

Huron Perth Healthcare Alliance	
1. Clinical Policies and Procedures	Original Issue Date: May 07, 2018
Cardiac Monitoring Guidelines	Review/Effective Date: May 07, 2018
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Scope

This policy applies to all nursing staff who may be expected to care for adult, paediatric and/or infant patients requiring cardiac monitoring in their area of work, and who have received appropriate theoretical preparation to care for these patients at the Huron Perth Healthcare Alliance (HPHA).

Policy Statement

This policy describes general standards of care related to cardiac monitoring, including managing alarms, rhythm interpretation and documentation of rhythm strips. Some patient care areas may have additional practices related to the cardiac monitoring of their specific patient populations, which should be outlined in their Unit Specific Policies & Procedures.

Purpose Statement

This policy acts as a guideline for nurses to apply best practice standards in cardiac monitoring to ensure prompt detection of changes in heart rate or rhythm. It is expected that staff, as outlined in the Scope section above, shall adhere to the principles outlined in this policy.

Definitions

Cardiac monitoring: Also referred to as ECG (electrocardiographic) monitoring

Electrocardiograph (ECG): A continuous graphic picture of electrical activity generated by the depolarization and repolarization of cardiac tissue, using electrodes placed on the skin.

Bedside or Portable ECG monitors: A monitoring system that records the electrical activity (ECG) of the heart via electrodes and lead wires that are attached directly to the patient. Impulses are transmitted directly from the patient to a fixed bedside or portable bedside monitor. In some cases these images are also transmitted to a central monitor.

Telemetry: A monitoring system attached to the patient by electrodes which use a wireless

network to transmit ECG data continuously to a centralized monitor location.

Electrode: Small adhesive gel pad applied to specific areas on the patient's skin and attached to lead wires in order to produce an ECG image.

Lead: The view of the heart that is produced when electricity passes from electrode to electrode.

Indications

Indications for telemetry include, but are not limited to:

- Known history of current presence of non-life threatening arrhythmias
- Stable patients diagnosed with cardiomyopathy, pericarditis, endocarditis, myocarditis, pericardial effusion or other conditions that may cause arrhythmias
- Sinus bradycardia with or without haemodynamic compromise
- Acute electrolyte imbalance
- Administration of medications which are known to effect the conduction system of the heart
- Establishment of new anti-arrhythmic therapy
- Monitoring for side effects of drugs that are known to cause actual or potential QT prolongation or ventricular dysrhythmias.
- Unexplained sudden collapse (recent pre- syncope/syncope) or other neurological signs/symptoms that might be due to cardiac arrhythmias.

Mat/Child Specific Indications

- Post anesthetic care – i.e. Post caesarean section
- During neonatal resuscitation procedures as per the 7th edition guidelines
- Premature infants
- Unstable sepsis in a pediatric patient
- The decision to discontinue telemetry is determined on an individual basis and is dependent upon individual clinical situations. Always follow physician's orders for initiation and discontinuation of telemetry.

Considerations

Rhythm Display

- Lead choice depends on the patient's clinical condition, the goals of telemetry (i.e. arrhythmia versus ischemia) and available equipment.
- For ischemia monitoring, the lead that reflects the area of ischemia is recommended.
- Ensure consistent lead placement and documentation when lead position has changed
- Display the patient's ECG tracing in two different leads, if available.

Alarm Parameters

- Alarm limit settings will be checked at the start of every shift on the central monitor and will be adjusted according to the individual patient condition and rhythm. *Mat/Child Specific:* For infants and Pediatrics, this will require a physician's order.
- The types of alarm parameters that can be changed by nursing staff may include rate (high or low), abnormal rhythms or complexes, and pacemaker recognition. *Mat/Child Specific:* For infants and Pediatrics, this will require a physician's order.
- If parameters are changed from default setting this must be documented in the appropriate section of the patient's electronic chart.
- The nurse must monitor and review the patient's rhythm and acknowledge alarms from the central station, if central station present.

