Cardiovascular Lab (CVL) & Electrophysiology (EP) Lab Addendum

Table of Contents

Temporary Pacemakers and Epicardial Pacemakers 2

SAFEGUARD FOCUS Cool™ Compression Device Management 3

Vascular Sheath Management and Post Procedural Care 4

Universal Protocol for Invasive Procedures 6

Consent and Refusal of Consent for Procedures 7

Fire Safety in Surgical Services 8

Malignant Hyperthermia 9

Massive Transfusion 12

Specimen Handling in Surgical Services 13

Dress Code- Surgical and Procedural Attire 15

Verbal and Telephone Orders 18

Labeling of Medications and Solutions 19

Positioning the Patient in the Perioperative Setting 20

Pregnancy Testing in the Female Perioperative Patient 21

POCT Whole Blood Oximetry Avoximeter Procedure 22

Latex Sensitivity 24

Transfusion Specimen Collection and Labeling Procedure 25

Policy: Transportation of Patients 26

Use of Electrosurgery in Surgical Services 27

Radiation Safety 28

Protocol for Provider with Fluoro Certification (Non-Radiologists) 31

Resuscitation and Emergency Interventions During Hospitalization 32

Moderate Procedural Sedation by Non-Anesthesia LIP 33

Deep Procedural Sedation by Non-Anesthesia LIP – ADULT ..... **Error! Bookmark not defined.**

Moderate Sedation by Credentialed RN 27

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

Must be transferred to a monitored cardiology unit (Cardiology A or Cardiology B only)

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

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

Universal Protocol for Invasive Procedures

For additional information refer to full Policy: *Universal Protocol for Invasive Procedures* in PolicyStat

<table>
<tr><th colspan="3">SAFE SURGERY CHECKLIST: PROVIDENCE OREGON</th></tr>
<tr><th>BRIEFING</th><th>TIMEOUT</th><th>DEBRIEF</th></tr>
<tr><td>Verify prior to induction of Anesthesia</td><td>Immediately before procedure start.
All team members suspend activity & verbally participate.</td><td>At the end of the case and before the SURGEON leaves the OR.</td></tr>
<tr><td>Before patient enters OR, CIRCULATOR confirms:
❑ Room thermostat temperature confirmed
❑ Implants / Specials are available</td><td rowspan="2">SURGEON / PROCEDURALIST leads the timeout & begins by stating:
❑ Patient Name
❑ Procedure planned
❑ Laterality *
❑ Confirms visible site marking *
❑ Confirms review of recent labs and display of relevant images *</td><td>CIRCULATOR confirms with SURGEON:
❑ Counts are correct
❑ Actual procedure performed
❑ Wound class
❑ Specimens verified and labeled</td></tr>
<tr><td>Upon patient entry to OR, CIRCULATOR & SCRUB pause and verify:
❑ Patient identified using 2 unique identifiers matched to consent
❑ Procedure & laterality confirmed with patient & matched to consent
❑ Site marking confirmed per policy
❑ Allergies verified
❑ Active warming / SCD devices available</td><td>ANESTHESIA PROVIDER states:
❑ Antibiotic given *
❑ Patient glucose *

SCRUB continues by stating:
❑ Instruments ready & medications labeled
❑ Confirms plan for management of heat generating devices, including cautery holster location</td><td>ANESTHESIA PROVIDER confirms with SURGEON:
❑ Estimated blood loss (EBL)
❑ Patient glucose *

SCRUB verifies with CIRCULATOR:
❑ Local medication administered
❑ Implanted items</td></tr>
<tr><td>CIRCULATOR & ANESTHESIA PROVIDER verify:
❑ Special anesthesia equipment present
❑ Blood product availability addressed *</td><td>CIRCULATOR continues by stating:
❑ Patient name & procedure match consent form
❑ Are there any other concerns?
❑ "THE TIMEOUT IS COMPLETE"
Note: A colored towel covers the instrument tray until the CIRCULATOR states that the "TIMEOUT IS COMPLETE"</td><td>* as applicable by policy, protocol or procedure
 
</td></tr>
</table>

Consent and Refusal of Consent for Procedures

For additional information (including age of consent, competence, and allowed disclosures refer to full Policy: *Consent and Refusal of Consent for Procedures* in PolicyStat

Medical Center Staff Responsibility

1. Informed Consent (PARQ) is the responsibility of the provider.
2. Informed Consent (PARQ) must occur before the hospital consent form is signed.
3. The initial Informed Consent, at times, may not be done by the actual performing proceduralist (i.e., OB Informed Consents may be done in the physician's office, but an on-call physician does the procedure).
4. The actual performing proceduralist, if different from the initial physician that provided the PARQ, must re-PARQ prior to the commencement of the procedure.
5. The Informed Consent must be documented prior to the commencement of the procedure but not necessarily prior to signing the consent form.

G. Documentation on the hospital consent form will include:

1. The name of the procedure(s) is/are entered on the consent form by the RN or provider.
2. The only acceptable source for transcribing the procedure is the provider order.
3. The procedure(s) shall be entered without using abbreviations.
4. Careful attention must be given to laterality; "right" and "left".
5. All physicians/proceduralists and LIPs performing significant procedures, as defined in the Professional Staff Bylaws, will have their name listed.
6. There must be a separate consent form signed EACH time a procedure is done.

Fire Safety in Surgical Services

For additional information refer to full Policy: *Fire Safety in Surgical Services* in PolicyStat

II. Response to Fires in the OR

A. In all cases of unexpected fire or smoke in the OR

a. The charge nurse will be contacted as quickly as is safely possible to activate the code red response team (dial 88, pull manual station if the fire alarm is not already activated) and alert other OR staff if deemed necessary.

b. The code red response team will meet the charge nurse or designee at a predetermined location outside the restricted area for briefing and determine the appropriate response.

III. Surgical Intubations-Extinguishing Airway Fires

A. At the first sign of an Airway or Breathing Circuit fire, be prepared to assist with any of the potential interventions, listed below, as deemed appropriate and directed by the attending physician.

a. Disconnect the breathing circuit from the tracheal tube.

b. Remove the tracheal tube:

1. Have another team member extinguish it using water/saline

2. Remove cuff-protective devices and any segments of burned tube that may remain smoldering in the airway

3. Stop the flow of gases to the airway

4. Pour saline or water into the airway

5. Care for the patient:

1. Re-establish the airway and resume ventilating with air until certain that nothing is left burning in the airway; switch to 100% oxygen

2. Examine the airway for the extent of damage and treat the patient accordingly

6. Save involved materials and devices for later investigation.

IV. Fires on the Surgical Patient

A. In the event of a small fire on the patient, immediately:

a. Cover and sweep small fires with water/saline soaked sponge/towel.

b. Remove the burning material from the patient.

c. Check for and remove any smoldering material from the OR,

d. Complete a Datix report.

B. In the event of a large fire or unexpected smoke:

a. Stop the flow of breathing gases to the patient.

b. Remove the burning material from the patient.

c. Have another team member extinguish the burning material with water/saline.

d. Care for the patient:

i. Resume ventilation

ii. Control bleeding.

iii. Evacuate patient to another smoke compartment, if indicated due to smoke or fire.

iv. Examine the patient for injuries and treat accordingly.

e. ONLY THE NURSE SUPERVISOR AND/OR THE DEPARTMENT MANAGER, OR THEIR AUTHORIZED DESIGNEE, WILL SHUT OFF MED GAS SERVING THE AREA THAT THEY MANAGE.

f. Complete a Datix report.

