



CLINICAL POLICY

Electrical Equipment

A. EFFECTIVE DATE :

January 18, 2022

B. PURPOSE :

To insure safe use of electrical equipment, maintain the integrity of the UCHC electrical system and comply with State and National code, CMS and TJC.

C. POLICY :

This policy identifies the use of electrical equipment within Patient care and Non Patient care areas. Facilities and Clinical Engineering will oversee the use of electrical equipment used in JDH and associated clinics.

D. SCOPE:

The scope of this policy applies to all electrical equipment within any JDH or UMG.

E. INTRODUCTION :

This policy is based on pertinent sections of NFPA 99 (2012), the version currently adopted by The Joint Commission (TJC) and the Center for Medicare and Medicaid Services (CMS).

NFPA 99 (2012) Chapter 10 states:

10.2.3.6 Multiple Outlet Connection. *Two or more power receptacles supplied by a flexible cord shall be permitted to be used to supply power to plug-connected components of a movable equipment assembly that is rack-, table-, pedestal-, or cart-mounted, provided that all of the following conditions are met:*

(1) The receptacles are permanently attached to the equipment assembly.

(2) The sum of the ampacity of all appliances connected to the outlets does not exceed 75 percent of the ampacity of the flexible cord supplying the outlets.*

(3) The ampacity of the flexible cord is in accordance with NFPA 70, National Electrical Code.

(4) The electrical and mechanical integrity of the assembly is regularly verified and documented.*

(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.*

A.10.2.3.6 (5) Power taps used in conjunction with an isolated power system are not subject to this requirement.

10.2.4 Adapters and Extension Cords.

10.2.4.1 Three-prong to two-prong adapters shall not be permitted.

10.2.4.2 Adapters and extension cords meeting the requirements of [10.2.4.2.1](#) through [10.2.4.2.3](#) shall be permitted.

10.2.4.2.1 All adapters shall be listed for the purpose.

10.2.4.2.2 Attachment plugs and fittings shall be listed for the purpose.

10.2.4.2.3 The cabling shall comply with [10.2.3](#) related to wire material and gage.

F. DEFINITIONS :

Extension Cords- an electric cord fitted with a plug at one end and a receptacle at the other

Patient Care Room/Area- room where a patient is intended to be examined or treated

Patient Care Vicinity- 6 feet beyond the normal location of patient bed, chair, table, or / and other device that supports patient during examination and treatment

Multiple Outlet Connection- Two or more power receptacles supplied by a flexible cord

Wire Adapters / Current Tap- A device permitting the attachment of a branch electrical circuit to a main circuit by means of an attachment plug or cap.

Power Tap / Power Strip- an electrical device consisting of a cord with a plug on one end and several outlets on the other

Household Appliances- Any device that is labeled by UL as "Household Appliance"

G. MATERIAL(S) NEEDED :

None

H. PROCEDURE :

Medical Devices in Patient Care Rooms:

Clinical Engineering will approve and track all power strips and other medical devices in patient care areas. The following procedure will be followed:

Electrical Medical Devices

1. Clinical Engineering needs to be notified prior to procuring/deploying any medical device.
2. Clinical Engineering will complete incoming Inspection on all new electrical medical devices.

Power Strips (defined by UL as RELOCATABLE POWER TAPS)

1. The use of Power Strips in patient care areas must be approved by Clinical Engineering
2. Power Strips shall be verified before use, inspected annually and tracked to the medical device its mounted or by individual asset number.
3. Power Strips shall be a Special Purpose Relocatable Power Tap (SPRPT) listed as UL1363A or UL60601-1
4. Power Strips shall be used to supply power to plug-connected components of a movable assembly that is rack, table, pedestal or cart mounted, provided it is permanently mounted to the assembly.
5. Power Strips shall only be used to provide multiple outlets for a total load not exceeding 11 amps.
6. Power Strips may be used in conjunction with isolated power systems
7. Power Strips shall be plugged into a permanent, fixed receptacle

Non-Medical Devices in Patient Care Rooms:

Electrical powered, under rated, Non-Medical Devices such as TV’s, PC’s, Clocks and other devices should not be placed in Patient Care Room/Area within the patient care vicinity as defined in NFPA 99.

