## Appendix H: Care of the Patient with a Hemodialysis Catheter

### Recommendations for Use
1. High flow venous access devices are utilized for dialysis procedures
2. Acute catheters (ex. Shiley, Mahurkar) are typically placed at the bedside by the renal fellow or designee.
3. Chronic catheters (Davol, Vaxcel) are permanent, tunneled dialysis catheters, placed in the CVIL/CVIR lab

### Insertion Considerations
1. Follow guidelines as described in Adult Vascular Access Device (VAD) Policy, including use of Central Line Insertion Care Team Checklist for bedside procedures
2. When a non-tunneled VAD is no longer needed for dialysis, it should be removed or guidewired to a smaller lumen catheter.

### Site Care
1. Dialysis dressing change procedure and site care is different than the Central VAD dressing change and is located in the Nursing Practice and Organization Manual, VAD Catheter Dressing Change Procedure.

### Line Management Blood Draws
1. Hemodialysis VADS shall not be opened, flushed or used by non-dialysis staff except in life threatening emergency or when ordered by Nephrology attending or fellow and nursing staff have received specialized training
   a. The physician must write orders specific to the management of this line including volume and concentration of heparin, if needed.
2. If ordered by the Nephrology attending or fellow, Hemodialysis VADs may be used for blood draw (Refer to Dialysis Blood Drawing Procedure).
   a. Any individual who draws blood from or changes a dressing for a hemodialysis catheter must have specialized training.
   b. VAT, where available, shall draw blood from a hemodialysis catheter on non-ICU/IMC units
   c. For hemodialysis catheters it is imperative to withdraw and discard 6 mL of blood prior to use, (including medication infusion, or saline flush) so that patient does not get a bolus of heparin.

### Dressing
1. For new tunneled central VADS, a nurse shall assess the site and dressing when the patient returns from OR/CVIL/CVIR. The site shall be dressed with gauze dressing, changed daily, until the site is no longer oozing. Transparent dressing with q 7 day changes can be applied as soon as oozing has stopped. Dialysis catheter dressings must be changed every 7 days or when it becomes damp, loose, soiled or if the patient develops a problem at the site that require closer inspection.). Refer to VAD Catheter Dressing Change Procedure.
2. Dialysis staff shall perform dressing changes on active dialysis lines with each treatment.
3. Where applicable, the VAT will perform dialysis dressing changes on patients who do not have dialysis treatments at least once per week or who have loose or soiled dressings on general acute care units (exception Pediatrics and Oncology). Unit nurse must notify VAT of need for dressing change.
4. ICU/IMC and Oncology nurses are responsible for performing dialysis catheter dressing changes on patients who: are on continuous venovenous renal replacement therapies; do not have dialysis treatments weekly; or who have loose or soiled dressings.
### Hemodialysis Flush/Lock

For hemodialysis catheters it is imperative to withdraw and discard 6 mL of blood prior to use, (including medication infusion, or saline flush) so that patient does not get a bolus of heparin.

| Aspirate as described, then flush with NSS first, followed by heparin flush if ordered | **NSS Flush:** 10 mL NSS, each lumen followed by heparin lock | If ordered by physician, Heparin Lock: Determine size of catheter (indicated on catheter lumen and may vary between the two lumens). To each lumen, Heparin 1 mL Heparin 5000 units/mL mixed with 1 - 2.5 mL NSS according to catheter size plus 0.1 cc overfill. Example: catheter lumen size is 2.3. You will take 1 ml heparin (5000 units/ml) and mix it with 1.4 ml NSS for total volume of 2.4 ml-flush each lumen. | **Frequency:** Post-dialysis by dialysis staff, at least 3 times per week. OR if being used for blood draws, after obtaining blood specimen. |

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**ICU Patients routinely receive NSS flush only for HD catheters. A specific order must be written for heparin flush.**