Care of the Patient Undergoing Cardiac Angiography:

PURPOSE: To define the care of the patient undergoing cardiac angiography in the Cardiac Catheterization Laboratory.

POLICY: All patients will be contacted within seven working days prior to their scheduled procedure for pre-procedure instructions.

1. Inpatients will be visited on the appropriate nursing unit.
2. Outpatients will be telephoned at home.

SUPPORTIVE DATA: Patients undergoing cardiac angiography present with a variety of medical problems and symptomology. Close assessment and monitoring are necessary to allow for a safe, comfortable and expedient procedure.

DESIRED PATIENT OUTCOMES:

1. The patient will verbalize understanding of cardiac angiography.
2. The patient will be free of complications.
3. The patient will experience minimal discomfort throughout the procedure.

CLINICAL ASSESSMENT AND CARE:

1. Obtain a past medical history, including known allergies and present medications.
2. Assess patient for NPO status of four hours minimum prior to the procedure.
3. Assess the time of last void.
4. Assess initial vital signs upon arrival to the Catheterization Lab/Procedure Center, including pulse, respiration, blood pressure, pulse
oximetry and temperature if applicable. Mark peripheral pulses with ink for continued assessment.

5. Assess baseline neurological status, patient understanding of the procedure, and patient’s anxiety and ability to cooperate.

6. Obtain a current weight and height.

7. Assess pre-procedure lab work to include: PT/PTT, BUN, K+, H+H, platelets and creatinine. Obtain if needed.

8. Determine a signed consent form has been obtained.

**GENERAL CARE:**

1. Explain and answer questions and listen to concerns about the procedure.

2. Continued patient assessment to include cardiac rate and rhythm, pulse oximetry, blood pressure, respiratory status, neurological assessment and assessment of puncture site and peripheral pulses.

   a. Vital signs with pulse oximetry to be documented every 15 minutes throughout the procedure unless conscious sedation is administered - the vital signs with pulse oximetry will be documented every 15 minutes for the first hour, every 30 minutes for the next two hours, and hourly until discharged if an outpatient. Should the patient require admission, follow physician’s written orders. If conscious sedation is administered, follow Hospital Conscious Sedation Policy.

   b. Assessment of puncture site and extremity for bleeding, swelling, changes in color, temperature of loss of feeling and previously marked peripheral pulses to be made with each vital sign assessment.

3. Assess the patient’s need for sedation and discuss with the Cardiologist for appropriate orders. Document this assessment on Conscious Sedation Flowsheet.
4. Establish IV access and maintain throughout the procedure and recovery period. If possible, a #20 gauge angiocatheter should be used. Heplock unless orders for IV fluid given by physician.

a. Patients scheduled for cardiac angioplasty need hydration fluid. Request an order for fluid type and rate from Cardiologist.

5. Position the patient safely and appropriately on the angiography table, promoting comfort. Use medical immobilization as necessary to maintain proper positioning during procedure.

6. Administer medication as ordered by the Cardiologist.

7. Obtain lab specimens as ordered.

8. Offer emotional support throughout the procedure.

9. Maintain accurate account of contrast given.

10. Reinforce Cardiologist’s instructions as needed throughout the procedure.

11. Apply appropriate dressing to puncture site after sheath discontinued.

12. Admit patient to recovery unit and maintain strict bedrest unless otherwise ordered.

13. Encourage diet and fluids unless contraindicated.

PATIENT TEACHING:

1. Inform the patient of his/her scheduled procedure time and to arrive 1 ½ hours early.

2. Inform the patient that he/she must remain NPO for four hours prior to the procedure, except medications are to be taken with a sip of water. Insulin and oral hypoglycemics are to be held or taken as ordered by MD.

3. Inform the patient that he/she will remain in the Recovery
area until approximately 4:00 p.m. or possibly longer, if needed.

4. Inform the patient that a responsible adult must drive him/her home and remain with him/her for a 24 hour period if possible.

