



Defense Health Agency

ADMINISTRATIVE INSTRUCTION

NUMBER 6015.01

January 11, 2022

DAD-MEDLOG

SUBJECT: Electrical Safety Standards in Defense Health Agency Facility Patient Care Vicinities

References: See Enclosure 1

1. PURPOSE. This Defense Health Agency-Administrative Instruction (DHA-AI), based on the authority of References (a) and (c), and in accordance with the guidance of References (d) through (m), establishes the Defense Health Agency's (DHA) procedures to mitigate the risk of line powered electrical equipment in the proximity of patients.

2. APPLICABILITY. This DHA-AI applies to the DHA, DHA components (activities under the authority, direction, and control of DHA), and all personnel to include: assigned or attached Active Duty, Reserve and National Guard Service members, members of the Commissioned Corps of the Public Health Service, federal civilian employees, contractors (when required by the terms of the applicable contract), other personnel assigned temporary or permanent duties at DHA and DHA Components, to include Other Lines of Business (OLB) under the authority, direction, and control of the DHA.

3. POLICY IMPLEMENTATION. It is DHA's instruction, pursuant to References (a) through (m), that governance decision support and standard practices be communicated, ensuring all DoD Healthcare Medical Devices and Equipment (MDE) in the Military Health System are available, functional, and safe for patient centered care. Program guidance is based upon Military Health System strategy, risk and mission priorities, laws, regulations and policies. The use of the name or mark of any specific manufacturer, commercial product, commodity, or service in this publication does not imply endorsement by the DHA.

4. RESPONSIBILITIES. See Enclosure 2.

5. PROCEDURES. See Enclosure 3.

6. PROPONENT AND WAIVERS. The proponent of this publication is the Deputy Assistant Director, Medical Logistics (MEDLOG). When Activities are unable to comply with this publication the activity may request a waiver that must include a justification, to include an analysis of the risk associated with not granting the waiver. The activity director or senior leader will submit the waiver request through their supervisory chain to the Deputy Assistant Director, MEDLOG to determine if the waiver may be granted by the Director, DHA or their designee.

7. RELEASABILITY. **Cleared for public release**. This DHA-AI is available on the Internet from the Health.mil site at: <https://health.mil/Reference-Center/Policies> and is also available to authorized users from the DHA SharePoint site at: <https://info.health.mil/cos/admin/pubs/SitePages/Home.aspx>.

8. EFFECTIVE DATE. This DHA-AI Choose an item.:

a. Is effective upon signature.

b. Will expire 10 years from the date of signature if it has not been reissued or canceled before this date in accordance with Reference (d).

/S/
RONALD J. PLACE
LTG, MC, USA
Director

Enclosures

1. References
2. Responsibilities
3. Procedures

Glossary

ENCLOSURE 1

REFERENCES

- (a) DoD Directive 5136.01, “Assistant Secretary of Defense for Health Affairs (ASD(HA)),” September 30, 2013, as amended
- (b) DoD Directive 5136.13, “Defense Health Agency (DHA),” September 30, 2013
- (c) United States Code, Title 10, Section 1073c
- (d) DHA-Procedural Instruction 5025.01, “Publication System,” August 24, 2018
- (e) DoD Instruction 6430.02, “Defense Medical Logistics Program,” August 23, 2017
- (f) DHA-Procedural Instruction 6430.02, “Defense Medical Logistics (MEDLOG) Enterprise Activity (EA),” September 27, 2018
- (g) National Fire Protection Association 70, “National Electrical Code,” current edition
- (h) National Fire Protection Association 99, “Health Care Facilities Code,” current edition
- (i) National Fire Protection Association 101, “Life Safety Code,”® current edition
- (j) National Fire Protection Association 110, “Standard for Emergency and Standby Power Systems,” current addition
- (k) Unified Facilities Criteria 3-560-01, “Operation and Maintenance: Electrical Safety,” July 24, 2017, as amended
- (l) Unified Facilities Criteria 3-501-01, “Electrical Engineering,” October 6, 2015, as amended
- (m) Unified Facilities Criteria 4-510-01, “Design: Military Medical Facilities,” May 30, 2019, as amended

