



## AASM CENTER ACCREDITATION FACT SHEET

# Equipment Maintenance

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#### Definition of Medical Equipment

Medical equipment is defined as any patient-related equipment that is facility owned, borrowed, leased, consigned, or equipment used for demonstration purposes and data collection, such as, oxygen equipment, sensors, bands, oximeters, thermistors, beds, PAP equipment, and biophysiologic equipment.

#### The Purpose of Equipment Maintenance

A routine schedule for the inspection and maintenance of all patient-related equipment helps ensure the safety of patients and personnel as well as accurate and uninterrupted operation.

#### Three Major Components of Equipment Maintenance:

##### 1. Routine visual inspection for apparent defects by technical staff at least monthly

Visually inspect the physical condition of equipment for flaws, cracks, deformities, tears, or any other visually apparent defects. Inspect for: loose knobs or switches, frayed or cracked power cords, loose or broken plug pins, loose power plug or any medical equipment with a two-pronged plug. Ensure equipment is labeled with a current electrical safety inspection sticker. Ensure no electrical cords are used and patient's personal electrical appliances are not used.

Complete performance test checking for appropriate lights or tones when unit is operated.

If any problems are noted, remove equipment, tag appropriately, and send for repair by an authorized technician.

## STANDARD E-4-EQUIPMENT MAINTENANCE

A written plan for monitoring of all patient-related equipment for electrical and mechanical safety is required. The written plan must include specific instructions regarding documentation of compliance. The plan must address: monthly visual inspection of equipment by staff for apparent defects; adhering to manufacturer's recommendations for monitoring and maintenance of recording equipment; and electrical safety testing by a certified electrician or biomedical engineer to include at least annual testing for ground fault (resistance should be less than 0.5 ohms from chassis to ground) and chassis leakage current (amperage should be less than 100 microamps from equipment that will be in direct contact with the patient, and less than 300 microamps from equipment that will not be in direct contact with the patient, including the recording PCs).



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### **2. Electrical safety testing by certified technician or biomedical engineer at least annually**

Diagnostic equipment will have biomedical checks performed at least annually or more frequently to adhere to manufacturer's recommendations.

Electrical and mechanical safety checks include the following:

- Resistance should be less than 0.5 ohms from chassis to a ground.
- Chassis leakage current should be less than 300 microamps from equipment that is NOT in direct contact with the patient, including the recording PCs.
- Chassis leakage current should be less than 100 microamps from equipment that will be in direct contact with the patient.

### **3. Documentation of Compliance**

Document routine inspections on maintenance log listing the following: each piece of equipment, frequency of inspection, procedure for inspection, who performs inspection, and where monthly reports are filed. Obtain annual report signed by certified electrician or biomedical engineer which includes description, serial number, ground fault, and current leakage for each piece of equipment, and indicate where reports will be filed.

## **Additional Recommendations**

### **Electrical Safety Rules for Sleep Facility Staff Members**

Remove from service and report any piece of equipment if:

- Any wire or cord is frayed, worn, cut, or burned
- A plug is broken, bent, or loose
- Switches or knobs are loose
- Cables do not connect securely
- Any concern of overheating by smell or touch
- Equipment has been dropped or physically damaged
- There has been liquid spilled on equipment or equipment is leaking

Do not use extension cords in patient areas

Never disconnect any electrical plug from the wall by grasping the power cord; always firmly grasp and pull the plug

Do not allow patients to use personal electrical appliances



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### Technical Staff Training

All technical staff must receive training necessary to assure the safe and proper operation of all medical equipment used by the sleep facility. All training must adhere to the facility's policies and procedures.

Documentation of in-service on any new equipment or equipment upgrades must be completed prior to use on patients

Mandatory re-training programs should be provided on any piece of equipment involved in a patient incident or when a potential incident has been identified.

### KEY THINGS TO KEEP IN MIND...

The facility's Equipment Maintenance Policy must include:

- Routine visual inspection of all patient-related equipment at least monthly
- Electrical and mechanical inspection by certified electrician or biomedical engineer at least yearly
- Means of documentation of both inspections
- A review of maintenance logs may be required at site visit.