

Cardiac Short Stay: Admission and Discharge

Site Applicability

SPH Cardiac Short Stay Unit

Practice Level

Restricted to registered nurses with:

- ECG monitoring knowledge and skill
- Adequate opportunity for practice of caring for patients in CSSU, i.e. 4 to 5 days/month.

Requirements

All patients require physician order for discharge

Need to Know

- Patients in CSSU may undergo various cardiac procedures, including cardiac catheterization and percutaneous coronary intervention, non-coronary intervention (e.g. valve procedure, ASD/VSD/PFO closure), electrophysiology study/intervention, arrhythmia management device implant, elective cardioversion or transesophageal echocardiography. For each of these procedures, there are existing protocols that complement the admission and discharge protocol.
- Patients in CSSU may be admitted on an elective or semi-urgent (from home), urgent (from SPH unit or referring hospital) or emergent basis (e.g. STEMI patient from emergency). Transfer of emergent patients to the Cath lab is expedited and their procedures are prioritized; this may delay elective outpatient or stable inpatients' procedures.
- Patients who are referred to cardiac surgery should be seen by the Cardiac Surgery Triage Nurse and surgeon if possible before being discharged from CSSU.

Protocol

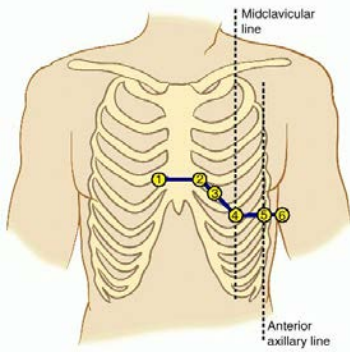
Admission

1. Perform bedside safety equipment check. The CSSU bedside safety equipment includes:
 - Nasal prongs (1)
 - Simple face mask (1)
 - Oral Airways (1 of each size)
 - AMBU bag attached to oxygen
 - Yankauer attached to suction tubing and canister
 - Yankauer (1 extra)

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2. Confirm patient's identification using two patient identifiers. See [B-00-11-10192](#) - Patient/Resident Identification for approved patient identifiers.
3. Confirm patient and family understanding of procedure. Discuss outline of the day with patient and family.
4. Ask patient to change into hospital attire.
5. Review and initiate planned pre-procedure orders in CST Cerner record.
6. Ensure pre-procedure 12 lead ECG is ordered. CSSU RN may place order for pre-procedure 12 lead ECG on admission if necessary.
7. Conduct admission assessment including:
 - Baseline vital signs
 - Baseline vascular assessment (i.e., pedal pulses and radial pulses)
 - Verify family member contact phone number
 - Confirm discharge/travel plans
 - Complete Interventional Cardiology Assessment Power Form
 - Complete Perioperative Pre-procedure Checklist Power Form
8. Complete Best Possible Medication History (BPMH).
9. Complete HeartIS Clinical Factors for all angiogram patients. (Located in Interventional Cardiology Assessment Form).
10. Teaching:
 - Discuss possible treatment timelines with patient and family members. For example: the difference in discharge time for SCA versus a PCI.
 - Ensure family members know approximate timeline for discharge, are aware of discharge plan and requirement to come back to unit, and have the CSSU phone number if required.
11. Assess level of anxiety. Reinforce information about procedure, provide reassurance, consider medication to relieve anxiety. Review pre-procedure orders for medication. If providing medication, ensure Consent is complete prior to administering.
12. Assess nicotine dependence. For patients who use nicotine, nicotine replacement therapy is highly encouraged. See [Tobacco Dependence Management](#) Guideline
13. Assess need for interpretation services. See [Request an Interpreter](#).
14. Measure temperature for all patients and inform MD if temperature over 37.5°
15. Assess and maintain NPO according to physician orders.
16. Insert peripheral IV as per physician orders. Preferred sites and set-ups:
 - Angiogram Patients: Left forearm, minimum size 22 gauge.
 - TAVI, Mitral Clip Patients: Anesthesia team will insert IV
 - TEE or cardioversion: minimum #20 gauge, either forearm
 - Pacemaker/internal cardioverter defibrillator implant: On same side as implant side (for possible venogram); minimum #20 gauge.

- EP Lab: Either forearm, minimum #20 gauge
17. Establish cardiac monitoring with a five-lead cable. Place the precordial lead in the V₃ position, as this lead combination (II, III, V₃) is the most sensitive to myocardial ischemia.



- Establish cardiac monitoring *upon admission* for:
 - Emergency/unstable patients (e.g. AMI on transit to/from CL, hemodynamic/ respiratory instability)
 - Pacemaker/ICD implant as per Physician request
 - Cardioversion
 - In-patients from referring hospitals
 - All 5A/B patients telemetry (any class)
 - All patients from critical care areas (CICU, ICU, etc.)

18. Blood work:

- Ensure blood work is current (past 7 days for outpatients; 48 hours for in-patients) Refer to physician orders
- CSSU RN may enter routine pre-procedure blood work. This includes CBC, GFR, and INR.
- If on warfarin:
 - Elective cardioversion: INR must be in or above the therapeutic range (2.0 or more for routine cardioversions, 2.5 or more for patients with mechanical valves). Communicate result to cardiologist.
 - Ablation: Notify electrophysiologist if INR less than 1.5 or greater than 3.5.
 - Other procedures: Check INR. If INR result greater than 1.5, notify MD
 - Review GFR result and initiate Contrast Induced Nephropathy protocol if applicable as per physician orders.