ENCLOSURE 2
RESPONSIBILITIES

1. DIRECTOR, DHA. The Director, DHA, will:
 - a. Exercise overall responsibility for the Electrical Safety Standards in DHA Military Medical Treatment Facilities (MTF) and Dental Treatment Facilities (DTF) patient care vicinities.
 - b. Implement policy, guidance, and instruction consistent with References (a) through (j).
2. DHA, ASSISTANT DIRECTORS. The DHA, Assistant Directors will implement and comply with this DHA-AI with in their assigned responsibilities.
3. DEPUTY ASSISTANT DIRECTOR, MEDLOG. The Deputy Assistant Director, MEDLOG must ensure Electrical Safety Standards in MTF/DTF program policies are established in accordance with this DHA-AI.
4. CHIEF, DHA HEALTHCARE TECHNOLOGY MANAGEMENT (HTM). The Chief, DHA HTM must:
 - a. Ensure the MTF/DTF HTM managers are compliant with established local electrical safety programs.
 - b. Review and recommend procedures requested by local MTF/DTF Directors for special or unique requirements varying from this DHA-AI.
5. DHA MARKET, SMALL MARKET AND STAND-ALONE MEDICAL TREATMENT FACILITY ORGANIZATION, AND DHA REGION DIRECTORS. Market, Small Market and Stand-Alone Medical Treatment Facility Organization, and DHA Region Directors must ensure compliance with this DHA-AI.
6. DIRECTOR, MTF/DTF. The Director, MTF/DTF must:
 - a. Ensure supported MTF/DTF have established policy regarding Electrical Safety Standards in DHA MTF/DTF patient care vicinities included in local electrical safety programs
 - b. Approve the Electrical Safety Program and ensure inclusion in local training programs in accordance with Reference (h).

c. Approve local electrical safety procedures established to satisfy special or unique safety requirements sending any unique, special requirements or variances to the Chief, DHA HTM for review and recommendations.

d. Actively assess and approve in writing the designation of patient care vicinities as Category 1, 2, 3, or 4 in accordance with Reference (h).

e. Actively assess and designate in writing the Anesthetizing Locations within the MTF/DTF. An anesthetic as used in accordance with Reference (h), applies to any inhalational agent used to produce sedation, analgesia, or general anesthesia.

f. Perform and document in writing the risk assessment to determine whether to designate operating rooms as Wet Procedure Locations. Operating rooms are considered a Wet Procedure Location unless a documented risk assessment determines otherwise, in accordance with Reference (h).

g. Ensure areas designated as Wet Procedure Locations are properly equipped to protect patients and staff against the risk of electrical shock with the use of proper line power isolation or interruption circuits in accordance with References (h) and (l).

h. Ensure Line powered equipment and devices located within the Wet Procedure Locations must have special sustainment intervals procedures to prevent the risk of electrical shock in accordance with References (h) and (l).

i. Issue local policy and procedures for the use of privately-owned, line-powered electrical devices, within the guidance of this DHA-AI.

j. Assess and approve in writing a list of devices authorized to be connected to emergency power receptacles (red outlets) to include life support devices and mission-critical equipment.

k. Ensure unauthorized equipment found to be plugged into emergency power receptacles is confiscated and may be subject to disciplinary action, as appropriate.

7. MTF/DTF HTM MANAGER. The MTF/DTF HTM Manager must:

a. Ensure compliance with established DHA and local electrical safety policies.

b. Be an active and contributing member of the Environment of Care (EC) Committee and will provide all required reports and data to the EC committee as prescribed in accordance with local policy and procedures.

c. Assist MTF/DTF Education and Training staff in development of the Electrical Safety Awareness training by providing technical advice on electrical safety, as required.

- d. Ensure MDE proposed for purchase is compatible with existing utility systems in coordination with the MTF/DTF Safety Office and Facility Management.
- e. Maintain documentation of MDE electrical safety testing as required.
- f. Report defects in electrical power systems/utilities to Facility Management for repair.

8. EC COMMITTEE. The EC Committee must:

- a. Review and ensure compliance with the DHA and local electrical safety program and policies.

- b. Review and recommend local electrical safety actions and procedures to the MTF/DTF Director based on inspections and survey results from the work centers.

9. MDE USERS AND STAFF. MDE Users and MTF/DTF Staff must:

- a. Operate MDE in accordance with manufacturer recommendations.
- b. Ensure MDE is visually inspected for electrical hazards and unsafe conditions are corrected before MDE is used.
- c. Ensure identified hazards are reported in accordance with DHA procedures.