C. Save all items that are involved in the fire to facilitate the investigation.

a. Provide all items that are involved in the fire to quality/risk management personnel.

b. All fire events must be investigated and findings are reported to Safety/Environment of Care Committee.

V. Fire or smoke in the OR ***not involving a patient***:

A. Extinguish the fire using the appropriate fire extinguisher.

B. For fire involving equipment - if possible/practical disconnect equipment and remove from the OR for hand-off to the code response team.Do not leave extinguished equipment unattended.

C. Evaluate the status of the OR and proceed or prepare to evacuate the patient.

D. Complete a UOR

Malignant Hyperthermia

For additional information refer to full Policy: *Malignant Hyperthermia* in PolicyStat

C. Implementation of Protocols for an acute event:

1. Nurse or designee institutes emergency code as directed by anesthesia provider and/or physician.
2. Call RRT, Code Blue and/or main OR as appropriate per facility. Designated person brings malignant hyperthermia cart into room.
3. Nursing leadership and pharmacy are notified.
4. Assign additional support staff as necessary to assist anesthesia and circulator.
5. Contact the Malignant Hyperthermia Association of the United States (MHAUS) Hotline at (800) 644-9737 per anesthesia provider.

D. Treatment of Symptoms: Anticipate need for prescribed medications.

1. Dantrolene: Reconstitute (Dantrium/Revonto/Ryanodex)
    a. Locate on the malignant hyperthermia cart.
    b. Reconstitute only with preservative free sterile water, 2.5 mg/kg rapidly
    c. Shake Dantrium/Revonto vial well, until clear; Ryanodex is a suspension that does not clear.
    d. Repeat until signs of MH are reversed
2. Additional Medications: Prepare medications as required such as: sodium bicarbonate; IV glucose and insulin; calcium chloride; anti-arrhythmic agents. When Ryanodex is used, mannitol should be available.
3. Thermoregulation Measures:
    a. Obtain refrigerated saline or ice, if "patient cooling" is indicated.
    b. Use cold saline for I.V.'s. Note: Do not use IV Lactated Ringer's solution.
    c. Surface cooling may be indicated using ice, cold wet cloths, a hypothermia blanket and/or misting the patient with cool water per spray bottles. In addition a fan may be used to assist in the cooling process.
    d. Implement protective measures to prevent skin/tissue injury due to thermal sources.
    e. Consider internal cavity lavage per MHAUS recommendations (peritoneal or thoracic cavity lavage supported. Gastric or rectal lavage not supported per 2019 edition).
    f. Extracorporeal circulation and heat exchanger (femoral to femoral).
    g. Stop cooling if temperature <38 degrees C and falling to prevent hypothermia
4. Blood Specimen tubes should be collected per following guidelines (in order of draw):

TEST ORDERED	TUBE TYPE	EXPECTED TAT for RESULTS
Blood Cultures	Set of 2 bottles, Aerobic and Anaerobic	
PT, APTT, D Dimer, Fibrinogen	Blue Top	30 minutes
TSH, Free T4	Yellow SST	24 hours
CMP, LDH, CK, CKMB	Mint Green top	45 minutes
Myoglobin	Mint Green top	2 hours
CBC with or without Diff, PLT	Purple top	30 minutes
Lactate	Grey top	30 minutes

*Blood cultures are very useful and should be included to rule out bacteremia.

5. Urine collection for myoglobin level may be indicated if blood is positive on the UA dipstick. Pigmenturia (e.g., brown or red urine) indicates that renal protection is mandated. When the urine is centrifuged or allowed to settled, and the sample shows clear supernatant, i.e., the coloration is due to red cells in the sample.
6. Admit patient to appropriate Intensive Care Unit.
7. Educational materials will be provided to the patient and patient's family.

E. Documentation

1. Assessments and care given will be documented by the procedural or circulator RN on the intra-operative or appropriate procedural record.
2. A Datix Event Report will be filled out and sent to the unit manager and Quality Management.

Massive Transfusion

For additional information refer to full Policy: *Massive Transfusion of Blood and Blood Products in Adult* in PolicyStat

Hemostasis goals while using this guideline:

1. INR < 1.5, PTT < 45 seconds
2. Fibrinogen > 100 mg/dL
3. Platelet count > 100,000/mL
4. HCT > 24%

Resuscitation Goals while using this guideline:

1. Temp > 36° C
2. SBP > 100 mmHg
3. HR < 110 BPM
4. Ionized Calcium > 1 mmol/L
5. Urine Output > 0.5 ml/kg/hr

PROCEDURE Copy Link

Upon recognition of acute, massive, uncontrolled bleed:

A. **Physician verbal order is required to initiate massive transfusion protocol (MTP)**

B. **Circulating Nursing Responsibilities:**

1. Notify Team Leader, Charge RN for additional help.
2. Notify blood bank (x67806) of initiation of this guideline. Use the SBAR-R format:

SBAR-R Format

S (situation)	Give your name and location. State that you are initiating the Massive Transfusion Protocol.
B (background)	Provide patient name, medical record number, patient location, name of contact person on unit during "Massive" and phone extension.
A (assessment)	Give information regarding source(s) of bleeding (i.e. surgical, coagulopathy, etc.), anticipated blood product needs and the most recent hematocrit, if known.
R (request)	Request Massive Blood Pack
R (repeat back)	Blood bank technologist should repeat back the request for Massive Transfusion Pack, patient name, medical record number, unit contact person and phone extension. The technologist will give an estimate of when products will be available.

C. **Transfusion Nurse will communicate with Blood Bank:**

1. Enter order for :
   a. Massive Blood Pack STAT. These and all additional labs should be designated "STAT" and "massive transfusion" should be entered on comments line.(These initial lab studies, especially for Type and Cross which is ordered in the blood pack, should be collected before any blood products are transfused, but transfusion will not be held up pending lab results).
   b. Massive Lab Panel and obtain specimens (Order includes hemogram with platelets (HGM), PT/INR, PTT, fibrinogen, D-Dimer and basic metabolic panel.
2. Assure that blood products will be obtained from blood bank via the designated runner. (Avoid utilizing the tube system during a massive transfusion.)
3. Verify all blood products prior to administration per Oregon Nursing Policy PO-022-10-V1
4. Confirm that products should remain in Blood Storage Transport cooler at the patient's bedside until use. (Unused products that have the potential to remain in the cooler for >30 minutes should be moved to the blood refrigerator).
5. If products are not used, they need to be returned to the blood bank.
6. Discard all empty blood and blood component bags into one spot in the room in which the patient is receiving care. This helps to make sure that all units transfused were documented. The empty bags can be discarded 1-2 hours after protocol is discontinued).
7. Notify blood bank when use of Massive Transfusion Protocol has been discontinued.
8. Notify blood bank when patient location changes.

Specimen Handling in Surgical Services

For additional information refer to full Policy: *Specimen Handling in Surgical Services* in PolicyStat

Specimen Handling is a complex process with many steps involved to ensure the test is completed correctly for the correct patient.

Policy: *Specimen Handling in Surgical Services* comprehensively outlines all steps needed to ensure safety. Refer to full policy when on site if handling specimens.

