Standards Revisions Related to Life Safety Code Update

APPLICABLE TO HOSPITALS

Effective January 9, 2017

Environment of Care (EC) Chapter

EC.01.01.01
The hospital plans activities to minimize risks in the environment of care.
Note: One or more persons can be assigned to manage risks associated with the management plans described in this standard.

Elements of Performance for EC.01.01.01

1. Leaders identify an individual(s) to manage risk, coordinate risk reduction activities in the physical environment, collect deficiency information, and disseminate summaries of actions and results.
   Note: Deficiencies include injuries, problems, or use errors.

2. The hospital has a written plan for managing the following: The environmental safety of patients and everyone else who enters the hospital's facilities.

3. The hospital has a written plan for managing the following: The security of everyone who enters the hospital's facilities.

4. The hospital has a written plan for managing the following: Hazardous materials and waste.

5. The hospital has a written plan for managing the following: Fire safety.

Key: D indicates that documentation is required; R indicates an identified risk area.
7. The hospital has a written plan for managing the following: Medical equipment.

8. The hospital has a written plan for managing the following: Utility systems.

EC.02.01.01
The hospital manages safety and security risks.

Elements of Performance for EC.02.01.01

1. The hospital implements its process to identify safety and security risks associated with the environment of care that could affect patients, staff, and other people coming to the hospital's facilities.
   Note: Risks are identified from internal sources such as ongoing monitoring of the environment, results of root cause analyses, results of proactive risk assessments of high-risk processes, and from credible external sources such as Sentinel Event Alerts.

3. The hospital takes action to minimize or eliminate identified safety and security risks in the physical environment.

5. The hospital maintains all grounds and equipment.

7. The hospital identifies individuals entering its facilities.
   Note: The hospital determines which of those individuals require identification and how to do so.

8. The hospital controls access to and from areas it identifies as security sensitive.

9. The hospital has written procedures to follow in the event of a security incident, including an infant or pediatric abduction.

10. When a security incident occurs, the hospital follows its identified procedures.

11. The hospital responds to product notices and recalls. (See also MM.05.01.17, EPs 1–4)

14. The hospital manages magnetic resonance imaging (MRI) safety risks associated with the following:
   - Patients who may experience claustrophobia, anxiety, or emotional distress
   - Patients who may require urgent or emergent medical care
   - Patients with medical implants, devices, or imbedded metallic foreign objects (such as shrapnel)
   - Ferromagnetic objects entering the MRI environment
   - Acoustic noise
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16. The hospital manages magnetic resonance imaging (MRI) safety risks by doing the following:
   - Restricting access of everyone not trained in MRI safety or screened by staff trained in MRI safety from the scanner room and the area that immediately precedes the entrance to the MRI scanner room.
   - Making sure that these restricted areas are controlled by and under the direct supervision of staff trained in MRI safety.
   - Posting signage at the entrance to the MRI scanner room that conveys that potentially dangerous magnetic fields are present in the room. Signage should also indicate that the magnet is always on except in cases where the MRI system, by its design, can have its magnetic field routinely turned on and off by the operator.

EC.02.01.03
The hospital prohibits smoking except in specific circumstances.

   Elements of Performance for EC.02.01.03

   1. The hospital develops a written policy prohibiting smoking in all buildings. Exceptions for patients in specific circumstances are defined. Note: The scope of this EP is concerned with all smoking types—tobacco, electronic, or other.

   6. The hospital takes action to maintain compliance with its smoking policy.

EC.02.02.01
The hospital manages risks related to hazardous materials and waste.

   Elements of Performance for EC.02.02.01

   1. The hospital maintains a written, current inventory of hazardous materials and waste that it uses, stores, or generates. The only materials that need to be included on the inventory are those whose handling, use, and storage are addressed by law and regulation. (See also IC.02.01.01, EP 6; MM.01.01.03, EP 3)

   3. The hospital has written procedures, including the use of precautions and personal protective equipment, to follow in response to hazardous material and waste spills or exposures.

   4. The hospital implements its procedures in response to hazardous material and waste spills or exposures. (See also IC.02.01.01, EP 2)

   5. The hospital minimizes risks associated with selecting, handling, storing, transporting, using, and disposing of hazardous chemicals.

   6. The hospital minimizes risks associated with selecting, handling, storing, transporting, using, and disposing of radioactive materials.
7. The hospital minimizes risks associated with selecting and using hazardous energy sources.  
   Note: Hazardous energy is produced by both ionizing equipment (for example, radiation and x-ray equipment) and nonionizing equipment (for example, lasers and MRIs).

8. The hospital minimizes risks associated with disposing of hazardous medications.  
   (See also MM.01.01.03, EPs 1–3)

9. The hospital minimizes risks associated with selecting, handling, storing, transporting, using, and disposing of hazardous gases and vapors.  
   Note: Hazardous gases and vapors include, but are not limited to, ethylene oxide and nitrous oxide gases; vapors generated by glutaraldehyde; cauterizing equipment, such as lasers; waste anesthetic gas disposal (WAGD); and laboratory rooftop exhaust. (For full text, refer to NFPA 99-2012: 9.3.8; 9.3.9)

10. The hospital monitors levels of hazardous gases and vapors to determine that they are in safe range.  
    Note: Law and regulation determine the frequency of monitoring hazardous gases and vapors as well as acceptable ranges.

11. For managing hazardous materials and waste, the hospital has the permits, licenses, manifests, and safety data sheets required by law and regulation.

12. The hospital labels hazardous materials and waste. Labels identify the contents and hazard warnings. * (See also IC.02.01.01, EP 6)  
    Footnote *: The Occupational Safety and Health Administration’s (OSHA) Bloodborne Pathogens and Hazard Communications Standards and the National Fire Protection Association (NFPA) provide details on labeling requirements.

17. For hospitals that provide computed tomography (CT), positron emission tomography (PET), or nuclear medicine (NM) services: The results of staff dosimetry monitoring are reviewed at least quarterly by the radiation safety officer, diagnostic medical physicist, or health physicist to assess whether staff radiation exposure levels are “as low as reasonably achievable” (ALARA) and below regulatory limits.  
    Note 1: For the definition of ALARA, please refer to US Nuclear Regulatory Commission federal regulation 10 CFR 20.1003.  
    Note 2: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.

18. For hospitals that use Joint Commission accreditation for deemed status purposes: Radiation workers are checked periodically, by the use of exposure meters or badge tests, for the amount of radiation exposure.

19. For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital has procedures for the proper routine storage and prompt disposal of trash.
The hospital manages fire risks.

**EC.02.03.01**

The hospital minimizes the potential for harm from fire, smoke, and other products of combustion.

1. The hospital maintains free and unobstructed access to all exits.
   Note: This requirement applies to all buildings classified as business occupancy. The "Life Safety" (LS) chapter addresses the requirements for all other occupancy types.

9. The written fire response plan describes the specific roles of staff and licensed independent practitioners at and away from a fire's point of origin, including when and how to sound and report fire alarms, how to contain smoke and fire, how to use a fire extinguisher, how to assist and relocate patients, and how to evacuate to areas of refuge.
   Note: For additional guidance, see NFPA 101-2012: 18/19: 7.1; 7.2.

**EC.02.03.03**

The hospital conducts fire drills.

1. The hospital conducts fire drills once per shift per quarter in each building defined as a health care occupancy by the Life Safety Code. The hospital conducts quarterly fire drills in each building defined as an ambulatory health care occupancy by the Life Safety Code. (See also LS.01.02.01, EP 11; LS.02.01.70, EP 6; LS.03.01.70, EP 6)
   Note 1: Evacuation of patients during drills is not required.
   Note 2: When drills are conducted between 9:00 P.M. and 6:00 A.M., the hospital may use alternative methods to notify staff instead of activating audible alarms.
   Note 3: In leased or rented facilities, drills need be conducted only in areas of the building that the hospital occupies.

2. The hospital conducts fire drills every 12 months from the date of the last drill in all freestanding buildings classified as business occupancies and in which patients are seen or treated.
   Note: In leased or rented facilities, drills need be conducted only in areas of the building that the hospital occupies.

3. When quarterly fire drills are required, at least 50% are unannounced. Fire drills are held at unexpected times and under varying conditions. Fire drills include transmission of fire alarm signal and simulation of emergency fire conditions.
   Note 1: When drills are conducted between 9:00 P.M. and 6:00 A.M., the hospital may use alternative methods to notify staff instead of activating audible alarms.
   Note 2: For additional guidance, see NFPA 101-2012: 18/19: 7.1.7; 7.1; 7.2; 7.3.

4. Staff who work in buildings where patients are housed or treated participate in drills according to the hospital’s fire response plan.
5. The hospital critiques fire drills to evaluate fire safety equipment, fire safety building features, and staff response to fire. The evaluation is documented.

EC.02.03.05
The hospital maintains fire safety equipment and fire safety building features.
Note: This standard does not require hospitals to have the types of fire safety equipment and building features described below. However, if these types of equipment or features exist within the building, then the following maintenance, testing, and inspection requirements apply.

Elements of Performance for EC.02.03.05

1. At least quarterly, the hospital tests supervisory signal devices on the inventory (except valve tamper switches). The results and completion dates are documented.
   Note 1: For additional guidance on performing tests, see NFPA 72-2010: Table 14.3.1.
   Note 2: Supervisory signals include the following: control valves; pressure supervisory; pressure tank, pressure supervisory for a dry pipe (both high and low conditions), steam pressure; water level supervisory signal initiating device; water temperature supervisory; and room temperature supervisory.

2. Every 6 months, the hospital tests vane-type and pressure-type water flow devices and valve tamper switches on the inventory. The results and completion dates are documented.
   Note 1: For additional guidance on performing tests, see NFPA 72-2010: Table 14.4.5.
   Note 2: Mechanical water-flow devices (including, but not limited to, water motor gongs) should be tested quarterly. The results and completion dates are documented. (For full text, refer to NFPA 25-2011: Table 5.1.1.2)

3. Every 12 months, the hospital tests duct detectors, heat detectors, manual fire alarm boxes, and smoke detectors on the inventory. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 72-2010: Table 14.4.5; 17.14.

4. Every 12 months, the hospital tests visual and audible fire alarms, including speakers and door-releasing devices on the inventory. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 72-2010: Table 14.4.5.

5. Every 12 months, the hospital tests fire alarm equipment on the inventory for notifying off-site fire responders. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 72-2010: Table 14.4.5.

6. For automatic sprinkler systems: The hospital tests electric motor–driven fire pumps monthly and diesel-engine-driven fire pumps weekly under no-flow conditions. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 25-2011: 8.3.1; 8.3.2.

7. For automatic sprinkler systems: Every six months, the hospital tests water-storage tank high- and low-water level alarms. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 25-2011: 9.2.1; Table 9.1.1.2.
8. For automatic sprinkler systems: Every month during cold weather, the hospital tests water-storage tank temperature alarms. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 25-2011: 9.2.4; Table 9.1.1.2.

9. For automatic sprinkler systems: Every 12 months, the hospital tests main drains at system low point or at all system risers. The results and completion dates are documented.
   Note: For additional guidance on performing tests, see NFPA 25-2011: 13.2.5; 13.3.3.4; Table 13.1.1.2; Table 13.8.1.

10. For automatic sprinkler systems: Every quarter, the hospital inspects all fire department water supply connections. The results and completion dates are documented.
    Note: For additional guidance on performing tests, see NFPA 25-2011: 13.7; Table 13.1.1.2.

11. For automatic sprinkler systems: Every 12 months, the hospital tests fire pumps under flow. The results and completion dates are documented.
    Note: For additional guidance on performing tests, see NFPA 25-2011: 8.3.3.

12. Every five years, the hospital conducts hydrostatic and water-flow tests for standpipe systems. The results and completion dates are documented.
    Note: For additional guidance on performing tests, see NFPA 25-2011: 6.3.1; 6.3.2; Table 6.1.1.2.

13. Every six months, the hospital inspects any automatic fire-extinguishing system in a kitchen. The results and completion dates are documented.
    Note 1: Discharge of the fire-extinguishing systems is not required.
    Note 2: For additional guidance on performing inspections, see NFPA 96-2011: 11.2.

14. Every 12 months, the hospital tests carbon dioxide and other gaseous automatic fire-extinguishing systems. The results and completion dates are documented.
    Note 1: Discharge of the fire-extinguishing systems is not required.
    Note 2: For full text, refer to NFPA 13-2010: 21.4.1.6(1).

15. At least monthly, the hospital inspects portable fire extinguishers. The results and completion dates are documented.
    Note 1: There are many ways to document the inspections, such as using bar-coding equipment, using check marks on a tag, or using an inventory.
    Note 2: Inspections involve a visual check to determine correct type of and clear and unobstructed access to a fire extinguisher, in addition to a check for broken parts and full charge.
    Note 3: For additional guidance on inspection of fire extinguishers, see NFPA 10-2010: 7.2.2; 7.2.4.
16. Every 12 months, the hospital performs maintenance on portable fire extinguishers, including recharging. Individuals performing annual maintenance on extinguishers are certified. The results and completion dates are documented.
Note 1: There are many ways to document the maintenance, such as using barcode equipment, using check marks on a tag, or using an inventory.
Note 2: For additional guidance on maintaining fire extinguishers, see NFPA 10-2010: 7.1.2; 7.2.2; 7.2.4; 7.3.1.

17. The hospital conducts hydrostatic tests on standpipe occupant hoses five years after installation and every three years thereafter. The results and completion dates are documented.
Note: For additional guidance on hydrostatic testing, see NFPA 1962-2008 (Chapter 7), and NFPA 25-2011.

