



Origination 12/13/2023
Last 6/3/2025
Approved
Effective 6/3/2025
Last Revised 6/3/2025
Next Review 6/2/2028

Owner Jennifer Standfest: CNO
Area/Department Nursing
Applicability MMC, Cadillac, Charlevoix, Grayling, Otsego

Cardiac Telemetry Monitoring

Purpose

To enhance patient safety and clinical consistency by outlining continuous cardiac monitoring guidelines, arrhythmia detections and overall alarm management.

Definitions

- Cardiac Monitoring/Telemetry Monitoring:** Continuous cardiac rhythm display at the bedside and/or transmitted to a central monitoring console that can provide alarms or print/save rhythm strips.
- Telemetry Technician:** Licensed or unlicensed staff member with training and competency in electrocardiogram (ECG) rhythm interpretation.
- Telemetry Observer:** An individual assigned to listen for and/or observe specific visual cues with the intention of escalating information to a resource trained to assess and/or intervene in a specific situation.

Policy

- An order is needed to initiate and discontinue cardiac monitoring. Orders should specify any parameters and any circumstances in which the patient can be temporarily or permanently removed from monitoring.
- When initiating cardiac monitoring, the following identifiers are used:
 - 10-digit account number
 - Last Name, First Name (NOTE: This will automatically pull through ADT feed if 10-digit account number is entered correctly)

- C. The Registered Nurse (RN) is responsible to:
1. Initiate and maintain continuous monitoring and to perform initial review and adjustment of settings and alarm parameters.
 2. Regularly review and interpret cardiac rhythm and document findings in the chart.
 3. Assess need for continued cardiac monitoring daily, using provider orders or protocol, where applicable.
 4. Report clinically relevant abnormalities identified on review or by alarm/event review to the provider. Abnormalities include but are not limited to:
 - a. Any new dysrhythmia (i.e., tachy or brady arrhythmia exceeding alarm)
 - b. Heart block
 - c. New atrial fibrillation or flutter or inadequate rate control of these rhythms
 - d. Ventricular tachycardia/fibrillation
 - e. Supra-ventricular tachycardia
 - f. Any symptomatic patient with a dysrhythmia
 - g. Any dysrhythmia requiring immediate treatment
 5. Initiate code response or other facility specific rapid response protocols or appropriate emergency interventions
 6. The RN may delegate tasks to appropriately trained support personnel. These may include, but are not limited to: equipment preparation, skin preparation, electrode application/reapplication, application of monitoring equipment.
- D. Where present, telemetry technicians may review and adjust specific settings and alarm parameters and may interpret cardiac rhythms, complete specific documentation, and shall report abnormalities to the RN.
1. The technician will monitor each telemetry unit for ventricular tachycardia, ventricular fibrillation, asystole, tachycardia and bradycardia, low battery and lack of rhythm. The telemetry technician will contact the nurse with findings.
 2. A telemetry log may be kept on each unit with pertinent info such as the patient's name, dominant rhythm, assigned nurse and the direct phone number(s) for the assigned care team.
- E. A telemetry technician and/or any RN not directly responsible for the patient's care who observes events or responds to alarms at the bedside or central monitoring station will notify the primary nurse of any changes in the patient's condition, monitor settings, or alarm parameters.
- F. Where present, telemetry observers are identified 24 hours a day. The telemetry observer may perform other clerical duties that do not remove them from direct view or audio of the monitor. The observer will arrange for another trained observer or nurse to fill the role temporarily if needed for breaks or to perform other job duties away from the area.
- G. Any support personnel should consult with/notify the appropriate individual (eg., telemetry observer or technician, RN, etc.) prior to removing a patient from monitoring for showering,

procedures/testing or discharge.

Electrode and Lead Placement, Battery Replacement

- A. Electrodes are applied according to Lippincott Procedures - Cardiac monitoring (lww.com) instructions found online. Electrodes shall be changed daily and as needed (PRN) or in accordance with manufacturer recommendations.
- B. Lead placement should be confirmed at the beginning of each shift, along with verification the monitor / transmitter is functioning properly and that suitable battery life remains.
- C. Battery change should occur minimally when "low battery" signal appears, or with approximately 25% battery life remaining.

Lead Selection

- A. Lead II is generally selected as the standard monitoring lead.
- B. For a standard 5 lead system, V1 is commonly selected as the second lead. An alternate lead may be selected based on which provides a clearer trace, more prominent or upright waves, or by which a particular area of the heart can be better monitored.

Cleaning

- A. Upon discontinuation of telemetry monitoring, the telemetry unit and electrodes are cleaned per manufacturer instructions.

Cardiac Rhythm Waveforms and Documentation

- A. A rhythm strip will be measured, interpreted, and documented per the following guidelines:
 - 1. Rhythm interpretation is ongoing and documented as part of the nursing assessment
 - 2. Inpatient care (critical, intermediate, or telemetry care departments) at admission, each shift with initial RN assessment, and with any significant change in rhythm or significant symptoms
 - 3. Emergency Department (ED) at admission and with any life-threatening rhythms or significant changes in patient condition
 - 4. Rhythm waveform documentation should include the name of identified rhythm, heart rate, PR/QRS/QT intervals where applicable, and the name of the RN or Telemetry Technician performing the documentation.

Monitoring Guidelines

- A. HR alarms will be set appropriately to the patient's baseline HR, rhythm, clinical condition or treatment plan by an RN or Telemetry Technician.
- B. If a monitored patient has a pacemaker, the pacemaker detection function of the cardiac monitor must be turned ON

Refer to Munson Healthcare (MHC) entity specific intravenous (IV) Medication Guidelines and/or consult with pharmacy for information related to risk of prolonged QT interval and for IV medication administration and required monitoring.

- C. QT interval monitoring functions of the cardiac monitors may be utilized by the RN/Tele Tech as an adjunct to patient / rhythm assessment. A patient with a baseline prolonged QT or on a medication that has the potential of prolonging the QT interval may have orders for more frequent QT measurements.
- D. ST segment monitoring and ST mapping functions of the cardiac monitors may be utilized by the RN/Tele Tech as an adjunct to patient assessment. (Note: some clinical conditions make it difficult to achieve accurate ST monitoring i.e., atrial fib or flutter with an irregular baseline, ventricular pacing, left bundle branch block. Consider turning ST monitoring off in these conditions).
- E. Silencing Alarms:
 - 1. A trained telemetry observer or technician or a registered nurse may silence clearly erratic/false alarms such as those caused by motion or artifact while requesting evaluation by clinical personnel.
 - 2. A lethal rhythm alarm may be silenced by a Telemetry Technician or RN after the RN evaluates the rhythm and/or patient condition.

