**Purpose:** To improve the effectiveness of clinical alarm systems by providing guidance on alarm coverage, alarm use, and adequate annunciation of alarms.

**Policy:**

1. Biomedical Engineering manages preventive maintenance and testing of medical equipment in the Hospital.
2. Alarm systems incorporated into medical equipment and into patient monitoring systems shall be activated whenever the piece of equipment is in use. This applies to alarm systems that are triggered by physical or physiologic monitoring of the individual, by variations in measured alarm settings on medical equipment directly applied to the patient and emergency assistance alarms. Alarm limits should be set within acceptable ranges based upon the patient's condition.
3. Alarms should not be disabled or inactivated at any time, nor shall they be set to such extremes as to fail to detect significant changes in a patient's condition or operation of the equipment.
    a. Alarms may be temporarily silenced using a predetermined alarm silence function (generally limited to 2 minutes), only when the patient is receiving care by healthcare providers at the bedside. The alarm silence should be reset back to an active alarm status when care is completed and before the healthcare provider leaves the bedside.
4. Alarm and alarm limits shall be set based on the clinical setting and the clinical condition of the patient when the equipment is placed in use with each new user.
5. To encourage recognition of patient-safety risks, each department shall identify and train staff responsible for verification, testing, and alarm activation.

**Procedure:** Specific procedures for effective use of alarm systems are as follows:

1. Each clinical area shall be responsible for effective alarm coverage and that clinical alarms are used appropriately and they are annunciated adequately.
2. Clinicians using the device shall have documented competency with its operation.
3. Active medical device alarms shall be:
    a. Activated whenever the medical device is in use
    b. Verified at the start of each shift
    c. Verified if the patient is transported between clinical areas
4. When clinical alarms are annunciated, staff should physically check the patient and evaluate the reason for the alarm before resetting it. The alarms may be muted for the brief period of time only when the staff member is monitoring, evaluating, and/or treating the patient. Before, turning attention away from the patient, the alarm shall be reactivated.
5. The Careview system shall not be utilized in monitoring patient status in response to alarms.
6. Whenever possible, the volume level of clinical alarms shall be sufficiently audible with respect to distances and competing noise to be heard by the responsible clinicians in the immediate patient care area. This may require that the alarm volume be adjusted upward at certain times of the day based upon the noise level and activity in the patient

care area. Patient's room and physical location in the patient care area may need to be moved to improve audibility of the alarm.

7. Patient monitors shall not be placed in stand-by mode for indefinite periods of time and should be used only when needed to facilitate patient treatment or care (bathroom, eating, bathing, etc);.
8. Special care will be provided to high risk medical device alarms, e.g. ventilators and provide immediate response when these clinical alarms are triggered annunciated.
9. Medical devices found to have non-functioning alarm systems should be immediately removed from service until repaired by Biomedical Engineering.
10. Monitor and/or device information shall be included in Hand-Off Communication.