18. The hospital operates fire and smoke dampers one year after installation and then at least every six years to verify that they fully close. The results and completion dates are documented.
Note: For additional guidance on performing tests, see NFPA 90A-2012: 5.4.8; NFPA 80-2010: 19.4; NFPA 105-2010: 6.5.

19. Every 12 months, the hospital tests automatic smoke-detection shutdown devices for air-handling equipment. The results and completion dates are documented.
Note: For additional guidance on performing tests, see NFPA 90A-2010: 6.4.1.

20. Every 12 months, the hospital tests sliding and rolling fire doors, smoke barrier sliding or rolling doors, and corridor walls and partitions for proper operation and full closure. The results and completion dates are documented.
Note: For additional guidance on performing tests, see NFPA 80-2010: 5.2.14.3; NFPA 105-2010: 5.2.1; 5.2.2.

25. The hospital has written documentation of annual inspection and testing of door assemblies by individuals who can demonstrate knowledge and understanding of the operating components of the door being tested. Testing begins with a pre-test visual inspection; testing includes both sides of the opening.
Note: For additional guidance on testing of door assemblies, see NFPA 101-2012: 7.2.1.5.10.1; 7.2.1.5.11; NFPA 80-2010: 4.8.4; 5.2.1; 5.2.3; 5.2.4; 5.2.6; 5.2.7; 6.3.1.7; NFPA 105-2010: 5.2.1.

27. Documentation of maintenance, testing, and inspection activities for Standard EC.02.03.05, EPs 1–20, 25 (including fire alarm and fire protection systems) includes the following:
- Name of the activity
- Date of the activity
- Inventory of devices, equipment, or other items
- Required frequency of the activity
- Name and contact information, including affiliation, of the person who performed the activity
- NFPA standard(s) referenced for the activity
- Results of the activity
Note: For additional guidance on documenting activities, see NFPA 25-2011: 4.3; 4.4; NFPA 72-2010: 14.2.1; 14.2.2; 14.2.3; 14.2.4.
EC.02.04.01
The hospital manages medical equipment risks.

**Elements of Performance for EC.02.04.01**

2. **For hospitals that do not use Joint Commission accreditation for deemed status purposes:** The hospital maintains either a written inventory of all medical equipment or a written inventory of selected equipment categorized by physical risk associated with use (including all life-support equipment) and equipment incident history. The hospital evaluates new types of equipment before initial use to determine whether they should be included in the inventory.

For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital maintains a written inventory of all medical equipment.

3. The hospital identifies high-risk medical equipment on the inventory for which there is a risk of serious injury or death to a patient or staff member should the equipment fail. Note: High-risk medical equipment includes life-support equipment.

4. The hospital identifies the activities and associated frequencies, in writing, for maintaining, inspecting, and testing all medical equipment on the inventory. These activities and associated frequencies are in accordance with manufacturers’ recommendations or with strategies of an alternative equipment maintenance (AEM) program.

Note 1: The strategies of an AEM program must not reduce the safety of equipment and must be based on accepted standards of practice, such as the American National Standards Institute/Association for the Advancement of Medical Instrumentation handbook ANSI/AAMI EQ56: 2013, Recommended Practice for a Medical Equipment Management Program.

Note 2: Medical equipment with activities and associated frequencies in accordance with manufacturers’ recommendations must have a 100% completion rate.

Note 3: Scheduled maintenance activities for high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory must have a 100% completion rate. Scheduled maintenance activities for non-high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory may be deferred as defined by organization policy, provided the completion rate is not less than 90%.
5. For hospitals that use Joint Commission accreditation for deemed status purposes:
The hospital's activities and frequencies for inspecting, testing, and maintaining the
following items must be in accordance with manufacturers' recommendations:
- Equipment subject to federal or state law or Medicare Conditions of Participation in
  which inspecting, testing, and maintaining must be in accordance with the
  manufacturers’ recommendations, or otherwise establishes more stringent
  maintenance requirements
- Medical laser devices
- Imaging and radiologic equipment (whether used for diagnostic or therapeutic
  purposes)
- New medical equipment with insufficient maintenance history to support the use of
  alternative maintenance strategies
Note: Maintenance history includes any of the following documented evidence:
- Records provided by the hospital’s contractors
- Information made public by nationally recognized sources
- Records of the hospital’s experience over time

6. For hospitals that use Joint Commission accreditation for deemed status purposes: A
qualified individual(s) uses written criteria to support the determination whether it is
safe to permit medical equipment to be maintained in an alternate manner that
includes the following:
- How the equipment is used, including the seriousness and prevalence of harm
during normal use
- Likely consequences of equipment failure or malfunction, including seriousness of
  and prevalence of harm
- Availability of alternative or back-up equipment in the event the equipment fails or
  malfunctions
- Incident history of identical or similar equipment
- Maintenance requirements of the equipment
(For more information on defining staff qualifications, refer to Standard HR.01.02.01)

7. For hospitals that use Joint Commission accreditation for deemed status purposes:
The hospital identifies medical equipment on its inventory that is included in an
alternative equipment maintenance program.

9. The hospital has written procedures to follow when medical equipment fails, including
using emergency clinical interventions and backup equipment.

10. The hospital identifies quality control and maintenance activities to maintain the
quality of the diagnostic computed tomography (CT), positron emission tomography
(PET), magnetic resonance imaging (MRI), and nuclear medicine (NM) images
produced. The hospital identifies how often these activities should be conducted.
EC.02.04.03
The hospital inspects, tests, and maintains medical equipment.

**Elements of Performance for EC.02.04.03**

1. **For hospitals that do not use Joint Commission accreditation for deemed status purposes:** Before initial use of medical equipment on the medical equipment inventory, the hospital performs safety, operational, and functional checks.

   For hospitals that use Joint Commission accreditation for deemed status purposes: Before initial use and after major repairs or upgrades of medical equipment on the medical equipment inventory, the hospital performs safety, operational, and functional checks.

2. The hospital inspects, tests, and maintains all high-risk equipment. These activities are documented. (See also PC.02.01.11, EP 2)
   - **Note 1:** High-risk equipment includes medical equipment for which there is a risk of serious injury or even death to a patient or staff member should it fail, which includes life-support equipment.
   - **Note 2:** Required activities and associated frequencies for maintaining, inspecting, and testing of medical equipment completed in accordance with manufacturers’ recommendations must have a 100% completion rate.
   - **Note 3:** Scheduled maintenance activities for high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory must have a 100% completion rate.

3. The hospital inspects, tests, and maintains non-high-risk equipment identified on the medical equipment inventory. These activities are documented. 
   - **Note:** Scheduled maintenance activities for non-high-risk medical equipment in an alternative equipment maintenance (AEM) program inventory are to be completed at 100%. AEM frequency is determined by the hospital’s AEM program.

4. The hospital conducts performance testing of and maintains all sterilizers. These activities are documented. (See also IC.02.02.01, EP 2)

5. The hospital performs equipment maintenance and chemical and biological testing of water used in hemodialysis. These activities are documented.

14. The hospital meets all other HealthCare Facilities Code requirements; facilities code for electrical equipment in the patient care vicinity as related to NFPA 99-2012: Chapter 10.
   - **Note:** For hospitals that use Joint Commission accreditation for deemed status purposes: the hospital meets the applicable provisions of the Life Safety Code Tentative Interim Amendment (TIA) 12-5.

15. For hospitals that use Joint Commission accreditation for deemed status purposes: Qualified hospital staff inspect, test, and calibrate nuclear medicine equipment annually. The results and completion dates are documented.

17. The hospital maintains the quality of the diagnostic computed tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI), and nuclear medicine (NM) images produced.
For diagnostic computed tomography (CT) services: At least annually, a diagnostic medical physicist does the following:
- Measures the radiation dose (in the form of volume computed tomography dose index [CTDVol]) produced by each diagnostic CT imaging system for the following four CT protocols: adult brain, adult abdomen, pediatric brain, and pediatric abdomen. If one or more of these protocols is not used by the hospital, other commonly used CT protocols may be substituted.
- Verifies that the radiation dose (in the form of CTDVol) produced and measured for each protocol tested is within 20 percent of the CTDVol displayed on the CT console. The dates, results, and verifications of these measurements are documented.
Note 1: This element of performance is only applicable for systems capable of calculating and displaying radiation doses.
Note 2: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.
Note 3: Medical physicists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)

For diagnostic computed tomography (CT) services: At least annually, a diagnostic medical physicist conducts a performance evaluation of all CT imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluation includes the use of phantoms to assess the following imaging metrics:
- Image uniformity
- Slice thickness accuracy
- Slice position accuracy (when prescribed from a scout image)
- Alignment light accuracy
- Table travel accuracy
- Radiation beam width
- High-contrast resolution
- Low-contrast resolution
- Geometric or distance accuracy
- CT number accuracy and uniformity
- Artifact evaluation
Note 1: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.
Note 2: Medical physicists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)
21. At least annually, a diagnostic medical physicist or magnetic resonance imaging (MRI) scientist conducts a performance evaluation of all MRI imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluation includes the use of phantoms to assess the following imaging metrics:
- Image uniformity for all radiofrequency (RF) coils used clinically
- Signal-to-noise ratio (SNR) for all coils used clinically
- Slice thickness accuracy
- Slice position accuracy
- Alignment light accuracy
- High-contrast resolution
- Low-contrast resolution (or contrast-to-noise ratio)
- Geometric or distance accuracy
- Magnetic field homogeneity
- Artifact evaluation

Note: Medical physicists or MRI scientists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the medical physicist or MRI scientist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)

22. At least annually, a diagnostic medical physicist or nuclear medicine physicist conducts a performance evaluation of all nuclear medicine imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluations are conducted for all of the image types produced clinically by each NM scanner (for example, planar and/or tomographic) and include the use of phantoms to assess the following imaging metrics:
- Image uniformity/system uniformity
- High-contrast resolution/system spatial resolution
- Sensitivity
- Energy resolution
- Count-rate performance
- Artifact evaluation

Note 1: The following test is recommended, but not required: Low-contrast resolution or detectability for non-planar acquisitions.

Note 2: The medical physicist or nuclear medicine physicist is accountable for these activities. He or she may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the medical physicist or nuclear medicine physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)
23. At least annually, a diagnostic medical physicist conducts a performance evaluation of all positron emission tomography (PET) imaging equipment. The evaluation results, along with recommendations for correcting any problems identified, are documented. The evaluations are conducted for all of the image types produced clinically by each PET scanner (for example, planar and/or tomographic) and include the use of phantoms to assess the following imaging metrics:
- Image uniformity/system uniformity
- High-contrast resolution/system spatial resolution
- Low-contrast resolution or detectability (not applicable for planar acquisitions)
- Artifact evaluation

Note 1: The following tests are recommended, but not required, for PET scanner testing: sensitivity, energy resolution, and count-rate performance.
Note 2: Medical physicists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the medical physicist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)

24. For computed tomography (CT), positron emission tomography (PET), nuclear medicine (NM), or magnetic resonance imaging (MRI) services: The annual performance evaluation conducted by the diagnostic medical physicist or MRI scientist (for MRI only) includes testing of image acquisition display monitors for maximum and minimum luminance, luminance uniformity, resolution, and spatial accuracy.

Note 1: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.
Note 2: Medical physicists or MRI scientists are accountable for these activities. They may be assisted with the testing and evaluation of equipment performance by individuals who have the required training and skills, as determined by the physicist or MRI scientist. (For more information, refer to HR.01.02.01, EP 1; HR.01.02.05, EP 20; HR.01.02.07, EPs 1 and 2; HR.01.06.01, EP 1; LD.03.06.01, EP 4.)

EC.02.05.01
The hospital manages risks associated with its utility systems.

Elements of Performance for EC.02.05.01

1. The hospital designs and installs utility systems that meet patient care and operational needs.

2. For hospitals that do not use Joint Commission accreditation for deemed status purposes: The hospital maintains a written inventory of all operating components of utility systems or maintains a written inventory of selected operating components of utility systems based on risks for infection, occupant needs, and systems critical to patient care (including all life-support systems). The hospital evaluates new types of utility components before initial use to determine whether they should be included in the inventory.

For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital maintains a written inventory of all operating components of utility systems.
3. The hospital identifies high-risk operating components of utility systems on the inventory for which there is a risk of serious harm or death to a patient or staff member should the component fail. Note: High-risk utility system components include life-support equipment.

4. The hospital identifies the activities and associated frequencies, in writing, for inspecting, testing, and maintaining all operating components of utility systems on the inventory. These activities and associated frequencies are in accordance with manufacturers’ recommendations or with strategies of an alternative equipment maintenance (AEM) program.
   Note 1: The strategies of an AEM program must not reduce the safety of equipment and must be based on accepted standards of practice.
   Note 2: For guidance on maintenance and testing activities for Essential Electric Systems (Type I), see NFPA 99-2012: 6.4.4.
   Footnote *: An example of guidelines for physical plant equipment maintenance is the American Society for Healthcare Engineering (ASHE) book Maintenance Management for Health Care Facilities.