Alarm Settings and Clinical Management

- A. The Clinical Engineering department has oversight for the testing and maintenance of clinical devices to ensure accurate settings, proper operation, and detectability of alarms.
- B. Monitor settings are configured according to manufacturer recommendations to enhance patient safety. A copy of all configuration settings is maintained by the Clinical Engineering department. These settings may only be changed with approval of the Cardiac Monitoring Steering Committee or the Cardiac Monitoring Alarm Committee, with the endorsement of the Clinical Leadership Council.
- C. Arrhythmia monitoring will be on and audible for all monitored patients, with the exception of patients who are receiving end of life care, where death is anticipated and an order for comfort care is present.
- D. Alarm volume should be set audibly so that nursing staff is able to hear and respond appropriately to non-critical and critical alarms. It is the responsibility of the bedside nurses, the unit coordinator, and other clinical staff to maintain the appropriate alarm volume which decreases noise pollution for patients and visitors, while ensuring prompt staff notification of alarm situations.
- E. Select alarm parameters are unlocked and able to be adjusted on an individual basis by the RN, Telemetry Technician, or other licensed clinician within their scope of service.
- F. All monitor alarm settings should be adjusted to reflect patient or condition specific values and should be reviewed and adjusted (if indicated) at admission, each shift, and as needed by the RN and/or Telemetry Technician.
 - 1. The nursing staff member will determine the appropriate response to the alarm; however, the nurse is responsible to confirm findings, verify patterns, and evaluate

interpretations through patient assessment. The response to an alarm may include but is not limited to silencing the alarm, recording the strip, and/or initiating emergency interventions.

2. In the event of a Code Blue or Cardioversion, an event strip will be documented containing the initiation of the event and documentation of changes in rhythm continuing through termination of efforts. As an alternative, a strip from the defibrillator may be used to record the events of the Code Blue.

G. Patient care staff are familiar with alarm settings, policies and procedures.

Transfer/Discharge Procedure

- A. At the time of transfer/discharge, the patient MUST be discharged from the bedside and/or central monitoring console, and when applicable, have their encounter be dissociated from the electronic health record (EHR).
- B. Refer to manufacturer instructions for use for specific steps to transfer or discharge patient.

Transport Monitoring

- A. An RN (or in some cases, a paramedic) shall accompany the patient for transport if the patient is in critical condition, hemodynamically unstable and/or on continuous vasoactive infusions.
- B. Other monitored patients transported by unlicensed staff will be monitored remotely by the telemetry technician, telemetry observer, or RN. A portable phone will be assigned and in the possession of the staff member closest to/responsible for the patient at all times. Monitoring staff will use this phone to communicate emergency conditions and request immediate assistance for the patient.

Reference

1. Wiegand, D. L. (Ed.). (2017). AACN Procedure Manual for High Acuity, Progressive, and Critical Care (7th ed., pp. 467-476). St. Louis, MO: Elsevier.

Keywords

Cardiac, Telemetry, Monitoring, Tele Tech

Approval Signatures

Step Description	Approver	Date
System Policy Oversight Committee	Terri Fries: Document Mgmt Spec	6/3/2025
CNO Council	Jennifer Standfest: CNO [AM]	6/2/2025

Applicability

Cadillac Hospital, Charlevoix Hospital, Grayling Hospital, Munson Medical Center, Otsego Memorial Hospital

Standards

No standards are associated with this document

COPY



MUNSON HEALTHCARE

Origination 12/11/2015
Last Approved 1/24/2024
Effective 1/24/2024
Last Revised 1/24/2024
Next Review 1/23/2026

Owner Danielle Graber:
Mgr Laboratory Services -
Phlebotomy
Area/Department Laboratory
Applicability Munson
Healthcare Systemwide
Tags Policy

LAB GEN: Patient Identification for Laboratory Specimen Collection

Purpose

To provide accurate identification of patients, eliminating related medical errors and patient harm. Identification (ID) of the patient is an on-going process that begins when the patient enters the hospital and continues throughout the patient's stay. To maintain and facilitate patient care and safety and to ensure accurate and reproducible laboratory results, the labeling of laboratory samples will be consistently completed at the point of care.

Definition

1. **Point of Care:** within close proximity of the draw site; meaning at the patient's bedside or similar area (i.e. next to the drawing chair).

Policy

- A. Patients are identified by two (2) identifiers at the point of care. All samples are adequately and permanently labeled immediately upon collection at the point of care.

Identification Guidelines

- A. Two aspects of patient ID must be verified prior to specimen collection:
 1. **Inpatients (includes Emergency Room (ER) patients)**

- a. Scan the patient's ID band located on the patients' wrist or ankle with the PDA system. Ask the patient to state their legal name (First & Last) and date of birth (DOB). Compare their response to the information on the PDA system & patient ID band.
- b. If the PDA system is unavailable compare Sunquest label or chart sticker to the patient ID band located on the patients' wrist or ankle. Ask the patient to state their legal name (First & Last) and DOB. Compare their response to the information on the Sunquest label or chart sticker & patient ID band.
- c. Note: For patients who are unable to verbalize two aspects of ID, verify ID with a caregiver or family member whenever practical.

2. Outpatients

- a. Ask patient to state the following information:
 - i. Name: (First and Last legal)??
 - ii. DOB
- b. Verify this information with that on all paperwork provided including the lab requisition(s).

Labeling Guidelines

- A. Immediately upon collection all samples must be permanently labeled with two patient-specific identifiers:
 1. Affix a sunquest label, chart sticker, or hand write full legal name and second unique ID number (medical record #). If the medical record # is unknown or is not available, acceptable 2nd identifiers are the patient's DOB, account number, office chart number, social security number.
 2. Affix labels vertically down blood tubes and horizontally across other collection containers.
- B. If second label is required, the first permanent label may be covered but not removed. Double check full name and date of birth when applying second label.
- C. Samples must be labeled in the patient's presence. Do not move samples or allow patient to leave the area before labeling the samples.

Pretransfusion Specimen Labeling Guidelines

- A. Immediately upon collection pretransfusion blood specimens are labeled at the time of specimen collection in the presence of the patient with:
 1. Patient's first and last name
 2. Unique identification number (medical record #)
 3. Date and time of collection
 4. Initials of individual collecting the specimen if not Sunquest label

- B. Sunquest Label, Chart Label, or hand labeled with black or blue ink is acceptable for labeling pretransfusion specimens.
- C. Pretransfusion blood specimen collectors are recorded in the laboratory information system. All phlebotomists have a Tech ID code unique to employee. For non-laboratory staff collections, initials of collector are recorded in the laboratory information system as a comment.

Additional Information on Specimen Container(s) when Applicable

- A. Specimen Source (such as cultures)
- B. Collection Duration (12 or 24 hours for timed urine specimens)
- C. Collection Time for Serial Draws (30 minutes, 1 hour, 2 hours, 3 hour)
- D. Tube Number in Order of Draw (#1, #2, #3 for spinal fluid tubes)
- E. Preservative Added (acetic acid preservative added to a 24-hour urine container)

Glass Slides

- A. Glass slides must be labeled with the patient name. A second identifier is preferred, but the name only is acceptable.

