SHADY GROVE ADVENTIST HOSPITAL PATIENT CARE POLICY MANUAL	
Structure Standards for Telemetry Services	
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PURPOSE	To provide guidelines in order to safety monitor patients remotely on hard wire and non hard wired telemetry. To describe the correct process involved in remotely monitoring patients on telemetry.
PEOPLE AFFECTED	Nursing personnel, Telemetry monitor Technicians, and other health care professionals.
SUPPORTIVE DATA	The Telemetry Room is located on the third floor of the hospital inside the ACCU area. It provides 24 hours of continuous cardiac telemetry and/or SPO2 monitoring. It is equipped with 13 central stations capable of monitoring 120 Channels. Several devises are placed to insure continuing monitoring even when electricity is lost.
CONTENT	**Unit Objectives** • To provide an environment conducive to healing through the prompt detection and treatment of conditions causing dysrhythmia/ respiratory distress requiring prompt interventions **Administration and Organization of the Unit** • The Telemetry Services is organized within the Critical Care Division of the Nursing Department. Overall management of the area is the responsibility of the IMCU Nurse Manager. Supervision, direction, and support is provided by the Director of Critical Care Services. Collaboration with other department heads takes place periodically through formal and informal meetings. **Direction of the Telemetry Services** **Nursing Direction** • The IMCU Nurse Manager is an RN with requisite clinical and managerial experience. He/ She is specially selected by the Director of Critical Care Services to assume overall responsibility for the effective organization and management of the Telemetry Area . He/she has 24 hour responsibility for the effective functioning of the staff including their development and evaluation, the efficient functioning of the unit; and the quality of patient care provided in the setting. • The Charge Nurse and/or designee with the requisite clinical experience is selected by the IMCU Nurse Manager to oversee the shift for the purpose of facilitating unit communications, coordination, and delivery of patient care. The IMCU Nurse Manager assigns a relief charge nurse from the staff to provide these duties when the Charge Nurse is unavailable. • The Administrative Supervisor is a member of the Nursing Management Team, and in the absence of the Nurse Manager acts as a resource person to the Charge Nurse/Relief Charge Nurse, and Telemetry technicians providing direction and support during weekend, holidays, and alternative shifts. The Administrative Supervisor contributes to staff development and evaluation of Telemetry staff and communicates with the unit Nurse Manager on a regular basis regarding staff performance and any problems concerning unit operation or patient care.

- The IMCU Nurse Manager reports to the Director of Critical Care Services. While this is a direct line relationship, the IMCU Nurse Manager maintains authority in managing the services. The Director of Critical Care Services provides direction, support and guidance to the nurse manager and aids in her/his development both clinically and administratively. The Director of Critical care Services provides an additional level of clinical expertise and functions as a resource to the staff as well as the nurse manager. He/she is active in periodic supervision, standards development and quality improvement. The Director of Critical Care Services is responsible primarily for development of the division as a subsystem for the Department of Nursing and links the divisional unit with the executive level of the Department of Nursing.
- The Vice President of Patient Care/Chief Nurse Executive is ultimately responsible for the quality of personnel performance and patient care delivered within the Department of Nursing. He/she meets these responsibilities indirectly through delegation to the qualified Nursing Management Team. The CNE links the Department of Nursing with the medical and administrative hierarchy. He/she is ultimately responsible for the growth of the Nursing Service as a whole in seeing that it responds to the needs of the institution specifically and the Community in general.

Medical Direction

- The responsibility for ordering and discontinuing telemetry services are specified in the delineations of privileges of the Medical Staff Bylaws.

Quality Improvement

- The Critical Care Committee is responsible for overseeing the quality of care in the Telemetry Area, and for making recommendations for quality improvement and utilization.

Hours of Operation

- The Telemetry Services provides continuous monitoring daily census 24 hours a day. Staffing will be adjusted for census changes.

Utilization of the Unit

Admission Policies

- Please see Admission/ Discharge/ Criteria Policy for Telemetry Services.

Limitations

- Limitations to the care provided are based on the demand for transceivers beyond capacity and/or insufficient staff to monitor patients safely.

