Cardiology Med-Surg Specialty Addendum

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Pre-Op Decolonization for High-Risk Surgical Procedures Policy

For additional information refer to full Policy: *Pre-Op Decolonization for High Risk Surgical Patients* in PolicyStat

Protocol Element	Patients without povidone iodine allergy (default pathway)	Patients with povidone iodine allergy
Nares screen for S. aureus (MRSA and/or MSSA)	Required MRSA only. If patient has a history of MRSA within the last 5 years, treat as positive for MRSA (do not need to swab again) Test must be within 30 days of surgery date. Inpatients: will be ordered by provider. For outpatients: Will be ordered in Preadmit clinic prior to admission if not ordered by surgeon. See "Nursing Protocol for Pre-Admission Testing of Adult Surgical Patients"	Required combo MRSA/MSSA Test must be within 30 days of surgery date.
CHG (Chlorhexidine gluconate) shower for 5 days prior to surgery, including night before and morning of surgery.	Required *unless timing of surgery due to clinical need does not allow time for showers. (i.e., fracture, etc.)*	Required *unless timing of surgery due to clinical need does not allow time for showers. (i.e., fracture, etc.)*
CHG (Chlorhexidine gluconate) cloths applied in pre-operative area ***(wipes do not require provider order)*** Wipes may be applied in the most appropriate setting for the patient, based on condition and workflow. This may be either the inpatient floor or the SSU pre-op area.	Required	Required
Mupirocin 2% antibiotic ointment applied to both nares BID for 5 days prior to surgery	No	Order required. To be ordered by patient's surgeon if needed for individuals with positive nares screen, history of MRSA, or unknown status[1]
Povidone/iodine nasal antiseptic	Order required. To be ordered by SSU RN and applied per manufacturer's instructions.	No
CHG oral care in pre-operative area	No	No
Standard antibiotic prophylaxis	Required - see surgeon order.	Required - see surgeon order.
Standard antibiotic prophylaxis PLUS Vancomycin	Required for all individuals with MRSA positive nares screen, history of MRSA	Required for all individuals with MRSA positive nares screen, history of MRSA

Vascular Sheath Management and Post Procedural Care

For additional information refer to full Policy: *PSVMC: Vascular Sheath Management and Post-Procedural Care for a Patient with a Femoral Sheath, Arterial and Venous, and Use of Compression Devices (Adult)* in PolicyStat

Sheath removal must be performed by clinical caregivers that have demonstrated competency. Sheath maintenance and post-removal care will be performed by Registered Nurses (RN). Do not perform unless you have a documented competency on file

1. IF catheter exit site is bleeding, THEN apply pressure for 5 minutes and notify LIP
2. IF there is a change in assessment, THEN notify LIP, restart neurovascular checks from beginning and maintain bedrest/limb precautions
    a. NOTE: To prevent limb ischemia, do not leave the artery blocked for more than 3 minutes
3. IF the patient is obese or has large hips, THEN consider the use of manual pressure
    a. NOTE: Placement of the system may not be suitable on large patients or patients with very wide hips as the belt may be too short
4. IF hematoma (e.g. pain or tenderness and swelling at the access site) develops, THEN apply firm pressure to site and hold or the originally estimated time (start over), follow the same steps and reassess for hemostasis, notify LIP, mark area and continue to monitor site
5. IF femoral compression device needed for long periods of time, THEN a brief interruption using manual compression is completed at least every 3 hours
6. IF retroperitoneal hematoma is suspected (e.g. hypotension, tachycardia, pallor, lower abdominal pain, back pain, significantly decreased hematocrit or neurovascular changes in the leg with the puncture), THEN notify LIP
7. IF pseudoaneurysm is suspected (e.g. painful palpable pulsatile mass and positive bruit), THEN apply manual pressure and notify the LIP
8. IF vessel occlusion is suspected (e.g. sudden onset of pain, possible paresthesia, limb is cyanotic and cool to touch, diminished or absent pulses), THEN notify the LIP
    a. NOTE: If compression device in place, remove device and hold manual pressure while assessing limb for return of circulation
9. IF the patient has a vasovagal response (e.g. pallor, bradycardia, hypotension or emesis), THEN place the patient in Trendelenburg and notify the LIP
10. IF arteriovenous fistula is suspected (e.g. swelling of extremity and continuous bruit at the access site), THEN apply manual pressure and notify the LIP
11. IF access site infection (e.g. high fever, femoral abscess), THEN notify the LIP

