

POSITION DESCRIPTION / PERFORMANCE EVALUATION

Job Title: Biomedical Engineering Technician
 Prepared by: _____
 Date: _____

Supervised by: Chief Biomedical Engineer
 Approved by: _____
 Date: _____

Job Summary: Provides and documents, under supervision, preventive, predictive, metered, interval-based and corrective maintenance on biomedical equipment. Participates in performance improvement and CQI activities.

DUTIES AND RESPONSIBILITIES:

3 = Exceeds Performance 2 = Expected Performance 1 = Needs Improvement

Demonstrates Competency in the Following Areas:

Performs biomedical equipment repairs and tests on all new and repaired equipment prior to being put into service. All repairs and tests shall be documented.	3	2	1
Performs scheduled and unscheduled inspections, maintenance and electrical safety tests of biomedical equipment to maintain code compliance. Responsible for documenting the results of all inspections, maintenance and tests.	3	2	1
Orders supplies according to established procedures.	3	2	1
Assists in training of all hospital staff in the safe use of biomedical equipment.	3	2	1
Assists in maintaining the records of all equipment handled by the Biomedical Engineering Department.	3	2	1
Provides technical support on new and replaced biomedical equipment.	3	2	1
Responsible for keeping current on new developments in biomedical equipment and systems.	3	2	1
Participates in performance improvement and information management programs.	3	2	1
Demonstrates knowledge and is able to identify each patient's age-specific needs to promote a safe environment needed by the patient group.	3	2	1
Maintains compliance with Joint Commission, federal, state and local standards and regulations.	3	2	1
Performs all aspects of patient care in an environment that optimizes patient safety and reduces the likelihood of medical/health care errors.	3	2	1

Professional Requirements:

Adheres to dress code, appearance is neat and clean.	3	2	1
Completes annual education requirements.	3	2	1
Maintains regulatory requirements.	3	2	1
Maintains patient confidentiality at all times.	3	2	1
Reports to work on time and as scheduled, completes work within designated time.	3	2	1
Wears identification while on duty, uses computerized punch time system correctly.	3	2	1

SUBJECT: MEDICAL EQUIPMENT MANAGEMENT PLAN	REFERENCE #7001
DEPARTMENT: HOSPITALWIDE	PAGE: 1 OF: 11
APPROVED BY:	EFFECTIVE:
	REVISED:

MISSION:

Insert your mission statement for the medical equipment management plan. Be sure that the mission for the plan reflects the mission statement of the organization.

SCOPE:

- The scope of medical equipment management plan defines the processes which _____ Hospital (list all sites that are included in this plan) provides for the safe and proper use of medical equipment used in the patient care setting. The Engineering and Biomedical Engineering Departments provide services seven (7) days per week, 24 hours per day. The Engineering Department has contracted with the following companies to provide services (include the name of the company and what equipment services are supplied):

_____	_____
_____	_____
_____	_____

OBJECTIVE:

The objective of _____ Hospital's medical equipment management plan is designed to assess and control the physical and clinical risks of all equipment used in the diagnosis, treatment, monitoring and care of our patients.

GOALS:

- The goals of _____ Hospital's medical equipment management plan includes the following:
 - To minimize the clinical and physical risks of equipment through inspection, testing and regular maintenance
 - To establish criteria for identifying, evaluating and inventorying equipment which is included in the program
 - To provide education to personnel on the capabilities, limitations and special applications of equipment; operating, safety and emergency procedures of equipment; the procedures to follow when reporting equipment management problems, failures and user errors; and the skills and/or information to perform maintenance activities

SUBJECT: SELECTION AND ACQUISITION OF EQUIPMENT	REFERENCE #7003
DEPARTMENT: BIOMEDICAL ENGINEERING	PAGE: 1 OF: 2
APPROVED BY:	EFFECTIVE: REVISED:

PURPOSE:

Ensure that medical equipment under consideration for use in the facility is evaluated prior to purchase, lease or rental.

