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Note on Medical Equipment and their Responsibilities of the Healthcare Technology Management Professional

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Commentary

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ABOUT THE STUDY

The term "Medical equipment management" (also known as "clinical engineering," "Clinical engineering management," "clinical technology management", "Healthcare technology management", "Biomedical maintenance," "Biomedical equipment management," and "Biomedical engineering") refers to the field of work that involves overseeing operations, assessing and enhancing utilisation and safety, and supporting the servicing of healthcare technology. Similar to other healthcare professions, these healthcare technology managers go by numerous specialty or organisational hierarchy names.

Responsibilities

It is the responsibility of the healthcare technology management professional to ensure that the systems and equipment used in patient care are functional, safe, and configured appropriately to meet the needs of the healthcare organisation; that the equipment is used effectively and in accordance with the highest standards of care by educating the patient, the healthcare provider, and the equipment user; and that the equipment is built to minimize the risk of loss, harm, or damage to the patient, provider, or other individuals. The following are some, but not all, of the duties are performed by a healthcare technology management professional:

- Equipment control
- Asset management
- Equipment inventories

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- Work order management
- Data quality management
- Equipment maintenance management

Equipment control

Every medical care facility ought to have procedures and policies in place for managing assets and controlling equipment. Medical device management is a part of equipment control and asset management, which may be supported by automated information systems or by specialised equipment management and maintenance software. Control over equipment starts as soon as it is delivered and lasts for the duration of its useful life. Biomedical Equipment Technicians (BMETs), either employed by the facility or hired out, should examine newly acquired equipment. The BMETs will be given an established equipment control/asset number by the facilities equipment/property manager. In their database, maintenance operations are tracked and recorded using this control number.

Work order management

Work order management entails creating scheduled and unscheduled work orders in order to generate systematic, quantifiable, and traceable techniques for all acceptance/initial inspections, preventative maintenance, calibrations, and repairs. The maintenance of current and completed work orders, which offer a thorough maintenance history of all medical equipment devices used in the diagnosis, treatment, and care of patients, can be done on paper or on a computer. All safety, preventive, calibration, test, and repair services carried out on such medical devices are included in work order management. Managers in charge of staff time, the total number of hours technicians spend working on equipment, and the maximum repair cost per one-time repair can all use a complete work order management system as a resource and workload management tool.

Data quality management

Any automated medical equipment management system needs accurate, complete data. Initiatives to improve data quality can assist in ensuring the accuracy of clinical and biomedical engineering data. The following information is required to create basic, precise, maintainable automated records for the management of medical equipment: nomenclature, manufacturer, nameplate model, serial number, and cost of procurement, condition code, and maintenance evaluation. Other pertinent information could be found in the warranty, location, other contractor agencies, intervals, and due dates for scheduled maintenance. These fields are essential for ensuring that the right maintenance is carried out, that the equipment is tracked, and that the devices are secure for use in patient care.

Nomenclature: It specifies the nature of the device, how it works, and the kind of maintenance that needs to be done. The ECRI Institute Universal Medical Device Naming System serves as the basis for many nomenclature schemes.

Manufacturer: The Original Equipment Manufacturer (OEM) is the business whose sale of the product has been authorised by the FDA (OEM).

Serial number: This is a serialised number (which may contain alpha characters) issued by the manufacturer and is typically located on the data plate as well. To get device warnings and recalls, we must have this number.

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One or more of these core elements are closely tied to a number of other management tools, including planning and budgeting for equipment replacement, depreciation calculations, and at the local level literature, repair parts, and supplies. Each month, the quality of the data must be monitored, and any discrepancies must be fixed.