Approval Signatures

Step Description	Approver	Date
System Policy Oversight Committee	Terri Fries: Document Mgmt Spec	1/24/2024
Lab Medical Director	William Kanner	1/24/2024
Document Owner	Danielle Graber: Mgr Laboratory Services	10/20/2023

Applicability

Cadillac Hospital, Charlevoix Hospital, Grayling Hospital, Kalkaska Memorial Health Center, MHC Corporate (Home Health, Dialysis, NMSA, etc.), Manistee Hospital, Munson Medical Center, Otsego Memorial Hospital, Paul Oliver Memorial Hospital

Standards

No standards are associated with this document

COPY



SAME DAY DISCHARGE CHECKLIST

 SAME DAY DISCHARGE

Patient Name	Phone Number
Procedure	Date of Procedure
Access Site	

Initials	Criteria for Same Day Discharge
	Vital signs and access site are stable
	Bedrest complete & patient ambulates as pre-procedure, 1 hour before discharge
	Prescriptions/booklets/cards given
	Follow up appointment scheduled in _____ (location)
	Education completed/discharge instructions given

Initials	PCI/PVI
	EKG completed
	Post procedure Hgb & Cr are completed
	Confirmed dual Antiplatelet Therapy & scripts are filled
	Cardiac Rehab consult for PCI
	Complete f/u phone call

Initials	PPM/ICD/Device
	EKG completed
	Figure 8 suture removed (if applicable)
	Chest xray completed and read by provider
	Device Interrogated
	Ice bag
	Complete f/u phone call

Initials	Left Atrial Appendage Closure
	CBC & BMP completed
	Physician's order for discharge

Initials	Ablation
	EKG completed
	Figure 8 suture removed (if applicable)
	PPI ordered (Afib only) x 30 days
	Complete f/u phone call

Initials	Sotalol Infusion
	EKG completed - 2 hours after PO dose
	No QTc prolongation - <500 mS/20% baseline
	Confirmed Sotalol prescription, 1 tab for AM dose
	Follow up EKG scheduled in office

PATIENT ID LABEL

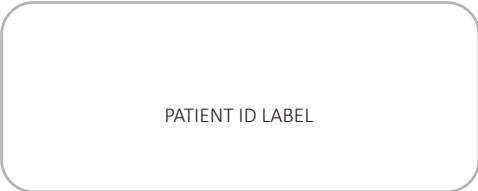
INITIALS	SIGNATURE	DATE	TIME
INITIALS	SIGNATURE	DATE	TIME

POST- PROCEDURE CALL BACK QUESTIONNAIRE

COMPLETE PRIOR TO DISCHARGE			
	Yes	No	N/A
Post-procedural concerns: ooze, bleed, hematoma, hypo/hypertension, pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			

COMPLETE DURING FOLLOW-UP PHONE CALL			
	Yes	No	N/A
Is the patient experiencing any of the following:			
Swelling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bleeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Numbness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fever	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nausea or vomiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For SDD PCI's - Are you taking your: _____? (name of antiplatelet medication)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you feel you received all the information you needed from the nurses on the day of your procedure?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you know when and where your follow-up appointment is?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns noted. Does the patient need CNS follow-up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Do you have any other comments or questions? _____			

SIGNATURE	TITLE	DATE	TIME
SIGNATURE	TITLE	DATE	TIME



Status **Active** PolicyStat ID **17748818**



Origination 10/26/2009
Last Approved 8/4/2025
Effective 8/4/2025
Last Revised 5/5/2022
Next Review 8/3/2028

Owner Rebecca Pines:
Dir Nursing
Cardiac Cath Lab
Area/
Department Cardiac Cath Lab
Applicability MMC
Tags Procedure

Skin Prep Protocol

Purpose

The following protocol designates the areas to be prepared for various procedures.

Policy

- A. Hair removal shall be completed as close to the procedure time as possible using electric clippers. Hair removal shall not be performed in the procedure rooms to prevent contaminating the sterile field.
- B. The patient's procedure site shall be assessed for moles, warts, rashes or other conditions prior to skin preparation and documented.
- C. An antimicrobial agent with a broad spectrum germicide action will be used when indicated. The agent should be non-toxic. (Standard agent is Chloroprep).
- D. Cardiac Cath Laboratory personnel will be trained and skilled in skin preparation techniques.

Site Selection

- A. Arteriotomy or venotomy can be performed through the following sites:
 - 1. Femoral
 - 2. Brachial
 - 3. Subclavian
 - 4. Radial
 - 5. Internal Jugular

Equipment

- A. Electric clippers
- B. Anti-microbial agent (Chloraprep)
- C. The agent will depend on patient's allergies and physician preference.
- D. Absorption towel
- E. 2 inch transpore tape or Pre-Op Peel and Stick Glove

Procedure

- A. Verify physician's order for procedure and site.
- B. Ascertain that the patient has signed the consent for the procedure.
- C. Question the patient about any allergies to drugs or a possible topical allergic reaction.
- D. Explain the procedure to the patient.
- E. Gloves will be worn.
- F. Expose only the area to be prepped; ensure privacy.
- G. Shave the appropriate area using electric clippers.
- H. Carefully remove shaved hair and dry skin with tape or Pre-Op Peel and Stick Glove.
 - I. Prep according to Association of periOperative Registered Nurses (AORN) recommended practices for skin preparation.
 - J. Dispose of used clipper blade in "sharps" container.

Document ID: 073.P020

Approval Signatures

Step Description	Approver	Date
System Policy Oversight Committee	Terri Fries: Document Mgmt Spec	08/2025
Physician	Todd Adams: Physician	08/2025
Document Owner	Magdalena Stewart: Clinical Nurse Specialist	07/2025

Applicability

Munson Medical Center

Standards

No standards are associated with this document

COPY



MUNSON HEALTHCARE

Origination 2/14/2019
Last Approved 8/14/2024
Effective 8/14/2024
Last Revised 8/14/2024
Next Review 8/14/2027

Owner Joseph Santangelo: Chief Medical Quality & Safety Officer
Area/Department Medical Staff
Applicability Munson Healthcare Systemwide
Tags Policy

Universal Protocol: For Surgical and Non-Surgical Invasive Procedures

Purpose

To provide a policy for surgical and non-surgical invasive procedures.

Policy

- A. The Universal Protocol is a multi-disciplinary process encompassing the multiple phases of pre-surgical/procedural preparation to improve patient safety and prevent procedural errors.
- B. The Universal Protocol consists of three components, a pre-procedure verification process, marking of the surgical/procedural site and the time out just before starting the procedure.
- C. The protocol applies to all surgical and non-surgical invasive procedures. These procedures may occur in settings other than the Operating Room (OR), i.e. medical procedure room (MPR), emergency department (ED), radiology, cardiac diagnostic unit, nursing units, or ambulatory setting. Invasive procedures are procedures involving a puncture or incision to the skin, insertion of an instrument, or insertion of foreign material into the body. PICC lines, central line insertions, chest tube insertion, and other similar procedures are within the scope of the protocol.
- D. Refer to Addendum A for invasive procedures specific to the protocol. Minimal risk procedures such as venipuncture, peripheral line placement, NG tube insertions, or urinary bladder catheters are not part of the protocol.

Pre-Procedure Verification Process

A. Purpose

1. To ensure that all of the relevant documents, related information and/or equipment are:
 - a. Available prior to the start of the procedure
 - b. Have been correctly identified, labeled, and matched to the patient's identifiers
 - c. Have been reviewed and are consistent with the patient's expectations and with the team's understanding of the intended patient, procedure, and site. The patient (or guardian if the patient is a minor or incompetent) is involved in the verification process when possible.