Length of Stay (LOA)

- Generally, length of stay is determined by the patient's physical status, including

his/her ability to meet a defined discharge criteria.

- A patient's length of stay should be consistent with the average length of stay for patients with similar conditions and acuity levels. The attending physician and/or Intensivist in conjunction with the nursing staff and the monitor technician will maintain quality of care so that the patient can be discharged as early as possible.
- All available resources should be used to facilitate a timely discharge – for example, multidisciplinary rounds, daily interaction between physician and/or Intensivist and nursing staff and/or telemetry technician .
- Periodic care conferences will be scheduled to determine appropriate utilization, and priorities for all patients requiring continuous telemetry monitoring and plan their care accordingly.

Governing Rules of the Unit

Visitors

- Visitors are not allowed in the Central Monitoring Room in order to maintain patient's safety .

Cell Phone Usage

- Cell phone usage is discouraged inside the Telemetry Room.

Electrical Safety and Maintenance

- The Clinical Engineering Department will perform regularly scheduled maintenance on the telemetry monitoring equipment, including all transceivers.
- Transceivers and other monitoring equipment will be returned to the telemetry room within one hour of disconnection.
- Batteries , electrodes , telemetry pouches, strip paper will be ordered and kept on each individual unit.
- Transceivers and other monitoring devices will be stored in the central station, located in the ACCU.
- A designee of the requesting unit will sign out the equipment on the equipment log-sheet according to channel assignment.
- Damaged or defective equipment will be returned to the telemetry room to be identified, labeled, and returned to biomedical engineer services for repair
- ***When essential equipment malfunctions, it will be reported to the Bio-medical Engineering Department immediately, and to the following individuals through the chain of command. Charge, Nurse, Nurse Manger, Nursing Supervisor, and Director of Critical Care services.*** The incident is entered in the HERCULES reporting system.
- The unit follows hospital policy on Electrical Safety and Maintenance.

Infection Control

- Telemetry Services adheres to the infection control measures outlined in the Hospital Infection Control Manual.

- All discontinued transceivers, lead sets and other devises will be cleaned with EPA

registered identified germicidal agent, and returned to the central monitoring Room in ACCU.

Housekeeping

- The housekeeping department provides supplies, equipment, and personnel to assist the nursing staff in maintaining an environment conduce to the healing process.
- The housekeeping personnel assigned to the Telemetry Services are trained in the proper disinfection of surfaces and equipment necessary for the purpose of preventing infections and cross contamination .

Patient Confidentiality and Rights

- All patient information is confidential and is protected by the hospital's Patient Bill of Rights.
- Any discussion of patient information in public areas is a violation of hospital policy, requiring disciplinary action.
- Patient's records are to be seen only by the appropriate hospital employees.
- Patients/Patients Representative requesting to see their records may do so at any time. It is preferable to have a healthcare provider present while the patient/ patient representative reviews the records to answer questions and concerns.

Emergency Equipment.

- Emergency telephones- Hot –Line " Red Telephones" are located in all Pt Care units providing Telemetry monitoring services. They provided a safety net in the case of failure with the Vecera to Vocera communication system .

Fire and Disaster Plans

- There are two exits located on each side of the unit and two in the middle of each ICU/CCU section for evacuation.
- Telemetry Services follows the hospital wide fire/Disaster plan. All staff participate in drills and competency training required by hospital wide policy.

Staffing

- The Telemetry Services is staffed with enough professional and nonprofessional staff members to provide the appropriate care for its average daily census, as outlined in the annual unit budget.
- Each monitor technician will monitor approximately 56 channels
- Assignments are made with consideration for patient monitoring needs, and Technician/ RN capabilities
- The charge nurse, Nurse Manager and Administrative Supervisor will make arrangements to meet changing acuity levels or increased patient census.
- More telemetry technicians and/or nurses can be provided by approaching first part-time and then full-time staff to work overtime or by obtaining approved personnel available on a per diem basis through the Nursing Office.
- Staff may be offered a E-day or PTO day. All staff will report to work as scheduled

unless notified ahead of time by the charge nurse. Required records of staff utilization will be maintained on the unit and in the nursing office.

