

## MAINTENANCE AND USE OF MEDICAL DEVICES

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### ANNOTATION

The work is given the type of repair of electronic medical devices and the concept of maintenance of medical equipment. The contact between the repair companies of medical devices and healthcare enterprises is described, as well as all accounting and reporting documents for the maintenance of medical equipment.

**Keywords:** electronic, medicine, devices, equipment, repair, healthcare, act, statements, contract.

### INTRODUCTION

Maintenance organization owned by medical equipment has the right to issue an opinion on the exclusion of expired medical equipment from accounting.

Scope of use and application [1].

There are three types of repair of electronic medical devices:

daily ("horizontal repair") repair. At the same time, some malfunctions that occur during the use of medical devices are identified and corrected. This work can also be performed by technical service specialists.

medium ("medium repair") repair, in which the failure of some parts and blocks of a medical device is determined, and then they are repaired by replacing them. Secondary repair work can be carried out in the conditions of treatment facilities:

complete ("major") repair, in which repair work is carried out in a special workshop or at the factory in case of failure of several units and parts of the device, or failure of the device as a whole.

Specialist performing medium and major repairs must have extensive experience and knowledge. The workplace of this specialist should be equipped with modern measuring and control instruments, a test bench, various service documents and instructions.

When carrying out repair work, workers of treatment facilities must apply with a registered

letter addressed to the repair organization, company. Based on this letter, the correction specialist, after arriving at the medical facility and getting acquainted with the state of the medical equipment, selects the necessary correction method. If necessary, medical equipment will be delivered to the repair base, and repair work will be carried out at a special workplace [2].

As indicated in the section "Main malfunctions and methods for their detection and elimination" of the technical documentation for medical devices, corrective work is carried out using the forms of voltage, current, pulses at various points of the device.

Since some repair companies or enterprises are in close contact with manufacturers of medical equipment, they have enough spare parts and technical documentation for the repair of medical equipment. After the repair work is completed, the operating parameters of the medical equipment are checked and the necessary technical parameters are adjusted using the necessary elements of the electrical circuit. This is mainly done using variable resistance, capacitor, and inductors. When adjusting, the necessary oscilloscope, generator, frequency meter, voltmeter, ohmmeter, ammeter and other tools are used [3].

Maintenance of medical equipment is set of measures (including installation, adjustment and repair) necessary to ensure the operability, maintenance and repair of medical equipment, ensuring safe operation during operation on the basis of regulatory and operational documents. Also, these works are provided with their transportation and storage. The frequency of medical equipment and maintenance is the time interval between the same preventive or slightly more complex maintenance works. Technical control over the state of medical equipment - checking the compliance of the characteristics and parameters of medical equipment products with regulatory, design and operational measures, identifying worn and damaged parts, checking the operability and operability of all protective and blocking devices and operational documentation.

Repair of medical equipment is set of works to restore the health of medical equipment, it is the restoration of resources and components of medical equipment.

Daily maintenance of medical equipment is not a recurring unplanned impact on product resources, it is important that it occurs suddenly. This is done by replacing defective elements (if it does not exceed 1% of the amount specified in the maintenance contract). After repair, the technical condition of medical equipment is carried out in the volumes specified in the operational documents.

The limiting states of medical equipment is the time of use to given state, which is presented by a number of documents (passport, uniforms, operating instructions, etc.) upon delivery to a medical institution.

Working with faulty medical equipment is dangerous for the patient and medical staff, in which case the owner is responsible. In accordance with the legislation on the protection of the health of citizens (users), permission to use medical equipment for medical purposes is allowed after it passes through the state register in the prescribed manner.

In any case, the maintenance of medical equipment can be carried out by service companies (legal entities, individual entrepreneurs, state technical employees of medical institutions, employees of technical services) operating within the framework of the current legislation. Maintenance of medical equipment of a certain type or name is carried out on the basis of

regulatory legal acts, national international standards and norms, as well as on the basis of instructions in operational documents. Medical institutions enter into an agreement with a technical service organization for the supply of medical equipment and maintenance.

The contract is accompanied by a maintenance schedule and a list of medical equipment in need of repair. In this case, the list includes medical equipment with a warranty period. This list also includes prices for the maintenance of each medical equipment (monthly). Maintenance is required for all medical equipment available in a healthcare facility. The contract must include mandatory metrological verification of medical equipment measuring instruments, a schedule of periodic metrological control, which must be signed and approved by the executor of the schedule and the medical institution.

Repair services (including daily repairs) can be carried out independently if this is determined in accordance with the application of the executive medical and preventive organization or when checking the technical condition of medical equipment or providing metrological services. Upon receipt of an application for repairs, the executive organization must send a specialist within three days. At least once a year, the contractor must train medical personnel on the rules for the safe handling of medical equipment [4].

It is necessary to appoint a person responsible for working with the specialists of the enterprise for the maintenance of medical equipment of medical institutions, and he must control the implementation of these works. In case of mutual problems, it is necessary to draw up an executive act, which must be approved if both sides express their opinions.

When importing medical equipment, the importing organization must provide the following.

- Operating documents in the Uzbek language, information on the necessary conditions for the maintenance and use of imported medical equipment in working condition;
- documents required for maintenance and free repair of medical equipment supplied during the warranty period;
- training of medical personnel and technical service personnel to work with imported medical equipment

Appendix: If the supply of medical equipment is carried out through an intermediary organization, a document confirming the authority of the intermediary organization received from the manufacturer at the time of conclusion of the agreement (contract) is submitted.

Unless otherwise specified in the contract, maintenance of medical equipment during the warranty period can be carried out on the basis of an agreement with a maintenance company by a specialist authorized to carry out maintenance of this type of medical equipment, or with the help of full-time maintenance specialists.

Employees (staff) of a medical institution must be trained in the rules for the technical operation of medical equipment and are responsible for compliance with these rules.

Conclusion: Documents for the maintenance of medical equipment.

Accounting and reporting documents for the maintenance of medical equipment include:

- contract for the maintenance of medical equipment (contract);
- magazine of maintenance of medical equipment;
- prescriptions of medical products (required according to regulatory documents);
- act on the maintenance of medical equipment;
- protocol (acts) for monitoring the state of medical equipment;

- maintenance schedule (plan);
- reporting documents on the acquisition of each measuring instrument as part of the process equipment.

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