OR/Procedural RN Specimen Handling Responsibilities:

1. Correctly and appropriately handle, label, document and provide safe delivery of specimens.
    i. Specimens requiring special handling will be directly taken to pathology, where pathology personnel are notified and verbally told what exam is required and whether a call back is needed.
2. Specimens are:
    i. Obtained from the sterile field as soon as possible/within a timely fashion with surgeon's permission.
    ii. Placed in closed containers, with secure lids, and kept moist.
    iii. Verified with the surgeon in order to correctly document:
        a. Specimens in EPIC
        b. The information and details on the consultation form (if/when needed)
        c. See detailed process further below in policy
    iv. Correctly logged in the specimen log book when transporting/dropping off specimens for pathology.
        a. See detailed process in Procedure B, section 4 in policy,

1. Each specimen must be accurately and legibly labeled with the following:
    a. Patient identification – patient sticker (to include at a minimum two patient identifiers - patient name, DOB)
    b. Letter of Specimen
    c. Name and/or Description of specimen, including site and laterality
    d. Date specimen collect
    e. Time specimen collected from the field
    f. OR RN initials
    g. Surgeon

Dress Code- Surgical and Procedural Attire

For additional information refer to full Policy: *Dress Code (Surgical and Procedural Attire)* in PolicyStat

Surgical Attire

A. Facility approved and laundered, or disposable, surgical attire must be donned daily in a designated dressing area before entry into semi-restricted and restricted areas.
    a. Personal surgical attire is not allowed. Surgical attire must not be worn arriving or leaving the medical center.
        a. Use of personal hair coverings permitted as described in section "B".
    b. Surgical attire must be changed daily
    c. Whenever it becomes visibly soiled, contaminated, or wet.
    d. Surgical attire contaminated with visible blood or body fluids must remain at the medical center for safe transport to laundering facility.
    e. Personal clothing that is worn under surgical attire must be clean and with minimal amount of low lint fabric showing beyond surgical attire (e.g. neckline of undershirt).
    f. Arms may be covered during performance of preoperative patient skin prep; wearing sterile gloves for application or delivery of all patient skin preps is required
    g. Jumpsuits designed to completely cover personal apparel are provided for visitors entering the department to work briefly in the semi-restricted and restricted areas (e.g. biomedical engineers, repairmen, law enforcement).

B. All personnel must cover scalp and hair when entering the semi-restricted and restricted areas.
    a. All efforts will be made to cover as much hair as possible.
    b. Facial hair (beards and moustaches) should be be covered when in the restricted areas and while prepping and packaging items in the clean assembly section of sterile processing.
    c. If reusable head coverings are worn, hospital-laundered cloth options are preferred.
        a. Personal head coverings may be worn. They should be visibly clean, contain hair well, and have no rips or holes that allow hair to protrude.
        b. Personal head coverings that become visibly contaminated with blood, body fluids, or other potentially infectious materials must be laundered on campus before being taken home. Contact Environmental Services for assistance with contaminated attire.
    d. Remove head covering at the end of shift or when they are contaminated.

C. Clean, dedicated shoes must be worn when entering the semi restricted and restricted areas.
    a. Shoes should have closed toes and low heals to minimize the risk of injury.
    b. Shoe covers or boots must be worn in the instances when gross contamination can reasonably be anticipated.
    c. Single use shoe covers worn as PPE must be removed immediately after use. After removal discard and perform hand hygiene.

D. Masks must be worn at all times in the restricted areas during sterile procedures.
    a. Masks must cover both the nose and mouth and be secured in a manner that prevents venting.
    b. Masks are discarded directly after removal; hand hygiene performed. They are not to be worn around the neck or in pockets.
    c. Masks must be changed when soiled, between cases and when leaving the surgical suite.

E. Protective eyewear or face shields must be worn whenever activities could place caregiver at risk for a splash to the face or eyes.

F. Fluid impervious aprons are worn by caregivers performing decontamination and other activities where contact with large volumes of blood or body fluids are unavoidable.

G. Nametags are considered part of the caregiver's dress requirement and must be worn on the scrub top or jacket.
    a. Daily cleaning with low level disinfectant recommended.
    b. Clean badge with low level disinfectant when badge becomes soiled with blood, body fluid or other potentially infectious material.
    c. Badge holders such as lanyards, chains or beads pose a risk for contamination and may be difficult to clean and should not be worn.

H. Personal x-ray gowns may be used, but must be maintained according to hospital policy

I. Fabric stethoscopes coverings must not be used; stethoscopes should not be worn around the neck.
    a. Stethoscopes must be cleaning with low level disinfectant between patients.

J. Personal cover apparel, laboratory coats and jackets, must not be worn in the semi-restricted and restricted areas.

K. Personal items necessary for patient care (e.g. back packs, brief cases, fanny packs) may be brought into the semi-restricted and restricted areas. These items should be completely contained in a hospital provided plastic bag and placed in a designated area off the floor.

L. Personal Cell Phones/Electronic Devices brought into the operating room - Daily cleaning with low level disinfectant is recommended.

Personal Grooming

A. Fingernails should be clean, short and healthy.

B. Nail polish is discouraged. If polish is worn it must be free from chips and/or cracks. Caregivers who wear nail polish must use the same discipline of vigorous surgical scrub as if no polish is worn.

C. Artificial nails – any fingernail enhancement or resin bonding product, including extensions or tips, gels, acrylic overlays, resin wraps – cannot be worn when working in the OR, or when handling sterile supplies.

D. Jewelry, if worn, should not pose safety risk to patients or the wearer
    1. Jewelry (rings, watches, bracelets, etc) must be removed from hands before performing surgical hand scrub, per AORN guidelines for hand hygiene.
    2. Necklaces, if worn, should be tucked into the neckline of the wearer's shirt (scrub top) when scrubbed, or when performing sterile tasks, to avoid having them dangle over the sterile field and pose risk of contamination.

E. On duty caregivers must not wear fragrance of any kind.

Non-Sterile Procedure Rooms (e.g. GI lab/laser lab)

A. It is not required for caregivers/providers to change their clothing once they arrive at work.

B. PPE must be selected based on the potential for exposure during a particular task. PPE in the non-sterile procedure/GI rooms includes:
    a. Gloves
    b. Gowns
    c. Masks
    d. Goggles/eye/face shields

C. Effective use of PPE includes proper removal, disposable and hand hygiene.

References:

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.

Labeling of Medications and Solutions

For additional information refer to full Policy: *Labeling of Medications and Solutions* in PolicyStat

A. Labeling occurs when any medication or solution is transferred from the original packaging to another container, unless it is administered immediately by the person who prepares the medication or solution. If the medication or solution that has been removed from its original container will be used over the course of the procedure, the receiving container (including syringes) must be labeled.

B. All solutions and medications used will be in containers that legibly and correctly identify the current contents.

1. Medications and solutions both on and off the sterile field are labeled even if there is only one medication being used.
2. Containers that have not been appropriately labeled will not be used. Any medication or solution found without proper identification will be discarded.
3. The contents must be identified by a label on the main body of the container (i.e. not the lid).
4. A handwritten label or tape may be used.

C. Labels will include:

1. Name of the solution/medication/substance;
2. Strength of solution/medication;
3. Quantity
4. Diluent and volume if not apparent from container;
5. Expiration date when not used within 24 hours
6. Expiration time when expiration occurs in less than 24 hours
   (Expiration date and time are not necessary for short procedures).