5. For hospitals that use Joint Commission accreditation for deemed status purposes:
   - The hospital’s activities and frequencies for inspecting, testing, and maintaining the following items must be in accordance with manufacturers’ recommendations:
     - Equipment subject to federal or state law or Medicare Conditions of Participation in which inspecting, testing, and maintaining be in accordance with the manufacturers’ recommendations, or otherwise establishes more stringent maintenance requirements
     - New operating components with insufficient maintenance history to support the use of alternative maintenance strategies
   Note: Maintenance history includes any of the following documented evidence:
     - Records provided by the hospital’s contractors
     - Information made public by nationally recognized sources
     - Records of the hospital’s experience over time

6. For hospitals that use Joint Commission accreditation for deemed status purposes: A qualified individual(s) uses written criteria to support the determination of whether it is safe to permit operating components of utility systems to be maintained in an alternate manner that includes the following:
   - How the equipment is used, including the seriousness and prevalence of harm during normal use
   - Likely consequences of equipment failure or malfunction, including seriousness of and prevalence of harm
   - Availability of alternative or back-up equipment in the event the equipment fails or malfunctions
   - Incident history of identical or similar equipment
   - Maintenance requirements of the equipment
   (For more information on defining staff qualifications, refer to Standard HR.01.02.01)

7. For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital identifies operating components of utility systems on its inventory that are included in an alternative equipment maintenance program.
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| 8. | The hospital labels utility system controls to facilitate partial or complete emergency shutdowns.  
Note 1: Examples of utility system controls that should be labeled are utility source valves, utility system main switches and valves, and individual circuits in an electrical distribution panel.  
Note 2: For example, the fire alarm system’s circuit is clearly labeled as Fire Alarm Circuit; the disconnect method (that is, the circuit breaker) is marked in red; and access is restricted to authorized personnel. Information regarding the dedicated branch circuit for the fire alarm panel is located in the control unit. For additional guidance, see NFPA 101-2012: 18/19.3.4.1; 9.6.1.3; NFPA 72-2010: 10.5.5.2. |
| 9. | The hospital has written procedures for responding to utility system disruptions. |
| 10. | The hospital's procedures address shutting off the malfunctioning system and notifying staff in affected areas. |
| 11. | The hospital's procedures address performing emergency clinical interventions during utility system disruptions. |
| 13. | The hospital responds to utility system disruptions as described in its procedures. |
| 14. | The hospital minimizes pathogenic biological agents in cooling towers, domestic hot- and cold-water systems, and other aerosolizing water systems. |
| 15. | In critical care areas designed to control airborne contaminants (such as biological agents, gases, fumes, dust), the ventilation system provides appropriate pressure relationships, air-exchange rates, filtration efficiencies, temperature and humidity.  
Note: Areas designed for control of airborne contaminants include spaces such as operating rooms (all classes), special procedure rooms that require a sterile field, Caesarean delivery rooms, rooms for patients diagnosed with or suspected of having airborne communicable diseases (for example, airborne infection isolation rooms, pulmonary or laryngeal tuberculosis, bronchoscopy), patients in "protective environment” rooms (for example, those receiving bone marrow transplants), laboratories, pharmacies, sterile supply/processing rooms, and other sterile spaces.  
The basis for design compliance is the Guidelines for Design and Construction of Health Care Facilities, based on the edition used at the time of design (if available). |
| 16. | In non–critical care areas, the ventilation system provides required pressure relationships, temperature, and humidity.  
Note: Examples of non–critical care areas are general care nursing units; clean and soiled utility rooms in acute care areas; laboratories, pharmacies, diagnostic and treatment areas, food preparation areas, and other support departments. |
| 17. | The hospital maps the distribution of its utility systems. |
| 18. | Medical gas storage rooms and transfer and manifold rooms comply with NFPA 99-2012: 9.3.7. |
19. The emergency power supply system’s equipment and environment are maintained per manufacturers’ recommendations, including ambient temperature of at least 40°F; ventilation supply and exhaust; and water jacket temperature (when required). (For full text, refer to NFPA 99-2012: 9.3.10)

EC.02.05.03
The hospital has a reliable emergency electrical power source.

**Elements of Performance for EC.02.05.03**

1. For facilities that were constructed, or had a change in occupancy type, or have undergone an electrical system upgrade since 1983, the hospital has a Type 1 or Type 3 essential electrical system in accordance with NFPA 99, 2012 edition. This essential electrical system must be divided into three branches, including the life safety branch, critical branch, and equipment branch. Both the life safety branch and the critical branch are kept independent of all other wiring and equipment, and they transfer within 10 seconds of electrical interruption. Each branch has at least one automatic transfer switch. For additional guidance, see NFPA 99-2012: 6.4.2.2; 6.4.2.2.6.

2. The hospital provides emergency power within 10 seconds for the following: Alarm systems, as required by the Life Safety Code. Note: For guidance in establishing a reliable emergency power system (that is, an essential electrical distribution system), see NFPA 99-2012: 6.4.1.1; 6.4.2.2.3.3; NFPA 110-2010: 4.1; Table 4.1(a).

3. The hospital provides emergency power within 10 seconds for the following: Exit route and exit sign illumination, as required by the Life Safety Code. Note: For guidance in establishing a reliable emergency system (that is, an essential electrical distribution system), see NFPA 99-2012: 6.4.1.1; 6.4.2.2.3.3; NFPA 110-2010: 4.1; Table 4.1(a).

4. The hospital provides emergency power within 10 seconds for the following: Emergency communication systems, as required by the Life Safety Code. Note: For guidance in establishing a reliable emergency power system (that is, an essential electrical distribution system), see NFPA 99-2012: 6.4.1.1; 6.4.2.2.3.3; NFPA 110-2010: 4.1; Table 4.1(a).

5. The hospital provides emergency power within 10 seconds for the following: Equipment that could cause patient harm when it fails, including life-support systems; blood, bone, and tissue storage systems; medical air compressors; and medical and surgical vacuum systems. Note: For guidance in establishing a reliable emergency power system (that is, an essential electrical distribution system), see NFPA 99-2012: 6.4.1.1; 6.4.2.2.3.3; NFPA 110-2010: 4.1; Table 4.1(a).
**Prepublication Requirements continued**

October 31, 2016

6. The hospital provides emergency power within 10 seconds for the following: Areas in which loss of power could result in patient harm, including intensive care, emergency rooms, operating rooms, recovery rooms, obstetrical delivery rooms, nurseries, and urgent care areas.

   Note: For guidance in establishing a reliable emergency power system (that is, an essential electrical distribution system), see NFPA 99-2012: 6.4.1.1; 6.4.2.2.3.3; NFPA 110-2010: 4.1; Table 4.1(a).

10. The hospital provides emergency power within 10 seconds for the following: Emergency lighting at emergency generator locations. The hospital's emergency power system (EPS) has a remote manual stop station (with identifying label) to prevent inadvertent or unintentional operation. A remote annunciator (powered by storage battery) is located outside the EPS location.

   Note: For guidance in establishing a reliable emergency power system (that is, an essential electrical distribution system), refer to NFPA 99-2012: 6.4.1.1.6; 6.4.1.1.17; 6.4.2.2.3.3; NFPA 110-2010: 5.6.5.6; 7.3.1.

11. The hospital provides emergency power for elevators selected to provide service to patients during interruption of normal power (at least one for nonambulatory patients).

   Note: For guidance in establishing a reliable emergency power system for the equipment branch (that is, an essential electrical distribution system), refer to NFPA 99-2012: 6.4.2.2.5; 6.4.2.2.5.4.

**EC.02.05.05**

The hospital inspects, tests, and maintains utility systems.

Note: At times, maintenance is performed by an external service. In these cases, hospitals are not required to possess maintenance documentation but must have access to such documentation during survey and as needed.

**Elements of Performance for EC.02.05.05**

1. When performing repairs or maintenance activities, the hospital has a process to manage risks associated with air-quality requirements; infection control; utility requirements; noise, odor, dust, vibration; and other hazards that affect care, treatment, or services for patients, staff, and visitors.

2. For hospitals that do not use Joint Commission accreditation for deemed status purposes: The hospital tests utility system components on the inventory before initial use. The completion date and the results of the tests are documented.

   For hospitals that use Joint Commission accreditation for deemed status purposes: The hospital tests utility system components on the inventory before initial use and after major repairs or upgrades. The completion date and the results of the tests are documented.
4. The hospital inspects, tests, and maintains the following: High-risk utility system components on the inventory. The completion date and the results of the activities are documented.

   Note 1: A high-risk utility system includes components for which there is a risk of serious injury or even death to a patient or staff member should it fail, which includes life-support equipment.
   Note 2: Required activities and associated frequencies for maintaining, inspecting, and testing of utility systems components completed in accordance with manufacturers' recommendations must have a 100% completion rate.
   Note 3: Scheduled maintenance activities for high-risk utility systems components in an alternative equipment maintenance (AEM) program inventory must have a 100% completion rate.

5. The hospital inspects, tests, and maintains the following: Infection control utility system components on the inventory. The completion date and the results of the activities are documented.

   Note 1: Required activities and associated frequencies for maintaining, inspecting, and testing of utility systems components completed in accordance with manufacturers' recommendations must have a 100% completion rate.
   Note 2: Scheduled maintenance activities for infection control utility systems components in an alternative equipment maintenance (AEM) program inventory must have a 100% completion rate.

6. The hospital inspects, tests, and maintains the following: Non-high-risk utility system components on the inventory. The completion date and the results of the activities are documented.

   Note: Scheduled maintenance activities for non-high-risk utility systems components in an alternative equipment maintenance (AEM) program inventory may be deferred as defined by organization policy, provided the completion rate is not less than 90%.

7. The hospital meets all other HealthCare Facilities Code requirements for electrical distribution, HVAC, as related to NFPA 99-2012: Chapters 6 and 9.

   Note: For hospitals that use Joint Commission accreditation for deemed status purposes: the hospital meets the applicable provisions of the Life Safety Code Tentative Interim Amendments (TIAs) 12-2 and 12-3.

**EC.02.05.07**

The hospital inspects, tests, and maintains emergency power systems.

Note: This standard does not require hospitals to have the types of emergency power equipment discussed below. However, if these types of equipment exist within the building, then the following maintenance, testing, and inspection requirements apply.

**Elements of Performance for EC.02.05.07**

1. At least monthly, the hospital performs a functional test of battery-powered lights required for egress for a minimum duration of 30 seconds and a visual inspection of EXIT signs. The test results and completion dates are documented.

   Note: For additional guidance, see NFPA 101-2012: 7.9.3; 7.10.9.
2. Every 12 months, the hospital either performs a functional test of battery-powered lights on the inventory required for egress for a duration of 1 1/2 hours, or the hospital replaces all batteries every 12 months and, during replacement, performs a random test of 10% of all batteries for 1 1/2 hours. The test results and completion dates are documented.

3. The hospital performs a functional test of Level 1 stored emergency power supply systems (SEPSS) on a monthly basis and performs a test of Level 2 SEPSS on a quarterly basis. Test duration is for five minutes or as specified for its class (whichever is less). The hospital performs an annual test at full load for 60% of the full duration of its class. The test results and completion dates are documented.
   Note 1: Non–SEPSS battery backup emergency power systems that the hospital has determined to be critical for operations during a power failure (for example, laboratory equipment or electronic medical records) should be properly tested and maintained in accordance with manufacturers’ recommendations.
   Note 2: Level 1 SEPSS are intended to automatically supply illumination or power to critical areas and equipment essential for safety to human life. Included are systems that supply emergency power for such functions as illumination for safe exiting, ventilation where it is essential to maintain life, fire detection and alarm systems, public safety communications systems, and processes where the current interruption would produce serious life safety or health hazards to patients, the public, or staff.
   Note 3: Class defines the minimum time for which the SEPSS is designed to operate at its rated load without being recharged. For additional guidance, see NFPA 111-2010: 8.4.

4. At least weekly, the hospital inspects the emergency power supply system (EPSS), including all associated components and batteries. The results and completion dates of weekly inspections are documented.
   Note: For additional guidance, see NFPA 110-2010: 8.3.1; 8.3.3; 8.3.4; 8.4.1.

5. At least monthly, the hospital tests each emergency generator under load for at least 30 continuous minutes. The cool-down period is not part of the 30 continuous minutes. The test results and completion dates are documented.

6. The monthly tests for diesel-powered emergency generators are conducted with a dynamic load that is at least 30% of the nameplate rating of the generator or meets the manufacturer’s recommended prime movers’ exhaust gas temperature. If the hospital does not meet either the 30% of nameplate rating or the recommended exhaust gas temperature during any test in EC.02.05.07, EP 5, then it must test the emergency generator once every 12 months using supplemental (dynamic or static) loads of 50% of nameplate rating for 30 minutes, followed by 75% of nameplate rating for 60 minutes, for a total of 1½ continuous hours.
   Note: Tests for non-diesel-powered generators need only be conducted with available load.

7. At least monthly, the hospital tests all automatic transfer switches on the inventory. The test results and completion dates are documented.

8. At least annually, the hospital tests the fuel quality to ASTM standards. The test results and completion dates are documented.
   Note: For additional guidance, see NFPA 110-2010: 8.3.8.
9. At least once every 36 months, hospitals with a generator providing emergency power for the services listed in EC.02.05.03, EPs 5 and 6, test each emergency generator for a minimum of 4 continuous hours. The test results and completion dates are documented. 
Note: For additional guidance, see NFPA 110-2010, Chapter 8.

10. The 36-month diesel-powered emergency generator test uses a dynamic or static load that is at least 30% of the nameplate rating of the generator or meets the manufacturer's recommended prime movers' exhaust gas temperature. 
Note: Tests for non-diesel-powered generators need only be conducted with available load.

EC.02.05.09
The hospital inspects, tests, and maintains medical gas and vacuum systems. 
Note: This standard does not require hospitals to have the medical gas and vacuum systems discussed below. However, if a hospital has these types of systems, then the following inspection, testing, and maintenance requirements apply.