ENCLOSURE 3

PROCEDURES

1. TRAINING. DHA department supervisors must train staff and incorporate the following prior to a new staff member being approved to work:

a. Orientations including procedures for reporting safety hazards, points of contact for corrections, accident reporting and investigation procedures, and hazards unique to the work area.

b. All electrical safety training (user/operator, safety, etc.), will be appropriately documented (i.e. service guidelines, accrediting requirements, local policy, until DHA guidance and processes are developed).

2. EXTENSION CORDS AND ADAPTERS. In general, extension cords and adapters will not be used in patient care vicinities.

a. If no viable alternate solutions are available, the use of extension cords and adapters must be approved in writing by Director, MTF/DTF for use in patient care vicinities, with a completed risk assessment and mitigation plan, while simultaneously funding and submitting an emergency work order to Facility Management and notifying the MTF/DTF HTM Manager of the event.

b. If extension cords are used, the cords will be appropriately rated and sized to support expected loads (but not smaller than #16 American Wire Gauge) with the appropriate jacket type and hospital grade connectors in accordance with References (g) and (h).

c. When an extension cord is used in patient care vicinities to support MDE operation, an electrical safety inspection/testing in accordance with Reference (h) will be performed by HTM and documented in the Accountable Property System of Record (APSR). Extension cord(s) and connected MDE must pass inspection and testing prior to use.

d. MTF/DTF HTM approved configurations of equipment to an extension cord or adapter will be properly marked or tagged by the MTF/DTF HTM Manager for use with assigned MDE. Any unapproved or failed configurations will be immediately removed from use by MTF/DTF HTM Technicians.

3. EMERGENCY POWER RECEPTACLES (RED OUTLETS)

a. The use of emergency power receptacles will be limited to devices identified as life support or mission critical by the Director, MTF/DTF. No staff or patient-owned devices will be plugged into an emergency power receptacle.

b. Emergency Power Receptacles are to be red color with “EMERGENCY” markings to be readily identifiable unless local conditions require the use of alternative designation schemes and is documented within the local risk assessment. (Reference (m))

4. RELOCATABLE POWER TAP (RPT). RPTs are two or more receptacles supplied by a flexible cord used in administrative or common areas. Proper use of RPTs is necessary to maintain a safe environment in administrative locations. RPTs will only provide power to non-medical equipment and must be UL Listed 1363 compliant; non-compliant RPTs will not be used.

a. RPTs must not be used in patient care vicinity. (Reference (h))

b. RPTs must not be connected to another power strip/surge protector or extension cord(s) (e.g., no daisy-chaining).

c. RPTs must be inventoried and inspected annually for mechanical and electrical integrity by the work center supervisor with oversight from the MTF/DTF EC and Safety Office (Reference (h)).

d. MTF/DTF EC will monitor the status of the Facility Work Order to install appropriately placed permanent power receptacle(s) in order to reduce or eliminate the need for the RPTs (References (g) and (h)).

5. SPECIAL PURPOSE RELOCATABLE POWER TAP (SPRPT). SPRPTs are two or more hospital receptacles supplied by a flexible cord. SPRPTs providing power to patient care-related electrical equipment in a patient care vicinity must be SPRPTs listed as underwriter laboratories (UL) 1363A (i.e., medical grade SPRPT permanently attached to a MDE) or UL 60601-1 (i.e., medical grade SPRPT not permanently attached to a MDE) compliant. Proper use of SPRPTs is necessary to maintain a safe patient care environment.

a. MTF/DTF HTM Manager will coordinate with the EC committee to monitor the status of the Facility Work Order to install appropriately placed permanent power receptacle(s) in order to reduce or eliminate the need for the SPRPTs (References (g) and (h)).

b. SPRPTs may be used in a patient care vicinity to power rack-, table-, pedestal-, or cart-mounted patient care-related electrical MDE assemblies as components to the system, in accordance with References (h) and (h).

(1) Receptacles on the SPRPT component will only be used by the system assigned MDE.

(2) The SPRPTs will be used and tested in accordance with References (g) and (h).

(3) After electrical safety check of the MDE to include the SPRPT have been completed and approved for use, any unused receptacles on the SPRPT must be blocked or secured in such a way to require tools to unblock to prevent additional devices from being connected in accordance with Reference (h) by a qualified technician.

c. The electrical and mechanical integrity of the assembly is regularly verified and documented through the scheduled maintenance of the supported MDE to include verifying the SPRPT conductors are not under undue tension.