D. Medication containers do not need to be labeled if immediately prepared and administered by the same person.

1. If the provider preparing the medication or solution participates in another function before administration, the container must be labeled.
2. If more than one medication is prepared by the provider, each medication container must be labeled.

E. If two or more people participate in the preparation and administration of the medication or solution, a two-person verbal and visual verification of the label's accuracy is required. (Medications prepared and labeled by a pharmacist do not require a second person verification).

F. At the conclusion of an operative or non-operative procedure, all supplies including the contents of any medication(s) or solution(s) will be appropriately discarded. This applies to multi-dose vials unless the vial was accessed outside of the patient room or procedural area. Refer to CDC link under References for information on dating multi-dose vials utilized outside of the immediate patient treatment area.

Positioning the Patient in the Perioperative Setting

For additional information refer to full Policy: *Postitioning the Patient in the Perioperative Setting* in PolicyStat

Patient positioning is a complex process with many steps involved to ensure patient safety

Policy: *Postitioning the Patient in the Perioperative* **comprehensively outlines all steps needed to ensure safety. Refer to full policy when on site if positioning patients.**

Documentation of patient care

1. Patient care and the use of positioning equipment should be documented on the intraoperative record by the circulating nurse.
2. Documentation should include but not be limited to:
    a. Preoperative assessment with descriptions of the patient's overall skin condition on arrival and discharge from the perioperative suite.
    b. Preoperative assessment of ROM of joints involved in positioning.
    c. Type and location of positioning equipment/padding used.
    d. Initials/names, titles of persons involved in positioning the patient.
    e. Patient position for procedure and any change in position if repositioning is necessary.
    f. Postoperative assessment for injury related to position.

Pregnancy Testing in the Female Perioperative Patient

For additional information refer to full Policy: *Pregnancy Testing in the Female Perioperative Patient* in PolicyStat

PROCEDURE

A. All female patients aged 12 to age 55 and/or menarche that are undergoing elective and urgent procedures requiring anesthesia, will be presented with the option to undergo routine urine HCG or serum BHCG testing prior to surgery within 24 hours of surgery, unless the surgeon or proceduralist denies the order or the patient falls into the exceptions list:

1. Existing known pregnancy or admitted for incomplete abortion, missed abortion or ectopic pregnancy
2. Previous hysterectomy
3. Trauma case

B. Surgeon/Proceduralist and Anesthesia to be notified if patient or guardian refuses HCG testing.

C. Patients that undergo the urine HCG or serum BHCG test, will not be admitted to the operating room until the results are known.

D. Surgeon/Proceduralist will be notified of positive results.

E. Surgeon/Proceduralist will communicate the positive result to the patient alone first, and for patients below the age of 15 the surgeon will also talk to parents or guardian separately.

POCT Whole Blood Oximetry Avoximeter Procedure

For additional information refer to full Policy: *POCT Whole Blood Oximetry Avoximeter Procedure* in PolicyStat

SAMPLE

Patient preparation:

A. **Sample volume:**

1. 50 uL minimum needed to fill cuvette

B. **Anticoagulants:**

1. Preferred- Sodium or lithium heparin
2. Acceptable- EDTA
3. **NOTE:** Anticoagulants are not necessary if the cuvette is filled and analyzed immediately after the sample is drawn.
4. **Warning:** Excessive volumes of anticoagulant in the collection syringe can cause dilution errors.
5. **Warning:** When drawing blood from a line that is being used to administer fluids or medications, withdraw waste from the line first and make sure that only whole blood is sampled. It is recommended that 2-3 times the dead space be discarded. Allowing the sample to be diluted with saline will give erroneous results.

Sample requirements:

A. Acceptable specimens are venous or arterial whole blood. Care should be taken to prevent the introduction of air into the sample when it is drawn. Expel all air bubbles from the syringe and seal the end of the syringe.

B. A freshly collected sample is required for accurate results.

C. Prior to analysis, the sample should be free of any air bubbles.

Unacceptable sample:

A. Citrate and Fluoride/oxalate specimens

B. Unlabeled specimens

Bedside Testing:

A. When testing is not performed at patient bedside, unlabeled specimens are unacceptable.

REAGENTS, SUPPLIES AND EQUIPMENT

REAGENTS	SUPPLIES	EQUIPMENT
• Liquid Quality Control, 3 levels, QC 253, RNA Medical	• Avoximeter 1000E Cuvettes • Optical Filters (yellow & orange) • Gauze (absorbent material) • Syringes and Needles • Clean Gloves	• Avoximeter 1000E

Storage and Stability: POCT Temperature/Humidity Device and Reagent Requirements Table

Labeling Requirements:

- Cuvettes are stored in a closed bag. Cuvettes are stable as long as the desiccant indicator is blue. If the desiccant changes color to violet or pink, obtain a new desiccant and place the new desiccant in the cuvette bag.

PROCEDURE

Performing the Test:

A. Establish positive patient identification using two patient identifiers prior to sample collection.

B. Verify that the cuvette pathlength is correct for the cuvettes in use. The cuvette pathlength is printed on the label of the cuvette bag.

C. Immediately after collecting the sample, fill the cuvette. Sample must be analyzed within 2 min of collection. If the sample was collected in an anticogulated syringe and not infused into the cuvette immediately after blood draw, mix the whole blood sample by rolling the syringe between the palms of your hands for a full ten seconds.

- Poorly mixed samples or those containing clots may cause inaccurate results.

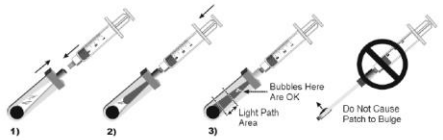
D. Insert the syringe tip into the cuvette syringe port and inject the blood sample into the cuvette, holding cuvette down at a 45° angle.

E. Continue injecting blood until the sample reaches the black vent patch. Leave syringe attached to cuvette.

- Never force blood into a cuvette, if it does not fill easily, discard and use another cuvette.
- Overfilling will cause the vent patch to bulge outward. If this happens, pull back slightly on the syringe plunger to flatten patch

F. Confirm that no debris or air bubbles are present in the sample light path.

- Discard cuvette when air bubbles or debris are present in the light path, they will cause erroneous results.



G. If any blood is on the exterior of the cuvette, remove it with gauze. Be careful to not cause the side vent patch to bulge.

H. Leaving the syringe attached. Hold the cuvette by the black cap; insert it into the instrument within 30 seconds of filling the cuvette. Vent patch should be facing the left side of the test chamber to prevent blood from getting on the optical detector.

- Do not depress the plunger while the cuvette is in the instrument.

I. Enter or confirm User ID

- **Note**: The analyzer will erase the User ID after 15 min of inactivity.

J. Enter or confirm patient ID

- ***IMPORTANT***: The analyzer will hold the patient ID until it is changed. Always ensure that the correct patient ID is entered for each test. Operators will need to enter the patient ID for the first test of the case and confirm it for each additional test. Operators may also change the patient ID prior to a case under the data management menu.

K. Print patient result on Avoximeter printer, retain printout for 2 years.

L. After the result is reported, remove the cuvette and dispose into a biohazard waste container.

- Do not leave cuvettes in the instrument.

M. Always keep cuvettes in a sealed bag with desiccant.

Expected Values and Critical Values:

Refer to POCT Reference Range Table for expected and critical values.