Elements of Performance for EC.02.05.09

1. In time frames defined by the hospital, the hospital inspects, tests, and maintains critical components of piped medical gas and vacuum systems, including the source, distribution, inlets/outlets, and alarms that protect the piped medical gas systems. These activities and results are documented.

2. When the hospital has bulk oxygen systems above ground, they are in a locked enclosure (such as a fence) at least 10 feet from vehicles and sidewalks. There is permanent signage stating “OXYGEN – NO SMOKING – NO OPEN FLAMES.” 
Note: For additional guidance, refer to NFPA 99-2012: 5.1.3.5.12.

3. The hospital’s emergency oxygen supply connection is installed in a manner that allows a temporary auxiliary source to connect to it. 
Note: For additional guidance, refer to NFPA 99-2012: 5.1.3.5.13.

4. The hospital tests piped medical gas and vacuum systems for purity, correct gas, and proper pressure when these systems are installed, modified, or repaired. The test results and completion dates are documented.

5. The hospital makes main supply valves and area shutoff valves for piped medical gas and vacuum systems accessible and clearly identifies what the valves control.

6. The hospital implements a policy on all cylinders within the hospital that includes the following:
   - Proper handling and transporting (for example, in carts, attached to equipment, on racks) to ensure safety
   - Physically segregating full and empty cylinders from each other in order to assist staff in selecting the proper cylinder
   - Labeling empty cylinders
   - Prohibiting transfilling in any compartment with patient care rooms
Note: For additional guidance, see NFPA 99-2012: 11.5.2.3; 11.6.2; 11.6.2.3; 11.6.5; 11.6.5.2; 11.6.5.3; 11.7.3.2.
7. The hospital meets all other HealthCare Facilities Code requirements, gas and vacuum systems, and gas equipment, as related to NFPA 99-2012: Chapters 5 & 11. Note: For hospitals that use Joint Commission accreditation for deemed status purposes: the hospital meets the applicable provisions of the Life Safety Code Tentative Interim Amendments (TIAs) 12-4 and 12-6.

**EC.02.06.01**

The hospital establishes and maintains a safe, functional environment. Note: The environment is constructed, arranged, and maintained to foster patient safety, provide facilities for diagnosis and treatment, and provide for special services appropriate to the needs of the community.

### Elements of Performance for EC.02.06.01

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<td>1.</td>
<td>Interior spaces meet the needs of the patient population and are safe and suitable to the care, treatment, and services provided.</td>
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<td>11.</td>
<td>Lighting is suitable for care, treatment, and services.</td>
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<td>20.</td>
<td>Areas used by patients are clean and free of offensive odors.</td>
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<tr>
<td>26.</td>
<td>The hospital keeps furnishings and equipment safe and in good repair.</td>
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**EC.02.06.05**

The hospital manages its environment during demolition, renovation, or new construction to reduce risk to those in the organization.

### Elements of Performance for EC.02.06.05

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| 1. | When planning for new, altered, or renovated space, the hospital uses one of the following design criteria:  
- State rules and regulations  
- Guidelines for Design and Construction of Health Care Facilities, 2014 edition, administered by the Facility Guidelines Institute and published by the American Society for Healthcare Engineering (ASHE) When the above rules, regulations, and guidelines do not meet specific design needs, use other reputable standards and guidelines that provide equivalent design criteria. |
| 2. | When planning for demolition, construction, renovation, or general maintenance, the hospital conducts a preconstruction risk assessment for air quality requirements, infection control, utility requirements, noise, vibration, and other hazards that affect care, treatment, and services. Note: See LS.01.02.01 for information on fire safety procedures to implement during construction or renovation. |
| 3. | The hospital takes action based on its assessment to minimize risks during demolition, construction, or renovation. |
4. For computed tomography (CT), positron emission tomography (PET), or nuclear medicine (NM) services: Prior to installation of new imaging equipment, replacement of existing imaging equipment, or modification to rooms where ionizing radiation will be emitted or radioactive materials will be stored (such as scan rooms or hot labs), a medical physicist or health physicist conducts a structural shielding design * assessment to specify required radiation shielding.
   Note: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.
   Footnote *: For additional guidance on shielding designs and radiation protection surveys, see National Council on Radiation Protection and Measurements Report No. 147 (NCRP-147).

6. For computed tomography (CT), positron emission tomography (PET), or nuclear medicine (NM) services: After installation of imaging equipment or construction in rooms where ionizing radiation will be emitted or radioactive materials will be stored, a medical physicist or health physicist conducts a radiation protection survey to verify the adequacy of installed shielding. * This survey is conducted prior to clinical use of the room.
   Note: This element of performance does not apply to dental cone beam CT radiographic imaging studies performed for diagnosis of conditions affecting the maxillofacial region or to obtain guidance for the treatment of such conditions.
   Footnote *: For additional guidance on shielding designs and radiation protection surveys, see National Council on Radiation Protection and Measurements Report No. 147 (NCRP-147).

**EC.03.01.01**
Staff and licensed independent practitioners are familiar with their roles and responsibilities relative to the environment of care.

**Elements of Performance for EC.03.01.01**

2. Staff and licensed independent practitioners can describe or demonstrate actions to take in the event of an environment of care incident. (See also HR.01.04.01, EP 1)
EC.04.01.01
The hospital collects information to monitor conditions in the environment.

Elements of Performance for EC.04.01.01

1. The hospital establishes a process(es) for continually monitoring, internally reporting, and investigating the following:
   - Injuries to patients or others within the hospital's facilities
   - Occupational illnesses and staff injuries
   - Incidents of damage to its property or the property of others
   - Security incidents involving patients, staff, or others within its facilities
   - Hazardous materials and waste spills and exposures
   - Fire safety management problems, deficiencies, and failures
   - Medical or laboratory equipment management problems, failures, and use errors
   - Utility systems management problems, failures, or use errors

   Note 1: All the incidents and issues listed above may be reported to staff in quality assessment, improvement, or other functions. A summary of such incidents may also be shared with the person designated to coordinate safety management activities.

   Note 2: Review of incident reports often requires that legal processes be followed to preserve confidentiality. Opportunities to improve care, treatment, or services, or to prevent similar incidents, are not lost as a result of following the legal process.

3. Based on its process(es), the hospital reports and investigates the following: Injuries to patients or others in the hospital's facilities.

4. Based on its process(es), the hospital reports and investigates the following: Occupational illnesses and staff injuries.

5. Based on its process(es), the hospital reports and investigates the following: Incidents of damage to its property or the property of others.

6. Based on its process(es), the hospital reports and investigates the following: Security incidents involving patients, staff, or others within its facilities.

8. Based on its process(es), the hospital reports and investigates the following: Hazardous materials and waste spills and exposures.

9. Based on its process(es), the hospital reports and investigates the following: Fire safety management problems, deficiencies, and failures.

10. Based on its process(es), the hospital reports and investigates the following: Medical/laboratory equipment management problems, failures, and use errors.

11. Based on its process(es), the hospital reports and investigates the following: Utility systems management problems, failures, or use errors.

15. Every 12 months, the hospital evaluates each environment of care management plan, including a review of the plan's objectives, scope, performance, and effectiveness.
EC.04.01.03
The hospital analyzes identified environment of care issues.

Elements of Performance for EC.04.01.03

2. The hospital uses the results of data analysis to identify opportunities to resolve environmental safety issues.

EC.04.01.05
The hospital improves its environment of care.

Elements of Performance for EC.04.01.05

1. The hospital takes action on the identified opportunities to resolve environmental safety issues.

Life Safety (LS) Chapter

LS.01.01.01
The hospital designs and manages the physical environment to comply with the Life Safety Code.

Elements of Performance for LS.01.01.01

1. The hospital assigns an individual(s) to assess compliance with the Life Safety Code and manage the Statement of Conditions (SOC) when addressing survey-related deficiencies.

2. In time frames defined by the hospital, the hospital performs a building assessment to determine compliance with the Life Safety chapter.

3. The hospital maintains current and accurate drawings denoting features of fire safety and related square footage. Fire safety features include the following:
   - Areas of the building that are fully sprinklered (if the building is partially sprinklered)
   - Locations of all hazardous storage areas
   - Locations of all fire-rated barriers
   - Locations of all smoke-rated barriers
   - Sleeping and non-sleeping suite boundaries, including the size of the identified suites
   - Locations of designated smoke compartments
   - Locations of chutes and shafts
   - Any approved equivalencies or waivers
4. When the hospital plans to resolve a deficiency through a Survey-Related Plan for Improvement (SPFI), the hospital meets the 60-day time frame.
   Note 1: If the corrective action will exceed the 60-day time frame, the hospital must request a time-limited waiver within 30 days from the end of survey.
   Note 2: If there are alternative systems, methods, or devices considered equivalent, the hospital may submit an equivalency request using its Statement of Conditions (SOC).
   Note 3: For hospitals that use Joint Commission accreditation for deemed status purposes: if there are existing alternative systems, methods, or devices, the hospital may submit a waiver request using their Statement of Conditions (SOC).
   Note 4: For additional guidance on equivalencies, see NFPA 2012: 101:1.4.3.

5. For hospitals that use Joint Commission accreditation for deemed status purposes:
   The hospital maintains documentation of any inspections and approvals made by state or local fire control agencies.

6. The hospital does not remove or minimize an existing life safety feature when such feature is a requirement for new construction. Existing life safety features, if not required by the Life Safety Code, can be either maintained or removed. (For full text, refer to NFPA 101-2012: 4.6.12.2; 4.6.12.3)

**LS.01.02.01**

The hospital protects occupants during periods when the Life Safety Code is not met or during periods of construction.

**Elements of Performance for LS.01.02.01**

1. The hospital has a written interim life safety measure (ILSM) policy that covers situations when Life Safety Code deficiencies cannot be immediately corrected or during periods of construction. The policy includes criteria for evaluating when and to what extent the hospital implements LS.01.02.01, EPs 2–14 to compensate for increased life safety risk. The criteria include the assessment process to determine when interim life safety measures are implemented.

2. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital evacuates the building or notifies the fire department (or other emergency response group) and initiates a fire watch when a fire alarm system is out of service more than 4 out of 24 hours or a sprinkler system is out of service more than 10 hours in a 24-hour period in an occupied building. Notification and fire watch times are documented. (For full text, refer to NFPA 101-2012: 9.6.1.6; 9.7.6; NFPA 25-2011: 15.5.2)

3. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Posts signage identifying the location of alternative exits to everyone affected.

4. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Inspects exits in affected areas on a daily basis. The need for these inspections is based on criteria in the hospital’s interim life safety measure (ILSM) policy.
5. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Provides temporary but equivalent fire alarm and detection systems for use when a fire system is impaired. The need for equivalent systems is based on criteria in the hospital's interim life safety measure (ILSM) policy.

6. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Provides additional firefighting equipment. The need for this equipment is based on criteria in the hospital's interim life safety measure (ILSM) policy.

7. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Uses temporary construction partitions that are smoke-tight, or made of noncombustible or limited-combustible material that will not contribute to the development or spread of fire. The need for these partitions is based on criteria in the hospital's interim life safety measure (ILSM) policy.

8. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Increases surveillance of buildings, grounds, and equipment, giving special attention to construction areas and storage, excavation, and field offices. The need for increased surveillance is based on criteria in the hospital's interim life safety measure (ILSM) policy.

9. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Enforces storage, housekeeping, and debris-removal practices that reduce the building's flammable and combustible fire load to the lowest feasible level. The need for these practices is based on criteria in the hospital's interim life safety measure (ILSM) policy.

10. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Provides additional training to those who work in the hospital on the use of firefighting equipment. The need for additional training is based on criteria in the hospital's interim life safety measure (ILSM) policy.

11. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Conducts one additional fire drill per shift per quarter. The need for additional drills is based on criteria in the hospital's interim life safety measure (ILSM) policy. (See also EC.02.03.03, EP 1)

12. When the hospital identifies Life Safety Code deficiencies that cannot be immediately corrected or during periods of construction, the hospital does the following: Inspects and tests temporary systems monthly. The completion date of the tests is documented. The need for these inspections and tests is based on criteria in the hospital's interim life safety measure (ILSM) policy.
13. The hospital conducts education to promote awareness of building deficiencies, construction hazards, and temporary measures implemented to maintain fire safety. The need for education is based on criteria in the hospital's interim life safety measure (ILSM) policy.

14. The hospital trains those who work in the hospital to compensate for impaired structural or compartmental fire safety features. The need for training is based on criteria in the hospital's interim life safety measure (ILSM) policy. Note: Compartmentalization is the concept of using various building components (for example, fire-rated walls and doors, smoke barriers, fire-rated floor slabs) to prevent the spread of fire and the products of combustion so as to provide a safe means of egress to an approved exit. The presence of these features varies, depending on the building occupancy classification.

LS.02.01.10
Building and fire protection features are designed and maintained to minimize the effects of fire, smoke, and heat.

Elements of Performance for LS.02.01.10


2. When building rehabilitation occurs, the hospital incorporates Chapter 43, Building Rehabilitation. (For full text, refer to NFPA 101-2012: Chapter 43; 18/19.4.3)

3. Fire barriers are continuous from outside wall to outside wall or from one fire barrier to another, or a combination thereof, including continuity through all concealed spaces, such as those found above a ceiling, including interstitial spaces. For those fire barriers terminating at the bottom side of an interstitial space, the construction assembly forming the bottom of the interstitial space must have a fire resistance rating not less than that of the fire barrier. (For full text, refer to NFPA 101-2012: 8.3.1.2)

4. Common walls that are between buildings or within buildings (occupancy separation) are fire rated for two hours. (For full text, refer to NFPA 101-2012: 18/19.1.1.4; 18/19.1.3.3; 18/19.1.3.4; 8.2.2.2)

5. The fire protection ratings for opening protectives in fire barriers, fire-rated smoke barriers, and fire-rated smoke partitions are as follows:
   - Three hours in three-hour barriers and partitions
   - Ninety minutes in two-hour barriers and partitions
   - Forty-five minutes in one-hour barriers and partitions
   - Twenty minutes in thirty-minute barriers and partitions
   (For full text, refer to NFPA 101-2012: 8.3.4; 8.3.3.2; Table 8.3.4.2)
   Note: Labels on fire door assemblies must be maintained in legible condition.

