STATE OF IOWA
DEPARTMENT OF PUBLIC SAFETY

STATE FIRE MARSHAL DIVISION

STATE FIRE MARSHAL SURGE PROTECTOR POLICY – (HEALTH CARE FACILITIES)

The following directive on surge protector (power strip) use applies to the following occupancies inspected by the Iowa State Fire Marshal Division: hospitals (and their licensed medical clinics), nursing homes, intermediate care facilities for individuals with intellectual disabilities (ICF/IIDs), ambulatory surgical centers (ASCs), and hospices.

Pertinent 2012 National Fire Protection Association (NFPA) 99 Health Care Facilities Code Definitions:

- "Patient bed location" is defined in section 3.3.136 as the location of a patient sleeping bed, or the bed or procedure table of a critical care area.
- "Patient-care-related electrical equipment" is defined in section 3.3.137 as electrical equipment that is intended to be used for diagnostic, therapeutic, or monitoring purposes in the patient care vicinity;
- "Patient care room" is defined in section 3.3.138 as any room of a health care facility wherein patients are intended to be examined or treated. Note that this term replaces the term "patient care area" used in the 1999 NFPA 99, but the definition has not changed.
- "Patient care vicinity" is defined in section 3.3.139 as a space, within a location intended for the examination and treatment of patients (i.e., patient care room) extending 6 ft. beyond the normal location of the bed, chair, table, treadmill, or other device that supports the patient during examination and treatment and extends vertically 7 ft. 6 in. above the floor.

A.) Power strips may be used in a *patient care vicinity* to power rack-, table-, pedestal-, or cart-mounted patient care-related electrical equipment assemblies, provided ***all*** of the following conditions are met, as required by section 10.2.3.6:

1) The receptacles are permanently attached to the equipment assembly.
2) The sum of the ampacity of all appliances connected to the receptacles shall not exceed 75 percent of the ampacity of the flexible cord supplying the receptacles.
3) The ampacity of the flexible cord is suitable in accordance with the current edition of NFPA 70, National Electric Code.
4) The electrical and mechanical integrity of the assembly is regularly verified and documented through an ongoing maintenance program.

5) Means are employed to ensure that additional devices or nonmedical equipment cannot be connected to the multiple outlet extension cord after leakage currents have been verified as safe.

B.) Power strips may ***not*** be used in a *patient care vicinity* to power non-patient care-related electrical equipment (e.g., personal electronics).

C.) Power strips ***may*** be used outside of the *patient care vicinity* for both *patient care-related electrical equipment* and non-patient-care-related electrical equipment.

D.) Power strips providing power to rack-, table-, pedestal-, or cart-mounted *patient care-related electrical equipment* assemblies are not required to be an integral component of manufacturer tested equipment. Power strips may be permanently attached to mounted equipment assemblies by personnel who are qualified to ensure compliance with section 10.2.3.6.

E.) Resident rooms in long-term care or other residential care facilities that **do not** use *line-operated patient-care-related electrical equipment* are not subject to the more restrictive *NFPA 99* requirements regarding the use of power strips in patient care areas/rooms.

F.) Resident rooms using *line-operated patient-care-related electrical equipment* in the *patient care vicinity* must comply with the *NFPA 99* power strip requirement.

G.) If power strips are used in any manner, precautions as required by the LSC and reference documents are required, including but not limited to: installing internal ground fault and over-current protection devices; preventing cords from becoming tripping hazards; connecting devices so that tension is not transmitted to joints or terminals; no "daisy chaining" power strips; using power strips that are adequate for the number and types of devices, and no overloading power strips with high load devices. In addition, the use of ground fault circuit interruption (GFCIs) may be required in locations near water sources to prevent electrocution.

H.) Power strips providing power to *patient care-related electrical equipment* must be Special-purpose Relocatable Power Taps (SPRPT) listed as **UL 1363A** or **UL 60601-1**.

I.) Power strips providing power to non-patient-care-related electrical equipment must be Relocatable Power Taps (RPT) listed as **UL 1363**.

J.) Electrical surge protectors that meet this policy may be used for computers and related equipment, facsimile machines, photocopiers, electronic scanning machines, and other consumer electronic devices such as DVD players, televisions, cell phone chargers, alarm clocks, and stereo equipment.

K.) The following types of products are prohibited from use with a surge protector in health care facilities: lamps, fans, large battery chargers, motor driven appliances such as air-conditioners, refrigerators, pop-machines, compressors and microwave ovens. The key idea to remember is the device that is being plugged into the surge protector is voltage sensitive and can be permanently damaged by either lightning or an electrical surge.

If you have questions, please contact Special Agent in Charge Kyle R. Gorsh with the Iowa Department of Public Safety - State Fire Marshal Division.