B. Process

1. An ongoing process of information gathering and verification, beginning with the decision to perform a procedure, continuing through all settings and interventions involved in the pre-procedure preparation of the patient, up to and including the "time out" just before starting the procedure. Missing information or discrepancies are addressed before starting the procedure. Pre-procedure verification is required for elective and emergent cases.

Detailed Requirements

A. Verification of the correct person, procedure, and site occurs:

1. At the time the procedure is scheduled.
2. At the time of preadmission testing and assessment.
3. At the time of admission or entry into the facility for a procedure whether elective or emergent.
4. Before the patient leaves the pre-procedure area or enters the procedure room.
5. Anytime the responsibility of care is transferred to another member of the procedural care team, (including the anesthesia providers) at the time of and during the procedure.

B. Verification of the correct person, procedure, and site should occur as the final step in preparing the patient for an invasive procedure, prior to when the time-out occurs. When possible, the patient (or guardian if the patient is a minor or incompetent) should be involved in the process. Each department will determine the location where the verification process will occur (i.e., prior to the patient leaving the pre-procedure area or entering the procedure room).

C. A standardized list will be used in the verification process to validate the correct patient, procedure, and site and to ensure all relevant items are available for the procedure.

1. At minimum, the list must include:
 - a. Patient identified using 2 patient identifiers
 - b. Validation of the correct procedure(s)

- c. Validation of the correct site(s)
 - d. Validation of the physicians order(s)
 - e. A valid consent form(s) that has been signed by the patient (or guardian if the patient is a minor or incompetent) and witnessed.
 - f. Relevant documentation, (i.e. a valid, relevant, updated H&P, consultation, or handwritten progress notes; nursing and pre-anesthesia/sedation assessment).
 - g. Correct diagnostic and radiology test results that are properly labeled, if applicable.
 - h. Required blood products, implants, devices, and/or special equipment available prior to start of the procedure, if applicable.
2. Each area may add additional items to the list, as applicable.
 3. Each area will be responsible to ensure the list is available and consistently used as a reference during the verification process.
 4. It is not necessary to document that a standardized list was used for each patient.

Marking the Operative/Procedure Site

- A. For patient safety, regulations require uniformity in site marking practices to prevent errors. The method of marking the site and the type of mark is to be unambiguous and be used consistently throughout the organization. **The approved site marking is the initials of the person performing the procedure.**
 1. ***The person performing the procedure must do the site marking, this cannot be delegated. This individual must be directly involved and present at the time the procedure is performed.***
 2. Marking should take place with the patient involved, awake and aware, if possible.
 3. The mark is made at or near the procedure or the incision site. Do **NOT** mark any non-procedure site(s) unless necessary for some other aspect of care.
 - a. The mark must be visible after the patient's skin is prepped, the patient is in their final position and sterile draping is completed.
 - b. The mark must be made using a marker that is sufficiently permanent to remain visible after completion of the skin prep and sterile draping. Adhesive site markers are not used as the sole means of marking the site.
 - c. The procedural physician may elect to write certain aspects of the procedure with the site marking, such as the vertebral level.?
 4. Site marking is required for the following procedures involving incisions or percutaneous puncture or insertion of foreign material into the body.
 - a. Marking includes laterality, surface (flexor, extensor), the level (spine), specific lesion or digit to be treated.
 - b. For midline incision approach for organs of laterality, the site is still

- marked and the laterality noted.
- c. A wrist/ankle band labeled "Operative or Procedural Side" (written with an indelible marker) will be placed on the limb of the correct side for identifying laterality for a natural orifice or perineum approach.?
 - d. Spinal procedures require a two stage marking process, marking of the site and identification of the vertebral level(s).
 - i. Marking of the skin at the general spinal region.
 - ii. The use of radiographic intraoperative techniques is required to mark the exact vertebral level.
 - e. Interventional radiology cases where the side or individual structure is identified by imaging guidance during the procedure.
5. For cases involving more than one procedure and different providers who are not involved in the previous procedure, site marking will occur when he/she enters the case, whether the patient is re-draped or not.
6. Final verification of the site mark should take place during the "time out".

Exemptions from Site Marking

- A. Interventional procedure cases in which the catheter/instrument insertion site is not predetermined (i.e. pacemaker insertions and cardiac catheterizations).
- B. Midline, single organ procedures and endoscopies without intended laterality.
- C. Interventional radiology cases where
 - 1. The site has been identified during intra-procedural imaging
 - 2. Routine nephrostomy tube exchange

Alternate Marking Conditions

- A. An alternate marking process will be used for cases in which it is technically or anatomically impossible or impractical to mark the site (mucosal surfaces, perineum, premature infants) or for patients who refuse site marking.
 - 1. Premature infants for whom the mark may cause a permanent tattoo. For side identification, a wrist/ankle band labeled "Operative or Procedural Side" (written with an indelible marker) will be placed on the limb of the correct side.
 - 2. Minimal access procedures: Minimal access procedures intended to treat a lateralization of an internal organ (percutaneous approach or through a natural orifice), initial the intended site at or near the insertion site. The marked site must remain visible after completion of the skin prep and sterile draping.
 - 3. Teeth: Indicate the operative tooth name(s) and number on documentation **or** mark the operative tooth (teeth) on the dental radiographs or dental diagram. The documentation, images, and or diagrams are available in the procedure room before the start of the procedure.

4. Lesions and wounds: Site marking is not required if there is an obvious wound or lesion that is the site of the intended procedure. However, if there are multiple wounds or lesions and only some of them are to be treated, and the decision and direction for which ones are to be treated is determined prior to the procedure itself, then the sites to be treated should be marked as soon as possible after the decision is made.

Site Marking Refusal by the Patient

- A. If a patient refuses the surgical/procedural site marking, the proceduralist will provide the patient with information on why site marking is appropriate and desirable for his/her safety. This allows the patient to make an informed decision.
 1. The proceduralist will validate the surgical/procedural site with the patient and another member of the surgical/procedural team
 - a. For side identification, a wrist/ankle band labeled "Operative or Procedural Side" (written with an indelible marker) will be placed on the limb of the correct side.
 2. The proceduralist will document in the patient's medical record the intended site and the reason why the patient refused site marking.

Time Out Process

- A. **Purpose**
 1. To conduct a final assessment validating the correct patient, correct procedure, and correct procedural or operative site immediately before starting the invasive procedure or making an incision.
- B. **Process**
 1. Active communication among all relevant members of the surgical/procedure team during the time out. The process is consistently initiated by a designated member of the team and the procedure is not started until all questions or concerns are resolved. See [Attachment 1. AORN Comprehensive Surgical Checklist](#).

Detailed Requirements

- A. *During the time out, the operative or procedural team must agree, at a minimum, the correct patient, correct procedure, and correct site. Areas may elect to add more elements to the time-out as deemed appropriate by that unit.*
- B. The time-out process will be standardized throughout the organization and will be conducted prior to starting the procedure or making an incision.
- C. The time-out applies to all procedural cases, including cases where the procedural physician is present at the time of the decision to perform the procedure and remains with the patient to the start of the procedure.
- D. There will be a separate time out performed prior to any regional anesthetic involving laterality.