5. Explain the procedure to the patient.
   a. Patient will lie in a supine position for extended period of time and movement is extremely limited.
   b. Patient will be placed on a cardiac monitor, pulse oximeter and blood pressure monitor which will inflate every 5 minutes or more frequently, if deemed necessary.
   c. The procedure will be done under sterile technique, therefore, the medical team will wear masks, caps, gloves and sterile gowns as necessary.
   d. An IV will be placed for any fluids or medications necessary during the procedure and will be removed just prior to discharge.
   e. The puncture site will be prepped with a cool bacteriocidal liquid and a sterile drape will be placed.
   f. A local anesthetic will be administered.
   g. After the area is numb, the physician will palpate the area and a needle will be placed into the appropriate vessel. A plastic catheter will then be threaded into
the appropriate site for injection.

h. A contrast agent will be injected and the patient may feel an increasing hot sensation during the contrast injection. This will subside.

i. After the test is complete, the physician will remove the plastic catheter from the vessel and will apply firm pressure at the site for insertion of approximately 20 minutes or longer if necessary. In most instances, a closure device will be used to close the artery.

j. A dressing will be placed on the insertion site.

6. Inpatients will be returned to the appropriate nursing unit.

7. Outpatients will remain in the recovery area until approximately 4:00 p.m.

a. While in the recovery area, inform the patient that vital signs and peripheral pulses will be checked frequently.

b. Lunch will be ordered for the patient and fluids will be encouraged.

c. Strict bed rest will be enforced and the patient must use a bedpan and/or urinal.

d. Splinting of the access site will be enforced during any type of straining, moving, laughing, coughing or walking for 24 hours.
8. Upon discharge, “Angiography Discharge Instructions” will be reviewed with patient and a copy sent home with him/her to use as a reference.

9. A follow-up phone call or visit will be made 72 hours after procedure.

**REPORTABLE CONDITIONS:**

Notify Cardiologist if any of the following occur:

1. Patient discomfort or significant complaints.
2. Abnormal lab values.
3. Abnormal EKG rhythm strip.
4. Hypertension or a 10% rise or fall in vital signs.
5. Contrast amount of 2cc per pound or greater.
6. Post-procedure bleeding, swelling or color, temperature or pulse changes.
7. Nausea or vomiting.

**DOCUMENTATION:** Document history, assessments, findings, medications and contrast administered, vital signs and follow-up on the patient record.

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Patient Instructions for Cardiac Catheterization/PCI
**PURPOSE:** To provide guidelines for patient education and preparation precardiac procedure.

**PROCEDURE:**

Action Points of Emphasis

Outpatient Scheduled by Cardiologist through Cath Lab Scheduling Secretary:

1. **Patient Instructions:**
   a. Patient will report to Cardiopulmonary Office or Procedure Center 1 ½ hours prior to scheduled procedure.
   b. Patient must be fasting from midnight the night before scheduled cath. May take medications with sip of water.
   c. If patient is taking Coumadin or Warfarin, medication must be stopped
      three full days before scheduled procedure.
   d. Patients will bring all medicines (in their appropriate bottle) to hospital with them.
   e. Patient will bring insurance cards with them.
   f. Patient must be accompanied by an adult to drive him/her home.
   g. Patient must arrange for a competent adult to stay with them for four hours after arrival home.
   h. Patient will be instructed to do only light activity for 24 hours after procedure.

2. **Preadmission Testing (Lab work with EKG) Must be done within 30 days prior**
   unless clinically indicated. Arrange testing through referring MD or Cath
Scheduling Secretary.

3. Inpatient can be scheduled at any available time slot in Cath Lab through Cath Lab Scheduling Secretary or Cath Lab charge person.
   a. Cardiac Cath procedure will be scheduled through Attending Cardiologist or Cardiologist performing the Cardiac Cath.
   b. Patient instructions/teaching done per respective nursing unit.
   c. Pre-cath orders and consent for procedure to be filled out and signed by Cardiologist performing Cardiac Cath.
   d. Patient must be fasting from midnight the night before Cath if Cath is scheduled for a.m. A clear liquid breakfast will be ordered if Cath is scheduled for after 12:00 noon.

