

Hemodialysis- Preparation of an Inpatient or Resident

Site Applicability

All VCH & PHC acute and Long-Term Care Homes

(Exception: This document does not apply to critical care areas)

Practice Level

RN, RPN, LPN: Basic skill

Need to Know

The purpose of this document is to provide guidance in how to prepare an inpatient or resident living in a Long-Term Care (LTC) Home for hemodialysis (HD) at St. Paul's Hospital (SPH) or Vancouver General Hospital (VGH), which includes meal preparation, medication administration, and interdepartmental communication.

Hemodialysis (HD) is a treatment that involves the removal of excess fluid and waste products that accumulates within the body.

People requiring HD may be hospitalized for any number of reasons or may live in a long-term care home. The person's HD schedule will affect their day-to-day care, including meal and medication schedules. Many people who regularly receive HD treatments attend either the VGH or SPH HD unit. VGH and SPH HD units are primarily outpatient clinics comprised of 44 and 45 beds, respectively, where up to 220 and 300 patients, respectively, are dialyzed during the weekdays and weekend. Depending on where the person is admitted and their acuity, they may be transferred to either one of these units where they will receive regular HD treatment.

SPH and VGH inpatients meeting criteria for transfer ([Appendix A](#)), will receive dialysis at their designated HD unit, otherwise the patient will be dialyzed on their inpatient unit. Those who are not inpatients at SPH or VGH and require dialysis will be transferred to either one of these HD units.

If there is a sudden change in patient's or resident's condition: Review or discuss with patient's or resident's physician or NP. Do not send the patient or person to the HD unit and inform the HD unit (by telephone call) regarding the change in condition and discuss further steps.

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Procedure

Preparation prior to sending the person to the Hemodialysis Unit:

Blood Work

- People requiring HD in acute care may need routine bloodwork for their acute care condition, which can be completed during their HD run.
- People requiring permanent HD will have bloodwork done every 6 weeks.
- Any STAT bloodwork will be ordered for the start of HD and will be drawn by the HD nurse. If bloodwork is required on the day of dialysis, please send requisitions with the person to the HD unit.

Meals

- **Meals** are not provided on the HD unit.
 - **SPH and VGH only:** Request to have Food Services send patient's tray to HD unit.
 - **VCH acute care site to SPH or VGH HD:** Send a bagged meal with the patient.
 - **Long-term Care Homes (Care Home):** Send a bagged meal with the person.
- Enteral feeds: see [Appendix B](#) for details

Medication administration prior to and during hemodialysis:

- Only those medications and treatments that must be given during the HD treatment will be administered and provided at the HD unit.
- Other considerations must be made with regards to medications and dialysis. A list of medications that should and should not be administered prior to, and during HD, is further detailed in [Appendix B](#).
- In Long-Term Care the nurse must ensure medication orders follow the recommendations in [Appendix B](#) and clarify with the physician or nurse practitioner as needed.

Inter-department Communication:

- For each HD run, the standardized communication tool for pre- and post-HD, called "Pre & Post Hemodialysis Transfer Report" ([BCHA.0029](#)), must be completed by the sending nurse prior to HD and the HD nurse prior to the patients' return. This report is a permanent part of the patient's health record.
- [Appendix C](#) includes the procedure for what is included for transfer to SPH or VGH HD unit.
 - [Inpatients going to and returning back from SPH HD](#)
 - [Inpatients going to and returning back from VGH HD](#)
 - [Residents living in Long-Term Care going to and returning back from SPH or VGH HD](#)

- Phoned reports should continue to be made whenever the patient's condition or situation requires person-to-person communication.

Expected Patient/Client/Resident Outcomes

Safe patient care through consistent patient preparation, medication administration, and inter-departmental communication.

