



Healthcare Technology Management Course: Medical Equipment Planning, Maintenance and Replacement



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Introduction:

Healthcare technology management, covering medical equipment planning, maintenance and replacement, is a 5-day course for biomedical and clinical engineering teams and department heads that ends with a Medical Equipment Management Plan for a case hospital. Hospitals lose clinical capacity when devices sit idle awaiting repair, when maintenance follows fixed intervals without regard to patient risk, and when replacement is decided by habit rather than evidence. Nominees already supervise or manage medical equipment services and work through case studies built on inventory, work order and cost data. CoreConcept Training Center delivers this healthcare technology management course.

Course Objectives:

- Build and reconcile a medical equipment inventory that records asset, location, risk and service data for every device in clinical use
- Assess clinical service needs and write equipment specifications and tender evaluation criteria that weigh lifecycle cost, uptime and service support
- Run acceptance testing and commissioning, and set risk-based preventive maintenance intervals and inspection procedures that include recurrent electrical safety tests
- Manage corrective maintenance, service contracts, hazard alerts, recalls and operator training records so that affected devices are withdrawn and returned to use safely
- Prioritise equipment for replacement and prepare capital budget requests supported by age, condition, downtime and support status
- Configure CMMS records and KPIs for a biomedical department and assemble a Medical Equipment Management Plan for a case hospital

Target Audience:

- Biomedical engineering teams responsible for equipment inventories, maintenance schedules and technician work allocation
 - Clinical engineering department heads accountable for equipment uptime, service budgets and reporting to hospital management
 - Biomedical workshop supervisors responsible for acceptance testing, electrical safety testing and test equipment control
 - Equipment planning teams that assess clinical needs and prepare specifications for new services and facility projects
 - Hospital technical services managers who share responsibility for medical equipment, utilities and service contracts
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Course Outline:

Day 1: Healthcare Technology Management Foundations and Equipment Inventory Baseline

- Healthcare Technology Management Scope Across the Equipment Lifecycle
- Clinical Engineering Department Roles, Workshops and Reporting Lines
- Medical Equipment Inventory Data Fields and Asset Tagging
- Equipment Nomenclature Coding and Inventory Reconciliation Walkround
- Biomedical Department Current-State Assessment Using a Maturity Checklist

Day 2: Equipment Planning, Needs Assessment and Acquisition Criteria

- Clinical Service Needs Assessment and Technology Gap Analysis
- Equipment Planning Room Data Sheets and Utility Requirements
- Technical Specification Writing for Imaging, Monitoring and Therapy Devices
- Tender Evaluation Matrix With Lifecycle Cost and Service Criteria
- Donated and Leased Equipment Acceptance Policy and Criteria

Day 3: Acceptance, Commissioning and Planned Maintenance Practice

- Incoming Inspection and Acceptance Testing Protocol Before First Use
- Risk-Based Maintenance Inclusion Scoring by Function and Physical Risk
- Preventive Maintenance Interval Setting and Inspection Procedure Library
- IEC 62353 Recurrent Electrical Safety Testing and Leakage Measurements
- Test Equipment Calibration Control and Performance Verification Records

Day 4: Corrective Maintenance, Service Contracts, Alerts and Replacement Decisions

- Corrective Maintenance Work Order Triage and Fault Diagnosis Workflow
- Service Contract Models, Uptime Clauses and Vendor Performance Reviews
- Hazard Alert and Recall Notice Handling With Device Quarantine
- Clinical User Training Records and Operator Competency Sign-Off
- Replacement Priority Scoring and Capital Equipment Budget Requests

Day 5: Case Study: Medical Equipment Management Plan for a Case Hospital

- Case Hospital Inventory, Downtime and Maintenance Cost Data Review
 - CMMS Configuration for Work Orders, Schedules and Spare Parts
 - Biomedical Department KPI Dashboard With Uptime and PM Completion
 - Multi-Year Equipment Replacement Plan and Capital Budget Submission
 - Medical Equipment Management Plan Completion and Peer Review
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Skills You Will Gain:

- Equipment Inventory Control
- Clinical Needs Assessment
- Lifecycle Cost Evaluation
- Risk-Based Maintenance Scheduling
- Electrical Safety Testing
- Service Contract Oversight
- Recall and Alert Response
- Replacement Prioritisation

Why Attend This Course:

- Deliver a Medical Equipment Management Plan for a case hospital to the clinical engineering head and the hospital equipment committee for adoption
- Decide which devices enter planned maintenance, at what interval, and which are replaced first, using scored criteria instead of age alone
- Avoid unsafe devices reaching patients after recalls or failed electrical safety tests, and stop paying for service contracts that do not deliver uptime
- Share inventory templates, acceptance checklists, KPI definitions and replacement scoring sheets with technicians and colleagues in the biomedical department

Conclusion:

Back at work, the participant gives the clinical engineering head and the hospital equipment committee a Medical Equipment Management Plan that sets inventory rules, maintenance inclusion criteria, alert handling, user training and a scored replacement list. Management uses it to approve the maintenance workload, service contract renewals and the next capital equipment budget, while supervisors use its KPIs in monthly reviews. After the first budget cycle, the department should review uptime, preventive maintenance completion, repeat failures and whether replacement priorities matched actual equipment condition.

Frequently Asked Questions FAQ:

What should participants know before a healthcare technology management course on medical equipment?

Participants should already supervise, plan or manage medical equipment services in a hospital or clinic and know how their department logs repairs and maintenance. Bringing an inventory extract, a recent work order report or a replacement request helps them apply the case work to their own setting.

How does healthcare technology management differ from medical device regulatory affairs or quality system courses?

It covers how hospitals plan, accept, maintain, monitor and replace equipment already in clinical use. Regulatory affairs and device quality system courses address manufacturers' classification, technical files and design controls, which this course touches only where hospitals receive recalls and safety notices.

Why does healthcare technology management use risk-based maintenance rather than fixed intervals alone?

Risk-based maintenance directs technician time to devices whose failure would harm patients or stop services, scoring function, physical risk and maintenance history. Manufacturer intervals remain an input, but scoring lets departments justify longer intervals for low-risk items and closer inspection for life-support equipment.

What do participants take back from the healthcare technology management course?

Participants take back a Medical Equipment Management Plan for a case hospital, with inventory, acceptance, maintenance inclusion, alert handling and replacement scoring templates, plus a CMMS field list and KPI dashboard design they can adapt to their own biomedical department.
