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| <br><b>Lakeridge Health</b><br><br><input checked="" type="checkbox"/> Harmonized | <b>Telemetry Utilization for Care of Medicine Patients – Policy and Procedures</b>  |   |
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|  | Document Applies to: All Lakeridge Health (LH) Staff and Physicians   |   |
|  | <b><i>A printed copy of this document may not reflect the current, electronic version on Lakeridge Health's Intranet, 'The Wave.' Any copies of this document appearing in paper form should ALWAYS be checked against the electronic version prior to use.</i></b> |   |

## Introduction

Telemetry monitoring is widely utilized within the acute hospital setting in order to assess and monitor patients with arrhythmias and those who are at risk of developing arrhythmias. This policy is to outline efficient utilization of telemetry monitoring and resources on medicine units at Lakeridge Health (LH). This policy does not include Emergency Departments or Intensive Care Units.

## Policy

- Telemetry monitoring will be initiated for patients with an order from an authorized prescriber.
- An order for telemetry monitoring will include the duration in which the patient will remain on the monitor.
- Patients who have an order for telemetry must also have an activity level order.
- Patients on telemetry will have functional vascular access at all times.
- Once the duration in which the patient needs to be monitored is completed the nurse will discontinue telemetry monitoring.
  - If the nurse feels that telemetry monitoring should be continued (e.g. new arrhythmias, change in patient status) the Most Responsible Practitioner (MRP) should be contacted to extend the duration.
- Patient assignment will be based on the acuity and stability of the patient using the three factor framework
- It is an expectation that upon hire or transfer to a unit utilizing telemetry monitoring, the nurse(s) completes or enrolls in the next available Coronary Care 1 Course (CC1) offered.
  - If unsuccessful in enrolling in the CC1 course, a meeting will be scheduled between the nurse, Patient Care Manager (PCM), union representative, and Human Resource representative to discuss next steps.
  - Nurses who may interpret cardiac rhythms at LH will have either:

- Completed Coronary Care 1 (CC1) or equivalent (i.e. Critical Care course with telemetry interpretation)  
**AND**
- Have successfully completed the Lakeridge Health Arrhythmia Interpretation Test with a passing result of 80% or higher.
- If the Nurse is **not** successful with the Lakeridge Health test, the nurse will have the opportunity to rewrite a new version of the test, as well as participate in a cardiac and rhythm interpretation review with their Clinical Practice Leader (CPL).
- If the nurse is not successful on the second attempt of the test, the nurse will complete a performance improvement plan with the PCM and CPL.
- If the nurse is not successful after the performance improvement plan is fulfilled, a meeting will be scheduled between the nurse, PCM, Union Representative, and HR representative to determine next steps.

### **Inpatient Telemetry Units**

Nursing teams can visualize all of the telemetry monitors at the receiving monitor on the unit through the central station.

Nurses will carry a mobile device that will be programmed by the nurse to receive alerts from the central station when changes occur in individual patient rhythms. Refer to the *Cardiac Secondary Alerting – Policy and Procedures*

The below Medicine units have individual capabilities and capacities for monitoring of patients requiring telemetry. The capacity of each unit is determined by biomedical department staff and unit leadership.

- Lakeridge Health Oshawa (LHO):Cardiology Unit (C7)
- Lakeridge Health Bowmanville (LHB): Medical/Surgical Unit
- Lakeridge Health Ajax-Pickering (LHAP): Medicine Units (2 East and 2 West)
- Lakeridge Health Port Perry (LHPP):Medical/Surgical Unit

### **Indications and Duration for Medicine Unit Telemetry Usage**

The following are some of the indications and suggested durations for the utilization and ordering of telemetry monitoring.

- 12hrs of monitoring
  - Post-revascularization with a Myocardial Infarction
- 24hrs of monitoring
  - Suspected Myocardial Infarction
  - Syncope
- 48hrs of monitoring
  - Confirmed Acute Myocardial Infarction
  - Suspected myocarditis
  - Post stroke/Transient Ischemic Attack
- Other Duration – criteria for discontinuation noted for each item

- Post Ventricular Tachycardia/Ventricular Fibrillation arrest – until ICD implanted or reversible cause addressed.
  - ICD shock requiring hospital admission – until precipitating event treated.
  - Symptomatic second-degree type I atrioventricular block – until precipitating event treated or pacemaker implanted.
  - Second- degree type II atrioventricular block or complete heart block – until pacemaker implanted.
  - Wolf-Parkinson-White with atrial arrhythmia conducted via accessory pathway – until ablation or optimization of medical therapy.
  - Hemodynamically unstable or symptomatic atrial fibrillation – until hemodynamic stability achieved or symptoms resolve.
  - Moderate-Severe imbalance of potassium or magnesium, especially in the context of electrical abnormalities on the ECG at the time of the abnormal labs – until correction of electrolyte abnormalities.
  - Select drug overdoses – daily reassessment.
- Telemetry monitoring is appropriate for patients that have a “No CPR” status and are being actively treated for arrhythmia management.
  - Telemetry may be required to assist in titrating anti-arrhythmic drugs for optimum rate control.

## Definitions

**Central Monitor:** A main station displaying multiple patients’ telemetry or cardiac monitoring, including cardiac waveforms, hemodynamics, oxygenation, and providing audible alerts. The central monitor also sends alerts to mobile devices carried by the nurse monitoring each patient.

**Cardiac Monitoring:** Electronically transmitted cardiac, hemodynamic, and oxygenation signals, which are displayed at the central monitor.