- The Nurse Manager is responsible for scheduling adequate coverage of all patients
- The schedule is made by the IMCU Nurse Manger with staff input through the use of scheduling guidelines.
- These schedules are submitted by the Nurse Manager, and are entered in the ANSOS scheduling program.
- There will be 1 to 2 monitor technicians per shift.
- Shifts will be 8 1/2 hours long, inclusive of lunch and breaks, and will be from 0630 to 1500 for day shift; 1430 to 2300 for evening shift; and 2230 to 0700 for night shift.
- Depending on department needs 12 ½ hrs shifts may be required in order to meet staffing needs
- Scheduled meal breaks will be covered by Telemetry Technicians, IMCU/ACCU staff, or other staff trained in dysrhythmia recognition..
- In the event of a sick call in, IMCU/ACCU staff, monitor technicians, and nurses trained in dysrhythmia recognition will cover for the absent system operator. The nursing office and IMCU charge nurse must be notified according to hospital sick call policy.

Preparation

- Staff will be hired for Telemetry Services by the Nurse Manager in collaboration with the Director of Critical Care Services. Staff will be selected based on current vacancies, education, experience and an interview process.

Orientation

- All Telemetry staff will complete hospital and unit orientation programs which are structured, formalized, and individualized.
- All staff will have an additional period of review at the end of the formal orientation period.

Continuing Education

- All staff will attend ongoing educational events held within the Department of Nursing and within the Telemetry Services. These educational activities will be based on routine and new responsibilities of nursing staff, identified learning needs, and data from patient care review activities (HERCULES reports).

  Mandatory educational activities include:

  1. CPR certification
  2. Annual Learning Suite Required Modules
  3. Required Competency Skills.

STANDARD OF CARE

- All patients placed on the telemetry monitoring system will have continuous monitoring of dysrhythmias and/or physiologic parameters. These dysrrhythmias and physiologic changes will be communicated to the primary nurse based on the priority for notification.

- The monitor technician will maintain the standards of practice related to the acquisition, detection, storage, and distribution of patient information.

- The nurse will be responsible for the observation, assessment, and maintenance of the equipment used for monitoring in addition to the assessment and intervention of physiologic changes in the patient's status.

General Information

The nurse and monitor technician must communicate the following information:

- · Request for transceiver and cables.
- · Initiation of monitoring.
- · Discontinuation of monitoring.
- · Interruption of monitoring.
- · Procedures or treatments.
- · Transfer to another unit and/or room.
- · Pacemaker or other implantable device.
- Electrodes should be changed every 24 hours and PRN.

SYSTEM MANAGEMENT

Admission

- The charge nurse or primary nurse will notify the monitor technician of the need to monitor a patient.
- Telemetry admission data, along with monitoring parameters, if applicable must be received by the monitor technician, located in the central station on the ACCU.
- The monitor technician will record the Vocera number of the primary nurse assigned to the patient according to the information provided by the charge nurse on the unit for which telemetry has been ordered.
- The monitor technician will assign the patient to a channel and distribute the transceiver or other device to the appropriate individual. Designated floor staff will sign-out equipment with the monitor technician at the central station located in the ACCU.
- All admissions will be entered in the logbook.
- The primary nurse will confirm the patient channel by comparing the transceiver number with the channel displayed.
- The primary nurse will view the Unit Central Monitor immediately after initial report each shift and upon admission for the rhythms of their assigned patients.

DOCUMENTATION:

- Within one hour after admission and at the beginning of each shift, a strip will be run by the monitor technician for each patient on telemetry. The strip will be interpreted and sent to the unit for placement in the patient's record, under the cardiology section, by the primary nurse.
- Documentation will include patient's name, room number, channel, date, time, leads, rate, PRI, QRS duration and QT with interpretation.
- History events in the full disclosure will be reviewed every two hours and after each Level One alarm.
- Each shift will be responsible for reviewing the full disclosure to supplement known arrhythmias as well as detect any changes that may not be previously documented.
- The monitor technician on duty will review the full disclosure before and after significant arrhythmia events. After a Code Blue, the monitor technician will run a

two-hour report.