6. In buildings, exit stairs connecting three or fewer floors are fire rated for 1 hour; exit stairs connecting four or more floors are fire rated for 2 hours. (For full text, refer to NFPA 101-2012: 7.1.3.2.1)
7. Fire-rated doors within walls and floors have functioning hardware, including positive latching devices and self-closing or automatic-closing devices. Gaps between meeting edges of door pairs are no more than 1/8 of an inch wide, and undercuts are no larger than 3/4 of an inch. Fire-rated doors within walls do not have unapproved protective plates greater than 16 inches from the bottom of the door. Blocking or wedging open fire-rated doors is prohibited. (For full text, refer to NFPA 101-2012: 8.3.3.1; NFPA 80-2010: 4.8.4.1; 5.2.13.3; 6.3.1.7; 6.4.5)

8. Doors requiring a fire rating of 3/4 of an hour or longer are free of coverings, decorations, or other objects applied to the door face, with the exception of informational signs, which are applied with adhesive only. (For full text, refer to NFPA 80-2010: 4.1.4)

9. Ducts penetrating the walls or floors with a fire resistance rating of less than 3 hours are protected by dampers that are fire rated for 1 1/2 hours; ducts penetrating the walls or floors with a fire resistance rating of 3 hours or greater are protected by dampers that are fire rated for 3 hours. (For full text, refer to NFPA 101-2012: 8.3.5.7; 9.2.1; NFPA 90A-2012: 5.4.1; 5.4.2)

10. The space around pipes, conduits, bus ducts, cables, wires, air ducts, or pneumatic tubes penetrating the walls or floors are protected with an approved fire-rated material. Note: Polyurethane expanding foam is not an accepted fire-rated material for this purpose. (For full text, refer to NFPA 101-2012: 8.3.5)


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**LS.02.01.20**

The hospital maintains the integrity of the means of egress.

**Elements of Performance for LS.02.01.20**

1. Doors in a means of egress are not equipped with a latch or lock that requires the use of a tool or key from the egress side, unless a compliant locking configuration is used, such as a delayed-egress locking system as defined in NFPA 101-2012: 7.2.1.6.1 or access-controlled egress door assemblies as defined in NFPA 101-2012: 7.2.1.6.2. (For full text, refer to NFPA 101-2012: 18/19.2.2.2.4; 18/19.2.2.2.5; 18/19.2.2.2.6)

2. Doors in a means of egress swing in the direction of egress when serving a room or area with an occupancy of 50 or more, except doors in existing smoke barriers. (For full text, refer to NFPA 101-2012: 7.2.1.4.2; 19.3.7.8(3))

3. Walls containing horizontal exits are fire rated for two or more hours, extend from the lowest floor slab to the floor or roof slab above, and extend continuously from exterior wall to exterior wall. (For full text, refer to NFPA 101-2012: 7.2.4.3.1; 18/19.2.2.5)
4. Doors in new buildings that are a part of horizontal exits have approved vision panels, are installed without a center mullion, and swing in the opposite direction of one another. Doors in existing construction are not required to swing with egress travel. (For full text, refer to NFPA 101-2012: 18.2.2.5.6; 18.2.2.5.4; 19.2.2.5.3)

5. When horizontal exit walls in new buildings terminate at outside walls at an angle of less than 180 degrees, the outside walls are fire rated for 1 hour for a distance of 10 or more feet. Openings in the walls in the 10-foot span are fire rated for 3/4 of an hour. (For full text, refer to NFPA 101-2012: 7.2.4.3.4)

6. Outside exit stairs are separated from the interior of the building by walls with the same fire rating required for enclosed stairs. The wall extends vertically from the ground to a point 10 feet or more above the top landing of the stairs or roofline (whichever is lower) and extends 10 feet or more horizontally. (For full text, refer to NFPA 101-2012: 18/19.2.2.3; 7.2.2.6.3)

7. Stairs and ramps serving as a required means of egress have handrails and guards on both sides in new buildings and on at least one side in existing buildings. (For full text, refer to NFPA 101-2012: 18/19.2.2.3; 18/19.2.2.6; 7.2.2.4; 7.2.5.4)

8. Stairs serving five or more stories have signs on each floor landing in the stairwell that identify the story, the stairwell, the top and bottom, and the direction to and story of exit discharge. Information is also presented in tactile lettering. The signs are placed five feet above the floor landing in a position that is easily visible when the door is open or closed. (For full text, refer to NFPA 101-2012: 18/19.2.2.3; 7.2.2.5.4)

9. Exits discharge to the outside at grade level or through an approved exit passageway that is continuous and terminates at a public way or at an exterior exit discharge. (For full text, refer to NFPA 101-2012: 18/19.2.7; 7.2.6; 7.7.2)

10. An exit enclosure is not used for any purpose that has the potential to interfere with its use as an exit and, if so designated, as an area of refuge. Open space within the exit enclosure is not used for any purpose that has the potential to interfere with egress. (For full text, refer to NFPA 101-2012: 18/19.2.2.3; 7.1.3.2.3; 7.2.2.5.3.1)

11. Exits, exit accesses, and exit discharges (means of egress) are clear of obstructions or impediments to the public way, such as clutter (for example, equipment, carts, furniture), construction material, and snow and ice. (For full text, refer to NFPA 101-2012: 18/19.2.5.1; 7.1.10.1; 7.5.1.1)

Note 1: Wheeled equipment (such as equipment and carts currently in use, equipment used for patient lift and transport, and medical emergency equipment not in use) that maintains at least five feet of clear and unobstructed corridor width is allowed, provided there is a fire plan and training program addressing its relocation in a fire or similar emergency. (For full text, refer to NFPA 101-2012: 18/19.2.3.4 (4))

Note 2: Where the corridor width is at least eight feet and the smoke compartment is fully protected by an electrically supervised smoke detection system or is in direct supervision of facility staff, furniture that is securely attached is allowed provided it does not reduce the corridor width to less than six feet, is only on one side of the corridor, does not exceed 50 square feet, is in groupings spaced at least 10 feet apart, and does not restrict access to building service and fire protection equipment. (For full text, refer to NFPA 101-2012: 18/19.2.3.4 (5))
<table>
<thead>
<tr>
<th>Requirement</th>
<th>Description</th>
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<tr>
<td>12.</td>
<td>When stair doors are held open and the sprinkler or fire alarm system activates the release of one door in a stairway, all doors serving that stairway close. (For full text, refer to NFPA 101-2012: 18/19.2.2.2.7; 18/19.2.2.2.8)</td>
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<tr>
<td>13.</td>
<td>Floors or compartments in a building have two or more approved exits arranged and constructed to be located remotely from each other. (For full text, refer to NFPA 101-2012: 18/19.2.4)</td>
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<td>14.</td>
<td>In new buildings, exit corridors are at least eight feet wide, unless otherwise permitted by the Life Safety Code. In new psychiatric buildings, exit corridors are at least six feet wide, unless otherwise permitted by the Life Safety Code. (For full text, refer to NFPA 101-2012: 18.2.3.4; 18.2.3.5)</td>
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<tr>
<td>15.</td>
<td>In existing buildings, exit corridors are at least 48 inches in clear width where serving as a means of egress from patient sleeping rooms. If modifying existing buildings with exit corridors that exceed eight feet, the exit corridors cannot be reduced to less than eight feet. (For full text, refer to NFPA 101-2012: 4.6.12.2; 19.2.3.4)</td>
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<td>16.</td>
<td>Exit access doors and exit doors are free of mirrors, hangings, or draperies that might conceal, obscure, or confuse the direction of exit. (For full text, refer to NFPA 101-2012: 18/19.2.1; 18/19.2.5.1; 7.1.10.2; 7.5.2.2.1)</td>
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<td>17.</td>
<td>Doors to new boiler rooms, new heater rooms, and new mechanical equipment rooms located in a means of egress are not held open by an automatic release device. (For full text, refer to NFPA 101-2012: 18.2.2.2.7)</td>
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<td>18.</td>
<td>The corridor width is not obstructed by wall projections. (For full text, refer to NFPA 101-2012: 18/19.2.3.3) Note: When corridors are six feet wide or more, it is allowable for certain objects to project into the corridor, such as hand rub dispensers or computer desks that are retractable. The objects must be no more than 36 inches wide and cannot project more than 6 inches into the corridor. These items must be installed at least 48 inches apart and above the handrail height. (For full text, refer to NFPA 101-2012: 18/19.2.3.4)</td>
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<td>19.</td>
<td>In new buildings, no dead-end corridor is longer than 30 feet. (For full text, refer to NFPA 101-2012: 18.2.5.2) Note: Existing dead-end corridors are permitted to be used if it is impractical and unfeasible to alter them. (For full text, refer to NFPA 101-2012: 19.2.5.2)</td>
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<tr>
<td>20.</td>
<td>Patient sleeping rooms open directly onto an exit access corridor. (For full text, refer to NFPA 101-2012: 18/19.2.5.6.1)</td>
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<tr>
<td>21.</td>
<td>Patient sleeping rooms that are larger than 1,000 square feet have at least two exit access doors remotely located from each other. Rooms not used as patient sleeping rooms that are larger than 2,500 square feet have at least two exit access doors remotely located from each other. (For full text, refer to NFPA 101-2012: 18/19.2.5.5)</td>
</tr>
</tbody>
</table>
22. Doors to patient sleeping rooms are not locked unless the clinical needs of patients require specialized security or where patients pose a security threat and staff can readily unlock doors at all times. (For full text, refer to NFPA 101-2012: 18/19.2.2.2.2; 18/19.2.2.5.1; 18/19.2.2.5.2)

23. Suites are separated from the remainder of the building by corridor walls or existing barriers and doors that limit the transfer of smoke. (For full text, refer to NFPA 101-2012: 18/19.2.5.7.1.2; 18/19.3.6)

24. Suites are subdivided by means of noncombustible or limited-combustible partitions or partitions constructed with fire-retardant-treated wood enclosed with noncombustible or limited-combustible materials. These partitions are not required to be fire rated. (For full text, refer to NFPA 101-2012: 18/19.2.5.7.1.4)

25. Suites of patient sleeping rooms larger than 1,000 square feet are provided with at least two exit access doors remotely located from each other, with one exiting directly to a corridor. The second exit may go into another suite (provided the two suites are separated with a corridor wall), an exit stair, exit passageway, or exit door to the exterior. (For full text, refer to NFPA 101-2012: 18/19.2.5.7.2.1(B); 18/19.2.5.7.2.2)

26. Suites not used as patient sleeping rooms that are larger than 2,500 square feet have at least two exit access doors remotely located from each other, with one directly exiting to a corridor. The second exit may go into another suite (provided the two suites are separated with a corridor wall), an exit stair, exit passageway, or exit door to the exterior. (For full text, refer to NFPA 101-2012: 18/19.2.5.7.3.2; 18/19.2.5.7.3.1(B))

27. For existing buildings, suites of patient sleeping rooms are limited to 5,000 square feet or less. If the existing building has an approved electrically supervised sprinkler system and total coverage automatic smoke detection system, the suite is permitted to be increased to 7,500 square feet. (For full text, refer to NFPA 101-2012: 9.6.2.9; 19.3.4; 19.3.5.7; 19.3.5.8.) If the suite is provided with direct visual supervision, an approved electrically supervised sprinkler system, and a total coverage (complete) smoke detection system, the suite is permitted to be increased to 10,000 square feet. (For full text, refer to NFPA 101-2012: 9.6.2.9; 19.2.5.7.2.1(D)(1)(a); 19.2.5.7.2.3; 19.3.4; 9.3.5.8)

28. For new buildings, patient sleeping suites are allowed to be 7,500 square feet. If the suite has total coverage smoke detection and direct visual supervision, the suite can be up to 10,000 square feet. (For full text, refer to NFPA 101-2012: 18.2.5.7.2.3; 18.2.5.7.2.1(D)(1)(a); 18.3.4)

29. Patient care suites not used for sleeping are limited to 10,000 square feet. (For full text, refer to NFPA 101-2012: 18/19.2.5.7.3.3)

30. For new buildings, sleeping and non-sleeping patient care suites have a travel distance to an exit access door of 100 feet or less from any point in the suite. The travel distance between any point in the suite and an exit is 200 feet. (For full text, refer to NFPA 101-2012: 18.2.5.7.2.4; 18.2.5.7.3.4)
31. For existing buildings, sleeping and non-sleeping patient care suites have a travel distance to an exit access door of 100 feet or less from any point in the suite. The travel distance between any point in the suite and an exit is either 150 feet if the building is not protected throughout by an approved electrically supervised sprinkler system or 200 feet if the building is fully protected by an approved electrically supervised sprinkler system. (For full text, refer to NFPA 101-2012: 19.2.5.7.2.4; 19.2.5.7.3.4)

32. Means of egress are adequately illuminated at all points, including angles and intersections of corridors and passageways, stairways, stairway landings, exit doors, and exit discharges. (For full text, refer to NFPA 101-2012: 18/19.2.8; 7.8.1.1)

33. Illumination in the means of egress, including exit discharges, is arranged so that failure of any single light fixture or bulb will not leave the area in darkness (< 0.2 foot candles). (For full text, refer to NFPA 101-2012: 18/19.2.8; 7.8.1.4)

34. Exit signs are visible when the path to the exit is not readily apparent. Signs are adequately lit and have letters that are four or more inches high (or six inches high if externally lit). (For full text, refer to NFPA 101-2012: 18/19.2.10; 7.10.1.5.1; 7.10.5; 7.10.6; 7.10.7)

35. Signs reading "NO EXIT" are posted on any door, passage, or stairway that is neither an exit nor an access to an exit but may be mistaken for an exit. (For full text, refer to NFPA 101-2012: 18/19.2.10.1; 7.10.8.3)


**LS.02.01.30**

The hospital provides and maintains building features to protect individuals from the hazards of fire and smoke.