**Most Responsible Practitioner (MRP) or designate:** A Physician member of the LH privileged staff, with the appropriate privileges

**No Cardiopulmonary Resuscitation (CPR):** A No CPR order excludes chest compression and cardiac defibrillation; however, endotracheal intubation, ventilation, and other modalities of organ support may be attempted.

**Mobile Device:** A portable hand-held hospital assigned device which receives alerts/notification from the central monitor in the form of messages.

**Telemetry Monitoring:** Electronically transmitted of cardiac waveforms from a patient-worn telemetry pack to the central monitor.

**Telemetry Pack:** Portable communication device worn by the patient that transmits electronic cardiac waveforms to the central monitor.

## Procedures

## **Initiation of Telemetry Monitoring**

- Review patient's electronic health record for a current telemetry order.
- Ensure order is entered into the electronic health record.

## **Education for Patient on Telemetry Monitoring**

- The nurse will provide telemetry monitoring education to the patient and/or their family/Substitute Decision Maker (SDM). Education will include:
  - An explanation that the monitor will continuously display the patient's cardiac waveform for ongoing analysis.
  - Emphasis that telemetry monitoring is a safe and timely method that ensures the healthcare team is notified if any arrhythmias are present in order to provide prompt intervention.
  - Advise the patient that physical assessment and communication of cardiac symptoms, in conjunction to monitoring is required. Remind the patient that they must still report symptomatic changes to their healthcare team, and that the nurse will continue to complete a physical assessment as patient indications and unit standards require.
  - Educate the patient/family/SDM to immediately report to the health care team (i.e. call using call bell) ANY of the following:
    - Chest pain or discomfort (e.g. heaviness in the chest, shoulder, back or jaw),
    - Pain that radiates to the left arm or back,
    - Palpitations,
    - Nausea or indigestion

## **Telemetry Pack**

- All patients who are admitted to the Medicine Program for telemetry monitoring will have the telemetry pack with a fully charged battery applied immediately upon arrival to the patient care unit.
- Upon initiation of telemetry pack, verify the alarm settings at the central monitor.
- Telemetry Pack batteries will be changed:
  - Every 24 hr for ECG only
  - Every 12 hr for ECG and continuous SPO2
  - As needed when battery is depleted

## **Telemetry Monitoring**

- Rhythm interpretation will be done using lead II.
  - Other leads may be used as appropriate and for additional clinical analysis (e.g. left or right bundle branch blocks). Select another lead if lead II does not allow for meaningful analysis.
- Analyze the patient's cardiac rhythm including ectopy/ arrhythmia at:
  - Admission
  - Transition in care (i.e.,transfer to another unit)
  - At the beginning every of shift
  - At least every 4 hours
  - With significant change in health status (i.e., with a rhythm change)
- The nurse will assess the patient when significant arrhythmias and/or other relevant problems occurs (e.g. complaints of chest pain).
- Review stored rhythm alarms and save/delete as appropriate each shift.
  - At transition of care
  - At the beginning of shift
  - With significant change in health status (i.e., with rhythm change)

If alarm limits are changed from default settings, document changes to define limits accordingly and rationale for the change(s).

- The MRP will be notified *immediately* of new and/or worsening arrhythmias or hemodynamic changes.
- The Charge Nurse/Unit Coordinator will be responsible for reviewing the telemetry bed assignment daily.

### **Electrodes**

- Apply new electrodes to patient, ensuring correct placement ([Appendix A](#)) and that skin is clean and dry prior to application.
- Change electrodes every 24 hours and PRN.
- If the patient is able to participate in their care, instruct the patient to notify the nurse if they develop a skin reaction or pruritus or if leads become disconnected
- Assess electrodes:
  - Every shift – for loss of adherence and for integumentary concerns in areas where the electrodes are placed (e.g. itchiness, redness, and skin reactions).
  - With any change in patient rhythm or condition.
  - Upon return to unit if patient is off unit for any length of time (e.g. diagnostic testing and/or procedures, therapy session).

### **Documentation**

- Document the patient's cardiac rhythm including ectopy/ arrhythmias at:
  - Admission
  - Transition in care (i.e. transfer to another unit)
  - At the beginning of every shift
  - Every 4 hours
  - Significant change in health status (i.e. with rhythm change)
  - As clinically required
- A hard copy of telemetry strips will be scanned into the electronic health record by the end
  - Rhythm strips must have:
    - the patient's name and/or unique number,
    - date,
    - time,
    - interpretation,
    - Nurse's initials
- The nurse will complete and document the following assessments upon initiation of telemetry, with changes in patient condition, and every 4 hours.
  - Cardiac
  - Respiratory
  - Vital Signs (BP, HR, RR and SpO<sub>2</sub>)

### **Discontinuing Telemetry Monitoring**

- When the recommended duration of telemetry monitoring, as indicated above, has been completed the nurse will discontinue telemetry monitoring. If the nurse feels that telemetry monitoring should be continued (e.g., new arrhythmias, change in patient status) the Most Responsible Practitioner (MRP) will be contacted to extend the duration.
- When discontinuing telemetry monitoring:
  - Explain to the patient that the monitoring is complete and the electrodes will be removed

- Discharge the patient from central monitor if applicable.
- Remove telemetry pack and electrodes from patient.
- Perform skin assessment over anterior chest where electrodes were adhered

## Transport

- For patients who have cardiac/telemetry monitoring ordered and who are temporarily leaving the unit or monitored hospital setting for diagnostic tests or therapies, refer to *Transportation (Inter and Intra Facility) of Adult Patients - Policy and Procedures*.

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## Appendix A: Correct placement of Electrodes