Documentation

1. Vascular Sheath LDA
2. Time hemostasis achieved
3. Groin site assessment
4. Vital signs prior, during and post-sheath removal
5. Neurovascular and peripheral vascular status of the affected extremity every 15 minutes x 4, every 30 minutes x 2, every hour x 4, then per LIP order
6. Discontinuation of vascular sheath
    a. Method used (e.g., Manual compression vs. Femoral Compression Device)
    b. Date and time of initial application of device
    c. Patient tolerance of procedure
    d. Record VS, cardiac rhythm, puncture site assessments, distal pulses, neurovascular assessments, periodic deflation and any repositioning of the device
    e. Length of time the device was in place and the appearance of the site after removal
7. Occurrence of unexpected outcomes

Remote Telemetry Monitoring for Adult Patients at PSVMC

For additional information refer to full Policy: *Remote Telemetry Monitoring for Adult Patients at PSVMC* in PolicyStat

A. RN Responsibilities
    1. Verify Provider order for telemetry monitoring
    2. Obtain and assemble monitoring equipment
    3. Notify MT of patient admission to telemetry and provide information:
        a. Sends Admission paperwork to MT (e.g., telemetry box number, patient name, room number, medical record number (MRN), code status, cardiac history, and admission diagnosis)
        b. Places patient on Telemetry Box and calls MT to confirm that patient is seen on nursing central monitor with correct patient name and room number
        c. Confirms with MT they have the Primary RN's phone extension and name
    4. The Primary RN is accountable to inform/call the MT <u>at the time</u> of:
        a. Patient admission, transfer, or discharge
        b. Telemetry is interrupted (e.g., bathing, off-unit for procedure)
            i.
                a. NOTE: Telemetry may be interrupted for baths or when leaving the floor for procedures, and when patient resumes telemetry. MTs will call the RN caring for the patient if the telemetry has not been restored at the following intervals: Bath/Hygiene – 30 minutes, Diagnostics (e.g., Radiology) – 60 minutes, and every 30 minutes thereafter
        c. Telemetry is restored
        d. Patient room location is changed
            i.
                a. NOTE: The MT must be notified for room changes to reassign room number in central monitor
        e. Administration of IV push cardiac medication or initiation of cardiac continuous infusion (e.g., Amiodarone, Dobutamine, Milrinone)
        f. Changes in notification parameters outside the pre-set adult monitoring parameters per Provider order
    5. Explain procedure to patient. Prepare skin and attach telemetry monitoring equipment to patient with proper placement of electrodes and new battery.
        a. NOTE: Ensure that electrodes are placed in the correct area on the patient's torso. RNs responsible for verifying patient on monitor at Nursing Station. Notify MT with problems
    6. Assigned RNs will place rhythm strips from MT in the respective patient folder every shift. MT will be provided and RN assignment sheet with respective RN telephone numbers on a shift-to-shift basis. RNs caring for patients will verify accuracy of the interpretation and measurements
    7. When telemetry is discontinued, the monitor tech will be notified.
        a. NOTE: Telemetry boxes must be returned to the MT room or removed from the patient room at the time of patient discharge. DO NOT PLACE A USED TELEMETRY BOX ON A NEW PATIENT.

Heart Transplant Multi-Disciplinary Team Composition & Responsibilities

For additional information refer to full Policy: *Heart Transplant Multi-Disciplinary Team Composition and Responsibilities, Post Heart Transplant Discharge Process, Post Heart Transplant Vaccine Recommendations, and other i* in PolicyStat

Nursing: Inpatient Nursing staff are responsible for managing the daily care of the heart transplant patient in all phases

1. Expectations:
    a. Patient education.
    b. Communication with the multidisciplinary team.
    c. Collaboration with heart transplant team on discharge planning.
    d. Participation during inpatient rounding.
    e. CVOR staff will receive specific training regarding ABO verification.
    f. Critical Care staff will receive specific training regarding the immediate post-operative phase following transplant.
    g. Attend program-specific QAPI meetings, ad hoc.

Administration of Peripheral IV Vasopressor in Adult Patients

For additional information refer to full Policy: *Administration of Peripheral IV Vasopressors in Adult Patients* in PolicyStat

POLICY

SAFETY MEASURES FOR PERIPHERAL ADMINISTRATION OF VASOPRESSORS

- The maximum recommended duration of any vasopressor medication administered peripherally is **24 hours.**
    - Provider may determine it is necessary to exceed this recommendation (order required).
- The maximum recommended vasopressor doses for peripheral administration are listed below (See Medications section).
    - Provider may determine it is necessary to exceed these recommendations (order required).
- The maximum vasopressor concentrations for peripheral administration listed below shall not be exceeded (See Medications section).
- Provider shall assess whether central line placement is required for vasopressor administration based upon peripheral line criteria below.