Documentation

Pre & Post Hemodialysis Transfer Report ([BCHA.0029](#))

References

- Clinical Skills. (n.d.). Hemodialysis. Retrieved from <http://mns.elsevierperformancemanager.com/SkillsConnect/Default.aspx?Token=549253&SkillID=125>
- Daugirdas, John T., Blake, Peter G., Ing, Todd S. Handbook of Dialysis, 4th Ed. 2012 pp. 152 – 155.
- Gutch, C.F., Stoner, Martha H., Corea, Anna L., Hemodialysis for Nurses and Dialysis Personnel. 8th Ed. 2012 pp 126
- Providence Health Care. (2013). Hemodialysis unit at St. Paul's hospital. Retrieved from <http://renal.providencehealthcare.org/services/hemodialysis-unit-st-pauls-hospital>

Appendices

- [Appendix A: Hemodialysis Inpatient Transfer/Admission Criteria \(ACUTE CARE ONLY\)](#)
- [Appendix B: Hemodialysis: Medication Administration Before, During & After Dialysis](#)
- [Appendix C: Interdepartmental Communication](#)

Appendix A: Hemodialysis Inpatient Transfer/Admission Criteria (ACUTE CARE ONLY)

The following conditions exclude patients from being transferred to the dialysis unit. These patients are to be dialyzed on their inpatient unit or in emergency.

- Unexpected or unexplained decrease in LOC within last 12 hours
- Requiring high flow oxygen of 40% or greater
- New tracheostomy that is less than 4 days old
- New chest tube that is less than 24 hours old
- Epidural infusion
- Intrathecal narcotic placed within last 24 hours
- Requiring suctioning to maintain airway patency
- Requiring special equipment to maintain patent airway or to support adequate respirations, such as CPAP or BiPAP
- Requiring IV fluids to maintain an adequate BP
- Respiratory distress, such as stridor or pulmonary edema
- Respiratory rate of less than 8 per minute (**VA Only:** if patient is followed by the Perioperative Pain Services (POPS), 8 is acceptable with a sedation scale (Pasero) of 5 to 1)
- **VA Only:** Sedation scale (Pasero) of more than 1 (2 if cleared by dialysis unit on individual basis)
- Requiring cardiac monitoring and/or external pacing
- Requiring one to one nursing supervision such as suicide risk or extreme restlessness, must be discussed with the dialysis unit prior to possible transfer
- Actively bleeding
- Spinal precautions
- Traction - orthopedic or spinal

Appendix B: Hemodialysis: Medication Administration Before, During & After Dialysis

A communication note on the Pre and Post Hemodialysis Transfer Report (BCHA.0029) should be added if a medication is to be given during or after dialysis per instructions below.

Analgesics

- If patient needs analgesics, patients should be given the analgesic before coming to dialysis.
- If patient requires analgesics during dialysis, it will be given in the dialysis unit.

Antibiotics

- **IV cloxacillin ordered at a Q4H frequency** (Pharmacy prepares/sends to inpatient unit)
 - Will be given according to MAR schedule in dialysis unit (if due) as appropriate; IV antibiotic bag should be sent by the inpatient nurse with the patient and it will be administered in the HD unit.
- **IV vancomycin (maintenance doses)** (HD nurse to prepare)
 - These doses are given at the end of the HD run. The HD unit has vancomycin vials in Omnicell and will prepare and administer the medication. If patient is dialyzing on the inpatient unit, the HD nurse is to call the HD unit to have the vancomycin vials sent to the inpatient ward for administration.
- **IV vancomycin loading (initial) dose** (Pharmacy prepares loading dose/sends to inpatient unit)
 - Loading/ initial dose can be given on the inpatient unit by ward nurse irrespective of dialysis.
- **All other frequencies of IV antibiotics**
 - To be given on the inpatient unit upon patient's return after completion of the hemodialysis run

Hypoglycemic Agents

- Oral hypoglycemic agents are to be given on the inpatient unit/ care home.
- Insulin should be administered on the unit where the patient will be eating.

Cardiovascular Medications

- Ideally, anti-hypertensives should not be given within six hours of starting dialysis.
 - Please have the prescriber clarify if there are questions or concerns about holding or delaying the administration of these medications until after dialysis.
 - If patients receives anti-hypertensives prior to dialysis, please enter this on the transfer report.
- Nitroglycerin patch (patch removal/ application are responsibility of sending inpatient unit/ care home): Patch should be removed prior to dialysis. If patient/ person is dialyzing in morning, apply patch after dialysis. If dialyzing in afternoon/ evening or has unstable angina, the nitroglycerin patch can be applied in the morning and removed prior to sending for dialysis.