4. Transfer patient from outside facility to be admitted to Cardiology Service.
   a. Determine if patient needs to go to ICU, Telemetry or General Medical floor.
   b. Be sure insurance is checked and need for precertification (individual interventional)
   c. Patient should be transferred to John Dempsey Hospital 1 ½ hours prior to scheduled Cath time if going to hospital bed; 1/2 hour before scheduled Cath if going directly to Cath Lab. Be sure sending hospital knows to have patient fast after midnight the night before and sends appropriate records.

**OUTCOME:** Diagnostic Cardiac Cath will be scheduled promptly and efficiently.
Patients undergoing Cardiac Cath will understand clear and concise instructions prior to arrival.

**PROTOCOL FOR: Post-Cardiac Intervention Procedures**

**INDICATIONS:**
- Percutaneous Transluminal Coronary Angioplasty (PTCA)
- Coronary Stent
- Rotoblator

**POLICY:**
1. Post-procedure, patients will be initially managed by the Interventional Cardiologist, Cardiology or Cardiothoracic Surgery APRN.
2. Patients must be on cardiac monitor while arterial sheath is in place and for two hours after sheath is removed, unless otherwise ordered by practitioner.

**DESIRED PATIENT OUTCOME:**
1. Patient will experience minimal/no complications related to Coronary Interventional Procedure.
2. Patient will maintain maximum level of comfort during postprocedure period.

**CLINICAL ASSESSMENT AND CARE:**

A. Circulation
1. Assess BP, P, resp, every 15 minutes X 1 hour, every 30
minutes X 2 hours, every 1 hour x 2 hours, then every 4 hours. 

Monitor BP via arterial line if present.

2. Monitor temperature every 4 hours. If temperature is >101°F, monitor every 2 hours. Notify practitioner per orders.

3. Assess circulation, sensation, motion and pulses of affected extremity every 15 minutes X 1 hour, then every 30 minutes X 2 hours, then every 1 hour x 2 hours, then every 4 hours.

4. Assess with sheath and/or closure device for bleeding or hematoma every 15 minutes X 1 hour, then every 30 minutes X 2 hours, then every 1 hour X 2 hours, then every 4 hours.

5. Increase frequency of assessment to every 15 minutes if a hematoma is present and increasing in size. Outline areas on dressing and time on all hematomas.

6. 12-Lead EKG should be performed on admission to the unit and in a.m. with copies on chart.


8. Assess mentation and neuro status at every 4 hours and prn.

9. Maintain Heparin, Angiomax, Integrilin and/or Research Study Drug Infusion per order. Monitor PTT and platelet count as ordered.

10. If femoral approach was used, the patient should remain on bedrest for 6 hours after the sheath is removed (HOB may be at 30°) unless otherwise ordered.

a. 6 hours after sheath is removed:

1) Patient may turn in bed
2) HOB may be elevated to 45°

3) The affected lower extremity can be bent slightly

b. 6-18 hours post sheath:
   1) Patient may sit on edge of bed (if stable groin site)
   2) May use bedside commode with help (if stable groin site)
   3) Increase activity/ambulate per practitioner orders.

11. For radial approach, the patient should remain on bedrest for
   4 hours; bathroom privileges with assist after 1 hour.
   a. HOB 45° for 1st hour, then to level of patient comfort.
   b. After 4 hours, increase activity per orders.

B. If bleeding / hematoma develops:

1. Apply light digital pressure to puncture site.

2. Direct manual pressure just above arterial site and/or a
   pressure bandage may be used if additional compression is
   necessary to control bleeding or if hematoma is forming.

3. Notify practitioner for bleeding/hematoma formation at site.
   Restart sequence of assessment at every 15 minutes if hematoma
   is present. Outline & mark time at the site of the hematoma.

4. For site with persistent oozing:
   a. Femostop compression device may be applied. Refer to
      Femostop protocol.
   b. For radial site, refer to Hemoband or Terumo (TR) band
      protocol.