A. Confirmatory Testing Requirements

1. If unexpected results are obtained, a repeat test may be performed, if possible with a new analyzer.
    a. Notify the provider of unexpected, abnormal or invalid results.
    b. Send specimen to the main laboratory for further testing, collect a new specimen if needed.

B. Interpretation of Results

1. Total hemoglobin (THb) and Oxyhemoglobin (%Hb O2) are considered measured analytes. Oxygen content is a calculated analyte. Total hemoglobin (THb) measured by the AVOXimeter 1000E includes oxyhemoglobin, deoxyhemoglobin, methemoglobin, and carboxyhemoglobin.

C. All critical results must be reported immediately to the physician/caregiver responsible for the patient's care and documented per department work-flow.

Documentation of Results:

A. Document both the %HbO2 and THb results in the patient McKesson report according to department work-flow policies.

1. Include in the report:
    a. The performing facility address
    b. Reference range statement
    c. Lab Order statement

Latex Sensitivity

For additional information refer to full Policy: *Latex Policy* in PolicyStat

POLICY STATEMENT

1. Providence is a latex-**reduced** environment.
2. Providence approved latex gloves are the only type of latex-containing glove permitted in Providence Oregon facilities and are used in departments such as: Operating rooms, to include c-section rooms and cardiac catheterization labs or wherever a sterile surgical procedure is performed.
3. Non-sterile latex exam gloves should not be purchased or used.
4. Latex balloons are not permitted in Providence Oregon facilities.
5. Where alternatives are available, departments will evaluate alternate products that do not contain latex to possibly replace latex containing products.
6. During test procedures, departments will avoid, whenever possible, use of any product containing latex, e.g. not use latex tourniquets, syringes with rubber gasket, latex tubing, etc.

DEFINITIONS

High Risk Populations include:

1. Individuals with spina bifida/spinal cord injury.
2. Individuals with history of chronic or recurrent infections of the genitourinary tract.
3. Individuals with occupational exposure to latex.
4. Individuals with multiple allergies to medications and/or environmental allergens, e.g., food allergies to bananas, avocados, tropical fruits, kiwi, and nuts.
5. Individuals with a history of a local reaction (urticaria or contact dermatitis) to latex

Latex means natural rubber latex (NRL) manufactured from the milky sap of the rubber tree *Hevea brasiliensis*.

Latex paint does not contain the latex protein. It is not linked to latex sensitivity and is not covered by this policy.

Latex-reduced environment is an environment that minimizes contact and aerosolized latex allergen exposure.

RESPONSIBILITIES

Managers

a. Implement this policy within the department.

b. Ensure latex-free products are used whenever possible.

c. Do not order latex products outside the system to replace latex-free products available through the system.

Caregivers

a. Complete the latex questionnaire provided by Caregiver Health during the initial health screening.

b. Do not bring latex containing products, including latex balloons, into Providence facilities.

c. Report known or suspected latex sensitivity/allergy to Caregiver Health via the EHS Hotline (503- 216-3200)

d. Caregivers who experience signs and symptoms that may be associated with latex products, or symptoms that interfere with their ability to perform essential job functions will report to their supervisor, file an incident report and/or a Job Accommodation Request via the Sedgwick Portal.

e. Caregivers who are sensitized to latex will:

- Seek to minimize contact with latex containing products.
- Follow policies and procedures for latex sensitive individual.
- Collaborate with their core leader and HR Client Manager to discuss the need for accommodation.

Caregiver Health

a. Direct caregivers to the Sedgwick Portal for reporting of health issues related to Latex sensitivity or to submit a Job Accommodation Request.

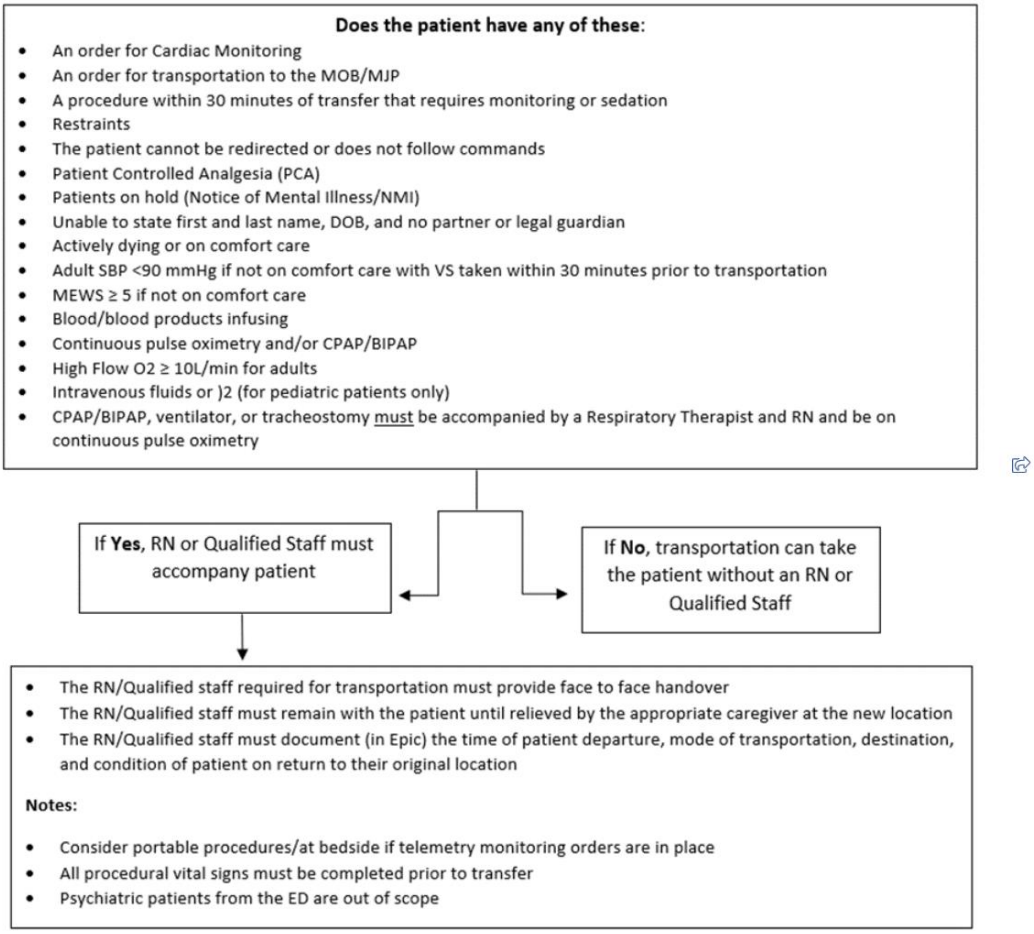
Transfusion Specimen Collection and Labeling Procedure

For additional information refer to full Policy: *Transfusion Specimen Collection and Labeling Procedure* in PolicyStat

