Decoded

Patient Room Doors in a Healthcare Occupancy

By Lori Greene, AHC/CDC, FDAI, FDHI, CCPR

The recent nursing home fire in central China which killed 38 elderly residents is a deadly reminder of the responsibility of these facilities to keep their residents safe. While the code requirements for healthcare facilities and nursing homes go far beyond the doors, frames and hardware, there are some important considerations for door openings to provide the necessary fire protection, egress and accessibility for residents and staff. Although today's codes do not typically require patient room doors to be fire door assemblies, they provide a critical layer of protection for patients.

NFPA 101 – The Life Safety Code

Although NFPA 101 – *The Life Safety Code* states that most corridor doors in a healthcare facility, including patient room doors, are not required to comply with NFPA 80 – *Standard for Fire Doors and Other Opening Protectives*, the code does include some requirements designed to help keep patients safe. Doors must be constructed to resist the passage of smoke, and the clearance between the bottom of the door and the floor covering must be no more than 1 inch. For existing facilities, either 1 ¾-inch solid bonded-core wood doors, or materials that resist fire for at least 20 minutes, are required.

Positive latching hardware is mandated by the code for corridor doors, so doors are self-latching when they are closed and will remain latched against the pressure created during a fire. Pairs of doors with an inactive leaf are required to have automatic flush bolts. Louvers, also called transfer grilles, are not allowed in these doors. Protection plates are permitted, whether factory or field-applied, with no limit in size and no requirement for a label. Annex A of NFPA 101 states that gasketing should not be necessary to limit the passage of smoke to an acceptable level, as long as the door is relatively tight-fitting.

Roller latches—friction bolts designed to hold the door in the closed position—are not allowed by NFPA 101 for most patient room doors in new health care occupancies, except in acute psychiatric settings where the clinical needs of patients require protective measures for their safety. In this application, roller latches must keep the door closed if a force of 5 lbf is applied at the latch edge of the door.

Doors in existing facilities are required to have a means of keeping a door closed against a 5-lbf force, and the method of keeping the door closed must be acceptable to the Authority Having Jurisdiction (AHJ).

Photo courtesy of Lori Greene

Corridor doors leading to patient rooms are specifically addressed by both NFPA 101 – *The Life Safety Code*, and the *International Building Code*. These doors play a critical role in the protection of patients in hospitals and nursing homes.

NFPA 101 allows roller latches to be used in existing healthcare occupancies if the building is equipped throughout with an automatic sprinkler system, however, the Centers for Medicare and Medicaid Services (CMS) has banned the use of roller latches on corridor doors in hospitals and nursing homes. If a patient room is within a suite, a roller latch may be acceptable as there is no positive-latching requirement for these doors.

Door closers are not required for patient room doors, although they are mandated fire door assemblies such as doors leading to exit enclosures, hazardous areas, and for doors in smoke barriers. A self-closing door serving a patient room could lead to a delay in discovery of a fire within the room, so automatic smoke detectors that are part of the building's fire alarm system are recommended for rooms that have door closers. NFPA 101 restricts the use of hold-open devices on patient rooms to those that release when the door is pushed or pulled; doors should not be blocked by furniture, door stops, hooks or plunger-type hold-opens.

Doors leading to rooms that do not contain flammable or combustible material, such as toilet rooms, bathrooms, shower rooms, sink closets, and similar auxiliary spaces are not required by NFPA 101 to have doors that are constructed to resist the passage of smoke. These doors do not require positive latching hardware, and ventilating louvers or transfer grilles are allowed.

International Building Code

Chapter 4 of the *International Building Code* (IBC) contains special requirements for certain occupancy types such as high-rise buildings, motor-vehicle-related occupancies and special amusement buildings. The chapter includes a section on Group I-2, which pertains to hospitals, mental hospitals, nursing homes and detox facilities.

Section 407.3 (2015 edition) requires corridor walls in I-2 occupancies to be smoke partitions. Although section 710 of the IBC details requirements for doors in smoke partitions, section 407.3.1 contains specific requirements for I-2 corridor doors, so those requirements would apply instead of section 710.

Section 407.3.1 states that corridor doors (with the exception of doors required to be rated as

One question that comes up quite often with regard to the IBC requirements for patient rooms is whether gasketing is required to limit smoke infiltration. While there is a stated limit for air transmission for fire door assemblies in corridors and smoke barriers, patient room doors do not fall into that category.

an incidental use area and doors that are part of an exit enclosure), are not required to have a fire protection rating. These corridor doors are not required to be self-closing or automatic-closing as the staff is expected to close the doors to patient rooms if there is a fire, or to evacuate patients to an adjacent smoke compartment, but the doors must provide an effective barrier to limit the transfer of smoke.

Corridor doors must have positive-latching devices, including constant-latching flush bolts on pairs, and roller latches are not permitted. The IBC Commentary states, *"This provision is primarily intended to apply to care recipient sleeping room corridor doors,"* however, it may apply to other auxiliary rooms such as exam rooms and support spaces that are not fire rated.

One question that comes up quite often with regard to the IBC requirements for patient rooms is whether gasketing is required to limit smoke infiltration. While there is a stated limit for air transmission for fire door assemblies in corridors and smoke barriers, patient room doors do not fall into that category. There is no mention in paragraph 407.3.1 of smoke infiltration or UL 1784 - *Air Leakage Tests of Door Assemblies and Other Opening Protectives,* so gasketing is not mandated. However, there is a reference in the IBC Commentary that could be confusing, or could cause some AHJs to expect patient room doors to comply with the stated limits for air transmission.

When addressing the section on smoke and draft control doors, the Commentary states: *"Section 407.3.1 requires corridor doors in Group I-2 to 'limit the transfer of smoke'; therefore, those doors must meet this section."* Many AHJs use the Commentary to help them understand the intent of the code, so questions will continue to arise until this reference between corridor doors to patient rooms and smoke and draft control doors is removed.

Another common question is whether patient room doors are required to be inspected annually, as fire door assemblies are. The general consensus is that because the doors are not fire door assemblies, the annual inspection and documentation is not mandated, but the doors, frames and hardware must be kept in proper working order. Corridor doors that are fire door assemblies, such as doors leading to stairwells or incidental use areas that require a rating, would be subject to the annual inspection.

There have been many fatal fires in hospitals and nursing homes that have shaped the current codes. Properly-maintained corridor doors can help to protect patients sheltered in their rooms during a fire. For more information on the requirements for patient room doors in a healthcare facility, refer to the codes and standards that have been adopted by the facility's jurisdiction. The AHJ is responsible for enforcing these requirements, and has the final say. ■

LORI GREENE, AHC/CDC, FDAI, FDHI, CCPR, is the Manager of Codes and Resources for Allegion. She can be reached at Lori.Greene@allegion.com or iDigHardware.com.