

EVERYDAY FIRE AND LIFE



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NFPA's standards that most obviously affect the daily operations of an ASC (NFPA's operational standards for ASCs) are found in two important publications: the 2000 edition of "NFPA 101® Life Safety Code®," which is commonly known simply as "the Life Safety Code," and the 1999 edition of "NFPA 99® Health Care Facilities®." In both cases, the Centers for Medicare and Medicaid Services (CMS) has determined that these editions of these standards should apply to ASCs. In the Life Safety Code, the ASC standards appear in a section not too surprisingly titled "Operating Features," which is located near the end of Chapter 21, "Existing Ambulatory Health Care Occupancies." In "Health Care Facilities," the ASC standards are contained in the chapters that address Essential Electrical Systems and Piped Medical Gas Systems, in subsections titled "Administration."

Many ASC operational standards contained in the Life Safety Code relate to avoiding the risks inherent in flammable or smoke-generating furnishings and decorations, and to creating and implementing a comprehensive fire emergency plan. The emergency plan requirements include eight distinct elements (see box at far right), education of staff and quarterly fire drills.

Some of the requirements for a comprehensive fire emergency plan that are most frequently overlooked include the following:

- Activation of the alarm system, including automatic transmission of an emergency signal to the fire-response dispatching authority, is required with every fire drill.
- Drills are to be "random," but conducted on a schedule that ensures employees are drilled under simulated emergency conditions at least once every three months. This requires drills for each distinct "shift" of staff.
- The maximum permitted trash or soiled linen container size, and the total capacity of such containers in a single room, is limited, except in areas protected as "hazardous areas" (which means that the area is situated within a fire-rated enclosure, has an automatic sprinkler system or both).
- Staff education must include "Code Phrase" training, meaning a phrase used only during a fire emergency such as "condition red," to assure activation of the alarm system if the person discovering a fire is unable to activate the alarm him or herself.
- The ASC is responsible for maintaining the integrity of the emergency exit pathway, a responsibility that extends outside the ASC in multi-tenant buildings to include common corridors and exit enclosures (stairs) used to reach the exterior.

Other operational aspects of the Life Safety Code that also apply to ASCs, but are not as immediately obvious, are found in cross-referenced chapters and sections of the code, and cover such

ASC operators sometimes believe that the fire and life safety requirements established by the National Fire Protection Association (NFPA) are a concern only during the design and construction phases of their ASCs, but many of these standards affect daily operations at ASCs. To retain patient and staff safety, Medicare certification and some state licenses and to avoid the potential for a devastating lawsuit or serious disruptions in your ASC's operations and cash flow, your ASC must continually maintain compliance with the NFPA requirements. ASC owners and managers need to tend to ongoing responsibilities established by the NFPA codes and ensure that daily activities in their ASC do not undermine code compliance in their facility.



SAFETY CODE CONCERNS

things as the periodic testing of exit sign illumination, maintenance of portable fire extinguishers, periodic testing of exit pathway light fixtures, door closer operational parameters related to time to close and secure latching, and other features of life safety design that can degrade or lose reliability through time.

The operational standards required by NFPA 99 are largely dependent on the type of Essential Electrical System (EES) an ASC has installed, and the presence or absence of a piped medical gas system. In laymen's terms, an EES is the overall electrical system of the ASC, including "normal power" intended to be used all the time and "alternate power" (emergency power) that kicks in when the normal power fails.

ASCs are required to provide either a Type 1 or Type 3 EES, depending on the types of anesthesia the ASC uses and the year in which the facility was built. Both types of EES can receive alternate power from constantly recharged batteries or from fuel-powered generator sets. A majority of operational responsibilities for the EES relate to ensuring that the alternate source of power is reliable and include everything from weekly inspections of the batteries used to start a generator or as an alternate source on their own to monthly testing of generator sets and "exercising" key circuit breakers and transfer switches. Other requirements relate to different aspects of the EES, such as periodic testing of "wet area"

circuit protection (accomplished through GFI circuit protection, and/or Line Isolation Monitoring to warn of impending ground fault conditions) annual checks of receptacles not rated for hospital use and routine maintenance of any and all electrical devices related to patient care and the building's life safety design.