STEP	ACTION
1	**Inpatients**: Check that the patient is wearing a facility identification armband. The band must be attached to the patient's body. **Outpatients**: Prepare a patient armband that includes the following; patient first and last name, PH&S medical record number, patient date of birth. Attach the band to the patient's body, usually the wrist. **Provide instructions to the patient to leave the band attached until either: a) their outpatient transfusion procedure is completed or b) they are discharged from the hospital.**
2	For a conscious patient, ask them to state and spell their first and last names and state their date of birth. Verify that the information given matches the information on their identification armband **exactly**. If not, correct any discrepancies before proceeding. If the patient is not conscious or is incoherent, ask a family member or friend that is accompanying the patient to verify their identity. If a family member or friend is not present, ask the patient RN to confirm the patient identity.
3	Verify that the patient first and last names and date of birth on the physicians order **exactly** matches the identification armband. If not, correct discrepancy before proceeding.
4	Prepare the specimen label - **do not affix label to the tube until after the specimen is collected.** A hand written or pre-printed label may be used. Alternately, hand write the required information directly on the tube. Patient information on the specimen label must **exactly** match the patient information on the identification armband. **The label must include the following legible information**: • Patient full last name, full first name (middle name optional) • Medical record number • Date of collection (The date on a pre-printed label must match the current date, otherwise the date of collection must be handwritten.) • Time of collection • Collector's initials ◦ **Note**: For Cerner Bridge labels, the pre-printed phlebotomist identifier is acceptable. **Notes:** • If the patient has an unusually long name, the pre-printed labels may have truncated the name. The label must include the full first and full last name and match the patient armband exactly. Hand writing may be necessary. • The Admitting Department caregivers must contact the facility blood bank prior to making changes to any patient identifier and swapping out armbands. A new transfusion specimen must be collected if any of the required patient identifiers above are changed. Refer to *Updating Wellsky Patient Registry Procedure*.
5	Collect the sample by venipuncture or from an established line taking care not to contaminate the sample with intravenous fluids. It is acceptable to shut off the IV for 2 minutes and then collect the sample if necessary.
6	Immediately place the prepared label on the sample in the presence of the patient. Place the label lengthwise on the sample aligned so the left side of the label is closest to the tube cap. **NEVER leave the patient's side with the sample unlabeled.**
7	Follow local processes to deliver the sample to the appropriate facility laboratory Blood Bank as soon as possible.

Policy: Transportation of Patients

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



Use of Electrosurgery in Surgical Services

For additional information refer to full Policy: *Use of Electrosurgery in Surgical Services* in PolicyStat

1. The Registered Nurse circulator will:
    a. Use clinical judgement and best-practice guidelines to determine placement of the electrosurgical dispersive pad, maintain safety precautions during use, and evaluate for adverse events.
    b. Perform a preoperative evaluation to identify any implantable devices and implement appropriate precautions for electrosurgery, including turning off the device if it is safe to do so.
2. Documentation
    a. The circulator will document the following elements related to ESU use in the intraoperative record:
        1. Electrode site of application
        2. Name of the individual who applied the pad.
        3. In the event of an injury a skin assessment after the pad has been removed.

Radiation Safety

For additional information refer to full Policy: *Radiation Safety* in PolicyStat

PROCEDURE:

A. Radiation Safety / Protective Clothing Inspection (Annual Inventory and Ongoing Inspection)

Each piece of lead is assigned an Article ID Number. This includes skirts, vests, one piece aprons, thyroid shields, patient lap shields, rolling shields, gloves and glasses.

All new aprons are assessed visually before use and annually. If a defect is found, fluoroscopic survey will be conducted.

Annually, a visual inspection is performed on all lead. The following scale is used to report findings and corrective action. All findings and corrective action must be logged on the Radiation Safety / Protective Clothing Inspection (Annual Inventory and Ongoing Inspection) log (Attachment #1), according to these specific guidelines:

Indications for Findings:

1. No tears or damage in the covering, trim material, shoulder straps or belt (ties)
2. Showing wear but no breach of integrity of outside material
3. Outer material repair warranted, fluoroscopic survey needed
4. Obvious wear and damage noted, fluoroscopic survey required. Repair or replacement indicated.

All missing lead items are indicated as MISSING and dated under "Date Inspected" column. A discrepancy list of all missing items is given to the specific department for remediation. If a lead item is not found, it is maintained on the inventory list indefinitely.

CVL will inspect all aprons initially and annually.

B. Radiographic Examination of Pregnant Patients

Technologists will ask all female patients within childbearing age (10-55) if there is a possibility they may be pregnant. Documentation of questioning will be made in the EMR in "End Exam Navigator". In the event the patient is pregnant and is to have an x-ray (involving the abdomen and/or pelvis region) or **any** CT, MRI or Nuclear Medicine exam, the technologist must contact a radiologist or ordering physician before proceeding with the procedure(s).

All pregnant patients having an x-ray involving the abdomen and/or pelvis region or **any** CT, MRI or Nuclear Medicine exam must sign an "Informed Consent for Diagnostic Imaging During Pregnancy" (attachment) before the exam(s) can be performed.

C. Patients Unsure of Pregnancy Status:
See Policy "Patients Unsure of Pregnancy Status".

D. CT, Fluoroscopy, X-Ray Repeat Imaging – Adult and Pediatric (Pediatric Imaging – Ages 0 to 18 Years of Age):

- The image / exam should only be repeated if the area of interest is not diagnostic.
- If the technologist is able to improve the circumstance, it is reasonable for the image / exam to be repeated once before consulting a radiologist and/or physician.
- If the technologist is unable to improve the circumstance that will improve the quality of the image / exam, the exam should not be repeated.
- For CT exams where contrast has already been given, the radiologist is consulted before a repeat is performed.

If you have questions and / or concerns, please contact a radiologist or attending physician.

E. Patient Shielding

NOTE: Patients will be shielded per the legal sex designated in the EMR.

1. Thyroid shields are available for use by those who wish to wear additional protection.
2. In the CT sections of the department, because the radiation source encircles the patient, efforts are made to protect patients during scanning when possible.
   a. Testicular shields are available in two sizes.
   b. Breast shields will be used on all female chest exams, unless Organ Dose Modulation (ODM) is utilized. The breast shield will be applied **after** the scout image.

F. Radiation Reporting and Monitoring

The Oregon Health Authority (OHA) requires every licensee or registrant to maintain radiation exposure records for caregivers working in radiation emitting areas. These records must be preserved indefinitely or until the OHA authorizes their disposal.

Monitoring:

1. Dosimeters will be purchased from an outside service.
2. It is the caregiver's responsibility to exchange dosimeters on a monthly and/or quarterly basis.
3. Dosimeters must be left in the department on the control badge board or in a designated area at the end of every shift.
4. Dosimeters are to be worn on the collar and outside the protective apron during fluoroscopy.
    a. For caregivers wearing two dosimeters (such as a fetal dosimeter or 2nd dosimeter for high exposure areas), one is designated to be worn at the collar outside the protective apron, and one is designated to be worn at the waist, under the protective apron.
5. Dosimeters must be protected from heat and water and handled with care.
6. Thyroid shields and protective glasses are available for use.
7. The control dosimeter must be kept in a location away from radiation exposure.
8. Caregiver dosimeter reports are available upon demand.
9. Radiation Safety Officer will be consulted if dosimeters are needed for caregivers working consistently in radiation emitting areas.

Reporting:

In keeping with the OHA regulations, caregiver reports are obtained monthly and/or quarterly for every caregiver provided with a dosimeter. These reports are reviewed by the Radiation Safety Officer (RSO), manager or designee using the following Action Level

Action Level 1 (125 – 374 mrem):

Review circumstances; at his/her discretion take additional actions to investigate.