- E. When more than one consent form is completed for more than one procedure being performed on the same patient, a time out will be completed to confirm each subsequent procedure before it is initiated.
- F. For cases involving more than one procedure and different providers, who are not involved in the previous procedure, site marking will occur when he/she enters the case, whether the patient is re-draped or not.
- G. All activities will be suspended (an actual pause), to the extent possible without compromising patient safety, allowing all members to focus on active confirmation of the correct patient, procedure, site, and other critical elements.
- H. A pre-designated member of the team will initiate the time out.
 - 1. All immediate members of the team who will be participating in the procedure at its inception will participate in the time-out (i.e. physicians, anesthesia providers, nurses, technicians, etc.).
 - 2. Interactive verbal communication is expected of all team members. All team members will be allowed to express concerns about the procedure. Concerns will be addressed prior to proceeding with the procedure.
- I. Completion of the time-out must be documented in the patient record validating the correct patient, procedure, and site.

Compliance Monitoring

- A. All hospital staff and physicians involved in the validation process have the responsibility to ensure patient safety. Failure to follow the Universal Protocol or to resolve issues regarding the performance of the verification, site marking, and the time out must be reported using the appropriate chain of command.
- B. Physicians and hospital staff should follow the department and/or Medical Staff Section chain-of-command for assistance in resolving discrepancies. Refer to the Chain of Command: Paging Response Time and Resolving Questions of Care and or Safety policy.
- C. Non-compliance or resistance to this policy will be reported through the electronic occurrence reporting system for review. All actual and "near miss" situations, where any of the steps of this procedure is not followed or is performed incorrectly, should be reported.
- D. Individual occurrences and aggregate occurrence data will be reviewed by Risk Management and referred to the appropriate Medical Staff and/or Nursing Administration leadership and peer review committee.

References

1. Joint Commission. (2019). *Hospital Accreditation Program. Chapter: National Patient Safety Goals*. Effective January 2019.? Retrieved from the Joint Commission Website https://www.jointcommission.org/hap_2017_npsgs

Addendum A

Invasive Procedures Specific to the Universal Protocol

- A. The Universal Protocol applies to the following invasive procedures according to the Universal Protocol: For Surgical and Non-surgical Invasive Procedures policy.
- B. **This list is not all-inclusive:**
1. All taps (i.e., thoracentesis, amniocentesis, paracentesis, pericardiocentesis, pleuracentesis, arthrocentesis, and lumbar puncture).
 2. Invasive pain control procedures (i.e., diagnostic or therapeutic blocks, epidural analgesia).
 3. Invasive radiological procedures (i.e., angiography, arthrogram, biopsy, lymphangiogram, myelogram, splenogram, ventriculogram, Whitaker test).
 4. Endoscopy procedures (i.e., bronchoscopy, colonoscopy, gastroscopy, sigmoidoscopy bronchoscopy, colonoscopy, gastroscopy, sigmoidoscopy, esophageal dilation, ERCP).
 5. Invasive cardio/thoracic procedures. (i.e., angioplasty, cardiac catheterization, implantation of pacer or cardioverter, intra-aortic balloon pump, stent placement, intravascular ultrasound, athrectomy).
 6. Biopsy/excision and drainage or aspiration (i.e., bone marrow, cisternal puncture, breast biopsy).
 7. Chest tube insertions
 8. Central line placement (i.e., CVP, Swan-Ganz).
 9. Peritoneal dialysis catheter insertion
 10. Percutaneous nephrostomy.
 11. IVC (inferior vena cava) filter placement.
 12. Embolization.

Document ID: 019.066

Attachments

[AORN-Comprehensive-Surgical-Check-2019.pdf](#)

Approval Signatures

Step Description

Approver

Date

System Policy Overnight Committee	Terri Fries: Document Mgmt Spec	8/14/2024
PLC	Joseph Santangelo: Chief Medical, Quality & Safety Officer [AM]	8/2/2024
Med Staff Leads (MEC)	Heather Flint: Sr Spec Lead, Med Staff Services SNE - South Regio	12/28/2023
Med Staff Leads (MEC)	Katryna Glettler: Sr Spec Lead, Med Staff Services SNE - Central Reg	10/6/2023
Med Staff Leads (MEC)	Angela Gee: Sr Spec Lead, Med Staff Services SNE - East Region	10/5/2023
Med Staff Leads (MEC)	Teresa Smith: Executive Office Coordinator	9/26/2023
Document Owner	Joseph Santangelo: Chief Medical, Quality & Safety Officer [AM]	9/26/2023

Applicability

Cadillac Hospital, Charlevoix Hospital, Grayling Hospital, Kalkaska Memorial Health Center, MHC Corporate (Home Health, Dialysis, NMSA, etc.), Manistee Hospital, Munson Medical Center, Otsego Memorial Hospital, Paul Oliver Memorial Hospital

Standards

No standards are associated with this document


Procedure: _____ **Date:** _____

VITALS		PRE-PROCEDURAL CHECKLIST				Yes	No	N/A	Initial	
Ht:	Wt:	▶ Is patient in isolation?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
T:	P:	▶ Does patient have a latex allergy?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
BP: RA	R:	▶ Has the consent been signed by provider?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
LA:	SpO ₂ :	PATIENT IDENTIFICATION AND HISTORY & PHYSICAL								
LABS & EKG		▶ Is patient identification band on arm?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Date		▶ Armbands verified on patient:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
WBC 3.6 - 10		<input type="checkbox"/> Latex <input type="checkbox"/> Limb Alert <input type="checkbox"/> Allergies <input type="checkbox"/> Fall prevention <input type="checkbox"/> Bilateral For Cardiac cases: Armbands are present on both arms		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
HGB F 12 - 16 M 14 - 18		▶ H & P on chart, dictated within 30 days of admission or Progress Note with detailed procedure plan - if no, contact Cardiologist		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
HCT F 37 - 47 M 42 - 54		▶ Consent - signed, dated, timed and on chart		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Platelets 150 - 400		▶ Time of last solid food: _____ Time of last liquids: _____								
PT/INR 0.9 - 1.1		ALLERGIES AND MEDICATIONS								
Na ⁺ 134 - 146		▶ Does patient have a contrast dye allergy? Final dose given: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
K ⁺ 3.4 - 5		Famotidine (Pepcid): _____ Diphenhydramine (Benadryl): _____								
BUN 10 - 23		Solumedrol (IV): _____ or Prednisone (PO): _____								
Creatinine 0.7 - 1.3		▶ Has Aspirin been given within 24 hours of procedure?		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
GFR greater than 60		Dose: _____ Time: _____ If no, contact Cardiologist								
Mg ⁺ 1.5 - 2.1		▶ Does patient take antiplatelet medication? (Plavix, ASA, Brilinta)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Glucose 70 - 99		▶ Does patient take anticoagulation medications? Last dose: _____		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Preg Test (age 12-50)		▶ If yes, what medication?								
	Yes	No	N/A	Initial	<input type="checkbox"/> Warfarin (Coumadin) <input type="checkbox"/> Rivaroxaban (Xarelto) <input type="checkbox"/> Dabigatran (Pradaxa) <input type="checkbox"/> Heparin <input type="checkbox"/> Lovenox <input type="checkbox"/> Eliquis (Apixaban)					
▶ Have procedural labs been drawn within 30 days? (CBC & BMP)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ Does patient have diabetes?		<input type="checkbox"/>	<input type="checkbox"/>		
▶ If no, enter orders for DOS labs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ If yes, hold oral diabetic meds, morning of procedure					
▶ Is patient on Warfarin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Blood sugar (most recent): _____ Time: _____					
▶ If yes, was INR drawn DOS?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Last dose of insulin given: _____ Time: _____					
<i>If yes and INR is greater than 1.5 notify Cardiologist unless otherwise specified</i>					▶ Is patient on a Heparin drip? If yes, discontinue. "On call" to A6 if ordered		<input type="checkbox"/>	<input type="checkbox"/>		
▶ Is GFR less than 60?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		PATIENT PREP					
▶ If yes, did patient receive IV hydration?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ Patient has removed their undergarments		<input type="checkbox"/>	<input type="checkbox"/>		
<i>*n/a for right heart catheterization*</i>					▶ Clip right and left groin, clip radial site		<input type="checkbox"/>	<input type="checkbox"/>		
▶ Pregnancy test result?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ IV is started with fluids infusing (no medication piggybacked)		<input type="checkbox"/>	<input type="checkbox"/>		
▶ Is 12 lead EKG completed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ If planned radial case, is IV out of the target access zone (styloid process proximal towards antecubital, approximately 8 cm)?		<input type="checkbox"/>	<input type="checkbox"/>		
▶ PVI?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		▶ 2nd intermittent lock is started (18-20 gauge) (If right heart cath is scheduled, antecubital site is preferred)		<input type="checkbox"/>	<input type="checkbox"/>		
ASSESSMENTS & PULSES		Key:		▶ Patient has voided "On call" to A6					<input type="checkbox"/>	<input type="checkbox"/>
LEFT PULSE	RIGHT PULSE	0 = Completely absent		COMPLETE ON CALL					Time	Initial
Radial: _____	Radial: _____	4 = Normal		Oral Hydration completed ON CALL						
Posterior Tibialis (PT): _____	Posterior Tibialis (PT): _____	D = Doppler		Oral Hydration documented ON CALL						
Dorsalis Pedis (DP): _____	Dorsalis Pedis (DP): _____	<input type="checkbox"/> Palable/Weak								
		<input type="checkbox"/> Palable/Strong								

