relocatable power taps (RPTs), also known as multi-plug adapters or power strips. Focus on Compliance includes the following resource:

- A sample power strip policy and procedure

Means of Egress (LS.02.01.20)

One of the most common citations related to means of egress are obstructions. To help hospitals avoid citations for obstructions in the means of egress, ASHE offers the following resources:

- Adopt-a-Floor instructions and work order tool
- Environmental tour checklist
- Life safety standards checklist

Built Environment (EC.02.06.01)

Among the most common reasons hospitals are cited under EC.02.06.01 is medical gas cylinder storage. To help hospitals comply with medical gas cylinder requirements, ASHE has several resources available:

- The monograph: *Medical Gas Cylinder and Bulk Tank Storage* (ASHE 2012)
- Medical gas cylinder storage requirements
- Sample medical gas cylinder policy and procedure

Fire Protection (EC.02.03.05)

Joint Commission survey data shows several reasons for citations related to fire protection, including lack of inventory, insufficient documentation, not providing the standard in documentation, and incorrect duration. Resources to help with this include:

- A series of documents on how to properly document the inspection, testing, and maintenance of fire alarms and fire protection systems
- A chart showing the proper frequency for inspecting, testing, and maintaining fire protection devices and systems

Building and Fire Protection Features (LS.02.01.10)

Fire doors and barrier management are key areas of noncompliance with Joint Commission Standard LS.02.01.10. ASHE has several resources available:

- A fire door checklist
- Webinars explaining the inspection of fire doors and barrier penetrations
- A sample of an above-ceiling permit policy and procedure
- A sample of an above-ceiling permit

Automated Suppression Systems (LS.02.01.35)

Common issues related to sprinkler systems include items being supported from sprinkler systems, inadequate sprinkler maintenance, and obstructions being stored within 18 inches of a sprinkler head. Resources to help facility professionals manage these issues include:

- Sample policies to help manage items being supported from sprinkler systems
- Graphics showing proper storage and shelving related to sprinkler head proximity

Hazardous Materials and Waste Management (EC.02.02.01)

Most citations in hazardous materials and waste management are related to regulations regarding eye wash stations, protective lead aprons, and personal protective equipment (PPE). The Focus on Compliance page includes helpful links to resources from the Occupational Health and Safety Administration (OSHA) including:

- An eye and face protection tool
- The OSHA Hazard Communication Standard
- The Ionizing Radiation Standard

All of these resources were created to help ASHE members comply with the various codes and standards regulating health care facilities. As these regulations change over time, ASHE will continue to provide members with tools and resources to help their compliance efforts. To explore the tools listed here or find additional resources, visit the Focus on Compliance project at www.ashe.org/compliance.

Advancing Health and the Patient Experience

By **Deanna Martin**, ASHE membership and communications director

Hospitals and health systems are increasingly working to improve patient experience scores measured through the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, which are now tied to reimbursements. Facing increased competitive, public relations, and financial pressures, hospital leaders seek solutions to keep patients happy, boost scores, and improve finances.

ASHE and its members work to help health care organizations improve the patient experience. ASHE's advocacy efforts also contribute to a better patient experience. This article outlines ways that ASHE's advocacy work and ASHE members contribute to more satisfied patients.

Advocacy Work to Increase Patient Satisfaction

The codes and standards that regulate health care help keep patients, staff, and visitors safe. However, outdated codes and requirements not backed by science can sometimes unintentionally lead to decreased patient satisfaction.

For example, ASHE has sought to relax unnecessary restrictions on the amount of combustible material allowed on hospital walls, partly because these unnecessary restrictions could decrease patient satisfaction by limiting artwork that soothes and calms patients.

ASHE has supported the expansion of the maximum smoke compartment size to 40,000 square feet instead of the existing 25,000 square foot maximum. With larger smoke compartments, hospitals can build more single-patient rooms that

create healthier outcomes, increase privacy, improve communication, and provide a better patient experience of care.

A large body of research surrounds patient satisfaction, and ASHE uses research to help support positions on codes and standards changes. For example, the location of sinks within patient rooms has been a topic of discussion during development of codes such as the Facility Guidelines Institute's *Guidelines for Design and Construction of Hospitals and Outpatient Facilities*. By looking at research on patient satisfaction, codes can be created that promote clinicians washing hands immediately on entering the patient room while still maintaining eye contact with the patient, which increases patient satisfaction score.

Facility Professionals Contribute to the Patient Experience

Codes and standards regulating the health care environment are not the only factor influencing patient satisfaction, of course. Facility professionals can make meaningful contributions to patient satisfaction. The HCAHPS survey includes two questions on the physical environment—questions related to quietness and cleanliness. Yet every aspect of a patient's experience of care is influenced by the health care physical environment, and facility professionals can influence the patient experience in a variety of ways.