Peripheral line criteria

- Recommend use of a 20-gauge or larger IV catheter
- Follow PIV placement recommendations as outlined in Peripheral IV Insertion - Adult
    - Line placement shall be in the forearm or upper arm contralateral to the blood pressure cuff.
        - Placement in an alternative location requires provider order.
    - Do not use lines in areas of flexion (e.g. hand, wrist, antecubital fossa) for vasopressor administration.
- One PIV must be dedicated to the administration of a single vasopressor.
    - A central line should be considered if administration of more than one vasopressor is required.
    - No other medications should be administered in the vasopressor line.
- Patient should have a minimum of **two peripheral intravenous** lines when vasopressor will be administered via PIV.
- Midline catheters may not be used for peripheral administration of vasopressors.

MEDICATIONS

- The following vasopressors and concentrations may be administered via peripheral intravenous lines.
- **Vasopressors not on this list are restricted to central line administration.**

Vasopressor	Recommended Maximum Peripheral Concentration	Recommended Maximum Peripheral Dose
DOPamine	1600 mcg/mL	10 mcg/kg/min
EPINEPHrine	20 mcg/mL	10 mcg/min
Norepinephrine	16 mcg/mL	20 mcg/min
Phenylephrine	400 mcg/mL	250 mcg/min
Vasopressin	0.2 units/mL	0.04 units/min

SAFEGUARD FOCUS Cool™ Compression Device Management

For additional information refer to full Policy: *SAFEGUARD FOCUS Cool™Compression Device Management* in PolicyStat

PURPOSE:

To provide guidelines for use of the SAFEGUARD FOCUS Cool™ Compression Device.

DESCRIPTION:

The SAFEGUARD FOCUS Cool™ Compression Device is a sterile, single use disposable device that has a clear window over a saline-filled compression balloon. It provides compression over closed surgical sites to achieve targeted hemostasis to pacemaker and ICD pockets in the immediate post-operative period.

INDICATIONS FOR USE:

The SAFEGUARD FOCUS Cool™ Compression Device is used for patients requiring targeted hemostasis to pacemaker and ICD pockets in the immediate post-operative period.

RESPONSIBLE PERSON:

Application of Device: Trained Registered Nurses (RN), Advanced Practice Providers (APP), Physicians, and procedural technicians can apply the SAFEGUARD FOCUS Cool™ Compression Device

Removal of Device: Trained Registered Nurses (RN), Advanced Practice Providers (APP), and Physicians can remove the SAFEGUARD FOCUS Cool™ Compression Device

SPECIAL CONSIDERATIONS:

A. Standard deflation (removal of saline) timing is outlined in this procedure. Any frequency listed outside this procedure standard must be written out by the provider in a separate order (see **Addendum A**).

B. Do not leave the SAFEGUARD FOCUS Cool™ Compression Device on for greater than 24 hours with > 30mL in the compression balloon as tissue damage may occur.

C. Over-instillation of fluid (greater than 60mL), the balloon may burst, detach, or compromise the adhesive or fastening properties of the device.

D. Do not attempt to reposition adhesive once applied. Adhesive only sticks properly on first application.

Bleeding Risk	Recommended SAFEGUARD FOCUS Cool™ Compression Device Deflation Timing	Total Time (estimated)
Low	Starting ***60 minutes (1-hour)*** after bandage placed, ***remove 20mL**** of fluid from the compression device ***every hour*** until all fluid is removed ***Standard Order – Per Protocol***	3 hours (180 minutes)
Medium	Starting at ***120 minutes (2-hours)*** after bandage is placed, ***remove 20mL**** of fluid from the compression device ***every hour*** until all the fluid is removed	4 hours (240 minutes)
High	Starting at ***120 minutes (2-hours)*** after bandage is placed, ***remove 20mL**** of fluid from the compression device ***every 2 hours*** until all the fluid is removed	6 hours (360 minutes)
Severe	Starting at ***240 minutes (4-hours)*** after bandage is placed, ***remove 20mL**** of fluid from the compression device. After ***480 minutes (8-hours)*** after the bandage is placed, ***remove 10mL of fluid (leaving 30mL in the balloon).*** At ***24-hours*** from application, assess the incision and if appropriate, gradually ***remove the remainder of the 30ml fluid.***	24 hours (1440 minutes)

*If oozing/bleeding persists, add increments of 5mL of saline every 1-2 minutes until oozing/bleeding stops, up to a maximum of 60mL in device

Verbal and Telephone Orders

For additional information refer to full Policy: *Verbal and Telephone Orders* in PolicyStat

A. To ensure patient safety, verbal and telephone orders are not to be used as routine methods of communication.
B. Verbal orders:
    1. Are not appropriate when the prescriber is present or has access to the patient's EHR
    2. May be acceptable in urgent clinical situations or when functioning in a sterile environment.
C. Telephone orders shall be limited to urgent clinical situations in which it is impossible or impractical for the prescriber to access the patient's EHR or to fax the order.

