PORTABLE DEVICES/EQUIPMENT IN CORRIDORS

Background:

Healthcare occupancies are prone to having more and different types of equipment in them. While NFPA 101: Sections 18.2.3.4. and 19.2.3.4 work to address the importance of maintaining minimum corridor widths, portable devices / equipment invariably find their way into these corridor spaces. Computers on wheels (COWs) are a particular concern.

NOTE: Because the size, geometry, and combustibility of mattresses and bed furnishings can vary to a great degree, and the possibility of other items being “stored” on the mattress surface, beds should not be considered portable devices / equipment for the purposes of this interpretation.

Questions:

Q1. How long should portable devices / equipment on wheels (such as COWs, portable x-ray machines (i.e. C-arms), EKG / EEG or other diagnostic equipment or other equipment with electrical connections) located in a corridor be permitted to be inactive before they are considered to be in storage? In this context, inactive is the amount of time that passes between users accessing the equipment.

A1. Although the code does not address a specific time limit (See NFPA 101:A.18.2.3.4/A.19.2.3.4), recent interpretations by the Joint Commission and Centers for Medicare/Medicaid Services have established a time of 30 minutes as a maximum limit on the amount of time that portable devices/equipment on wheels can be considered to be in use. The HITF agrees that this is a reasonable time frame for an AHJ to consider.

Note: This limitation should not be applied to crash carts or isolation carts.

Q2. Based on the answer to Q1, if the portable devices / equipment on wheels do not compromise the required egress width, can they be stored in the egress corridors, i.e. alcoves or spaces?
A2. YES. Alcoves or spaces being used for such purposes are not considered to be hazardous areas as defined by NFPA 101:18.3.2.1/19.3.2.1, nor should they be subject to the requirements for areas open to the corridor (See NFPA 101:18.3.6.1/19.3.6.1).

Q3. If the answer to Q2 is yes, can the portable devices / equipment on wheels be charging in these acceptable locations or while in use?

A3. YES, provided that the battery and charging systems meet the following design requirements to ensure safe operation:
- Sealed Lead-Acid Batteries:
  - Absorbed Glass Mat design and
  - Sealed Case (Sealed Lead-Acid)
- All Battery Systems (SLA, NiMH, Li+ Ion, Li+ Ion Polymer):
  - Smart Charging system with overcharge protection and
  - Shorted cell protection that shuts down upon detecting a shorted cell
Typical to the past, the evolution of long term care facilities is ahead of the codes and standards. One real world significant change is what is referred to as the “greenhouse project”. Small (10-12 beds), long term care facilities are being built in a campus like setting. The proponents of the smaller facilities feel this provides a more residential environment for the patients and improves the program of care for patients.

As you know, the codes and standards define a health care occupancy if it has four or more beds and the requirements remain the same whether there are 4 beds or 400 beds. An example where this is problematic is that each of these small facilities has a kitchen. Only residential appliances are used in the kitchen. Kitchens may be used to cook or warm meals for patients or they may be for personal use by staff or patients. The real issue is that the cooking appliances are residential type appliances. Most states are requiring the facilities to install commercial range hood and duct systems in compliance with the 1998 NFPA 96.

Currently, residential cooking equipment used for occupational therapy and in nourishment centers in health care facilities are generally not required to comply with NFPA 96.

Although both the 1998 and 2008 editions of NFPA 96 state that the standard applies to all cooking operations, except in single family homes, the 2008 NFPA 96 states in Section 1-1.4 the following:
Section 1-1.4 This Standard does not apply to facilities where all the following are met:

1. Only residential equipment is being used.
2. Fire extinguishers are located in all kitchen areas in accordance with NFPA 10, Standard for Portable Fire Extinguishers.
3. Facility is not assembly occupancy
4. The Authority Having Jurisdiction has approved the installation.
**Question:**

Does the 1998 NFPA 96 require cooking operations in health care facilities that comply with the intent of Section 1-1.4 of the 2008 NFPA 96?

**Answer:**

The Authority Having Jurisdiction (AHJ) always has the option of invoking the equivalency clause contained in NFPA 96: 1-3.5 (1998 Edition). This could certainly include the AHJ reviewing and taking into account any provision contained in a more recent edition of NFPA 96 - such as the 2008 edition and the scoping limits of Section 1.1.4. While it is likely that future editions of NFPA 101 will have special requirements for these future concept nursing home designs, AHJs may have to rely on certain equivalency provisions and application of “concept” ideas until any future regulations are finalized.
Document to be interpreted:  NFPA 101 (2000) 9.1.3, 19.5.1

Edition:  2000

Background Information (optional):

Many nursing homes have emergency generators that were approved and installed prior to the development of the first edition of NFPA 110 in 1985 and long before the 1998 edition of NFPA 110 became an applicable standard with the adoption of the 2000 LSC by CMS in 2003. The issue is that nursing homes are being told that they must bring their diesel engines into compliance with the 1998 edition of NFPA 110. For example, many of these older generators do not have remote annunciators or the ability to connect to an annunciator.

Question:

Does the 2000 Life Safety Code require previously approved diesel drivers to comply with the 1998 edition of NFPA 110?

Answer:

No. NFPA 101: 19.5.1 does not require full compliance with NFPA 110. NFPA 101: 9.1.3 does require the testing and maintenance of the generator to be done in compliance with NFPA 110 (1998 Edition).

It is noted, however, that an Authority Having Jurisdiction does have the prerogative to require compliance with the retroactive provisions (Section 1.3 of NFPA 110) if they judge or otherwise make a determination that the system presents a distinct hazard to life.