**Elements of Performance for LS.02.01.30**

1. In new construction, vertical openings, including exit stairs, are enclosed by one-hour fire-rated walls when connecting three or fewer floors and two-hour fire-rated walls when connecting four or more floors. Existing vertical openings, including exit stairs, are enclosed with a minimum of one-hour fire-rated construction. Note: These vertical openings include, but are not limited to, shafts (including elevator, light and ventilation), communicating stair, ramps, trash chutes, linen chutes, and utility chases. (For full text, refer to NFPA 101-2012: 8.6; 18/19.3.1; 7.1.3.2.1)

2. All new hazardous areas have doors that are self-closing or automatic-closing, except for laboratories using flammable or combustible materials deemed less than a severe hazard and storage rooms greater than 50 square feet, but less than 100 square feet that are used for storage of combustible material. Hazardous areas have a fire barrier with a one-hour fire-resistant rating. These areas include, but are not limited to, boiler and fuel-fired heater rooms, central/bulk laundries larger than 100 square feet, paint shops, repair shops, soiled linen rooms, trash collection rooms with containers exceeding 64 gallons, laboratories considered a severe hazard, and storage rooms larger than 100 square feet that contain combustible material. (For full text, refer to NFPA 101-2012: 18.3.2.1; 18.3.2.2; 18.3.2.3; 18.3.2.4; Table 18.3.2.1)
3. All existing hazardous areas have doors that are self-closing or automatic-closing. These areas are protected by either a fire barrier with one-hour fire-resistive rating or an approved electrically supervised automatic sprinkler system. Hazardous areas include, but are not limited to, boiler and fuel-fired heater rooms, central/bulk laundries larger than 100 square feet, paint shops, repair shops, soiled linen rooms, trash collection rooms with containers exceeding 64 gallons, laboratories employing flammable or combustible materials deemed less than a severe hazard, and storage rooms greater than 50 square feet used for storage of equipment and combustible supplies. (For full text, refer to NFPA 101-2012: 19.3.2.1; 19.3.2.2; 19.3.2.3; 19.3.2.4)

4. Where residential or commercial cooking equipment is used to prepare meals for less than 31 people in a smoke compartment, one cooking facility is permitted to be open to the corridor provided all criteria in NFPA 101-2012: 18/19.3.2.5.3 are met.

5. Installation and use of alcohol-based hand rub (ABHR) dispensers that are 95% or less alcohol content by volume are allowed in each smoke compartment as per NFPA 101-2012: 18/19.3.2.6.
   Note 1: See The Joint Commission’s website (http://www.jointcommission.org/life_safety_code_information__resources/) for alcohol-based hand rub (ABHR) requirements.
   Note 2: This element of performance reflects NFPA 101-2012: 18/19.3.2.6. For alternative guidelines on ABHR dispensers, see NFPA 101-2012: 8.7.3.1.

6. Existing wall and ceiling interior finishes are rated Class A or B for limiting smoke development and the spread of flames. Newly installed wall and ceiling interior finishes are rated Class A. (For full text, refer to NFPA 101-2012: 18/19.3.3; 10.2)

7. Newly installed interior floor finishes in corridors of smoke compartments with an approved automatic sprinkler system is at least Class II. Existing floor finishes are not restricted. (For full text, refer to NFPA 101-2012: 18/19.3.3; 10.2.7)

8. Corridors must be separated from all other areas by approved partitions, unless the space is permitted to be open in accordance with NFPA 101-2012: 18/19.3.6.1.

9. In existing buildings, corridor wall partitions are fire resistance rated for 1/2 hour, continuous from the floor slab to the floor or roof slab above, extended through any concealed spaces (such as those above suspended ceilings and interstitial spaces), properly sealed, and constructed to limit the transfer of smoke. (For full text, refer to NFPA 101-2012: 19.3.6.2)

10. Within corridors in smoke compartments that are protected throughout with an approved supervised sprinkler system, partitions are allowed to terminate at the ceiling if the ceiling is constructed to limit the passage of smoke. The passage of smoke can be limited by an exposed, suspended-grid acoustical tile ceiling with penetrating items such as sprinkler piping and sprinklers that penetrate the ceiling, ducted heating, ventilating, and air-conditioning (HVAC) supply and return-air diffusers, speakers, and recessed lighting fixtures. (For full text, refer to NFPA 101-2012: 18/19.3.6.2)
Corridor doors are constructed to resist the passage of smoke, fitted with positive latching hardware, hinged so that they swing, and the doors do not have ventilating louvers or transfer grills (with the exception of bathrooms, toilets, and sink closets that do not contain flammable or combustible materials). Undercuts are no larger than one inch. Roller latches are prohibited. (For full text, refer to NFPA 101-2012: 18/19.3.6.3.1; 19.3.6.3.4; 18.3.6.3.5; 18/19.3.6.4; 18/19.3.6.5; 19.3.6.3.10; 18/19.3.6.3.11)

In existing buildings, all corridor doors are constructed of 1 3/4-inch or thicker solid bonded wood core or constructed to resist fire for not less than 20 minutes, and the doors do not have ventilating louvers or transfer grills (with the exception of bathrooms, toilets, and sink closets that do not contain flammable or combustible materials). Roller latches are prohibited.

Note: For existing doors, it is acceptable to use a device that keeps the door closed when a force of five pounds is applied to the edge of the door. (For full text, refer to NFPA 101-2012: 19.3.6.3.1; 19.3.6.3.2; 19.3.6.3.5; 19.3.6.3.6)

In smoke compartments without sprinkler systems, fixed fire windows in corridor walls are 25% or less of the size of the corridor walls in which they are installed. Existing window installations that conform to previously accepted Life Safety Code criteria (such as a size of 1,296 square inches or less, made with wired glass or fire-rated glazing, and set in approved metal frames) are permitted. (For full text, refer to NFPA 101-2012: 19.3.6.2.7; 8.3.3.8; 8.3.3.9; 8.3.3.11)

Openings in vision panels or doors in corridor walls (other than in smoke compartments containing patient sleeping rooms) are installed at or below one half the distance from the floor to the ceiling. These openings may not be larger than 80 square inches in new buildings or larger than 20 square inches in existing buildings.

Note: Openings may include, but are not limited to, mail slots and pass-through windows in areas such as laboratories, pharmacies, and cashier stations. (For full text, refer to NFPA 101-2012: 18/19.3.6.5)

Corridors serving adjoining areas are not used for a portion of an air supply, air return, or exhaust air plenum.

Note: Incidental air movement between rooms and corridors (such as isolation rooms) because of the need for pressure differentials in hospitals is permitted. In such cases, the direction of airflow is not the focus for this element of performance. For the purpose of fire protection, air transfer should be limited to the amount necessary to maintain positive or negative pressure differentials. (For full text, refer to NFPA 101-2012: 19.5.2.1; NFPA 90A-2012: 4.3.12.1; 4.3.12.1.3.2)

In new buildings, at least two smoke compartments are provided for every story with patient sleeping or treatment rooms and for those stories that have an occupant capacity of 50 or more people, regardless of use. Smoke barriers have a minimum one-hour fire resistance rating; the maximum size of each smoke compartment is limited to 22,500 square feet. Space shall be provided on each side of smoke barriers to adequately accommodate the total number of occupants in adjoining compartments. The travel distance from any point within the compartment to a smoke barrier door is no more than 200 feet. (For full text, refer to NFPA 101-2012: 18.3.7.1; 18.3.7.3; 18.3.7.5)
17. In existing buildings, at least two smoke compartments are provided for every story that has more than 30 patients in sleeping rooms. Smoke barriers have a minimum ½-hour fire resistance rating; the maximum size of each smoke compartment is limited to 22,500 square feet. Space shall be provided on each side of smoke barriers to adequately accommodate the total number of occupants in adjoining compartments. The travel distance from any point within the smoke compartment to a smoke barrier door is no more than 200 feet. (For full text, refer to NFPA 101-2012: 19.3.7.1; 19.3.7.3; 19.3.7.5)

18. Smoke barriers extend from the floor slab to the floor or roof slab above, through any concealed spaces (such as those above suspended ceilings and interstitial spaces), and extend continuously from exterior wall to exterior wall. All penetrations are properly sealed. (For full text, refer to NFPA 101-2012: 18/19.3.7.3; 8.2.3; 8.5.2; 8.5.6; 8.7)
Note: Polyurethane expanding foam is not an accepted fire-rated material for this purpose.

19. Doors in smoke barriers are self-closing or automatic-closing, constructed of 1 3/4-inch or thicker solid bonded wood core or constructed to resist fire for not less than 20 minutes, and fitted to resist the passage of smoke. The gap between meeting edges of door pairs is no wider than 1/8 of an inch. In new buildings, undercuts are no larger than 3/4 of an inch. (For full text, refer to NFPA 101-2012: 18.3.7.6; 18/19.3.7.8; 8.5.4.1; NFPA 80-2010: 4.8.4.1; 6.3.1.7.1)

20. In smoke compartments without sprinkler systems, fixed fire windows in smoke barrier doors are 25% or less of the size of the doors in which they are installed. Existing window installations that conform to previously accepted Life Safety Code criteria (such as 1,296 square inches or less, wired glass or fire-rated glazing, and are set in approved metal frames) are permitted. (For full text, refer to NFPA 101-2012: 19.3.7.6; 8.3.3; 8.5.4.5)

21. In new buildings, the smoke damper is not required in the duct passing through a smoke barrier. In existing buildings, ducts that penetrate smoke barriers are protected by approved smoke dampers that close when a smoke detector is activated. The detector is located either within the duct system or in the area serving the smoke compartment. In existing buildings protected by an approved automatic sprinkler system, the damper is not required in the duct. (For full text, refer to NFPA 101-2012: 18/19.3.7.3; 8.3.5.1; 8.5.5; 8.5.5.7)

22. Approved smoke dampers protect air transfer openings extending through smoke barriers in ceiling spaces that are used as an unducted common plenum for either supply or return air. (For full text, refer to NFPA 101-2012: 18/19.3.7.3; 8.5.5.2)

23. Every patient sleeping room has an outside window or outside door except newborn nurseries or rooms intended for less than 24-hour stays (such as obstetrical labor beds, recovery beds, and observation beds in the emergency department). (For full text, refer to NFPA 101-2006: 18/19.3.8)
Note: Windows in atrium walls are considered outside windows.
24. In new buildings, the window sill height in patient sleeping rooms does not exceed 36 inches from the floor, except in special nursing care areas (for example, intensive care units, coronary care units, hemodialysis units, and neonatal intensive care units), where window sill height does not exceed 60 inches above the floor. (For full text, refer to NFPA 101-2006: 18.3.8.2)


**LS.02.01.34**
The hospital provides and maintains fire alarm systems.

**Elements of Performance for LS.02.01.34**

1. The fire alarm signal automatically transmits using one of the provisions of NFPA 101-2012: 9.6.4. (For full text, refer to NFPA 101-2012: 18/19.3.4)

2. The master fire alarm control panel is located in an area with a smoke detector or is in an area that is a continuously occupied and protected environment, which is an area enclosed with one-hour fire-rated walls and 3/4-hour fire-rated doors. (For full text, refer to NFPA 101-2012: 18/19.3.4.1; 9.6.4; 9.6.6; 9.6.1.8)

3. The ceiling membrane is installed and maintained in a manner that permits activation of the smoke detection system. (For full text, refer to NFPA 101-2012: 18/19.3.4.1)


**LS.02.01.35**
The hospital provides and maintains systems for extinguishing fires.

**Elements of Performance for LS.02.01.35**

1. The fire alarm system monitors approved automatic sprinkler system components. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.2.1)

2. The fire alarm system is connected to water flow alarms. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.2)

3. Piping supports for approved automatic sprinkler systems are not damaged or loose. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; NFPA 25-2011: 5.2.3.1; 5.2.3.2)

4. Piping for approved automatic sprinkler systems is not used to support any other item. (For full text, refer to NFPA 25-2011: 5.2.2.2)