Heparin

- Prophylaxis: Heparin 5000 units subcutaneous BID should be administered as ordered. If dialysis interferes with a scheduled dose, inpatient unit/care home to give either prior to dialysis (for am dialysis run) or after dialysis (for evening dialysis run). Subcutaneous heparin will NOT be given during dialysis.

Treatment: heparin intravenous infusions – Heparin IV infusions can be continued during the dialysis period (no extra intradialytic heparin will be given). PTTs should be arranged to be drawn and interpreted prior to dialysis. If necessary, the hemodialysis nurse can draw a PTT in the last hour of dialysis for interpretation by ward RN on return to inpatient unit.

Other Medications

- Phosphate binders (e.g. calcium carbonate, TUMS) should be given with meals wherever the patient/ resident is eating the meal.
- Tacrolimus, mycophenolate, prednisone and cyclosporine will be given according to the MAR schedule (inpatient unit/care home to send medication with patient if due during HD).
- IV iron, and darbepoetin/erythropoietin will be given in dialysis unit.
- Vitamin & mineral supplements, stool softeners, all once daily medications and most twice daily medications can usually wait until patient returns to the unit/ care home.
- Anticonvulsant medication may be given prior to dialysis if ordered more than once daily (e.g. BID, TID).

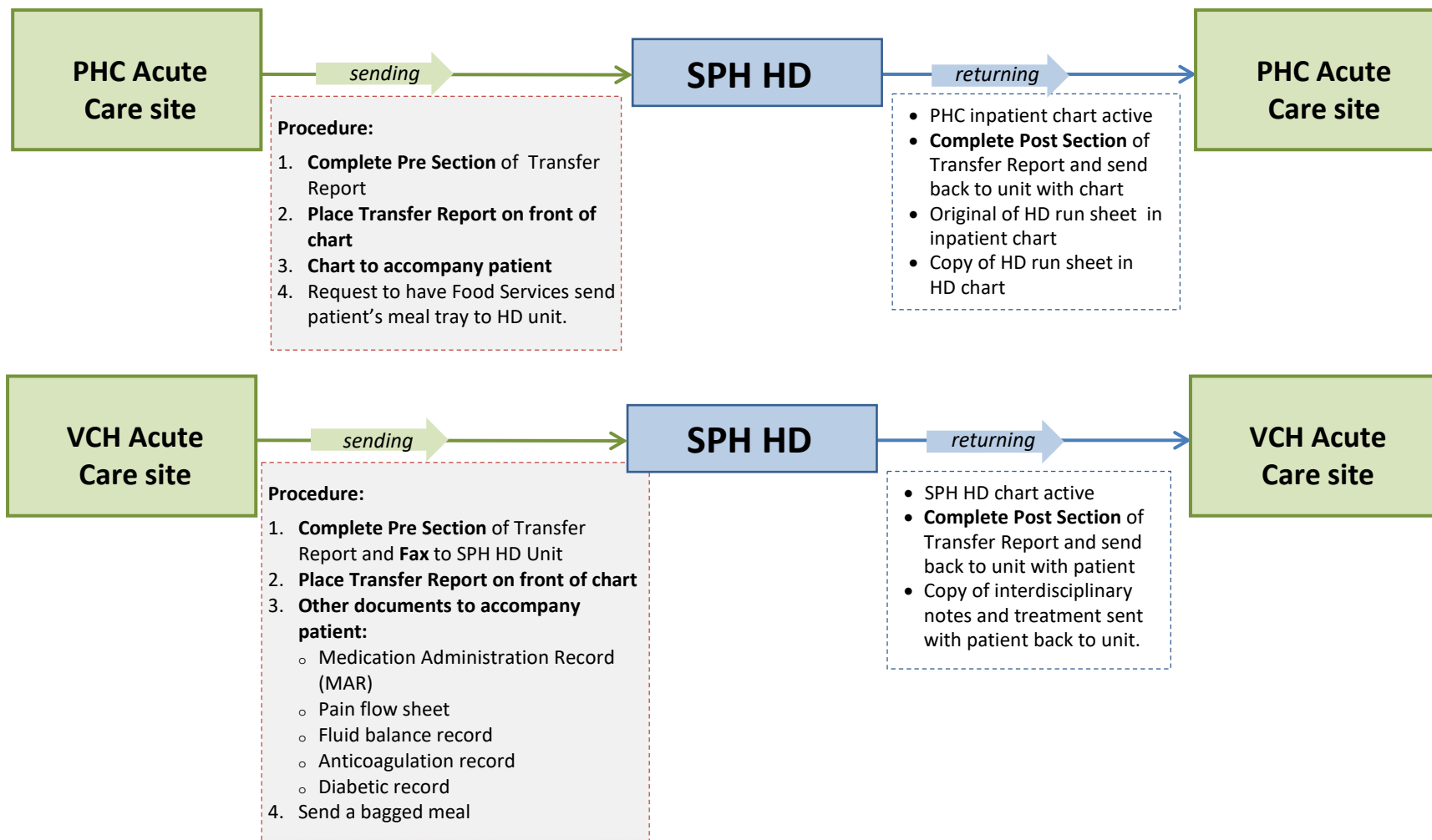
Enteral Feeds

- Enteral feeds should be stopped by unit/care home at least 30 minutes prior to dialysis (to prevent aspiration) and can be resumed by inpatient unit/ care home after dialysis upon patient's return. Obtain a doctor's order for holding tube feeds and notify the dietitian. (ICU and BTHA patients exempt).

Note: Do not send bags full of medications with the patient/ person as most can be given after dialysis.

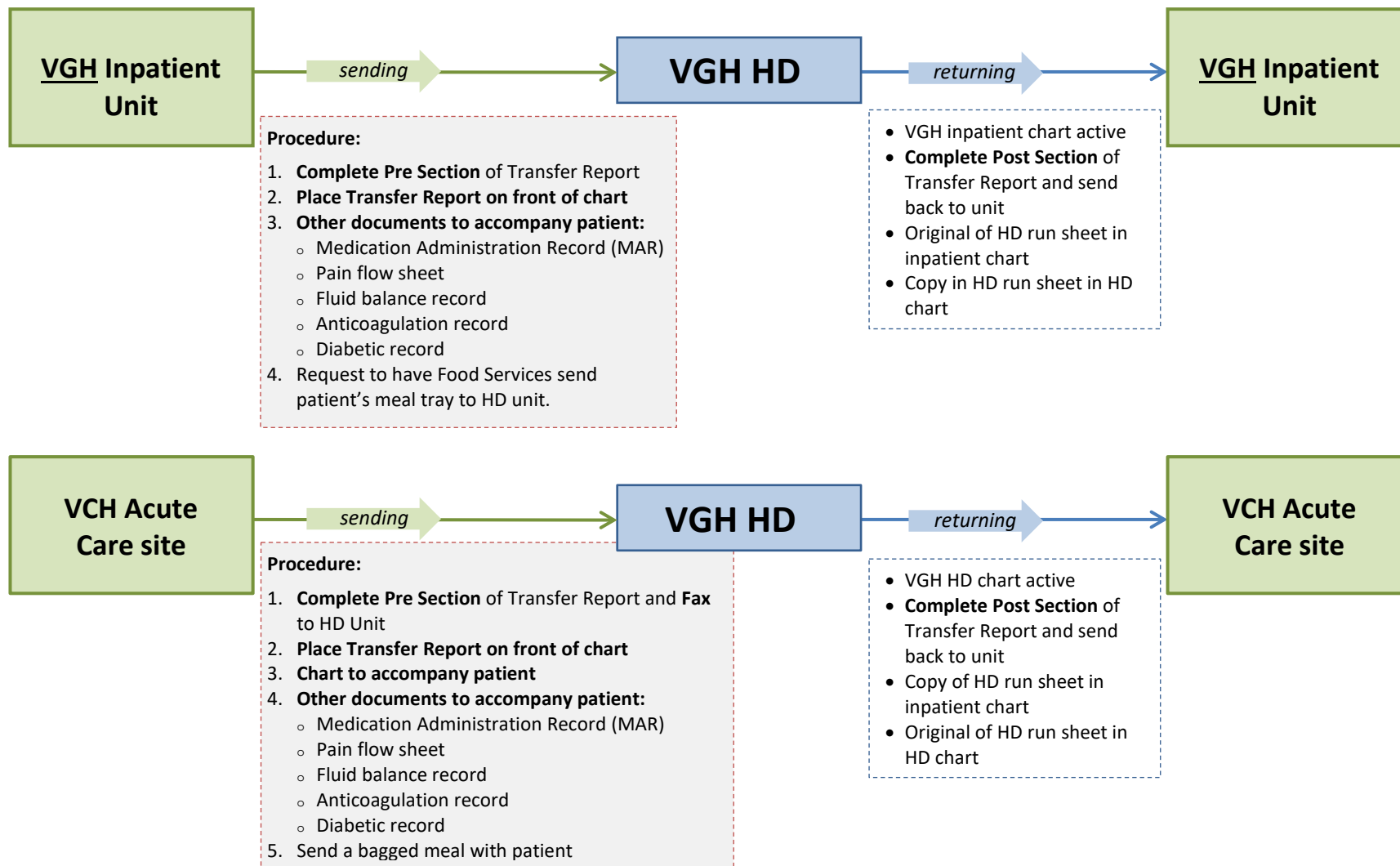
Appendix C: Interdepartmental Communication