5. If puncture site dressing needs to be changed, dress with dry
   sterile dressing and cover with transparent dressing, tape, or
pressure dressing if needed.

C. Report any of the following to MD:

1. Recurrence of chest pain.
2. Suspected retroperitoneal bleeding.
3. Symptomatic bradycardia or other arrhythmia occurs.
4. Absent or diminished pulse in affected limb.
5. Bleeding at sheath site or presence of a hematoma.
6. Coagulation results outside of desired range.
7. BP < 90 systolic or symptomatic hypotension occurs.
8. Temperature >102°F (or per ordered parameter).

PATIENT TEACHING:

1. Instruct patient to notify the nurse if they experience numbness, pain (including back or lower quadrant pain), throbbing, swelling, oozing or dampness at the site.
2. Instruct patient/family re: need for frequent assessment, vital signs, etc. Instruct patient re: keeping affected extremity stabilized/straight. HOB will be no higher than 30° (femoral site), 45 degrees (radial site).
3. Prior to discharge, instruct patient/family re:
   a. Site care
   b. Activity/limitations
   c. Newly prescribed medication/anticoagulant
   d. Symptoms of complications
   e. Follow up with practitioner
4. Instruct patient not to stop taking prescribed medication,
especially anticoagulant, without first checking with prescriber.

PROTOCOL FOR: Pre-ProEDURE Phone Interview for Scheduled Cardiac Catheterization Lab

POLICY:

1. All patients schedule for a procedure in the Cardiac Catheterization


Lab will be called, interviewed and a chart initiated prior to the procedure date.

2. The necessary pre-procedure data will be obtained and documented on the Pre-Procedure Call Form.

3. The privacy of confidential patient information will be safeguarded pursuant to UCHC HIPAA Policy 2003-24 (available online).

PROCEDURE

ACTION

1. A procedure schedule will be obtained weekly from the Scheduling Coordinator and updated as needed.

2. Nurses will obtain an updated medical history, review the procedure, preprocedure instructions, directions to the Cardiac Catheterization Lab or Procedure Center, ride home, and any special needs.

3. All information obtained will be documented on the Pre-Procedure Call Form and the chart updated.

4. If the patient is not available, messages should be left in accordance to UCHC HIPAA Policy 2003-24 (available online).

a. Protected Health Information may not be left on voicemail/answering machines. Any information left on answering machine/voicemail shall be generic in nature and should not indicate services being performed or the provider of such services. Thus, nursing staff shall identify the call
as coming Cardiology Department and ask for a call back from the patient only.

b. Pursuant to UCHC HIPAA Policy 2003-24 (available online), if the patient is calling to obtain information about him or herself, staff shall verify the patient’s identity by using information available in the registration system, e.g., last four digits of the social security number and date of birth.

c. Three attempts will be made to contact the patient. If after three unsuccessful attempts, the doctor will be notified that nursing was unable to reach the patient.

5. Completed charts for patients initially reporting to the Procedure Center will be brought to the Same Day front desk prior to the procedure.

6. Completed charts for patients reporting directly to the Cardiac catheterization Lab will be secured in the designated area in the Cardiac Catheterization Lab.
PROTOCOL/PROCEDURE FOR: Terumo (TR) Band
Radial Artery Compression Device (DRAFT)

PURPOSE: To ensure continuity and patient safety while discontinuing radial artery sheaths with a radial compression device and to assure hemostasis is maintained once the radial sheath is removed.

POLICY:

1. ONLY Cath Lab personnel can discontinue radial arterial sheaths. Cath Lab, CSDU, ICU and PACU RNs, CVTs or other cath lab personnel involved in direct patient care who demonstrate competency can maintain and remove the TR band according to the procedure outlined below.

2. Unless otherwise ordered, for diagnostic cases, the TR band should be left on for approximately 2 hours post-procedure; For interventional cases, the TR band should be left on for approximately 4 hours post-procedure, given the additional anticoagulation.

SUPPORTIVE DATA:
The Terumo TR Band is a device specifically designed to achieve hemostasis for the transradial approach for cardiac catheterization. It can be used for both right and left radial artery access and comes in 2 sizes (Regular and Large).