PATIENT ID LABEL

INITIALS	SIGNATURE	DATE / TIME



10842

 PATIENT IDENTIFICATION confirmed x 2 (name & birthdate)

 ALLERGIES VERIFIED:

Allergy band on: n/a Yes
 Heparin allergy: Yes No
 Contrast allergy: Yes No
 Latex allergy: Yes No

 Procedure verified: _____

 Indication for procedure: _____

 Proper consent form (signed/dated/timed by performing provider)

History and Physical:
 Update signed, dated, timed

 Access or implant site verified: _____

 Lab data reviewed: Hgb: _____ GFR: _____ INR: _____

 Medication status reviewed:
 Aspirin - confirm patient has received within 24 hours of procedure

 Anti-platelet: Clopidogrel (Plavix) Ticagrelor (Brilinta) Prasugrel (Effient)

 Warfarin (Coumadin) Eliquis Xeralto Last dose: _____

Implants:
 Antibiotic given prior to procedure

Drug: _____ Time: _____ Date: _____

 Patient data entered into x-ray system and hemodynamic system

 Pre-procedure sedation assessment completed by cardiologist

 Fire Risk Score: _____

FIRE RISK SCORE KEY	YES	NO
Incision above xiphoid or in oropharynx?	1	0
Open O2 or N2O2 source?	1	0
Ignition source?	1	0

1 = LOW Risk

2 = LOW w/potential for high risk

3 = HIGH Risk

STAFF SIGNATURE

TITLE

DATE

TIME

PATIENT ID LABEL



Origination 8/3/2016
Last Approved 11/5/2025
Effective 11/5/2025
Last Revised 11/5/2025
Next Review 11/4/2028

Owner Rebecca Pines:
Dir Nursing
Cardiac Cath Lab
Area/
Department Cardiac Cath Lab
Applicability MMC
Tags Procedure

Cardiac Catheterization Lab/Electrophysiology Lab/Cardiac Diagnostic Suite – Pre-Procedure Protocol

Purpose

To implement standard procedural orders within the Traverse Heart and Vascular (THV) cardiology department.

Scope

A signed Cath Lab/Electrophysiology (EP) Procedure order by a THV provider allows the THV Registered Nurse (RN), Structural Heart Program RN, or Cardiac Diagnostic Suite (CDS) RN the authority to initiate the associated procedural power plan as approved by the Cardiology department and the Pharmacy and Therapeutics (P&T) committee.

Procedure

(Also see the [Skin Prep Protocol](#))

Tilt Tablet Test

- A. Nothing by mouth (NPO)
- B. Void on call
- C. Intravenous (IV): 0.9% Sodium Chloride at 10 ml/hr- Have patient on telemetry before starting IV
- D. Obtain Urine Pregnancy test if applicable*

Cardioversion (DCCV) or TransEsophageal Echocardiogram (TEE) / Cardioversion

- A. If the basic metabolic panel (BMP) is greater than 7 days, obtain labs before the procedure on the day of service (DOS).
- B. Obtain Magnesium (Mg+) level if the patient is also scheduled for sotalol infusion.
- C. Obtain a prothrombin time (PT)/international normalized ratio (INR) (if on Coumadin) before the procedure, on the DOS
- D. Electrocardiogram (EKG) to be done before the procedure on the DOS
- E. Propofol 200mg IV Push (IVP) to patient's bedside.
- F. Outpatient EKG to be completed 1 week post successful DCCV with results to DCCV ordering provider unless provider directed otherwise.
- G. NPO
- H. Void on call
 - I. Obtain Urine Pregnancy test if applicable*
- J. IV: 0.9% Sodium Chloride at 10 ml/hr

TransEsophageal Echocardiogram (TEE)

- A. NPO 6 hours prior to procedure arrival time for non-anesthesia procedures
- B. TEE ordered with anesthesia NPO 8 hours prior.
- C. Patients taking Suboxone, Buprenorphine / Naloxone must be scheduled with Anesthesia
- D. Void on call
- E. IV: 0.9% Sodium Chloride at 10 ml/hr
- F. Obtain Urine Pregnancy test if applicable*

Right Heart Catheterization (RHC)

- A. If the complete blood count (CBC) and BMP are greater than 30 days, obtain labs before the procedure on the DOS
- B. Obtain PT/INR (if on Coumadin) before the procedure on DOS
- C. EKG to be done before the procedure on the DOS
- D. NPO
- E. Void on call
- F. Obtain Urine Pregnancy test if applicable*
- G. IV: 0.9% Sodium Chloride at 10 ml/hr
- H. Insert additional brachial intermittent lock
- I. Call the doctor if an allergy to heparin is documented

Left Heart Catheterization (LHC)/Percutaneous Coronary Intervention (PCI) or LHC and RHC/PCI

- A. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS
- B. Obtain PT/INR (if on Coumadin) before the procedure on the DOS
- C. EKG to be done before the procedure on the DOS
- D. NPO
- E. Void on call
- F. Obtain Urine Pregnancy test if applicable*
- G. PATIENT MUST HAVE TAKEN AT LEAST 81 MG ASPIRIN WITHIN 24 HOURS BEFORE THE STENT DEPLOYMENT. IF NOT, NOTIFY THE PROVIDER.
- H. Pre-hydration
 - 1. Estimated glomerular rate (eGFR) greater than or equal to 60: No pre-hydration indicated.
 - 2. eGFR 30-59:
 - a. Patient will drink 500 ml of water (half a liter, 16.9oz) two hours before their scheduled procedure.
 - b. Repeat BMP on the day of the procedure.
 - c. IV: 0.9% Sodium Chloride 3mL/kg for one hour before the procedure then 10 ml/hr
 - 3. eGFR less than 30: Follow the eGFR 30-59 policy unless otherwise instructed by the provider.
- I. Insert additional brachial intermittent lock if scheduled for RHC
- J. Call the doctor if an allergy to heparin is documented
- K. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IVP once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of prednisone 50mg by mouth (PO), 1 hour before the procedure.
 - 3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IV Push, 1 hour before the procedure.

