

MAINTENANCE OF CLINICAL EQUIPMENT – PREPAREDNESS AND RESPONSE CAPACITY

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Functional, accurate and safe clinical equipment is an essential requirement in the provision of health services. Well-maintained equipment will give clinicians greater confidence in the reliability of its performance and contribute to a high standard of patient care.

All health services require annual or periodic servicing of medical equipment. In addition to planned servicing and preventative maintenance, there may be the unexpected failure of medical equipment, necessitating repair.

Clinical Engineering (CLE), Biomedical Engineering (BME) or Medical Equipment Management (MEM) staff is responsible for ensuring both maintenance and repair of clinical equipment.

The main responsibilities can be summarized as:

- Maintain a current inventory of clinical equipment
- Program routine maintenance of clinical equipment (periodicity)
- Conduct routine checking of equipment (Level 1- on first line or/and Level 2 – technician)
- Label, isolate, remove and report faulty equipment to prevent injury
- Liaise with the relevant importer and service infrastructure regarding repairs and maintenance of equipment and any requirements for loan equipment
- Arrange transportation of equipment to and from the service provider
- Coordinate the repairs and maintenance of equipment as appropriate
- Conduct reception and incoming inspection of clinical equipment returned from maintenance or repair (IEC 62353)
- Provide appropriate clinical and technical expertise and guidance regarding the management of clinical equipment
- Provide documents regarding advice and repair procedures for clinical equipment
- Maintain the Operator manuals for equipment held at each health care facility
- Specified during the procurement process the needs for consumables and spares parts
- Provide training to technicians and operators (together with the importer or manufacturer)
- Maintain the equipment history record to track the performance of the equipment

The paper present in an intuitive manner how to refer to Maintenance and Repair during the lifecycle of a clinical equipment, how to identify the potential failures which can jeopardize the patient safety and how need to be tested the clinical equipment for conformity with the relevant standards (IEC 60601 series, ISO, AAMI, etc.).