DESIRED PATIENT OUTCOMES:
1. The patient will maintain hemostasis following radial artery sheath removal; distal perfusion to the limb will be maintained.

**EQUIPMENT:**

TR Band with inflator syringe  Elastoplast and gauze for pressure dressing  (Personal Protective Equipment is implied.)

**PROCEDURE**

<table>
<thead>
<tr>
<th>Application</th>
<th>Points of Emphasis</th>
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<tbody>
<tr>
<td>1. Place the TR band on the patient’s indicates wrist and tighten via the velcro strap.</td>
<td>1. A small green box where the band should be placed proximal to the percutaneous site.</td>
</tr>
<tr>
<td>2. Fill the TR band inflator syringe with initially be max of 18 mls of 18 ml of air. As the radial sheath is initially be inflated to slowly pulled out, inject the 18 mls of the maximum of 18 mls of air into the one-way valve on the band air. device, to inflate the balloon over-lying the radial artery.</td>
<td>2. The balloon should inflated to the</td>
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</table>
3. Once the sheath is completely removed, slowly withdraw air back out via the hemostasis syringe, 1 ml at a time, observing for adequate hemostasis is achieved without blood leaking out from the puncture site. This ensures that compromising flow in the radial artery.

At the point that blood leak is noted, re-inject 1 ml of air into the balloon.

4. Use a sterile gauze or swab to wipe away any excess flood from underneath the TR band.

5. Assess perfusion (color, temp, sensation in the affected hand).

6. Note the total mls of air instilled and keep the mls of air instilled and communicate this in hand-off report. Remember to syringe for later deflation.

REMOVAL:

1. When it is time to release the pressure (2-4 hours post procedure, or as ordered), withdraw half the amount of air that was instilled into the balloon, and observe for any bleeding.

2. If bleeding occurs, re-inject air until the bleeding stops and wait another 30 min before repeating the step above.

3. If there is no bleeding, remove all the air in order to deflate the balloon completely.
and observe for bleeding.

4. If there is no bleeding, remove the TR Band; 4. Elastoplast dressing

Cover the site with a sterile gauze and should be occlusive;

Elastoplast pressure dressing. It should not encircle

the entire wrist.

5. Assess perfusion to the hand (color temp, sensation) with vital signs.

6. Instruct the patient to leave the elastoplast dressing intact until the next morning and to avoid manipulation of the wrist for 24 hours.

   After the dressing is removed, the site may be gently cleansed with soap & water and a bandaid applied.

**REPORTABLE CONDITIONS:**

1. Notify the MD/ APRN of any uncontrolled bleeding (elevate the arm and apply manual pressure should this occur).

2. Notify the MD / APRN if circulation to the hand appears compromised.
PROTOCOL FOR: Radiation Exposure: Minimizing Patient Exposure

DESIRED PATIENT

OUTCOME: The patient is free from signs and symptoms of injury related to use of radiation. Radiation exposure is limited to the target site.

CLINICAL ASSESSMENT AND CARE:

1. Assess patient’s history of radiation exposure for therapeutic and diagnostic purposes.

2. Ensure that pre-menopausal women are aware of radiation risks associated with pregnancy. Obtain order for screening test, as indicated.

3. Ensure proper protective equipment is available.

4. Implement measures to protect the patient from direct and scatter radiation:

   a. shield gonads and thyroid when those organs are not targeted for
exposure.

b. shield abdomen and fetus of pregnant patients.

5. Report any of the following:

• inability to use lead shielding as recommended

• inability to position patient and film/fluoroscopy properly

6. Monitor for skin changes (e.g., redness, abrasions, bruising, blistering, edema).

**PROCEDURE/PROTOCOL FOR: Scheduling procedures in Cardiac Cath Lab: Cardiac Catheterizations and Percutaneous Coronary Interventions**

**PURPOSE:**

1. To outline personnel and duties involved in scheduling procedures in the Cath Lab.

2. To delineate steps in scheduling elective or emergent procedures in the Cath Lab.

3. To assure that any patient undergoing a cardiac procedure at JDH will be assessed for pre-procedure risk and will be directed to the appropriate level of care.