Interpreting and posting cardiac rhythm strips

A 6 second cardiac rhythm strip will be printed, interpreted, posted and documented on in the patient's chart:

- At the initiation of cardiac monitoring
- At the beginning of every shift
- When patient's cardiac rhythm changes
- As necessary based on assessment and clinical condition (may vary with post-procedure protocol and clinical pathways)
- All documented ECG strips must have the required patient identifiers and include the date and time of the strip
- Each rhythm strip will be interpreted for rhythm, rate, presence and configuration of the P waves, length of the PR interval, width of the QRS complexes, presence and configuration of the T waves, length of the QT intervals, presence of extra waves (e.g., U waves), and presence of arrhythmias.
- Rhythm strips must be glued (not taped) onto the Cardiac Monitor Rhythm Record, and must fit within the borders of the Record without being folded.

Electrodes

- Check for correct electrode placement every shift, and monitor the skin for an allergic reaction to the adhesive or gel and rotate electrode sites when changing electrodes if sites are irritated.
- Electrode function changes as the gel dries, therefore:
 - o Change the electrodes every 24 hours to reduce the number of electrode-related technical alarms
 - o Always place packages of electrodes in a sealed bag once they are opened, and
 - o Change all electrodes if a problem occurs with one

Rhythm/Rate Changes and Arrhythmia Alarms

When an arrhythmia alarm is noted or a rhythm change is observed, the nurse must immediately:

- Assess the patient, looking for related symptoms based on their current rhythm (such as level of consciousness changes, chest pain, respiratory changes)
- Obtain a complete set of vital signs
- Communicate concerns with the patient's MRP
- Print, interpret, post and document the rhythm strip in the patient's chart
- Document assessment findings, interventions and Physician communication appropriately in the electronic chart

Potential Lethal Arrhythmias

- When lethal arrhythmia alarm is identified on the monitor, the nurse will immediately evaluate the patient and intervene appropriately based on the clinical situation.
- The nurse is expected to complete a full set of vital signs and a cardiovascular and respiratory assessment and document findings and interventions in electronic chart.
- Messages displayed with a Critical or Lethal Arrhythmia alarm, such as V-Tach, are not to be changed unless ordered by a physician.
- Never turn off the monitor alarms.

End of Shift Requirement

- Review the occurrence of patient alarms per your patient care area's practice and reassess the alarm limits with changes in the patient's condition.
- The nurse will communicate rhythm status and relevant clinical information during Transfer of Accountability.

Transferring Patients with Cardiac Monitoring

- Unless otherwise ordered by a Physician, patients with orders for cardiac monitoring will be monitored with a portable ECG monitoring system while being transferred between units and/or departments.
- Unless otherwise ordered by a physician, patients requiring cardiac monitoring during transfers will be accompanied by a healthcare professional with the knowledge, skill and judgement to manage the care related to the patient requiring continuous cardiac monitoring.

Competency Requirements

- Required theoretical preparation and competency assessments may be determined by individual units based on the patient populations they serve (i.e.; Basic Arrhythmia course, ACLS, etc)
- It is recommended that nurses complete the **eTRAIN: Self Directed Learning Package: Cardiac Rhythm Review and Practice.**

Procedure

See Elsevier module: Cardiac Monitor Setup and Lead Placement.

HPHA Related Documents

[Cardiac Monitor Rhythm Record](#)

References

Down, N. (2016). Clinical Guidelines (Nursing) Cardiac Telemetry. The Royal Children's Hospital Melbourne. Victoria, Australia.

Elsevier. (2017). Skills: Cardiac Monitor Setup and Lead Placement. Retrieved from https://lms.elsevierperformancemanager.com/ContentArea/NursingSkills/GetNursingSkillsDetails?skillid=CC_054&skillkeyid=66&searchTerm=cardiac&searchContext=home

Winnipeg Regional Health Authority. (2012). Clinical Practice Guideline-Telemetry.