Action Level 2 (375 – 1,249 mrem):

Requires investigation and efforts to reduce the exposure. This may include exploration, observation and discussion of workflows to identify reasons for higher-than-expected dose and review of methods to control exposure

Action Level 3 (equal to or greater than 1,250 mrem):

RSO notifies caregiver in writing. If the radiation caregiver is not willing to modify and/or adopt practices to control exposure, disciplinary action may be implemented.

See site-specific Nuclear Medicine Policy for details of actions.

Upon termination of employment, a caregiver can request in writing from the Radiation Safety Officer a copy of the Form 5 report.

G. C-Arm Image Intensifier – Spacer Use

The State of Oregon regulations for the control of radiation stipulates: "The source – to – skin distance shall not be less than 30 cm on all mobile fluoroscopes."

In compliance with this regulation, the following rules will be applied:

1. The State of Oregon Regulations for the Control of Radiation rules (333-106-0210) will be followed for spacer use. If the spacer is removed during surgery, it must be immediately replaced.
2. All procedures, which are being performed with the use of the C-Arm Image Intensifier, will be documented. Specific information to be applied will be:
    a. Procedural date
    b. Technologist initials who performed the procedure
    c. Patient name
    d. Examination being performed
    e. e. Amount of fluoro time
    f. f.Physician

H. Radiation Safety for Declared Pregnant Radiation Worker

Please see Policy "Radiation Safety for Declared Pregnant Radiation Worker".

For additional information on radiation for declared pregnant radiation workers, see Oregon Regulations for the Control of Radiation.

Please speak with your manager or RSO if you have additional questions regarding radiation worker pregnancy and radiation exposure.

I. Performance of Fluoroscopic Examinations

As per Oregon Administrative Rule 333-106-0045(6), the use of fluoroscopy by those other than radiologists, will be restricted to A.R.R.T. Registered Radiologic Technologist, and M.D., D.O. or NP who have been properly trained and have been deemed competent in the safe use of fluoroscopy.

1. Use of fluoroscopy is interpreted to be any or all of the following:
    a. Physically positions patients
    b. Determining or adjusting exposure factors
    c. Activating the fluoroscopic on-switch/foot pedal
2. Proper training shall include but not be limited to the following topics:
    a. Principles and operation of the fluoroscopic x-ray machine
    b. Biologic effects of x-ray
    c. Radiation units
    d. Typical fluoroscopic outputs
    e. High-level control or boost-enable options
    f. Dose reduction techniques for fluoroscopy
    g. Protective devices
    h. Radiation monitoring
    i. Applicable radiation rules and regulations
3. All practitioners must provide documented evidence of formal training that included all of the topics listed above (#2), and/or read and complete the test for Federal and State regulatory guidelines for safe fluoroscopic usage. These individuals will then complete the attestation document for fluoroscopy qualification.

Protocol for Provider with Fluoro Certification (Non-Radiologists)

For additional information refer to full Policy: *Protocol for Providers with Fluoro Certification (Non-Radiologists)* in PolicyStat

POLICY STATEMENT:

The purpose of this policy is to assure proper radiation safety during fluoroscopy.

PROCEDURE:

Providers who wish to obtain medical fluoroscopy privileges will be referred to Medical Staffing to complete mandatory testing.

The Professional Staff Directory contains staff privilege information, including privileges to operate and/or direct use of medical fluoroscopy.

Any provider privileged for fluoroscopy use by the Medical Staff Department may use fluoroscopy and/or direct the use of a C-arm or fluoroscopic table with the following guidelines:

1. A technologist must be present during fluoroscopy use.
2. When initial set up is complete, the technologist may transfer the fluoroscopy foot pedal to the provider (privileged in fluoroscopy), if requested.
3. The technologist's primary role is:
    A. Set up the equipment
    B. Position the patient
    C. Ensure proper radiation protection
    D. Monitor procedure and fluoroscopy time
4. All fluoroscopic time will be logged in the EMR when exam data entry is done.

Resuscitation and Emergency Interventions During Hospitalization

For additional information refer to full Policy: *Resuscitation and Emergency Interventions During Hospitalization* in PolicyStat

OBJECTIVES

A. To promote proactive decision making and effective communication between providers, professional staff, patients, and families about emergency interventions.

B. To foster respect for patient autonomy and dignity, particularly at the end of life.

C. To provide a standardized approach and clear format for designating the level of emergency intervention for all patients admitted to the hospital and for those undergoing surgery.

POLICY STATEMENT

A. Decision Making
Consistent with the mission and values of Providence Health & Services the decision to initiate resuscitation and emergency interventions should be based on whether:

- Consistent with clinical standards of care
- Likely to benefit proportionate to the burdens entailed
- Consistent with patient/surrogate wishes
- Can be performed safely and feasibly

1. The decision for resuscitation and emergency interventions can and should be made before a medical crisis arises.
2. Consultation with the patient or their health care representative as the primary decision-maker is an essential component of decision making.
3. Consideration must be given to previous related documents and decisions, including POLST and/or Advance Directives.
4. When there are unresolved ethical and/or medical concerns regarding the orders for resuscitation and emergency interventions, the following resources are available to assist with communication, conflict resolution, and decision making:
    - Ethics Consult Team/Ethics Committee
    - Ethicist
    - Specialty Unit Medical Director
    - Departmental Chairperson or Director

B. Provider Orders

1. Resuscitation orders should be used to specify levels of responses to cardiopulmonary arrest and instability, based on the overall goal of therapy and patient preference.
    a. When the goal is to cure, full resuscitation and emergency interventions are employed.
    b. When the goal is support of organ function and/or medical stabilization, emergency interventions may be limited as specified in the orders.
    c. When the goal is comfort care, no **(emergency)** aggressive interventions to prolong life are initiated.
2. The attending provider is responsible for facilitating the decision making, writing the orders and documenting the discussions and plan of care in the medical record.
3. During the hospital stay, significant changes in the patient's condition may necessitate re-evaluation of the decision and new orders.

C. Resuscitation Orders During the Peri-Operative Period

1. Where appropriate, the provider should discuss with the patient/patient's health care representative whether, and to what extent, (**limited**) resuscitation orders should be modified during surgery. The provider is to document the decision on the orders.
    a. In some cases, patients with limited resuscitation orders who have surgery may temporarily be re-classified to receive full resuscitation and emergency interventions until they have completed the post-anesthesia recovery phase.
    b. In other cases, the patient may wish to limit resuscitation efforts even during anesthesia and surgery. The provider should discuss this decision ahead of time with the anesthesia provider, and document this discussion. A specific order for limiting resuscitation during surgery must be written by the provider in the medical record.

PROCEDURE

Copy Link

A. The attending provider will facilitate the decision regarding the appropriate resuscitation and emergency interventions as early in the hospitalization as possible.

B. Once the decision is reached, orders will be entered into the electronic health record (EHR).

C. The attending provider will document related discussion in the medical record.

D. Communication to pertinent caregivers will occur as appropriate and according to the nursing unit practice.

E. Upon discharge, a POLST form should be completed, if indicated. See General Operating Policy, Physician Orders for Life-Sustaining Treatment (POLST).

F. The interventions used to initiate resuscitation and emergency measures are based on the clinical scenario and the ACLS algorithm for managing that scenario.