**POLICY:**

1. Patients will be scheduled as:

   a. Outpatients (discharged on day of procedure)

   b. Inpatients

   c. Transferred from another facility, either as outpatient or inpatient admission

2. All procedures are scheduled by a physician after appropriate patient examination and testing is done.
3. All procedures are scheduled through the Cardiac Cath scheduling number, x 2828 or the Cath Lab charge person.

4. All patients who are admitted through Procedure Center or are transferred in stable condition to the Cath Lab or Cardiac Step-Down Unit will have the interventional cardiologist as attending physician unless otherwise ordered.

5. All patients post-Percutaneous Intervention are admitted or transferred to the Cardiac Step-Down Unit.

6. Patients who are unstable medically or with an acute MI will be admitted to ICU post-procedure.

PROCEDURE:

Scheduling of Cardiac Catheterization with Angiography and/or Percutaneous Intervention (PTCA/stenting)

ACTIONS

1. Preadmission testing for procedure, including blood tests and EKG, must be done within 30 days prior to procedure unless clinically indicated. Testing is to be arranged through scheduling MD’s office or the Cath Lab scheduling secretary.

   a. Outpatient pre-procedure orders, labwork, consents, H&P and other pertinent test results should be available to Cath Lab scheduling secretary on the day before the procedure so that a chart can be made and sent to AACU.

   b. Old medical records will be obtained by Cath Lab secretary and will accompany chart.

   c. Transfers and inpatients need the above information accompanying them to the Cath Lab.
2. Cath Lab scheduling secretary will obtain patient name, insurance precertification, DOB, address, SSN, insurance information, attending MD, interventional cardiologist, diagnosis and procedure to be done, and will repeat this information to admitting bed control.

3. Cath Lab scheduling will schedule date and time of procedure in 1 ½ hr intervals, Monday through Friday, starting at 7:30 a.m. with last case scheduled at 2:00 p.m. Emergency or urgent add-on cases will be scheduled through the Cath Lab charge person on a case by case basis.

4. Patient information, date, time TOO, procedure and MA will be called to:

Procedure Center, Cardiac Step-Down or ICU, Cath Lab, Cardiology Attending if needed, OR scheduling and cardiac surgeon’s office.

5. All scheduling information will be placed in Cath Lab schedule and Cath lab scheduling database.

**DESIRED OUTCOME:**

Patient needs will be anticipated to reduce risk and to improve outcomes with a successful Cath Lab procedure.

Patients scheduled of Cardiac Cath procedures will be directed promptly and efficiently through the scheduling registration process.
PROTOCOL FOR: Sheath Removal Care: Post Percutaneous Transluminal Angioplasty (PTCA)

POLICY:

Arterial sheaths will be removed by designated personnel, or a cardiologist.

DESIRED PATIENT OUTCOMES:

1. No hematoma will develop at sheath site.
2. Patient will maintain adequate perfusion to affected extremity.

PREPARATION FOR SHEATH REMOVAL:

1. Discontinue heparin drip, per MD order.
2. Obtain Fem-stop and 5lb. sand bag.
3. Verify that dressing supplies are available - 4x4s, elastoplast, etc.
4. Have 0.9% NS IV infusion set up.
5. Have Atropine available and pre-medicate per MD order, based on patient status (consult with MD if uncertain).
**CLINICAL ASSESSMENT AND CARE:**

1. Monitor HR, B/P and O2 saturation q 10 minutes x 30 minutes immediately after sheath removal.
2. Then monitor vital signs q 15 minutes x 1 hour, then q 30 minutes x 1 hour, then q 1 hour x 2 hours.
3. Simultaneously assess circulation, motion and sensation to both feet.
4. Apply 5lb. sand bag or Fem-stop to site x 6-8 hours, or per MD order.
5. Maintain bedrest while sandbag (or Fem-stop) is in place. No bending of groin is permitted. May turn side to side for back care.
6. May resume diet, per MD order.
7. Obtain 12-lead EKG.
8. Notify MD for:
   a. Absent or diminished pulse in affected limb.
   b. Presence of a hematoma.
   c. Symptomatic bradycardia or other arrhythmia.
   d. Bleeding at insertion site.
   e. Recurrence of chest pain.