Electrical Devices in Non-Patient Care Room/Areas:

Facilities will oversee and review new installations and the use of the items as defined below:

Extension Cords (defined by UL as Cord Sets and Power Supply Cords)

1. The use of extension cords shall only be used temporarily and not as a substitute for permanent wiring. (Except for construction usage, temporary usage shall be for less than 30 days.)
2. The extension cords shall not run through holes in walls, ceilings, floors, doorways, windows, or similar openings, be fastened in place or be concealed behind building walls, ceilings or floors
3. The extension cord must be plugged into a permanent, fixed outlet and have a minimum conductor size of #16 AWG and be three conductors and be Underwriters’ Laboratory (or equivalent)-Listed or shall use Underwriters’ Laboratory (or equivalent)-Listed components
4. Facilities may temporarily approve and track the use of extension cords in non-patient care areas

Powerstrips:

1. Shall not be required to fasten to a wall, desk, table etc. if a tool is required for removal
2. Shall only be used to provide multiple outlets for loads with an individual nameplate rating of less than or equal to 3 amps for each device. The total load shall not exceed 12 amps
3. Typical use is for PCs and ancillary devices but it may be used for other small devices but not items such as toasters, microwaves, refrigerators; etc.
4. Shall be Relocatable Power Taps (RPT) with surge protection and UL listed for the application.
5. Shall be plugged into a permanent, fixed receptacle
6. Shall have a minimum conductor size of #16 AWG and be three conductors
7. Shall not be used in lieu of a permanently installed receptacle

Appliances, Household (defined by UL as having the words “household use” on the label)

1. Facilities will approve use of Household appliances in non-patient care areas
2. Small UL labeled household appliances such as desk fans, task lights, etc. may be used by UCHC staff at individual workstations (no counter top microwaves and toasters) and in break rooms that simulate a household environment.
 - a. Conditions:
 - i. If the appliance has exposed metal parts that may become energized it shall either have a 3-wire cord and plug or be plugged into a GFCI receptacle
 - ii. The appliance shall be maintained per the manufacturer’s instructions
 - iii. The appliance shall NOT be plugged into a power strip or extension cord
 - iv. The appliance shall be removed from service if found to be defective and needing repair e.g. frayed cord, damaged power plug, broken case, etc.

Electrical Devices Not Allowed at JDH or Clinical Areas:

The following devices are not allowed:

- CUBE TAPS (defined by UL as CURRENT TAPS)
- THREE (3) WIRE TO TWO (2) WIRE ADAPTERS (defined by UL as CURRENT TAPS)

I. ATTACHMENTS :

None

J. REFERENCES :

NFPA 99, National Electrical Code

K. SEARCH WORDS :

None

L. ENFORCEMENT:

Violations of this policy or associated procedures may result in appropriate disciplinary measures in accordance with University By-Laws, General Rules of Conduct for All University Employees, applicable collective bargaining agreements, the University of Connecticut Student Code, other applicable University Policies, or as outlined in any procedures document related to this policy.

M. STAKEHOLDER APPROVALS :

On File

N. COMMITTEE APPROVALS :

NONE

O. FINAL APPROVAL :

- | | |
|---|---------------------------|
| 1. <u>Bruce T. Liang, MD (Signed)</u>
Bruce T. Liang, MD
Interim Chief Executive Officer & EVP for Health Affairs
Dean, School of Medicine | <u>02/08/2022</u>
Date |
| 2. <u>Anne Horbatuck (Signed)</u>
Anne D. Horbatuck, RN, BSN, MBA
Clinical Policy Committee Co-Chair | <u>02/08/2022</u>
Date |
| 3. <u>Scott Allen, MD (Signed)</u>
Scott Allen, MD
Clinical Policy Committee Co-Chair | <u>02/04/2022</u>
Date |
| 4. <u>Caryl Ryan (Signed)</u>
Caryl Ryan, MS, BSN, RN
Chief Operating Officer, JDH
VP Quality and Patient Services & Chief Nursing Officer | <u>02/07/2022</u>
Date |

P. REVISION HISTORY :

Date Issued: 8/85

Date Revised: 1/85, 11/88, 9/91, 9/97, 8/00, 9/08, 6/12, 11/15, 3/18, 5/18, 1/22

Date Reviewed: 9/12