Procedure

A. The prescriber identifies self, specifies the correct patient using 2 patient identifiers (per policy *Patient Identification and Verification*), and communicates the order.
B. The receiver of a verbal/telephone order will immediately enter the order in the patient's EHR.
    1. If the patient's EHR is not available (e.g. during EHR downtime), the order is to be written on a blank provider order form that is identified with the patient's name and an additional patient identifier.
C. The prescriber must wait until the order is entered into the patient's EHR.
D. The patient's name, additional identifier, and the order are read back by the receiver from the EHR or paper order form during downtime.
E. Following the read back, the prescriber will give verbal confirmation that the complete order is correct as read back.
F. In emergency situations where the order cannot be immediately entered or written, the receiver will repeat the order back to the prescriber. The prescriber will acknowledge that the order is correct. The order will then be entered into the patient's chart as soon as possible.
G. The required elements of a complete written verbal/telephone order are:
    1. Patient name and an additional identifier per policy *Patient Identification and Verification*
    2. Date and time order is received
    3. Origin of order
        A. Differentiate between telephone and verbal order; "TO" and "VO" are acceptable abbreviations for this purpose.
    4. Prescriber's name and professional category (e.g. MD)
    5. Receiver's signature and professional category (e.g., RN)
    6. Medication orders require drug name (brand or generic), dose, route and frequency.
    7. PRN (or "as needed") medication orders must include an indication for use.
H. All verbal and telephone orders will be authenticated/signed electronically within 48 hours.
I. The receiver may refuse to accept or implement a verbal/telephone order, if the order is deemed incomplete or unsafe. In such cases, processes outlined in policy *Administrative Chain of Command-Acute Patient Care Issues* must be followed.

Temporary Pacemakers and Epicardial Pacemakers

For additional information refer to full Policy: *Temporary Pacemakers Transvenous and Epicardial Pacemakers* in PolicyStat

RN RESPONSIBILITIES:

A. Patient with temporary pacing wires connected to a pacemaker generator may not shower. If the generator is not attached to the pacing wires, they may shower if the wires are covered with an aqua guard.
B. All temporary epicardial pacing wires must be insulated and always dressed. *Dressing will be changed per central line standards.*
C. When epicardial wires are not in use, the wires should be secured in 4x4 gauze and loosely taped to the patient's chest wall
D. Epicardial wires must be easily retrieved and not taped occlusively
E. Exposed epicardial wires should be secured in insulated material (e.g., finger cots, glove, plastic needle cap, ear plugs).
F. Gloves must be worn when handling the pacer wires.
G. Patients with temporary pacemakers in use should have pacing thresholds assessed and documented every 24 hours in Epic (preferably on dayshift) or per unit protocol (e.g., once per shift). Verify temporary pacemaker settings are ordered by LIP.
H. Patients with temporary pacemakers applied and in use will have the battery changed daily by the nurse caring for the patient. The change will be documented in the patient record and a piece of tape placed on the pack of the pacemaker with the nurse's initials, date, and time of battery change and will document in Epic (located under *Pacer Interventions*)
I. Pacemaker settings will be documented in Epic at change of shift and with any changes. Settings shall include the mode, rate, mA's, and mV's if indicated.
J. Pacemaker dependent patients will have a second temporary pacing generator readily available in the patient's room (CICU only)
K. A provider order is required before turning off the pulse generator
    1. Temporary pacing generators are to remain attached to the pacing wires until they have not been required for the past 24 hours
    2. Temporary pacing generators and extension cables are to remain the room, with the patient until the wires have been discontinued. At which time, the generator will be cleaned, removed from the room, and placed back in the designated storage area.
L. Patients with femoral transvenous pacemakers will remain on bedrest (CICU only)
M. Transvenous pacing wires will be always connected to a temporary pacer box even when the pacemaker is not in operation and power is off.
N. Epicardial pacing wires are to be removed by the surgeon or surgical assistant

TRANSFER CRITERIA TO CARDIOLOGY:

A. Temporary pacemaker with an underlying rhythm that is life-sustaining
B. Must be transferred to a monitored cardiology unit (Cardiology A or Cardiology B only)

Open Chest Code

For additional information refer to full Policy: *CC: Open Chest Code* in PolicyStat