POLICY:

All medical devices, including replacement and new equipment, will be based on a needs assessment completed by the individual department requesting the equipment. The Biomedical Engineering Department, in conjunction with nursing, medical staff and other relevant departments, will evaluate equipment before acquisition.

PROCEDURE:

- The requesting department will complete a needs assessment for the selected equipment and submit the request to the Capital Equipment Committee for review.
- The Capital Equipment Committee will review the needs assessment to determine if the purchase is justified.
- The equipment will be evaluated for:
 - Safety
 - Infection control
 - Clinical effectiveness
 - Compliance with manufacturer’s specification and codes and standards
 - Compatibility with existing equipment/systems
 - Ergonomic and operational factors
 - Maintenance and operating costs throughout equipment’s life

SUBJECT: USE OF CLINICAL ALARMS ON MEDICAL EQUIPMENT	REFERENCE #7021
DEPARTMENT: HOSPITALWIDE	PAGE: 1 OF: 3
APPROVED BY:	EFFECTIVE: REVISED:

POLICY:

_____ Hospital shall assure that all clinical alarms and medical equipment alarm systems utilized for patient care are properly operational and alarms are activated when the appropriate settings are in use.

PROCEDURE:

- Routine preventive maintenance (or established maintenance strategy) and testing of clinical alarms and alarm systems associated with medical equipment will be performed by the Engineering/Biomedical Department:
 - The Engineering/Biomedical staff will inventory all equipment/devices that are equipped with an alarm that is designed to elicit a response.
 - This includes all medical (patient care) equipment such as ventilators, infusion pumps, anesthesia gas monitors, hemodynamic monitors, etc., as well as safety and security alarms such as infant abduction alarms, patient “wander guard/fall alarms”, etc.
 - Each piece of medical equipment/device to be utilized for patient care will be inventoried for risk.
 - Each safety/security alarm throughout the institution will be inventoried for risk.
 - Assess each device and assign a risk score based on inherent risk of the device (or safety/security system) failing to alarm or failing to draw the attention of staff (staff do not respond to alarm).
 - Risk scoring risk will be assigned on a 0 - 5 scale, with 0 (zero) being **no risk** to patient 5 (five) being **serious risk** including possible death to the patient.
 - Testing of all equipment/devices and safety/security systems will be performed, starting with devices with the highest risk potential. Testing is designed to ensure the alarming mechanism (audible, visual, both) is functioning according to the manufacturer's specifications.

SUBJECT: INFUSION PUMPS - EQUIPMENT INSPECTION, CARE AND MAINTENANCE	REFERENCE #7022
	PAGE: 1 OF: 4
DEPARTMENT: BIOMEDICAL ENGINEERING	EFFECTIVE:
APPROVED BY:	REVISED:

PURPOSE:

To ensure that medical equipment used for patient care is clean, functional, safe, available and properly inventoried.

POLICY:

- Infusion pumps for patient use are electrical with battery operation back-up support. The infusion pumps are computerized which allows the delivery of specific doses of medications as ordered by the patient’s licensed independent practitioner. All infusion pumps utilized in the facility will have free-flow alarm systems and dose-registration locking devices.
- These protocols are to be followed when cleaning and checking the unit:
 - Activities to be performed in the decontamination room:
 - Remove any tape from machine, used tubing, etc., and discard in the appropriate biohazard waste container
 - Review and follow manufacturers’ instructions for decontamination
 - Unlock unit and clean inside plastic panel, per manufacturers instructions
 - Return clean unit to the equipment room
 - Activities to be performed in equipment room by the Biomedical Engineering Department:
 - Test pump for working condition of all alarms within the pump as a system, including assurance that pump contains working free-flow protection alarm.
 - Test pump for working condition of all dosing information/registration devices and associated locking mechanisms.
 - ◆ Conduct quarterly review of maintenance logs for infusion pump operational issues, including issues related to infusion pump alarms and locking mechanisms.