Inpatients going to and returning back from SPH HD



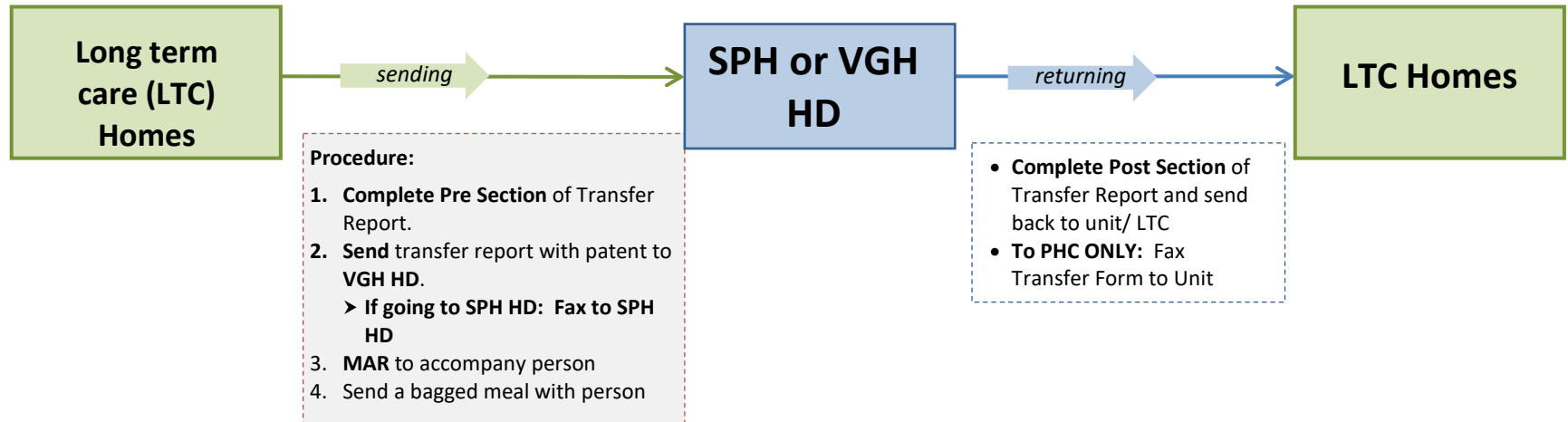
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Inpatients going to and returning back from VGH HD



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Residents going to and returning back from SPH or VGH HD



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