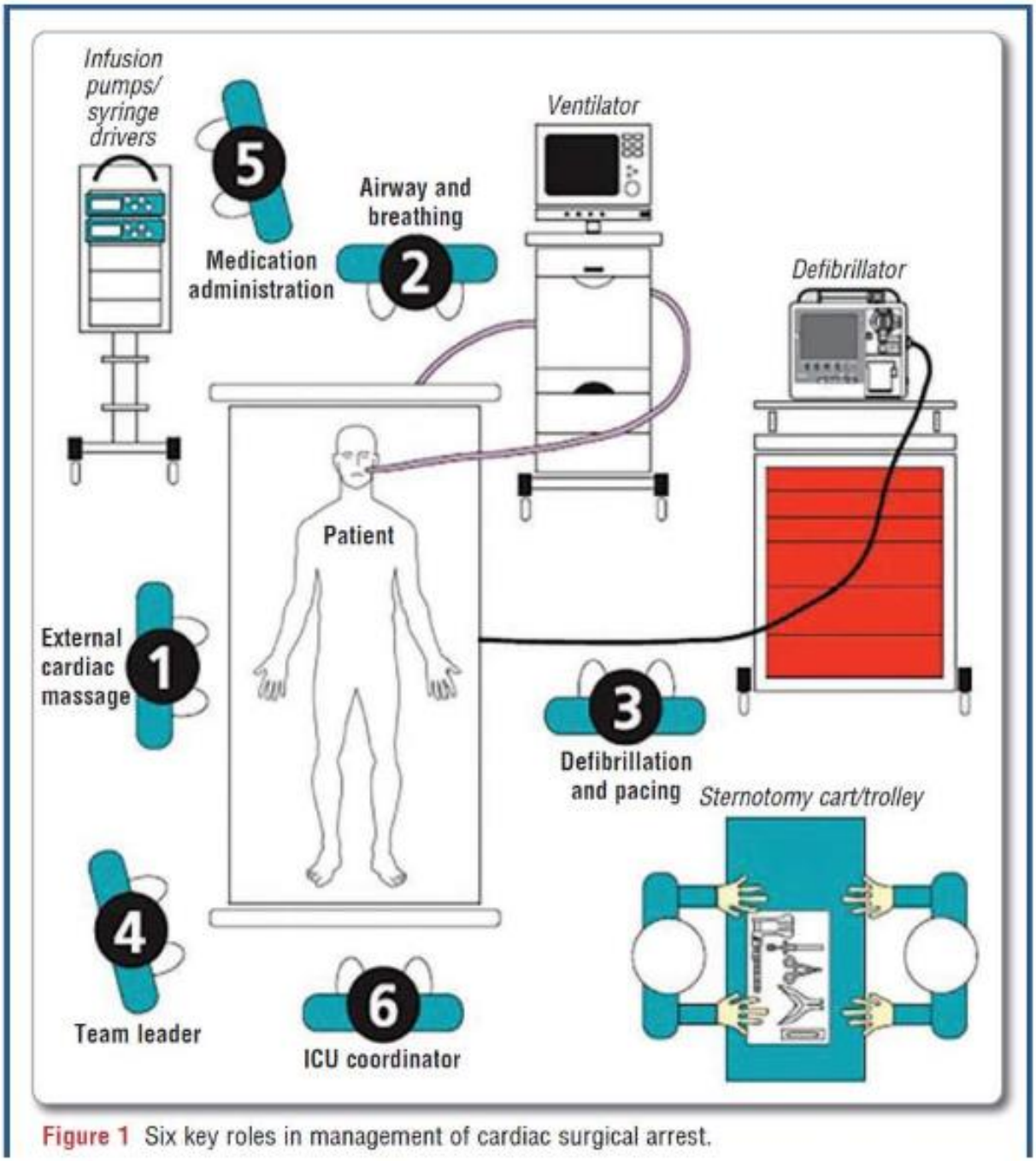
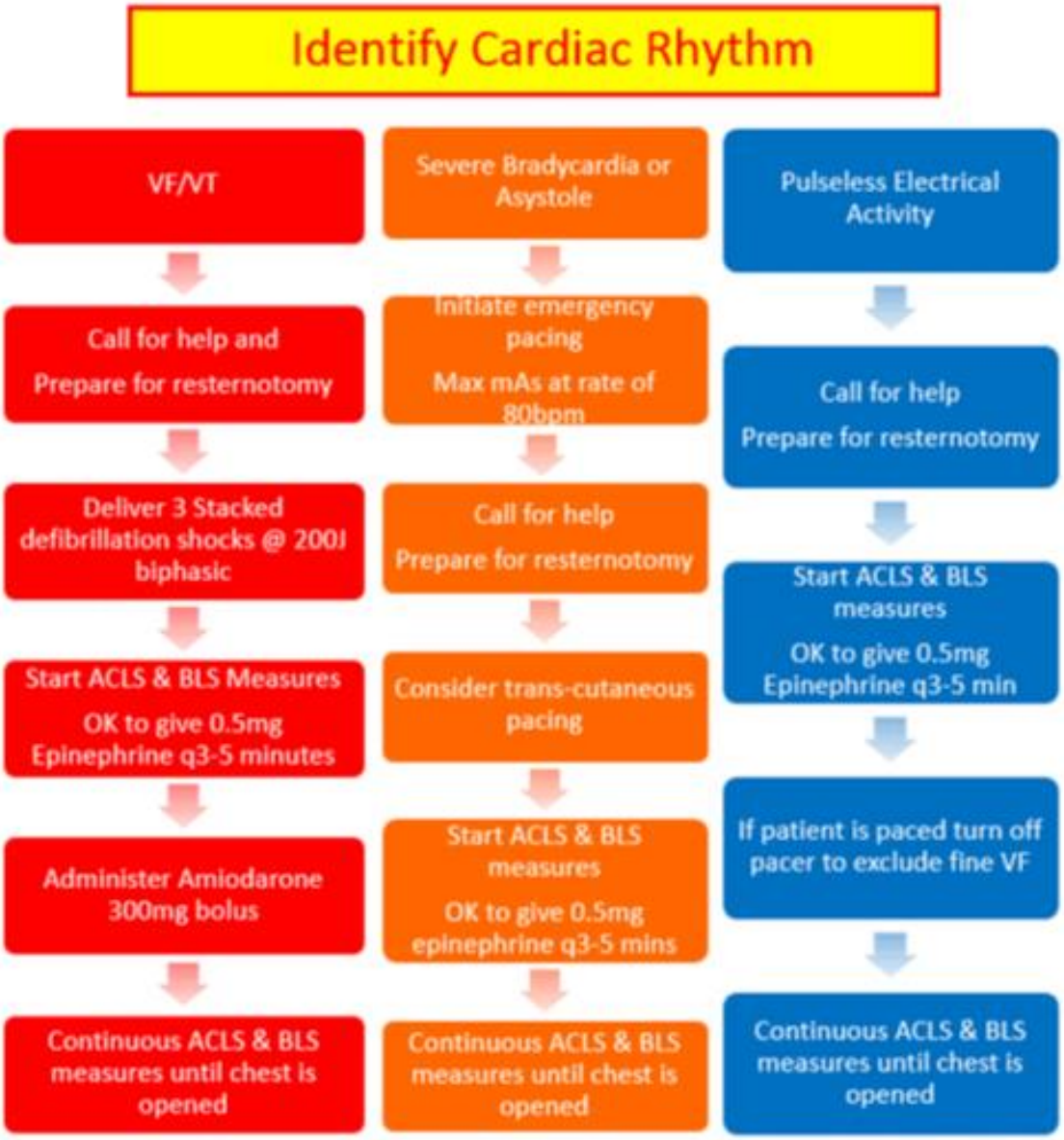


