

UNIT – II MEDICAL TECHNOLOGY MANAGEMENT PRACTICES 9

Strategic Medical Technology Planning, Scope , Clinical necessity operational support, strategic planning process - Technology assessment: Technology audit, Budget strategies, Pre requisite for medical technology assessment - Management Practice for Medical Equipment - Device evaluation, Risk reduction, Asset management, ESHTA

this.)

4 ESHTA – Equipment Safety, Handling, Testing, and Assessment

Equipment Safety

- Ensure all devices are safe for patient and operator use.
- Adapt with international standards (e.g., IEC 60601 for electrical medical equipment).
- Conduct risk assessments for equipment-related hazards (electrical shock, radiation exposure, mechanical injury).
- Maintain emergency procedures and provide safety signs on equipment.
- Perform electrical safety checks (e.g., earth leakage current, grounding resistance).
- Train staff on proper usage, handling, and movement of devices.
- Use correct lifting techniques and appropriate trolleys or carriers for transport.
- Avoid dropping, exposing to liquids, or overloading circuits.
- Ensure storage in dry, clean, and temperature-controlled environments.
- Mark and isolate out-of-service equipment to prevent accidental use.

Equipment Testing

- Conduct regular testing to ensure optimal performance:
 - Performance testing (accuracy, functionality).
 - Calibration to maintain measurement accuracy.

- Electrical safety tests (leakage current, insulation resistance).
- Use standardized testing protocols and certified test equipment.
- Maintain test records and certificates for audits and compliance.

Equipment Assessment

- Periodically assess condition and performance:
 - Check for wear and tear, functionality, and user feedback.
 - Evaluate downtime frequency and repair history.
- Determine whether to retain, repair, or replace the equipment.
- Conduct cost-effectiveness assessment – maintenance cost vs replacement.

Equipment Action

- Take timely corrective action based on testing and assessment results.
- Update maintenance logs and inform users of any equipment issues.
- Initiate preventive maintenance plans.
- Report adverse events to appropriate authorities if required.
- Implement continuous improvement strategies based on assessment data.