ASHE members may be wondering how to do more to improve the patient experience. ASHE recommends that members use a people, process, and place approach to patient satisfaction. Using this

model, a patient satisfaction committee at a hospital—one that includes the facility manager—could:

- Determine the ideal end-state, and then identify steps needed to create a culture that supports this goal (people)
- Examine the staff, patient, and visitor interventions that can improve the patient experience around noise (process)
- Improve building features, technology, and equipment to help reduce noise (place)

Hospital facility departments are trying a variety of people, process, and place improvements. ASHE published a Hospitals in Pursuit of Excellence (HPOE) guide called *Improving the Patient Experience Through the Health Care Physical Environment* (2016) that explores this model and how hospitals are using it.

One hospital featured in the report, St. Barnabas Health System in New York City, uses a people-focused approach in which frontline staff take the following steps when working in a patient's room:

- Knock on the door and ask the patient if this is a good time to enter.
- Introduce yourself and let the patient know why you're there and how long the repair or task will take.
- Wash your hands to avoid spreading germs and infection.
- Ask the patient their name and how they are feeling.
- Ask if the patient is comfortable (how is the room temperature, would they like any water, etc.)
- On completion of the task, wish the patient a good day and ask if you can do anything else to help.
- Smile, make eye contact, and show that you care.

Creating a culture of caring among all staff, including those who have traditionally not had much interaction with patients, can lead to better patient experiences.

Process improvements can also help. For example, a hospital's decisions on where mobile phones can be used can influence noise scores. Other processes affect staff, which can indirectly affect patients. For example, if a hospital layout is inefficient and nurses have to spend a lot of time walking to get supplies before returning to a patient, a patient may rate "communication with nurses" lower simply because the nurse doesn't have as much time to spend at the bedside. Lowering or shutting off some of the lights at night reminds staff and visitors that patients are sleeping and to keep noise down. Likewise, changing the resupply or equipment-moving processes can lead to quieter spaces. Creating a better process for reducing temperature variations in patient rooms can lead to better patient comfort.

The physical environment of a health care facility affects the patient experience in several ways. Creating a quieter environment, for example, can make a big difference in patient satisfaction scores. Another hospital featured in the HPOE guide, St. Alphonsus Medical Center in Boise, Idaho, evaluated the impact of the physical environment on the perception of noise and quality of sleep. The hospital ran a pilot by renovating a nursing unit using sound-absorbing materials including carpet in corridors, sound-absorbing wall surfaces, and high-performance acoustic tiles. When patients were surveyed in the renovated unit, as compared to a standard unit, quality of sleep as rated by the patient improved from 4.9 to 7.3 on a scale of 1 to 10, with 10 being the best.

Good design can help patients relax. Several studies have shown that patients who have a view



of nature—or even a picture of a landscape scene—require fewer doses of pain medication than control groups with views of abstract art, brick walls, or plain walls. Studies have shown that a combination of sensory exposures with nature can reduce perceived pain even more than just views, and some patients and staff members feel less stressed when exposed to areas like healing gardens.

Mercy Medical Center in Baltimore, Maryland, incorporated several design features aimed at enhancing the patient experience when it built a new hospital to replace an old facility in 2010. To provide natural light and views of nature, Mercy Medical Center oriented waiting rooms and public spaces toward a city park adjacent to the hospital, and created rooms with views of the Baltimore harbor. The hospital created rooftop healing gardens to pro-

vide places for patients, visitors, and staff to relax and refresh. Mercy Medical Center also incorporated family space in patient rooms, decentralized storage to help promote staff responsiveness, and an acuity-adaptable layout to reduce the movement of patients. Mercy Medical Center now has a four-star rating, and 80 percent of patients report that they would definitely recommend the hospital, compared to a national average of 71 percent.

By considering the people, processes, and places that affect the patient experience, health care facility professionals and other leaders can help their organizations meet important patient satisfaction goals. To learn more about ways to influence the patient experience or to review additional examples and case studies, download the HPOE guide at www.ashe.org/patientexperience.

Getting Involved



This *Advocacy Report* outlines the progress made toward better codes and standards regulating health care facilities. These advancements are not the result of mere luck. Each code proposal takes time and dedica-

tion from those involved in the field, and ASHE is always looking for new volunteers who want to work on these topics.

Getting involved in advocacy efforts provides a variety of benefits. On a personal level, getting involved can provide you a more in-depth knowledge of the codes and standards regulating health care. On an organizational level, getting involved can help your health care facility stay ahead of regulatory changes. On an even larger level, getting involved can help create unified codes for health care.

No matter what your role is, I encourage you to get involved as we work toward improved regulations. Here are ways you can help.

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.

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

By Russ Harbaugh, CHEP, ASHE president

manager 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 codes. 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.

Health Care Administrators

ASHE encourages health care administrators to ensure that their facility managers, as well as others in related positions, are members 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 for health care administrators to 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.

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. 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.

Health Care Accrediting Organizations

ASHE is a helpful resource for accrediting organizations that survey health care 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.

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, and can contact ASHE for additional information



Get involved.

Contact ASHE at ashe@aha.org or at 312-422-3800 to learn more about how you can help improve the codes and standards regulating health care.

Learn more about codes and standards through a variety of ASHE education programs.

www.ashe.org/calendar