Figure 1 Six key roles in management of cardiac surgical arrest.

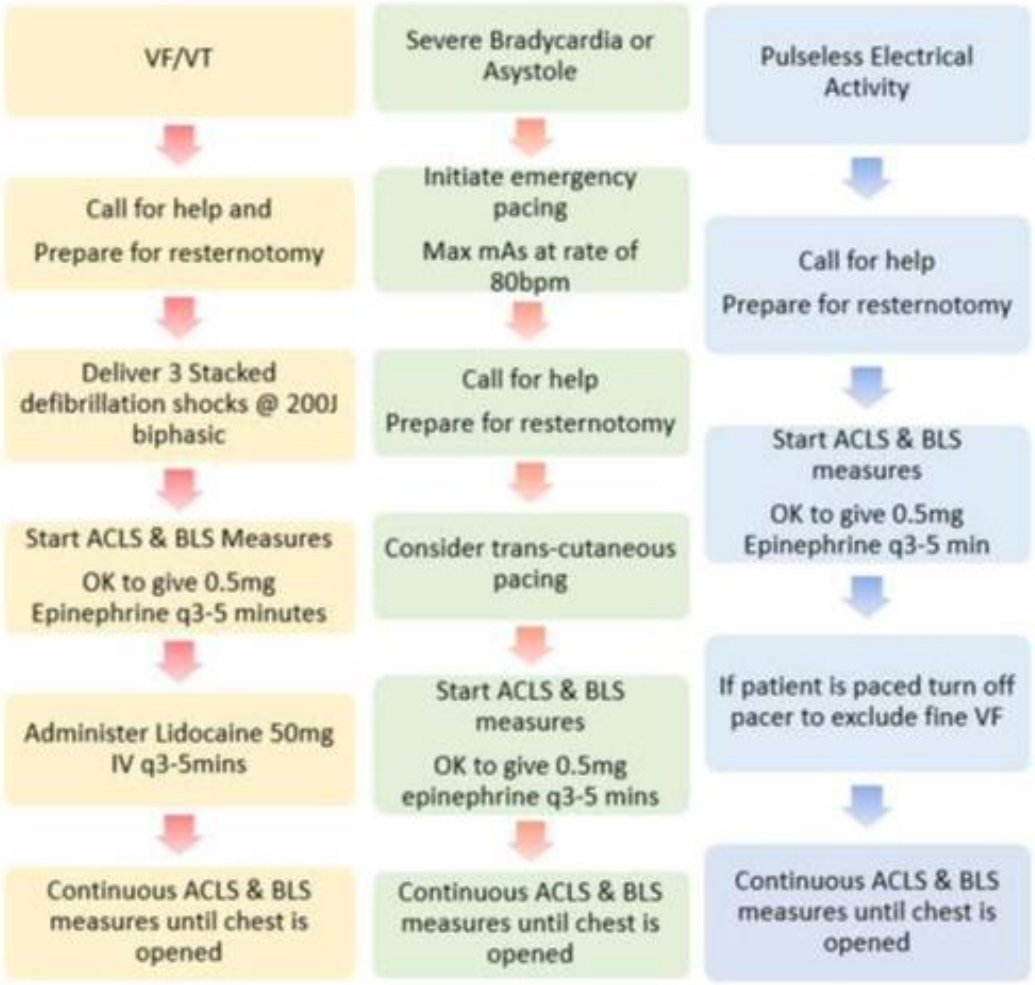
PSVMC Post Open Heart Surgery ACLS



- Airway and ventilation considerations:
  - If ventilated deliver FiO2 100% and turn off PEEP
  - Check ETT placement and cuff inflation by temporarily delivering approximately 10 breaths with bag-valve
  - Listen to breath sounds to rule out pneumothorax or hemothorax
  - Place patient back on ventilator with 100% FiO2 and no PEEP
- Defibrillation should occur in less than one minute from onset of event.
- This process is in effect during CICU stay upon transfer follow ACLS/BLS measures