5. Sprinkler heads are not damaged. They are also free from corrosion, foreign materials, and paint and have necessary escutcheon plates installed. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.5; NFPA 25-2011: 5.2.1.1.1; 5.2.1.1.2; NFPA 13-2010: 6.2.6.2.2; 6.2.7.1)
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<td>6.</td>
<td>There are 18 inches or more of open space maintained below the sprinkler deflector to the top of storage. Note: Perimeter wall and stack shelving may extend up to the ceiling when not located directly below a sprinkler head. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.1.1; NFPA 13-2010: 8.5.5.2; 8.5.5.2.1; 8.5.5.3)</td>
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<tr>
<td>7.</td>
<td>At least six spare sprinkler heads for each type of system, with associated wrenches, are kept in a cabinet that will not exceed 100°F. (For full text, refer to NFPA 101-2012: 18.3.5.1; 19.3.5.3; 9.7.1.1; NFPA 25-2011: 5.4.1.4; 5.4.1.4.1; 5.4.1.4.2; 5.4.1.6; 5.4.1.6.1; NFPA 13-2010: 6.2.9; 6.2.9.1; 6.2.9.3; 6.2.9.6)</td>
</tr>
<tr>
<td>8.</td>
<td>In both new buildings and existing buildings, the clothing closets in patient sleeping rooms are not required to have sprinkler protection if the closet does not exceed six square feet. (For full text, refer to NFPA 101-2012: 18/19.3.5.10)</td>
</tr>
<tr>
<td>9.</td>
<td>In new buildings, quick response sprinklers are installed in smoke compartments with patient sleeping rooms. (For full text, refer to NFPA 101-2012: 18/19.3.5.10; 18.3.5.6)</td>
</tr>
<tr>
<td>10.</td>
<td>The travel distance from any point to the nearest portable fire extinguisher is 75 feet or less. Portable fire extinguishers have appropriate signage, are installed either in a cabinet or secured on a hanger made for the extinguisher, and are at least four inches off the floor. Those fire extinguishers that are 40 pounds or less are installed so the top is not more than 5 feet above the floor. (For full text, refer to NFPA 101-2012: 18/19.3.5.12; 9.7.4.1; NFPA 10-2010: 6.2.1.1; 6.1.3.3.1; 6.1.3.4; 6.1.3.8)</td>
</tr>
<tr>
<td>11.</td>
<td>Class K–type portable fire extinguishers are located within 30 feet of grease-producing ranges, griddles, broilers, or cooking appliances that use vegetable or animal oils or fats, such as deep fat fryers. A placard is conspicuously placed near the extinguisher stating that the fire protection system should be activated prior to using the fire extinguisher. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 10.10.2; NFPA 10-2010: 5.5.5; 5.5.5.3; 6.6.2)</td>
</tr>
<tr>
<td>12.</td>
<td>Grease-producing cooking devices such as deep fat fryers, ranges, griddles, or broilers have an exhaust hood, an exhaust duct system, and grease removal devices without mesh filters. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 6.1)</td>
</tr>
<tr>
<td>13.</td>
<td>The automatic fire extinguishing system for grease-producing cooking devices does the following: deactivates the fuel source, activates the building fire alarm system, and controls the exhaust fans as designed. (For full text, refer to NFPA 101-2012: 18/19.3.2.5.1; NFPA 96-2011: 10.4; 10.6.1; 10.6.2; 8.2.3)</td>
</tr>
</tbody>
</table>
LS.02.01.40
The hospital provides and maintains special features to protect individuals from the hazards of fire and smoke.

Elements of Performance for LS.02.01.40

1. High-rise buildings have an approved automatic sprinkler system that meets the requirements of NFPA 101-2012: 18/19.4.2. (For full text, refer to NFPA 101-2012: 11.8)
   Note: Organizations that do not have approved automatic sprinkler systems in high-rise buildings (over 75 feet tall) as of July 5, 2016 have 12 years to install them.

2. The hospital meets all other Life Safety Code automatic extinguishing requirements related to NFPA 101-2012: 18/19.4.2.

LS.02.01.50
The hospital provides and maintains building services to protect individuals from the hazards of fire and smoke.

Elements of Performance for LS.02.01.50

1. Fireplaces in patient sleeping areas must meet the provisions of NFPA 101-2012: 18/19.5.2.2; 18/19.5.2.3.

2. New elevators are equipped with the following:
   - Firefighters' service key recall
   - Smoke detector automatic recall
   - Firefighters' service emergency in-car key operation
   - Machine room smoke detectors
   - Elevator lobby smoke detectors
   Existing elevators that have a travel distance of 25 feet or more above or below the level that best serves the needs of firefighters also meet these requirements. (For full text and any exceptions, refer to NFPA 101-2012: 18/19.5.3; 9.4.3)

3. In new buildings, the inlet door assemblies for linen- and waste-chute services are fire rated for one hour (or for 1 1/2 hours in chutes of four stories or more). In existing buildings, the inlet door assemblies for linen- and waste-chute services are fire rated for 3/4 of an hour (or for one hour if it opens into a corridor). (For full text, refer to NFPA 101-2012: 18/19.5.4; 8.3.3.1; 9.5; NFPA 82-2009: 5.2.3.1.3)

4. All linen and waste chute inlet and discharge service doors have both self-closing and positive-latching devices.
   Note: Discharge doors may be held open with fusible links or electrical hold-open devices. (For full text, refer to NFPA 101-2012: 18/19.5.4; 8.3.3.1; 9.5; NFPA 82-2009: 5.2.3.2.3)

5. Linen- and waste-chute discharge door assemblies are fire rated the same as the chute. (For full text, refer to NFPA 101-2012: 18/19.5.4; 9.5; NFPA 82-2009: 5.2.4; 5.2.3.2)
6. In buildings more than two stories high, an approved automatic sprinkler system is located above the top of the linen and waste chute service openings on the lowest service levels and above the service door opening on alternate floor levels. (For full text, refer to NFPA 101-2012: 18/19.5.4.3; 9.7; NFPA 82-2009: 5.2.6)

7. Trash chutes discharge into collection rooms that are not used for any other purpose and are separated from the corridor and have a minimum fire resistance rating not less than that specified for the chute. In existing buildings, if the trash collection room is protected with an approved automatic sprinkler system, linen collection may also occur. (For full text, refer to NFPA 101-2012: 18/19.5.4.4; 19.5.4.5; NFPA 82-2009: 5.2.4.1)

8. The hospital meets all other Life Safety Code building service requirements related to NFPA 101-2012: 18/19.5.4.

LS.02.01.70
The hospital provides and maintains operating features that conform to fire and smoke prevention requirements.

Elements of Performance for LS.02.01.70

1. Smoking is prohibited in any room, ward, or compartment where flammable liquids, combustible gases, or oxygen is used or stored; these areas have signs that read “NO SMOKING” or display the international symbol for no smoking. In facilities where smoking is prohibited and signs are prominently placed at all major entrances, secondary signs that prohibit smoking in hazardous areas are not required. (For full text, refer to NFPA 101-2012: 18/19.7.4)
   Note: The secondary sign exception is not applicable to medical gas storage areas.

2. In areas where smoking is permitted, ashtrays are safely designed and made of noncombustible material. Metal containers with self-closing cover devices in which ashtrays can be emptied are readily available to all areas where smoking is permitted. (For full text, refer to NFPA 101-2012: 18/19.7.4)

3. Decorations (for example, photos, paintings, other art) directly attached to the walls, ceiling, and non-fire-rated doors are permitted provided they do not exceed 20% of the wall, ceiling, or door areas in spaces in non-sprinklered smoke compartments; 30% in spaces in sprinklered smoke compartments; 50% inside patient sleeping rooms that do not exceed four people in sprinklered smoke compartments. (For full text, refer to NFPA 101-2012: 18/19.7.5.6)

4. Soiled linen and trash receptacles larger than 32 gallons are stored in a room protected as a hazardous area.
   Note: Containers that are 96 gallons or less and are labeled and listed as meeting the requirements of FM Approval Standard 6921 (or equivalent) and are used solely for recycling clean waste (including patient records awaiting destruction) are permitted in an unprotected area. Those containers that are greater than 96 gallons are stored in a hazardous storage area. (For full text, refer to NFPA 101-2012: 18/19.7.5.7)
5. Portable space heaters are prohibited in smoke compartments containing sleeping rooms and patient treatment areas. Non-sleeping rooms that are occupied by staff and separated from the corridor are permitted to have portable space heaters, but must contain heating elements not exceeding 212°F. (For full text, refer to NFPA 101-2012: 18/19.7.8)

Note: For this element of performance, nurses stations are considered patient treatment areas.

6. The hospital meets all other Life Safety Code operating feature requirements related to NFPA 101-2012: 18.7/19.7. (See also EC.02.03.01, EP 9; EC.02.03.03, EP 1)

LS.03.01.10

Building and fire protection features are designed and maintained to minimize the effects of fire, smoke, and heat.

Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

Elements of Performance for LS.03.01.10

1. Buildings meet requirements for height and construction type in accordance with NFPA 101-2012: 20/21.1.6.2; 1.6.3.

2. Ambulatory occupancies located in multi-occupancy buildings are separated from health care occupancies by two-hour fire-rated construction and from business occupancies by one-hour fire-rated walls. (For full text, refer to NFPA 101-2012: 20/21.1.3; 20/21.1.4; 20/21.3.7.1)

3. Fire barriers are continuous from outside wall to outside wall or from one fire barrier to another, or a combination thereof, including continuity through all concealed spaces, such as those found above a ceiling, including interstitial spaces. For those fire barriers terminating at the bottom side of an interstitial space, the construction assembly forming the bottom of the interstitial space must have a fire resistance rating not less than that of the fire barrier. (For full text, refer to NFPA 101-2012: 8.3.1.2)

4. The fire protection rating for opening protectives in fire barriers, fire-rated smoke barriers, and fire-rated smoke partitions is as follows:
   - Three hours in three-hour barriers and partitions
   - Ninety minutes in two-hour barriers and partitions
   - Forty-five minutes in one-hour barriers and partitions
   - Twenty minutes in ½-hour barriers and partitions

Labels on fire door assemblies must be maintained in legible condition. (For full text, refer to NFPA 101-2012: 8.3.4.2; Table 8.3.4.2; 8.3.3.2.3; NFPA 80-2010: 5.2.13.3)
5. Doors within walls and floors that are required to be fire rated have functioning hardware, including positive latching devices and self-closing or automatic-closing devices. Gaps between meeting edges of door pairs are no more than 1/8-inch wide, and undercuts are no larger than 3/4 of an inch. Blocking or wedging open fire-rated doors is prohibited. Doors required to be fire rated in the walls do not have unapproved protective plates greater than 16 inches from the bottom of the door. (For full text, refer to NFPA 101-2012: 8.3.3.1; NFPA 80-2010: 4.8.4.1; 5.2.13.3; 6.3.1.7; 6.4.5)

6. Doors requiring a minimum fire rating of 3/4 of an hour are free of coverings, decorations, or other objects applied to the door face. Informational signs, which are applied with adhesive only, are allowed provided that the informational signage does not exceed 5% of the door face area. (For full text, refer to NFPA 80-2010: 4.1.4; 4.1.4.2.1)

7. Ducts penetrating the walls and floors with a fire-resistance rating of less than three hours are protected by dampers that are fire rated for 1 1/2 hours; penetrations of three hours or greater are protected by fire dampers that are fire rated for three hours. (For full text, refer to NFPA 101-2012: 8.3.5.7; 9.2.1; NFPA 90A-2012: 5.4)

8. The space around pipes, conduits, bus ducts, cables, wires, air ducts, or pneumatic tubes penetrating the walls or floors are protected with an approved fire-rated material. Note: Non-approved polyurethane expanding foam is not an accepted fire-rated material for this purpose. (For full text, refer to NFPA 101-2012: 8.3.5)


**LS.03.01.20**

The hospital maintains the integrity of the means of egress.

Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

**Elements of Performance for LS.03.01.20**

1. Any door required to be self-closing, including those in an exit stair enclosure, may be held open provided there is an automatic release device that closes the door in response to the manual fire alarm system, loss of power, and smoke detectors. (For full text, refer to NFPA 101-2012: 20/21.2.2.4; 20/21.2.2.5; 7.2.1.8.2)

2. Exits discharge to the outside at grade level or through an approved exit passageway that is continuous and terminates at a public way or at an exterior exit discharge. (For full text, refer to NFPA 101-2012: 20/21.2.1; 38/39.2.7; 7.2.6; 7.7)
3. Doors in a means of egress are always unlocked in the direction of egress and swing in the direction of egress when there are 50 or more occupants. (For full text, refer to NFPA 101-2012: 20/21.2.2, 7.2.1.4.2)

4. Exit corridors or passageways serving as a means of egress are 44 (or more) inches wide. Doors opening in the means of egress from diagnostic or treatment areas are 32 (or more) inches wide. (For full text, refer to NFPA 101-2012: 20/21.2.3.2; 2.3.4)

5. Exits, exit accesses, and exit discharges are clear of obstructions or impediments to the public way, such as clutter (for example, equipment, carts, furniture), construction material, and snow and ice. (For full text, refer to NFPA 101-2012: 7.1.10.1)

6. Exit access doors and exit doors are free of mirrors, hangings, or draperies that might conceal, obscure, or confuse the direction of exit. (For full text, refer to NFPA 101-2012: 20/21.2.1; 7.5.2.2.1)

7. Floors or compartments of a building have two or more approved exits that are located remotely from each other. (For full text, refer to NFPA 101-2012: 20/21.2.4.1; 2.4.2; 7.4; 38/39.2.4)

8. In new buildings protected throughout by an approved automatic sprinkler system, dead-end corridors are no longer than 50 feet. In new buildings not provided with automatic sprinklers throughout, dead-end corridors are no longer than 20 feet. In existing buildings, dead-end corridors are no longer than 50 feet. (For full text, refer to NFPA 101-2012: 20/21.2.5; 38/39.2.5.2)

9. The travel distance from any point in a room to an exit is 150 feet or less; the travel distance is 200 feet or less in buildings protected throughout by an approved automatic sprinkler system. (For full text, refer to NFPA 101-2012: 20/21.2.6)

10. Nothing is stored in any exit enclosure. (For full text, refer to NFPA 101-2012: 20/21.2.1; 7.2.2.5)

11. Means of egress are adequately illuminated at all points, including angles and intersections of corridors and passageways, stairways, stairway landings, exit doors, and exit discharges. (For full text, refer to NFPA 101-2012: 20/21.2.8; 7.8)

12. Illumination in the means of egress, including exit discharge, is arranged so that failure of any single lighting unit will not result in darkness (less than 0.2 foot-candles of illumination). (For full text, refer to NFPA 101-2012: 20/21.2.8; 7.8.1.4)

13. Signs reading "NO EXIT" are posted on doors to stairs in areas that are not conforming exits and that may be mistaken for exits. (For full text, refer to NFPA 101-2012: 20/21.2.10; 7.10.8.3)

14. Exit signs are visible when the path to the exit is not readily apparent. Signs are adequately lit and have letters that are 4 or more inches high or 6 inches high if externally lit. (See NFPA 101-2012: 20/21.2.10; 7.10.5)

The hospital provides and maintains building features to protect individuals from the hazards of fire and smoke.

Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

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**Elements of Performance for LS.03.01.30**

1. In new construction, vertical openings, including exit stairs, are enclosed by one-hour fire-rated walls when connecting three or fewer floors and two-hour fire-rated walls when connecting four or more floors. Existing vertical openings, including exit stairs, are enclosed with a minimum of one-hour fire-rated construction. (For full text, refer to NFPA 101-2012: 20/21.3.1; 8.6; 8.6.5)
   Note: These vertical openings include, but are not limited to, shafts (including elevator, light, and ventilation), communicating stairs, ramps, trash chutes, linen chutes, and utility chases.

2. In buildings, exit stairs connecting three or fewer floors are fire rated for one hour; exit stairs connecting four or more floors are fire rated for two hours. (For full text, refer to NFPA 101-2012: 20/21.3.1; 38/39.3.1; 8.6.5)

3. All hazardous areas are enclosed with one-hour fire-rated walls with ¾-hour fire-rated doors; or hazardous areas have sprinkler systems and are constructed to resist the passage of smoke with doors equipped with self-closing or automatic-closing devices. (For full text, refer to NFPA 101-2012: 20/21.3.2; 38/39.3.2; 8.7; NFPA 80-2010: 4.8.4.1; 6.3.1.7; 6.5)

4. Installation and use of alcohol-based hand rub (ABHR) dispensers that are 95% or less alcohol content by volume are allowed in each smoke compartment as per NFPA 101-2012: 18/19.3.2.6.
   Note 1: See The Joint Commission's website (http://www.jointcommission.org/life_safety_code_information__resources/) for alcohol-based hand rub (ABHR) requirements.
   Note 2: This element of performance reflects NFPA 101-2012: 18/19.3.2.6. For alternative guidelines on ABHR dispensers, see NFPA 101-2012: 8.7.3.1.

5. Wall and ceiling interior finishes of exits and enclosed corridors are rated Class A or B for limiting smoke development and the spread of flames. (For full text, refer to NFPA 101-2012: 20/21.3.3; 38/39.3.3.2; 10.2.3)

6. Newly installed interior floor finishes in exits and enclosed corridors have a Class I or II radiant flux rating. (For full text, refer to NFPA 101-2012: 20/21.3.3; 10.2.7)
7. In new construction, openings in vision panels or doors are permitted without protection provided the openings are installed at or below one half the distance from the floor to the room ceiling and do not exceed 20 square inches. In rooms protected throughout by an approved automatic sprinkler system, the aggregate area of openings is limited to 80 square inches. In existing construction, openings are not limited. (For full text, refer to NFPA 101-2012: 20.3.6.2)  
Note: Openings may include, but are not limited to, mail slots and pass-through windows in areas such as laboratory, pharmacy, and cashier stations.

8. In new construction, corridors that provide access to exits are separated from other areas by one-hour fire-rated barriers unless otherwise permitted by NFPA 101-2012: 38.3.6.1.  
Note: For existing construction, there are no requirements. (For full text, refer to NFPA 101-2012: 20.3.6.2)

9. Ambulatory health care space must be separated from other tenants with a one-hour fire-resistance-rated barrier, constructed from the floor slab below to the floor or roof above. Doors in the barrier are 1½ inch thick, solid bonded (or equivalent), self-closing, and have positive latching. Doors are kept in the closed position except when in use. Windows in the barrier comply with NFPA 101-2012: 8.3. (For full text, refer to NFPA 101-2012: 20/21.3.7.1; 8.3)

10. Smoke barriers divide patient treatment floors into two or more smoke compartments. (For full text, refer to NFPA 101-2012: 20/21.3.7.2)

11. The size of new smoke compartments meets the requirements of NFPA 101-2012: 20.3.7.5. (For full text, refer to NFPA 101-2012: 20.3.7.2)

12. Smoke barriers extend from the floor slab to the upper floor or roof slab above, through any concealed spaces (such as those above suspended ceilings and interstitial spaces), continuously from exterior wall to exterior wall. All penetrations are sealed. New smoke barriers are constructed of one-hour fire-rated materials. (For full text, refer to NFPA 101-2012: 20/21.3.7.5; 20/21.3.7.6)

13. Ducts that penetrate smoke barriers, are protected by approved smoke dampers that close when a local smoke detector is activated. The detector is located either within the duct system or in the corridor.  
Note: In buildings with a fully ducted HVAC system and protected throughout by an approved automatic sprinkler system, dampers are not required. (For full text, refer to NFPA 101-2012: 20/21.3.7.6; 8.5.5)

14. Fixed fire window assemblies in smoke barrier walls or doors are fire rated for 20 minutes and are 25% or less of the size of the fire barrier in which they are installed.  
Note: Existing window installations that have wired glass or fire-rated glazing, are 1,296 square inches in size or smaller, and are set in approved metal frames are acceptable. (For full text, refer to NFPA 101-2012: 20/21.3.7.7, 8.3.3)

15. Doors in smoke barriers are constructed of 1 3/4 inch or thicker solid bonded wood core (or equivalent) and are self-closing or automatic-closing. (For full text, refer to NFPA 101-2012: 20/21.3.7.9; 20/21.2.2.4)
   Note: See The Joint Commission's website (http://www.jointcommission.org/life_safety_code_information__resources/) for alcohol-based hand rub (ABHR) requirements, including permissible volumes of ABHR gel and foam within a single smoke compartment.

LS.03.01.34
The hospital provides and maintains fire alarm systems.
Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.
Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.
Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

Elements of Performance for LS.03.01.34

1. The fire alarm signal automatically transmits to one of the following:
   - An auxiliary fire alarm system
   - Central station fire alarm system
   - A proprietary supervising station fire alarm system
   - A remote supervising station fire alarm system
   (For full text, refer to NFPA 101-2012: 20/21.3.4.3.2; NFPA 101-2012: 9.6.4)

2. The master fire alarm control panel is located in an area with a smoke detector or is in an area that is a continuously occupied and protected environment, which is an area enclosed with one-hour fire-rated walls and 3/4-hour fire-rated doors. (For full text, refer to NFPA 101-2012: 20/21.3.4.1; 9.6.4; 9.6.6; 9.6.1.8)

3. The remote ancillary annunciator panel is in a location approved by the local fire department or its equivalent. (For full text, refer to NFPA 101-2012: 20/21.3.4.3, 9.6.3; 9.6.3.5)

4. The fire alarm system contains an audible and visual evacuation signal throughout the building and provides occupant notification without delay. (For full text, refer to NFPA 101-2012: 20/21.3.4.3, 9.6.3; 9.6.3.5)

5. The fire alarm system is initiated by the approved automatic sprinkler system, or the fire detection system, or by manual pull stations. (For full text, refer to NFPA 101-2012: 20/21.3.4.3; 9.6.2)

LS.03.01.35
The hospital provides and maintains equipment for extinguishing fires.
Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.
Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.
Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

<table>
<thead>
<tr>
<th>Elements of Performance for LS.03.01.35</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. For new construction, the fire alarm system monitors the components of any required approved automatic sprinkler system. (For full text, refer to NFPA 101-2012: 20/21.3.5.2; 9.7.1.1)</td>
</tr>
<tr>
<td>2. The fire alarm system is connected to water flow alarms of any required automatic sprinkler system. (For full text, refer to NFPA 101-2012: 20/21.3.4.4; 20/21.3.5; 9.7.1.1)</td>
</tr>
<tr>
<td>3. Piping supports for approved automatic sprinkler systems are not damaged or loose. (For full text, refer to NFPA 101-2012: 20/21.3.4.4; NFPA 25-2011: 5.2.1; 5.2.2; 5.2.3)</td>
</tr>
<tr>
<td>4. Approved automatic sprinkler systems piping is not used to support any other item. (For full text, refer to NFPA 101-2012: 20/21.3.4.4; NFPA 25-2011: 5.2.2; NFPA 13-2010: 8.5.5.2; 8.5.5.3)</td>
</tr>
<tr>
<td>5. Sprinkler heads are not damaged and are free from corrosion, foreign materials, and paint. (For full text, refer to NFPA 101-2012: 20/21.3.4.4; NFPA 25-2011: 5.2.1; 5.2.2; NFPA 13-2010: 6.2.6.2; 6.2.7.1)</td>
</tr>
<tr>
<td>6. There is 18 inches or more of open space maintained below a sprinkler deflector to the top of storage. Note: Perimeter wall shelving may extend up to the ceiling when not located directly below a sprinkler head. (For full text, refer to NFPA 101-2012: 20/21.3.4.4; NFPA 25-2011: 5.2.1; 5.2.2; NFPA 13-2010: 8.5.5; 8.5.6)</td>
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<td>7. The travel distance from any point to the nearest portable fire extinguisher is 75 feet or less. Portable fire extinguishers have appropriate signage, are installed in a cabinet or secured on a hanger made for the extinguisher, and are at least four inches off the floor. Those fire extinguishers that are 40 pounds or less are installed so the top is not more than 5 feet above the floor. (For full text, refer to NFPA 101-2012: 20/21.3.5.3; 9.7.4.1; NFPA 10-2010: 6.1.3; 6.2.1)</td>
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The hospital provides and maintains special features to protect individuals from the hazards of fire and smoke.

Note 1: This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

**Elements of Performance for LS.03.01.40**

1. Windowless buildings or portions of windowless buildings meet the requirements of NFPA 101-2012: 20/21.4; 11.7.

2. High-rise buildings have approved automatic sprinkler systems that meet the requirements of NFPA 101-2012: 20/21.4; 11.8.

**LS.03.01.50**

The hospital provides and maintains building services to protect individuals from the hazards of fire and smoke.

Note 1: This standard applies to sites of care where 4 or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

Note 2: For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

Note 3: In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

**Elements of Performance for LS.03.01.50**

1. New elevators are equipped with all of the following:
   - Firefighters service key recall and smoke detector automatic recall
   - Firefighters service emergency in-car key operation
   - Machine room smoke detectors
   - Elevator lobby smoke detectors
   Existing elevators meet these requirements when they have a travel distance of 25 feet or more above or below the level that best serves the needs of firefighters. (For full text, refer to NFPA 101-2012: 20/21.5.3; 9.4)

2. The hospital does not allow unvented fuel-fired heaters. (For full text, refer to NFPA 101-2012: 20/21.5.2.2)

3. All heating appliances are provided with safety features to stop the flow of fuel and turn off the appliance during times of excessive temperatures or ignition failure. (For full text, refer to NFPA 101-2012: 20/21.5.2.2)

**LS.03.01.70**

The hospital provides and maintains operating features that conform to fire and smoke prevention requirements.

**Note 1:** This standard applies to sites of care where four or more patients at the same time are provided either anesthesia or outpatient services that render patients incapable of saving themselves in an emergency in the hospital.

**Note 2:** For hospitals that use Joint Commission accreditation for deemed status purposes: This standard applies to outpatient surgical departments in hospitals, regardless of the number of patients rendered incapable.

**Note 3:** In leased facilities, the elements of performance of this standard apply only to the space in which the accredited organization is located; all exits from the space to the outside at grade level; and any Life Safety Code building systems that support the space (for example, fire alarm system, automatic sprinkler system).

### Elements of Performance for LS.03.01.70

1. In areas where smoking is permitted, ashtrays are safely designed and made of noncombustible material. Metal containers with self-closing cover devices in which ashtrays can be emptied are readily available to all areas where smoking is permitted. (For full text, refer to NFPA 101-2012: 18/19.7.4)

2. Smoking is prohibited in any room, ward, or compartment where flammable liquids, combustible gases, or oxygen is used or stored; these areas have signs that read “NO SMOKING” or display the international symbol for no smoking. In facilities where smoking is prohibited and signs are prominently placed at all major entrances, secondary signs that prohibit smoking in hazardous areas are not required. (For full text, refer to NFPA 101-2012: 18/19.7.4)

   **Note:** The secondary sign exception is not applicable to medical gas storage areas.

3. The hospital prohibits all combustible decorations unless they meet the criteria of NFPA 101-2012: 20/21.7.5.4.

4. Soiled linen and trash receptacles larger than 32 gallons (including recycling containers) are located in a room protected as a hazardous area. (For full text, refer to NFPA 101-2012: 20/21.7.5.5)

5. Portable space heaters are prohibited in smoke compartments containing staff sleeping rooms and patient treatment areas. Non-sleeping rooms occupied by staff and employee areas separated from the corridor are permitted to have portable space heaters that contain heating elements not exceeding 212°F. (For full text, refer to NFPA 101-2012: 20/21.7.8)

6. The hospital meets all other Life Safety Code operating feature requirements related to NFPA 101-2012: 20/21.7. (See also EC.02.03.03, EP 1)