(1) The MTF/DTF EC Committee must approve use of SPRPTs with MDE and are used as designed. MTF/DTF HTM Manager will evaluate the safety characteristics of approved power strips/surge protectors used with MDE are UL1363A, or UL60601-1 compliant in accordance with References (g) and (h).

(2) SPRPTs will be gained as a component to the supported MDE system in the APSR.

(3) SPRPTs will not be connected to another power strip/surge protector or extension cord(s) (e.g., no daisy-chaining).

6. USE OF MDE NOT OWNED BY DHA. MDE not owned by DHA includes items not on APSR accountable record such as staff-owned, patient-owned, and privately-owned items, and MDE on accountable record with a DoD or Federal agency other than DHA.

a. For patient-owned MDE, the MTF/DTF EC Committee must develop local written procedures to control the use of patient-owned electrical devices in patient care environments. In addition to outlining for patients the MTFs/DTFs limited responsibility with their use in the facility, these procedures must ensure:

(1) Safety inspection/testing of the MDE.

(2) Approval by a medical provider who has determined the patient is mentally and physically capable to use the MDE in a safe manner and the use is medically necessary and appropriate for patient care.

(3) The patient has all the available supplies and consumable items for the use of the MDE.

(4) Patient owned devices are not plugged into an emergency power receptacle.

b. Electrical MDE not owned by DHA must conform to the same requirements as DHA MDE. Staff-owned electrical devices shall not be used in the patient care vicinity in accordance with Reference (h).

c. Staff-owned electrical and administrative equipment is not permitted in the patient care vicinities. If staff-owned electrical and administrative equipment is in the patient care vicinity, the equipment must comply with the same safety requirements as the DHA's MDE requirements and must not be plugged into an emergency power receptacle.

d. Patients or legally authorized representative (s) are notified in writing the DHA is not responsible for the accountability, maintenance, repair or protection of personally owned MDE.

7. ELECTRICAL SAFETY TESTING. Electrical testing should be complete and timely:

a. MTF/DTF Director is responsible to ensure electrical safety inspections of MDE used in patient care vicinities in accordance with Reference (h).

b. Electrical safety inspection and criteria defined in Reference (h). Electrical safety inspection results must be documented on work orders within the APSR.

c. Electrical Safety Testing Intervals:

(1) All patient care related electrical equipment used in patient care vicinities must be tested before being put into service for the first time. Retesting is not necessary to be conducted unless there is evidence of damage and/or after any repair or modification which may have compromised electrical safety in accordance with Reference (h).

(2) Wet procedure locations must be provided with special protection against electrical shock (see Reference (h)). In existing construction, special protection against electrical shock is not required if:

(a) The DHA MTF/DTF develops and maintains written procedures for electrical safety testing which includes continuity testing of all MDE, grounding conductors, and their connections.

(b) The written procedures include requirements for testing fixed receptacles, MDE connected by cord and plug, fixed electrical MDE when first installed, and where there is evidence of damage, and after any repairs, and routinely at intervals not exceeding 6 months.

(c) MTF/DTF HTM Managers will not extend inspection/testing intervals without the approval from the Chief, DHA MEDLOG HTM.

GLOSSARY

PART I. ABBREVIATIONS AND ACRONYMS

APSR	Accountable Property System of Record
DHA	Defense Health Agency
DHA-AI	Defense Health Agency-Administrative Instruction
DTF	dental treatment facilities
EC	Environment of Care
HTM	Healthcare Technology Management
MDE	Medical Devices and Equipment
MEDLOG	Medical Logistics
MTF	military medical treatment facility
RPT	Relocatable Power Tap
SPRPT	Special Purpose Relocatable Power Tap
UL	underwriter laboratories

PART II. DEFINITIONS

anesthetizing locations. An area in a patient care vicinity where moderate sedation, deep sedation, or general anesthesia is administered to a patient.

patient care vicinity. A space, within a location intended for the examination and treatment of patients, extending 1.8 meters (6 feet) beyond the normal location of the bed, chair, table, treadmill, or other device that supports the patient during examination and treatment extending vertically to 2.3 meters (7 feet 6 inches) above the floor

wet procedure locations. An area in a patient care vicinity where a procedure is performed that is normally subject to wet conditions while patients are present, including standing fluids on the floor or drenching of the work area, either of which condition is intimate to the patient or staff.