- After a rhythm has converted (e.g. atrial fibrillation to NSR), a one-hour report and a zoomed-in copy of the event via laser printer will obtained and forwarded to the patient's primary nurse.

- During a Code Blue, lead sets will remain on the patient during resuscitation, when at all possible

Discharge

- The primary nurse or designee will notify the monitor technician of patient discharge and will return the five-wire transceiver, with the battery removed, to the central station.
- The monitor tech will complete all documentation prior to discharging patient from the system.

- The monitor technician will not discharge the patient from the system until the transceiver has been returned. A twenty-four hour summary will be printed on each discharged patient.

Alarm Management:

- The patient's parameters can be individualized via physician's order or in consultation with nursing.
- Alarms will be **ON** at **ALL** times. SMART ALARMS and the silence function will be used to control audio alarms.
- The "level" function may **NOT** be turned off for recurring alarms; the store function may **NOT** be turned off for recurring alarms.
- In the event of recurring alarms, the primary nurse will be contacted.
- When the transceiver is removed from the patient for diagnostic studies or other reasons, the primary nurse, or designee, will notify the monitor technician that the patient will be off the system by phone/hotline prior to removing the transceiver. The transceiver should remain in the patient's room until either reapplied or returned to the central station.
- Level One alarms must be validated and cleared immediately to prevent audio recurrence.

Alarm Notification

- The monitor technician will notify the nurse of dysrrhythmias via Vocera and/or hot-line.
- All calls will be entered in the system log with the time, date, and name of those initiating/receiving the calls.
- When the nurse receives a call, the nurse will respond immediately by going to the patient's beside and holding down the remote button on the telemetry transceiver for three seconds to confirm. If the patient is being monitored by an instrument transceiver, the nurse will verify receipt of the call by calling the central station hotline.
- The monitor technician will notify the appropriate unit of equipment and signal difficulties by calling the unit phone. If no action has been taken within five minutes, the system operator will recall the unit.

STAT or Priority One Level Alarms:

Priority One Alarms are:

- ***V FIB***
- ***V Tachycardia > 8 beats***
- ***Asystole***
- ***Brady arrhythmias <35 BPM***
- ***New onset of Third degree heart block***
- ***New onset of pacemaker malfunction (non-capture or sensing problem)***
- ***Discharge of AICD, PCD***
- ***Leads off (critical lead)***
- ***Apnea***
- ***O2 Sat. less than 85%***

- All Priority One will be called via Vocera to Vocera if no answer use **"emergency break-through"**. In addition to the monitor technician will place a call to the patient's unit via the hotline. Priority One pages must be responded to within one minute.

Priority Two / Level Two Call

- *Priority Two / Level Two Calls include:*
- *· PVC's 4-7 beats in a row*
- *· A marked increase in ectopy, couplets, new presence of multifocal ectopy*
- *· New onset of atrial fibrillation or atrial flutter*
- *· Junctional rhythm and escape beats*
- *· New onset of bradycardia less than 40 BPM*
- *· New onset of tachycardia greater than 150, pauses (> 2 seconds)*
- *· Other as determined: i.e. AIVR (V Rhythm), prolonged intervals, ST*
- *depression/elevation, SVT/PAT*
- *All Priority Two pages must be responded to within five minutes.*
- *G. Priority Three / Level Three Call:*
- *Priority Three/Level Three Calls Include:*
- *· Low Battery*
- *· No signal*
- *· Check Lead*
- *· Lead off (non-critical)*
- *· Artifact/electrode check*

Level Three calls do not require verification

- The monitor technician at the central station will note correction of the situation.

Vocera / Hot-Line Communication/Escalation

- The charge nurse and the patient's primary nurse will carry a Vocera at all times..

- Nurse caring for a telemetry monitored patient will confirm assignments with Vocera numbers with the monitor technician by 2300, 0700, 1500 and 1900 each day.
- Vocera numbers will be reviewed every shift and/or at the time of transfer.
- Periodic validation of the integrity of the Vecera communication system between the nurse and monitor technician will occur.