Some states require that piped medical gases be available; others do not. But even in states where piped medical gases are not required, if an ASC uses piped medical gases, the NFPA's operational standards apply. A majority of operational standards for medical gases relate to their safe handling, storage and attachment to delivery systems. Common violations of medical gas operational standards include

- unrelated materials located in medical gas storage rooms
- empty gas cylinders not properly labeled or separated from full ones

MINIMUM FIRE EMERGENCY PLAN REQUIREMENTS

- Use of alarms
- Transmission of alarms to dispatcher
- Response to alarms
- Isolation of fire
- Evacuation of immediate area
- Evacuation of smoke compartment
- Preparation of floors and building for evacuation
- Extinguish the fire

- gas cylinders not used in order of delivery to the facility
 - gas cylinders not individually secured to prevent falling over
 - reserve portable cylinders stored in anesthetizing locations
- Periodic testing of the medical gas alarm system is also required, as well as documentation of all related maintenance and repairs.

MAINTAINING CODE COMPLIANCE

Perhaps the greatest challenge for assuring continuous conformance with the NFPA codes is to avoid violating them as the mission of the ASC evolves away from original expectations and additions or remodeling projects occur. This is no easy task. To avoid compromising or violating the aspects of facility design required by NFPA, you must have a thorough understanding of your particular facility's response to them. For example, while removing a door closer or latch when it seems to interfere with convenient access may seem to make sense at the time, doing so may violate requirements for a fire-rated assembly. Equipment parked in a passageway within your ASC may relieve crowding in other spaces but violate an exit-width requirement. If your remodeling plans for your ASC eliminate something you consider an "extra" exit, are you violating required distances between the exits that will remain?

While the nuances of the NFPA codes are subtle and numerous, some major features must never be overlooked or violated, including the following:

- The ASC must be separated from all adjacent occupancies (and multi-tenant building common areas) by construction (walls, doors and windows) with at least a one-hour fire-resistant rating. This construction should surround all areas making up the ASC, separate them from adjacent building areas and be continuous (with no open voids or oversized wire, duct or pipe penetrations from the floor slab to the roof deck, and across all floor levels when the adjacent occupancies are on other levels). Ducts penetrating the separation and serving areas both inside and outside the ASC must be provided with automatic dampers.
- Every required exit must have a manual pull fire alarm device inside the ASC within five feet of the exit door opening.
- Doors in smoke compartment walls must be fire rated and include a vision panel (i.e., a window).
- All fire-rated doors must close and latch automatically from any partially or fully open position.
- The glass in all fire-rated walls and doors must also be fire rated and set in metal frames. No more than 25% of a fire-rated wall may be glass.
- Any additions or modifications to ASCs, or buildings housing ASCs, must conform to the construc-



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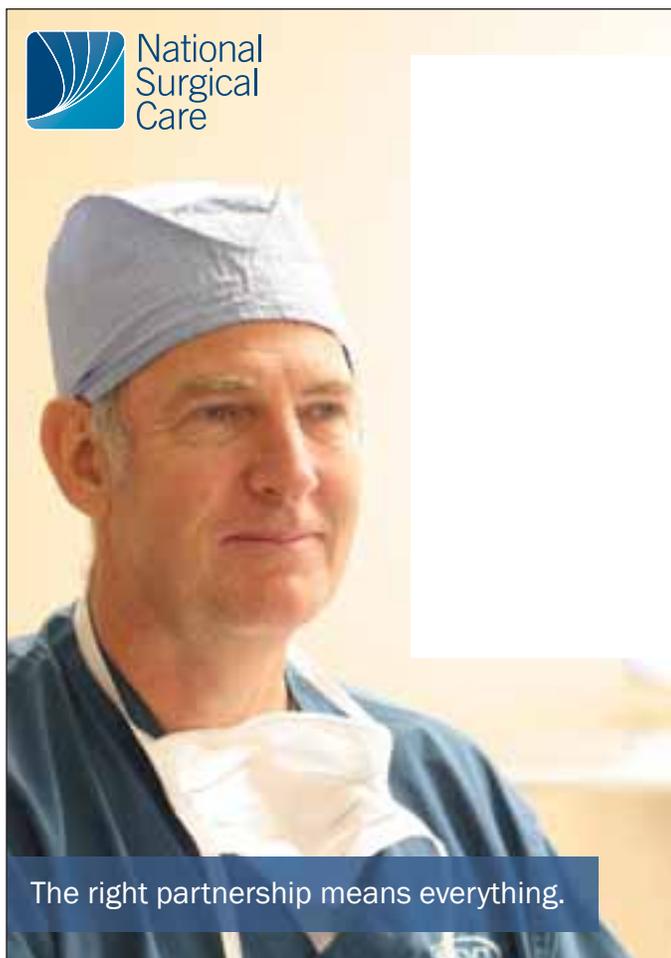
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tion and fire protection requirements and provisions of the original building and facility. In some cases, the modifications made may be so extensive (determined by thresholds of total cost or percentage of area effected) as to require the entire ASC to conform with standards for new facilities.