**PATIENT TEACHING:**

1. Reinforce need for: no bending of affected limb, frequent vital signs and pulse checks, bedrest per MD order post sheath removal.
2. Instruct patient to report any numbness, tingling or acute pain of affected limb, or right/left lower quadrant abdominal pain.
3. Reinforce the following to patient:
   a. Signs and symptoms of bleeding or hematoma.
   b. Don’t strain while sandbag or Fem-stop in place.
   c. Use sandbag or Fem-stop as a splint for coughing.
   d. Don’t strain to start urine stream.
   e. RN will monitor puncture site for redness, swelling, hardness or abnormal drainage.

**PROTOCOL FOR: Staff Duties in the Cardiac Catheterization Lab**

**PURPOSE:**
To define Cardiac Catheterization Lab team responsibilities in the Catheterization Lab during routine and emergency procedures.

**PROCEDURE:**

**ACTION**

1. Two staff members are assigned to 6:30 to 5:00 pm shift with the following responsibilities:
   a. Obtain keys from Pyxis on CSDU
   b. ISTAT/Glucometer QA/QCs
   c. Set up IV bags with time and date
   d. Mix Heparin Flush bags and label appropriately
   e. Assign scheduled patients with procedure number in Cine book
   f. Obtain demographic sheets for days schedule
   g. Enter patients into Vericis/Heartsuite monitor
h. Do emergency checklists in both rooms
i. Check code carts in all areas
j. Check Temps on contrast and blanket warmers in both rooms
k. Turn on Fluro/Heartsuite equipment
l. Check scheduler line x2828 for add on cases
m. Set up procedure table
n. All early morning responsibilities must be complete before staff takes a break
o. The 6:30 staff will be assigned #1 or #2. The #1 staff may leave at 5:00 pm. However, if cases are still going, the #2 staff is required to stay to assist with the case until 5:30 pm in the event there is less than 3 people on-call and no other staff until 5:30 pm.

2. Responsibilities of the Cardiac Catheterization Lab team members during daily function of the Catheterization Lab 7:00 - 5:30 pm. All responsibilities apply to both the RN and CVT role unless specific to a scope of practice.

a. The 7 am stuff RNs/CVTs are responsible to stock both rooms and holding room with supplies, linens/blankets. Check sharps containers and empty if needed in soiled utility room. Obtain stretchers/beds for day.
b. All stocking should be done prior to beginning other job duties and should be complete before leaving the unit or taking a break.
c. ANM will be in charge to coordinate flow, make assignments, serve as a
resource person and will supervise and support the team approach at all times. In the ANM’s absence, a charge person will be assigned to delegate and oversee unit flow.

d. ANM or charge RN will assign team members to cases.

e. All members of the team will assist in preparing the first patient of the day, i.e., paperwork, IV, EKG, lab work, before taking a break.

f. All staff will report to the ANM if they leave the Catheterization Lab premises and carry a pager/cell phone to ensure accountability.

g. Team members will recognize patient assignments and will promptly attend to the patient from admission to discharge from the Cardiac Catheterization Lab.

h. Both the RN and/or CVT will perform transfers via w/c, stretcher, or bed to and from the Catheterization Lab and will assist to get the patient on the table and prepared for the procedure.

i. If there is a delay in the transport department from Procedure Center to Cardiac Catheterization Lab over 15-20 minutes, a Catheterization Lab staff member will be assigned to transport the patient to the Catheterization Lab.

j. Neither team member should leave the patient without notifying the other member, for example, obtaining a blanket or lead. Time out of procedure rooms should be minimal to avoid disruption of flow and patient safety.
k. Both RN and CVT are responsible to ensure that the confidentiality and privacy needs of the patients are met.