Prep for LHC or RHC/LHC

- A. Prep selected wrist and forearm (palm side only) following [Skin Prep Protocol](#)
- B. Prep right groin in addition to selected wrist following [Skin Prep Protocol](#)
- C. Start IV in the opposite arm of planned radial access if possible
- D. If IV is in the same arm as the planned radial procedure, ensure it is not in the target zone

(styloid process proximal towards antecubital, approximately 8 cm)

- E. For planned brachial access, prep the medial brachial site of the planned access arm using the [Skin Prep Protocol](#)
- F. Call the doctor if an allergy to heparin is documented

Chronic Total Occlusion (PCI)

- A. Insert 2 IV sites
- B. Prep bilateral groin sites following [Skin Prep Protocol](#)
- C. Call the doctor if an allergy to heparin is documented

Peripheral Vascular Procedures (Including Upper, Lower, and Renal)

- A. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- B. Obtain PT/INR (if on Coumadin) before the procedure on DOS
- C. NPO
- D. Void on call
- E. Obtain Urine Pregnancy test if applicable*
- F. IV: 0.9% Sodium Chloride
 - 1. eGFR greater than or equal to 60: No Pre-hydration indicated.
 - 2. eGFR 30-59: Unless otherwise instructed by the provider will be as follows:
 - a. Patient will drink 500 ml of water (half a liter, 16.9oz) two hours before their scheduled procedure.
 - b. Repeat BMP on the day of the procedure.
 - c. 0.9% Sodium Chloride 3mL/kg for one hour before the procedure.
 - 3. eGFR less than 30: Follow the eGFR 30-59 policy unless otherwise instructed by the provider.
- G. Insert 2nd IV site.
- H. Prep bilateral groin sites and bilateral radial sites.
 - I. If tibial access, clip the entire leg of access and bilateral groin sites following [Skin Prep Protocol](#)
- J. If radial access (rare), prep radial and bilateral groin sites following [Skin Prep Protocol](#)
- K. Call the doctor if an allergy to heparin is documented
- L. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IV Push once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of

prednisone 50mg by mouth (PO), 1 hour before the procedure.

3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IVP, 1 hour before the procedure.

Perivalvular Closures (Atrial Septal Defect, Ventricular Septal Defect) and Patent Foramen Ovale Closure (PFO)

- A. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- B. Obtain PT/INR (if on Coumadin) before the procedure on DOS
- C. EKG to be done before the procedure on DOS
- D. NPO
- E. Void on call
- F. Obtain Urine Pregnancy test if applicable*
- G. Insert 2 IV sites. IV should be in the opposite arm if radial access is planned. If the IV is in the same arm as planned radial access, avoid the target zone (styloid process proximal towards antecubital approximately 8 cm).
- H. PATIENT MUST BE TAKING AT LEAST 81MG ASPIRIN PO DAILY- IF NOT, NOTIFY PROVIDER
- I. IV: 0.9% Sodium Chloride
 1. eGFR greater than or equal to 60: No Pre-hydration indicated.
 2. eGFR 30-59: Unless otherwise instructed by the provider will be as follows
 - a. Patient will drink 500 ml of water (half a liter, 16.9oz) two hours before their scheduled procedure.
 - b. Repeat BMP on the day of the procedure.
 - c. 0.9% Sodium Chloride 3ml/kg for one hour before the procedure. (A four-hour pre-hydration will not be allowed in this group).
 3. eGFR less than 30: Follow the eGFR 30-59 policy unless otherwise instructed by the provider.
- J. Prep selected wrist and forearm (palm side only) following [Skin Prep Protocol](#)
- K. Prep right groin in addition to selected wrist following [Skin Prep Protocol](#)
- L. Prep medial brachial site (if ordered) following [Skin Prep Protocol](#)
- M. Call the doctor if an allergy to heparin is documented

Pacemaker / Implantable Cardioverter-Defibrillator (ICD) Implantation, Generator Change, or Lead Extraction

- A. If no EKG within the last 30 days, obtain an EKG before the procedure on the DOS

- B. Obtain PT/INR (if on Coumadin) before the procedure on DOS
- C. NPO
- D. Void on call
- E. Obtain Urine Pregnancy test if applicable*
- F. IV: 0.9% Sodium Chloride at 10 ml/hr on the device side.
- G. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702.](#)
- H. Clip skin according to shaving guidelines on the [Implant Pre/Post Procedure Checklist form #1686.](#)
- I. Call the doctor if an allergy to heparin is documented
- J. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IVP once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of prednisone 50mg PO, 1 hour before the procedure.
 - 3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IVP, 1 hour before the procedure.
- K. ICD
 - 1. Place the ICD Implant Criteria Worksheet on the chart
- L. Lead Extraction
 - 1. Gtabs for T and C 4 units
 - 2. Prep neck to knees following [Skin Prep Protocol](#) and shaving guidelines on the [Implant Pre/Post Procedure Checklist form #1686.](#)

Electrophysiology Studies (EPS)

- A. If no EKG within the last 30 days, obtain an EKG before the procedure on the DOS
- B. Obtain PT/INR (if on Coumadin) before the procedure on DOS
- C. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- D. No Art Line
- E. NPO
- F. Void on call
- G. Obtain Urine Pregnancy test if applicable*
- H. IV: 0.9% Sodium Chloride at 10 ml/hr and 2nd i-lock.
 - I. Prep bilateral groins following [Skin Prep Protocol](#)
- J. Call the doctor if an allergy to heparin is documented
- K. Ablations
 - 1. Prep neck to knees following [Skin Prep Protocol](#)

2. Atrial Flutter ablation:
 - a. IV: 0.9% Sodium Chloride at 10 ml/hr and 2nd i-lock except for atrioventricular (AV) node ablations
3. Atrial Fibrillation ablation (done with general anesthesia):
 - a. IV: Lactated Ringers (LR) at 10 ml/hr and 2nd i-lock

Balloon Aortic Valvuloplasty (BAV)

- A. Neuro assessment (basic neurologic exam, not National Institutes of Health [NIH])
- B. IV: 0.9% Sodium Chloride at 10 ml/hr
- C. Additional intermittent lock
- D. Bilateral groin prep following [Skin Prep Protocol](#)
- E. Obtain Urine Pregnancy test if applicable*
- F. Void on call
- G. NPO
- H. Call the doctor if an allergy to heparin is documented