Moderate & Deep Procedural Sedation by Non-Anesthesia LIP - Adult

For additional information refer to full Policy: *Moderate & Deep Procedural Sedation by Non-Anesthesia LIP* - Adult

POLICY STATEMENT:

A. This policy outlines procedures and guidance for adults requiring moderate or deep procedural sedation.
B. **Moderate Procedural Sedation**: Only a licensed independent practitioner (LIP) privileged in moderate sedation OR a moderate sedation trained RN may administer moderate procedural sedation.
C. **Deep Procedural Sedation**: Only a LIP privileged in deep sedation OR a deep sedation trained RN may administer deep procedural sedation.
D. A sedation privileged LIP OR a sedation trained RN must be present at the patient's bedside throughout the administration of sedation.
E. The RN administering moderate or deep procedural sedation must be trained.
F. The RN monitoring a patient receiving moderate or deep procedural sedation:
    a. The patient must be monitored continuously without interruption for the duration of the procedural sedation.
    b. Should have no competing responsibilities that would compromise continuous monitoring and assessment of the patient during a sedation episode.
    c. The RN may not leave the patient unattended or perform other tasks that would compromise patient monitoring.
    d. If the sedation trained RN needs assistance with the procedure, a second team member is to be assigned to the patient (NOTE: The second member does NOT need to be trained in procedural sedation but must be able to effectively recognize patient decompensation resulting from procedural sedation and provide rescue interventions within scope of practice).
G. If post-procedure care and safe transportation home cannot be arranged, the procedure may be canceled except for urgent/emergent procedures according to the established definitions for such procedures.

Pre-Procedure

A. The sedation privileged Provider is responsible for:
    a. Obtaining informed consent and PARQ (Procedure, Alternatives, Risk, and Questions) for the patient receiving moderate or deep sedation
    b. Documenting the history and physical, noting vital signs, airway assessment, patient anesthesia experience, medications, allergies, and any pertinent diagnostic data.
    c. Documenting the pre-sedation assessment
    d. Documenting and assessing the patient's risk for obstructive sleep apnea using STOP-BANG (Snoring, Tiredness, Observed Apnea, Pressure, Body Mass Index, Age, Neck Circumference, and Gender) assessment
    e. Documenting the Mallampati assessment
    f. Documenting the ASA assessment
B. The sedation trained RN is responsible for:
    a. Verifying and documenting NPO status based on the ASA Fasting Guidelines
    b. Documentation of time-out procedure
    c. Vital signs (e.g., blood pressure (BP), respiratory rate (RR), heart rate (HR), rhythm), pain, sedation level using the Ramsay or Richmond Agitation Sedation Scale (RASS) scale, end-tidal CO2 (ETCO2) and pulse oximetry (O2 sat) are evaluated, documented, and communicated to the LIP immediately prior to initiation of sedation.

d. Patent IV access
e. Emergency Life Support Cart *(Code Cart)* with defibrillator and intubation supplies will be immediately available.
f. Equipment required: Airway management tools (e.g. Supplemental oxygen source, nasal cannulas, simple masks, bag/valve mask, suction with suction cannulas) and cardiac monitoring equipment.
g. Reversal agents are to be at the patient's bedside prior to beginning the procedure. (NOTE: Not all sedation medications have reversal agents).
h. *Planned outpatient procedure only*: Verification of a designated lay caregiver to escort the patient home
i. Patient education
j. Plan of care
k. An adult with an ASA score of 3 or greater, a BMI > 40, and/or a Mallampati score of 3 or 4 have higher risk for respiratory compromise and may require closer monitoring and/or additional support. The provider and registered nurse must consider whether sedation and monitoring would be more appropriately managed by an anesthesiologist/CRNA based upon patient's individual care needs.

Intra-Procedure Monitoring and Documentation

SUMMARY: INTRA-PROCEDURE MONITORING & DOCUMENTATION	
MONITORING	**FREQUENCY**
• Electrocardiogram (ECG) • Heart rate • Ventilatory status, including respiratory rate, oxygen saturation, and end-tidal carbon dioxide (ETCO2). • Blood pressure (e.g. Every 5 min) • Sedation status (Ramsay or RASS scale) **Continuous monitoring must be plainly visible to the person responsible for monitoring the patient**	Continuously
DOCUMENTATION	**FREQUENCY**
HR, BP, RR, O2 sat, ETCO2	Every 5 min
AND	
Sedation level (Ramsay or RASS scale) **pre-goal**	Every 5 min
Sedation level (Ramsay or RASS scale) **at goal**	Every 5 min
If change in patient condition: HR, BP, RR, O2 sat, ETCO2 AND Sedation level (Ramsay or RASS scale)	Every 5 min until patient condition stabilizes

Post-Procedure Monitoring and Documentation

SUMMARY: POST PROCEDURE MONITORING & DOCUMENTATION	
MONITORING	**FREQUENCY**
• Electrocardiogram (ECG) • Heart rate • Ventilatory status, including respiratory rate, oxygen saturation, and end-tidal carbon dioxide (ETCO2) • Blood pressure (e.g., Every 5 min) • Sedation level (Ramsay or RASS scale)	Continuously
DOCUMENTATION	**FREQUENCY**
HR, BP, RR, O2 sat, ETCO2, sedation level (Ramsay or RASS scale), ECG (when included in plan of care)	Every 15 min
Aldrete score	Every 15 min

Discharge after Sedation:

A. Patient may be discharged from the procedural area (e.g., transfer to inpatient unit) when:
   a. Aldrete score of at least 8 or greater (or pre-procedure score if baseline is < 8).
   b. Patient is alert and oriented (or mental status returned to baseline level or orientation).
   c. Protective reflexes have returned to pre-procedure function
   d. Vital signs and respiratory functions are stable (pre-procedure range) with adequate end-tidal CO2 and O2 saturation.

B. Patient may be discharged from the facility (e.g., home) when:
   a. Drinking liquids and/or eating a light snack without nausea or vomiting
   b. Ambulating without dizziness
   c. Voiding without problems
   d. Post-procedure pain plan in place
   e. If reversal agent is used, a sufficient duration of monitoring completed to ensure re-sedation does not recur (e.g., approximately 2-hours or more, based upon patient condition).
   f. Patient is discharged to the care of designated lay caregiver who will accompany/drive them home and be able to report any post-procedure complications

Moderate & Deep Sedation by Trained RN

Pertinent Policies: For additional information, review the following policies once you are ON-SITE (these require a PSJH login to access):

Moderate & Deep Procedural Sedation by Non-Anesthesia LIP - Adult

Emergency Department Protocol for Moderate (Conscious) Procedural Sedation- Ketamine (Hood River) (only for use at Hood River site)

Moderate Sedation for Pediatric Population

Deep Procedural Sedation for Pediatric Patients

- All RNs administering procedural sedation will be trained to do so.
- All RNs will comply with the Oregon State Board of Nursing Interpretive Statement on procedural sedation (**can** be accessed without a PSJH login).
- Complete online Modules (**can** be access without a PSJH login):
    - Module: Procedural Sedation (Moderate and Deep) - Adult
    - Module: Procedural Sedation (Moderate and Deep) - Pediatric
- Any RN providing continuous patient monitoring during a procedural sedation episode will complete and maintain BLS and ACLS certification. In areas where pediatric patients receive sedation, PALS certification is required. In areas where pediatric patients are exclusively treated, ACLS is not required.