- In the event of a dysrhythmia notification, the monitor technician will immediately go to the view screen and observe the dysrrhythmia in at least three leads for verification.
- ***If confirmation of a Level One event has not occurred within a minute of the vocera notification, the system operator will immediately call the Charge Nurse, and/or call the hot-line to notify the nurse of the event. If no confirmation of a level one event occurred by the primary nurse or the Charge Nurse within 3 minutes, the Monitor Technician may call for a Rapid Response or Code Blue.***
- ***If confirmation of a Level Two event,*** *by the primary nurse or designee, has not occurred within three minutes, the system operator will recall the Charge Nurse. If no confirmation by the Charge Nurse the Administrative Supervisor will be called.*
- *Backup notification of all Vocera will be done by hot-line. In addition, if the Vocera system is not functioning, the hot-line will be used for all notifications of arrhythmias.*
- If the patient remains monitored when transferred to another department, the monitor technician must be notified of the patient's destination.

Notification of System Testing:

- The system operator will initiate a shift test by verifying the hot line is functional in all floors daily at shift changes 2300, 0700, 1500, 1900.
- The Charge Nurse or designee on each unit will notify the central station that the staff has the specific Vocera communication devise with an extension number within 15 minutes of prior to initiation of the shift, and as needed when there is an assignment change..
- If the Charge Nurse, or designee, does not contact the monitor technician within the 15 minutes prior to the initiation of the shift, the monitor technician may call the unit via the hotline.
- Failure to respond to a shift test may result in a repeat call/and or notification of the Administrative Nurse Supervisor.

NURSING RESPONSIBILITIES

- When the patient returns to the unit, the transceiver will be reconnected within five minutes. The nurse will assure that a rhythm is seen on the unit Central Station Monitor, and notify the Monitor Technician to assure that the patient's rhythm is now present at the Telemetry Room Room
- The nurse or designee will notify the system operator if the patient is undergoing drug or electrical therapy that may induce a rhythm change.
- Telemetry EKG strips will be placed on the patient's medical record under the cardiology section.
- If the nurse is unable to trouble shoot equipment in a timely manner, the nurse should notify the monitor technician promptly for replacement equipment.
- Notify the monitor technician when the patient's telemetry is discontinued, the patient leaves the floor, or the unit is taken off for any reason.
- The nurse will check the lead placement telemetry and telemetry box number at the beginning of each shift.
- The nurse will report at change of shift the patient's rhythm and last 24-hour.

If the monitor tech observes an arrhythmia, the nurse will:

- ***Verify patient name and room number.***
- ***Go immediately to check on the patient.***
- ***Assess Level of consciousness.***

	• ***HR and rhythm, BP.*** • ***Presence of chest pain.*** • ***Color of skin.*** • ***Implement standard dysrhythmia orders*** • The nurse will notify the physician of any change in rhythm. **Notification and Documentation Requirements** • At the beginning of each shift, the off-going shift operator will communicate to the on-coming shift operator pertinent information related to each patient he or she has been responsible for, including but not limited to: heart rate, rhythm, dysrhythmia events. • Within two hours of the beginning of each shift and every eight hours and upon discharge, the monitor technician will interpret a rhythm strip for each monitored patient. The following parameters will be measured: HR, PRI, QRS and QT • Each patient's history will be reviewed as follows: every two hours, after each alarm and after each lethal dysrhythmia. • Nurses on the floors utilizing bedside monitors (HR/pulse oximetry, NIBP monitoring), will be notified of a change in the rate and rhythm by hotline/Vocera, which will be immediately upon identification of status change. This change will be documented by the monitor technician in the call logbook. • Documentation will be made from the full disclosure, zoomed in mode on three leads. (Leads II, V1, AVR).
RESPONSIBILITIES	All nursing staff, Monitor Technicians
REFERENCE(S)	Bell, L (2008). AACN Standards of care for Acute and Critical Care Nursing Practice, J. Grif Alspach, 6th Ed. 2006 AACN Core Curriculum for Critical Care Nursing , *2005 AACN Standards for Establishing and Sustaining Healthy Work Environments.*
APPROVAL	
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