Loop Recorder

- A. Prep implant area following [Skin Prep Protocol](#)
- B. Insert intermittent lock (explant only)
- C. Obtain Urine Pregnancy test if applicable*
- D. Call the doctor if an allergy to heparin is documented
- E. Void on call
- F. NPO (explant only)

Leadless Pacemaker

- A. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- B. PT/INR day of procedure (if on Coumadin)
- C. Obtain Urine Pregnancy test if applicable*
- D. NPO
- E. Prep bilateral groins following [Skin Prep Protocol](#)
- F. If no EKG within the last 30 days, obtain an EKG before the procedure on the DOS
- G. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702](#)
- H. Call the doctor if an allergy to heparin is documented
- I. IV: 0.9% Sodium Chloride at 10 ml/hr

Subcutaneous ICD

- A. Performed under general anesthesia
- B. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- C. PT/INR day of procedure (if on Coumadin)
- D. Obtain Urine Pregnancy test if applicable*
- E. Prep patient from left neck midline down to the waist and around rib cage following [Skin Prep Protocol](#) and shaving guidelines on the [Implant Pre/Post Procedure Checklist form #1686](#).
- F. NPO
- G. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702](#)
- H. IV: Lactated Ringer at 10 ml/hr

Left Atrial Appendage Closure

- A. If the CBC and BMP are greater than 30 days, obtain labs before the procedure on the DOS.
- B. Labs to be completed on the day of the procedure, before the procedure.
 - 1. If the patient is on Warfarin (Coumadin), obtain PT/INR
 - 2. Albumin
- C. Obtain Urine Pregnancy test if applicable*
- D. EKG on the day of the procedure
- E. NPO
- F. IV: 0.9% Sodium Chloride at 1.5 ml/kg/hr x 2 hours then 10 ml/hr plus 2nd -ilock
- G. Pre-bilateral groins following [Skin Prep Protocol](#)
- H. Call the doctor if an allergy to heparin is documented.
- I. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IVP once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of prednisone 50mg PO, 1 hour before the procedure.
 - 3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IVP, 1 hour before the procedure.
- J. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702](#)

Transcatheter Aortic Valve Replacement

- A. If the CBC, BMP, and GTABS are greater than 30 days, obtain labs before the procedure on the DOS.

- B. Labs to be completed on the day of the procedure, before the procedure.
 - 1. If the patient is on Warfarin (Coumadin), obtain PT/INR
 - 2. Albumin
 - 3. Total Bilirubin
- C. Obtain Urine Pregnancy test if applicable*
- D. ECG on the day of the procedure
- E. NPO
- F. IV: 0.9% Sodium Chloride at 10 ml/hr
- G. Pre-bilateral groins following [Skin Prep Protocol](#)
- H. Call the doctor if an allergy to heparin is documented.
- I. Written instructions per the TAVR Pre-Procedure Instruction form and the [Structural Heart Pre-Procedure Oral Anti-coagulation Policy](#)
- J. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IVP once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of prednisone 50mg PO, 1 hour before the procedure.
 - 3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IVP, 1 hour before the procedure.
- K. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702](#)

Mitraclip

- A. If the CBC, BMP, and GTABS are greater than 30 days, obtain labs before the procedure on the DOS.
- B. Labs to be completed on the day of the procedure, before the procedure.
 - 1. If the patient is on Warfarin (Coumadin), obtain PT/INR
 - 2. Albumin
 - 3. Total Bilirubin
- C. Test to be completed before the procedure: chest x-ray.
- D. Obtain Urine Pregnancy test if applicable*
- E. EKG within 6 months before the procedure AND on the DOS
- F. NPO
- G. IV: 0.9% Sodium Chloride at 10 ml/hr
- H. Pre-bilateral groins following [Skin Prep Protocol](#)
- I. Call the doctor if an allergy to heparin is documented.

- J. Written instructions per the Pre-Procedure Form
- K. Contrast Dye Allergy
 - 1. Diphenhydramine (Benadryl) 50mg IVP once, 1 hour before the procedure.
 - 2. If the patient received 2 prednisone doses as prescribed, give 3rd dose of prednisone 50mg PO, 1 hour before the procedure.
 - 3. If the patient did not take the 2 doses of prednisone as prescribed, give methylprednisolone (SoluMedrol) 40mg IVP, 1 hour before the procedure.
- L. Prophylactic Antibiotics - Pharmacy to dose. [Antibiotic Prophylaxis Surgical Orders Adult form #6702](#)

***Pregnancy Test-** All patients with female reproductive organs between menarche and menopause will have a urine pregnancy test performed on the morning of the procedure. Inpatients will have a urine or serum pregnancy test before sending the patient to the pre-procedure area. Patients who have had tubal ligation still need to be tested. Those with hysterectomies do not need to be tested.

Surgical Antibiotic Prophylaxis

Document ID: 073.P102



Approval Signatures

Step Description	Approver	Date
System Policy Oversight Committee	Terri Fries: Document Mgmt Spec	11/5/2025
Physician	Todd Adams: Physician	11/4/2025
P&T Committee	Heather Tolfree: Mgr Pharmacy - CPS	11/3/2025
Document Owner	Magdalena Stewart: Clinical Nurse Specialist	10/31/2025

Applicability

Munson Medical Center

Standards

No standards are associated with this document

Procedures/Findings/Interventions:		EF:
RCA: _____ LAD: _____ CIRC: _____ DIAG: _____ LM: _____ OTHER: _____		LVEDP:
_____		RA:
_____		PA:
Plan:		PCWP:
Medications:	Anticoagulation:	ACT:
Versed: _____	Heparin: _____	_____ @ _____
Fentanyl: _____	_____	_____ @ _____
Dilaudid: _____	Bivalirudin: bolus _____ gtt _____ d/c _____	_____ @ _____
_____:	Antiplatelet:	_____ @ _____
_____:	Plavix: _____ mg @ _____	_____ @ _____
Drips:	Ticagrelor: _____ mg @ _____	Contrast:
	Integrilin: bolus _____ gtt _____	_____
Antibiotic: _____ @ _____	Protamine: _____ @ _____	Fluids: _____
		Output: _____
Sheaths:		Foley: Y / N
Fr. _____ Site _____ Assessment _____	Vascular Compression Band:	
Fr. _____ Site _____ Assessment _____	Site: _____ cc _____ @ _____	
Fr. _____ Site _____ Assessment _____	Site: _____ cc _____ @ _____	
Fr. _____ Site _____ Assessment _____	_____	
Fr. _____ Site _____ Assessment _____	Pulses:	
_____	R: DP _____ PT _____ Radial _____	
	L: DP _____ PT _____ Radial _____	
Vital Signs:		
Pre: Pain _____		
BP _____ HR _____ Rhythm _____ RR _____ O2 _____		
Post:		
BP _____ HR _____ Rhythm _____ RR _____ O2 _____		
ROOM:		

NOT A PART OF THE PERMANENT MEDICAL RECORD



PATIENT ID LABEL



CARDIAC CATH LAB PROCEDURAL WORKSHEET