l. It is the responsibility of the team to ensure that privacy needs of the patient are met by covering genitals with a towel while doing skin prep and closing the door to the procedure room.

m. All team members need to communicate respectfully to each other during cases; accurately and clearly reporting data, for example, allergies, height, weight, risk factors, equipment, and medications.

n. The RN administers all medication ordered by the MD following medication protocols/MD orders to discontinue and titrate medications.

o. It is the responsibility of all team members to watch the ECG monitor and report changes during the procedure.

p. No team member should leave the room during the procedure except to retrieve equipment from the store room and it is never acceptable to have both members out of the room.

q. Personal phone calls are to be kept to a minimum and absolutely no personal cell phones are to be used in procedure room for any reason.

r. The Tech is responsible to obtain lesion information from the MD in a professional, tactful manner to record on protocol.
s. It is both the RN and CVTs responsibility to transfer and/or ensure the patient is transferred safely off the table to a bed or stretcher and that the patient is transferred to the receiving unit.
t. RN is to call report to receiving unit as soon as possible after case is complete.
u. Both RN/CVT are responsible for emergency care of a patient even after the procedure is complete.
v. All patients are monitored per protocol during manual compression of groin after sheath removal until disposition to receiving unit.
w. A staff member scrubbing in on a case is responsible for preparing the access site and uncovering the procedure table before scrubbing.
x. At the end of the case it is the team’s responsibility to remove drapes from the patient and table and take soiled instruments to soiled utility room.
y. All team members are responsible for prompt room clean up. This includes trash disposal between cases and wiping the procedure table, patient table, ECG leads, bp cuff, pulse oximetry probe and any soiled surface.
z. Procedure Room must be left ready for the next procedure with consideration for next team to use the room. For example, all used medication vials should be discarded, counter tops tidy, and paperwork in appropriate basket, equipment for table set up and fresh linen on bed. This also applies to cases after hours and on call.

aa. Charge sheets are to be done by the tech during the case.
bb. It is the responsibility of all team Lab members to ensure that the lab equipment is turned off properly, rooms cleaned and stocked before leaving at the end of the day. This is equally so when the team is called in for emergency cases.

cc. In the event that the Catheterization Lab census is low, the staff must be sure all rooms are stocked and in order, competencies are up to date and side jobs are done before being granted Comp Time.

3. Both RN and CVT are equal professional roles in the Catheterization Lab.

Proper staffing of the unit is essential with a minimum of 4 staff members scheduled daily.

4. Universal precautions are to be used by all team members.

**PROTOCOL FOR: Traffic Patterns**

**POLICY:**

1. The Catheterization Lab will be divided into the following two areas:

   1) restricted and 2) unrestricted.

2. **Restricted areas** include the procedure room. Clean scrub attire, hats, and masks are required in the table and sterile field areas;
cardiovascular technologist is required to wear scrub attire. Lead aprons are to be worn by all personnel during the procedure.

3. **Unrestricted areas** will include the following peripheral support areas:
   - control room
   - cath lab holding area

4. Patients entering the procedure rooms will wear clean gowns and be covered with clean linens.

5. Doors to procedure rooms will not be propped open.

6. Clean supplies will enter and exit procedure rooms from the main hallway. Soiled items will exit the procedure rooms through the main hallway after the items are covered. All soiled items will be terminally processed in the Decontamination Area of the CSS/IR.

7. Supplies and equipment will be removed from external shipping containers prior to delivery into restricted and unrestricted areas.

**DESIRED PATIENT OUTCOME:** The patient will be free from signs and symptoms of infection, related to breaches in staff adherence to proper traffic patterns.

**CLINICAL ASSESSMENT AND CARE:**

1. Upon admission to the operating or procedure rooms, the patient will be assessed for wearing of proper attire for the area.

2. The flow of clean and soiled items will be monitored and maintained per protocol.
3. *Doors to the procedure rooms will kept closed except during movement of patients, personnel, supplies, and equipment in and out of the area.*