PSVMC Post Heart Transplant ACLS

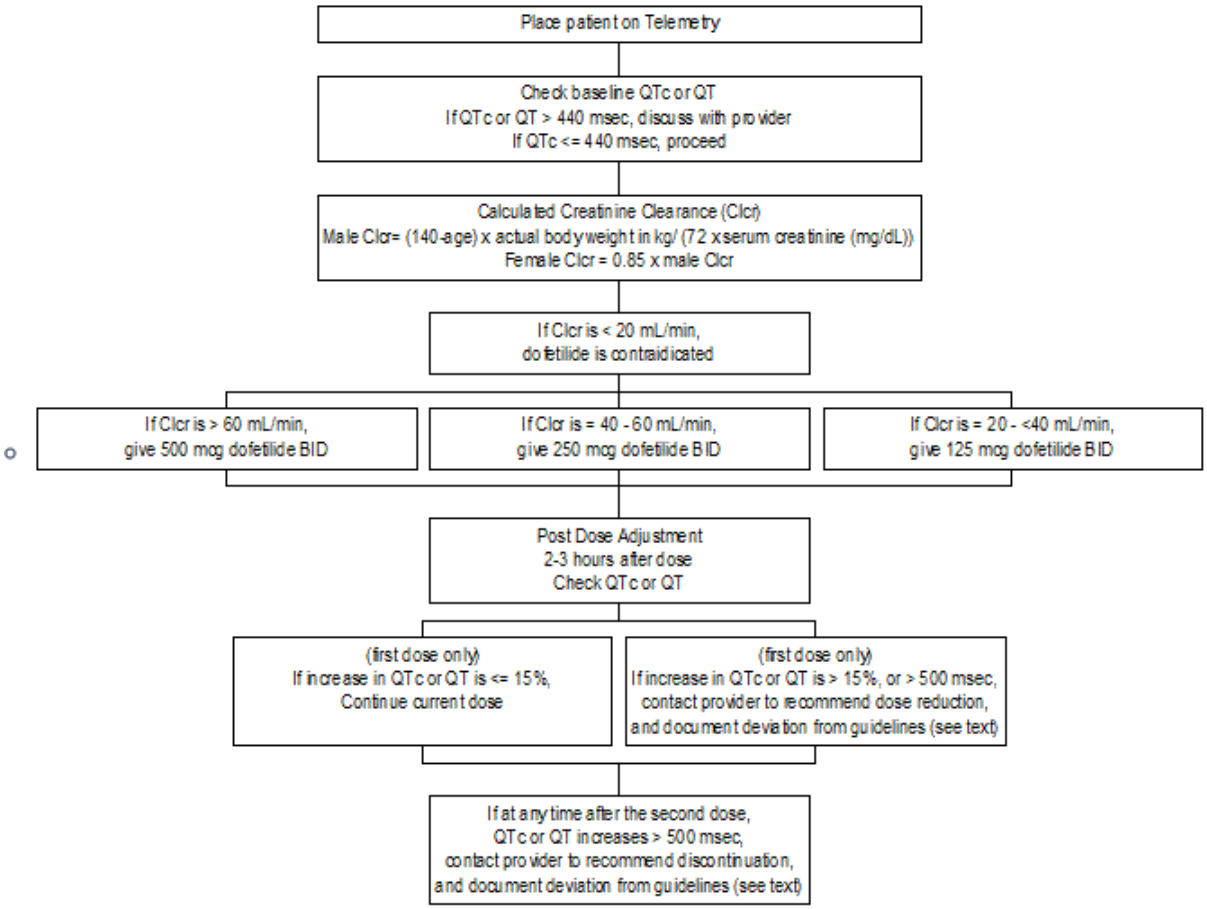
Identify Cardiac Rhythm



- Airway and ventilation considerations:
  - If ventilated deliver FiO2 100% and turn off PEEP
  - Check ETT placement and cuff inflation by temporarily delivering approximately 10 breaths with bag-valve
  - Listen to breath sounds to rule out pneumothorax or hemothorax
  - Place patient back on ventilator with 100% FiO2 and no PEEP
- Defibrillation should occur in less than one minute from onset of event.
- This process is in effect during CICU stay upon transfer follow ACLS/BLS measures
- ***Call Dr. Koomalsingh for ANY heart transplant Code Blue***

Dofetilide (Tikosyn) Dosing Guide

For additional information refer to full Policy: *Dofetilide (Tikosyn) Dosing Guideline* in PolicyStat



Milrinone Protocol

For additional information refer to full Policy: *Milrinone Protocol* in PolicyStat

Based on clinical conditions, symptoms exhibited, and current medication regimens, patients who require milrinone and meet the hemodynamic parameters listed below, will be initiated on milrinone on the cardiology units noted above.

The order for the inotropic infusion will be entered by the Licensed Independent Provider (LIP) without titration parameters. Titration will be done by the LIP based on reassessment of clinical condition and vital signs.

Parameters for initiation:

- Baseline systolic BP > 80mmHg
- Baseline mean arterial pressure > 50mmHg
- Baseline HR < 130 beats per minute
- No current symptomatic ventricular tachycardia/VT storm
- Continuous telemetry monitoring

Any patient that does not meet the above initiation parameters should be transferred to the Cardiac Intensive Care Unit for milrinone initiation.

LIP to write for inotrope initiation

- Dose change by written order only; no range parameters
- Milrinone
    - Minimum dose of 0.1 mcg/kg/min
    - Maximum dose of 0.5 mcg/kg/min
        - Maximum of one dose change every 3 hours
    - Vital signs/monitoring
        - Must be on telemetry
        - Vital signs every 3 hours x 2 checks after dose change, then resume unit standard.

RN to report any of the following to the LIP:

- Change in telemetry rhythm
- New change in symptoms
- Sustained systolic BP < 80mmHg with symptoms
- Interruption of inotropic infusion

Management of inotropic infusion:

- RN to check dose programmed into infusion pump at shift change.
- Inotrope infusion should never run dry
    - Order replacement infusions bag at least one hour prior to needing change.
- Do not change dosing weight of inotrope, even with change in weight noted.
    - Use dosing weight ordered by LIP at time of inotrope initiation.
- No blood draws to be performed from line infusing inotrope.
- Do not infuse any other Intravenous push (IVP) medications through line with inotrope infusing.
- Do not disconnect inotrope for any reason, unless ordered by LIP at time of inotrope discontinuation.

Tracheostomy Equipment Room Checklist

Type of trach/size: _____

Suction depth (cm): _____

Safety equipment at the bedside:

- ☐ Resuscitation bag/valve device with appropriate size mask *
- ☐ Dedicated oxygen flowmeter for resuscitation bag/valve device
- ☐ Obturator (from initial insertion)
- ☐ Backup trach tube same size as patient currently using
- ☐ Backup trach 1 size smaller than patient is currently using **
- ☐ 10ml syringe or cufflator
- ☐ Wall suction with canister (set up and working)
- ☐ Suction catheters (or inline suction)
- ☐ "Artificial Airway" alert sign on/outside door

* If trached because of upper airway obstruction, neonatal mask should be supplied for stoma ventilation if trach tube is dislodged and ventilation is required.
** Size 4 is smallest size available for adults

Non- Emergent Supplies

- ☐ Clean/sterile gloves and other PPE
- ☐ Inner Cannulas
- ☐ Trach ties (with Velcro)
- ☐ Sterile H_20 or NS
- ☐ Trach cleaning kits
- ☐ Manufactured split gauze or foam (hydrophilic) dressings
- ☐ Skin protectant/barrier film

*****Respiratory Therapy (RT) must accompany patient during transport*****

RT must be notified ASAP before a new patient with an artificial airway arrives on the unit AND before the patient leaves the room for any reason.

Transportation of Patients

For additional information refer to full Policy: *Transportation of Patients* in PolicyStat