19. Site preparation in CSSU:

- Site should be prepped as close as possible to time of procedure to minimize risk of infection. Site will be clipped in CSSU.
- Use clippers only; no razors
- **Angiogram/PCI:** Clip hairs on *both* femoral groin sites from mid-thigh, including inner thigh areas, to lower abdominal area to minimize discomfort from tape and drape removal.
- **EP:** Clip hairs on *both* sides only from mid-thigh, including inner thigh areas, to lower abdominal area to minimize discomfort from tape and drape removal. Clip hair on chest and back for placement of mapping pads, hands-free defibrillator pads during procedure.
- **Permanent pacemaker/ICD implants:**
 - Clip hairs on both sides of chest from neck to nipples. Clip hairs on the shoulder on the side of the device implant. Include the armpit for patients who will be receiving a subcutaneous ICD.

- Using sponge side of surgical "E-Z Scrub", patients or nurse wash neck to nipples (both sides) day of procedure. Include armpit and left axillary area for patients who will be receiving an SCD.

20. Pre-procedure medications:

- Outpatients take own medications day of procedure unless otherwise specified.
- Avoid pre-procedure sedation prior to completion of consent process
- See orders for prophylactic antibiotics for implants.

Recovery:

See specific applicable protocol.

Discharge

- Patients who receive procedural sedation or general anesthesia must meet discharge criteria according to [Cardiology Procedures: Care of Patients Receiving Procedural Sedation/General Anesthetic \(CSSU\)](#).
- Review Physician Orders prior to discharge.
- **Device Implant patients:** Review post-procedure orders for CXR. Patients must not be discharged until CXR has been reviewed by Physician.
- **Coronary Angiogram Patients:** Patients referred to surgery should be seen by the Cardiac Surgery Triage Coordinator and Cardiac Surgeon if possible before discharge.
- **TAVI Patients:** Ensure TAVI Clinic Patient Educator is aware of patient.
- For patients being discharged home, remove IV/saline lock and apply dressing
- Patient disposition:
 - Returning to hospital of origin:
 - Provide report to *ambulance staff or accompanying RN* and/or verbal phone report to receiving RN before patient is picked up or shortly after. Include procedure performed, outcomes, plan and any planned surgeries in report.
 - Provide copy of "HeartView" diagram and copy of procedure report (MacLab report) in addition to referring hospital chart.
 - Complete CSSU Report Transfer sheet.
 - If returning to MSJ Hospital, send entire chartlet with patient,
 - If returning to non-Cerner hospital: print transfer report
 - If transferring to 5A/5B or medical unit at SPH:
 - Give verbal phone report
 - Complete CSSU Report Transfer sheet.
 - Transfer patient in care of RN if requiring class 1 telemetry.

- If transferred to CICU:
 - Transfer patient with cardiac monitor in care of critical care RN,
 - In-person verbal report is given to CICU RN.
- If discharged home:
 - Review recommendations in appropriate discharge booklet

Documentation

Document all assessments, interventions and care given using Cerner, except during downtime when the downtime paper Cardiac Short Stay Unit tri-fold must be used.

Patient and Family Education

Elective patients:

- Provide risk factor counseling to all elective patients with coronary artery disease.
 - For patients with any lesion more than 50% OR 2 or more risk factors who reside within Vancouver Coastal Health, refer to a cardiac rehabilitation program within VCH
 - If not from within VCH, encourage patient to seek referral to cardiac rehab from primary care provider
- Review discharge medications:
 - Angiography/PCI patients: If patient unable to fill prescription by noon the following day, nursing may dispense take home medications. [See Dispensing Medications \(Nurses\)](#)
- Review access site care as per procedure protocols
- Review "HeartView" diagram and give patient copy.
- Provide patient with appropriate teaching pamphlets and follow-up information
- For device patients identify outpatient clinic patient will follow up with as well as follow up physician.
- Provide verbal instructions for all written instructions:
 - For any patient who receives general anesthesia/conscious sedation: provide patient with Discharge Guidelines
 - Angiogram or PCI: "After My Coronary Angiogram or Stent or Cardiac Procedure"
 - Electrophysiology (EP) Procedures: Post Discharge Care, ECG requisition for AFib ablations patients.
 - Post pacemaker/ICD implant: "Discharge Guidelines", device booklet and identification card, "Your Shock Plan"
 - Cardioversion: "After Cardioversion Discharge Information", ECG requisition as ordered by physician.
 - TEE: TEE Discharge Instructions

- Post special procedures (e.g. congenital intervention, septal closure): “Cardiac Special Procedures” post-discharge care.
- Inpatients:
 - Written discharge guidelines are provided on the wards.

Related Documents

2. [B-00-13-10086](#) – Cardiology Procedures: Care of Patients Receiving Procedural Sedation/General Anesthetic (CSSU).
3. [B-00-13-10123](#) – Cardiac Short Stay: Pediatric Interventional Cardiology or Electrophysiology
4. [B-00-13-10063](#) - Cardiac Cath Lab: Post Procedure Care, protocol
5. [B-00-11-10192](#) - Patient/Resident Identification

References

1. Shoulders-Odom, B. (2008). Management of Patients After Percutaneous Coronary Interventions. *Critical Care Nurse*, 28, 26-40.
2. Woods, S.L., Sivarajan Froelicher, E.S., & Motzer, S.A. (2010). *Cardiac Nursing* (6th Ed.). Philadelphia: Lippincott Williams & Wilkins.

Persons /Groups Consulted

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