Some of the important features of the NFPA codes that must never be overlooked apply only to ASCs of a certain size. For example,

- Any ASC larger than 2,500 square feet must have at least two exits separated by at least half the maximum straight-line dimension (measured as if there were no walls within the perimeter) of the ASC. If the entire building in which your ASC is located is protected by an automatic fire sprinkler system, the required separation distance between the two minimum required exits drops to one-third of the maximum dimension.
- Any ASC 5,000 square feet or larger (10,000 square feet if the entire building is fully protected by a sprinkler system) must be divided into two distinct smoke compartments. The dividing wall must provide a minimum of a one-hour fire-rated separation and be continuous from floor slab to roof deck. Each smoke compartment must include an exit that leads directly out of the ASC.

Any changes to the design and construction of your facility must compensate for the effect they have on NFPA code compliance and must ensure that occupant safety is never compromised.



Even in facilities that are not significantly modified from their original design, problems with NFPA code conformance tend to evolve with facility use. It is not uncommon to see computer or telephone cables run through fire-rated walls using oversized holes punched with a hammer—an unacceptable void in a firewall. ASCs designed without sufficient receiving and storage space can easily end up parking delivery cartons, equipment, supply carts and trash bins in passageways, but this practice frequently violates requirements for clear passage widths and could violate a prohibition against storage of flammable materials in an exit enclosure. Using any device to block open a door required to be fire rated (and consequently provided with an automatic closer) is never permitted.

Complying with these standards does not mean that your ASC is forever burdened with a poorly designed or outgrown facility, just that any changes to your facility must respect and perpetuate continued conformance. Require anyone who makes a new penetration in fire-rated construction to tightly seal any voids that remain as the work is finished. Before you eliminate an exit pathway, make sure the remaining exits will satisfy the minimum regulatory requirement. If a fire-rated door interferes with an aspect of operations, install a magnetic device that will hold the door open routinely but release when smoke is sensed by a local detector. There are many ways to solve any facility problem, and at least one of them will allow you to maintain code conformance.

PASSING REGULAR FIRE SAFETY SURVEYS

The “trick” to passing a Life Safety Code survey is simply being aware of the aspects of your facility design and construction that accommodate the code’s requirements, like occupancy separation walls, required exits, and smoke compartment walls, and making sure these design elements are maintained properly. If your facility lacks adequate clean supply or soiled holding rooms, modify your delivery/pickup schedule to minimize the problem. If your equipment storage is spilling into your ASC’s passageways, take a serious look at which equipment and supplies you are actually using and get all unnecessary equipment out of your facility.

If your problems cannot be mitigated with operational changes, you may need to look at remodeling or building an addition. If so, do yourself a favor and involve someone who will help you work around code compliance challenges. Get that person on board early . . . before you fail a survey.

Beyond that, keep up with periodic checks of your alarms, emergency power system and exit passage lighting, perform basic maintenance of anything that can wear out or require adjustment (door closers, latch hardware, etc.), and keep on-site records of everything. That done, you should be in good shape when the surveyor walks through your front door. **—ASC**

