

Example

Self-Cannulation of Fistulas Staff Policy and Procedure

Self-Cannulation of Fistulas* Policy and Procedure

ESRD Network #15
Date: 04/04

Purpose:

To assist and promote self-care for those patients who have mature fistulas; to reduce patient anxiety regarding infiltrates, infections, and missed "sticks" associated with a fistula access.

Policy:

Patients who have been on dialysis for approximately six months to one year and have matured fistulas are eligible to practice self-cannulation at their request. Patients must have the dexterity and visual capacity to perform this procedure. Patients will receive the following training from staff prior to approval to self-cannulate.

Procedure (see attached training checklist):

1. Teach patient to assess fistula for any signs or symptoms of infection: redness, swelling, abnormal drainage and tenderness. Note any bruising and locate last puncture sites. Palpate fistula for a thrill (bounding pulse) and listen for a bruit (buzzing).
2. Help patient to prepare fistula for cannulation:
 - Educate patient on the importance of and how to properly wash hands and access arm with anti-bacterial soap and water. Be sure to wash areas above and below fistula.
 - Select sites for cannulation. **DO NOT** cannulate a bruised/tender area or areas that look opaque (aneurysms). Select an area that is wide enough to accommodate the needle. Select a vein area that is straight or can be straightened with traction.
 - Teach the patient how to check for the direction of blood flow and the direction of the needles. Example: The venous needle points toward the venous return (toward the head of the patient) and the arterial needle may point in either direction.
 - Educate the patient about the benefits of rotating puncture sites.
 - Ready items for cannulation: cleansing solution, tourniquet, needles, clamp, and tape to secure needles in place. (Please use unit policy for taping procedure.)
 - Demonstrate application of Betadine in a circular motion (inside to out). Allow Betadine to dry. OR, if there is an allergy to Betadine, use 2% chlorhexidine in a circular motion.
3. Instruct patient on how to apply tourniquet. (Always use a tourniquet for matured fistulas. Using a tourniquet will give stability to the fistula for ease of cannulation.)
 - Using a tourniquet with Velcro edges: Wrap tourniquet above and around fistula arm. Pull tight, secure with Velcro.
 - Using a tourniquet with no Velcro: Wrap tourniquet above the fistula and around fistula arm, pull both ends straight up with non-fistula hand. This action will create tension under the fistula arm. Twist tourniquet ends twice (close to skin) and clamp tourniquet ends close to skin with a clamp.

Or

 - Staff to apply tourniquet.

*This sample policy presupposes that the facility has already met state and federal requirements for a self-care program.

4. Educate patient on selection of appropriate needle size (15g for mature fistulas) and how to grasp needle wings and remove protective sheath from tip. (Remind patient to keep needle sterile.) With cannulating hand, apply traction below determined puncture site using "pinkie" and side of hand (traction or making the area taut will straighten the fistula and prevent rolling). With bevel facing up, cannulate at a 25-degree angle (see Figure 1).

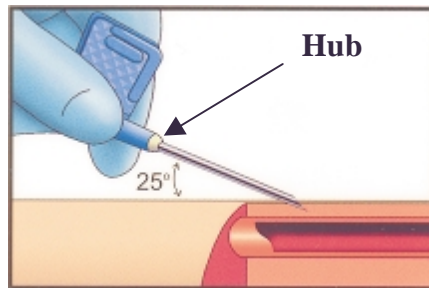


Figure 1**

Observe for a flashback of blood within the needle tubing. At this point, have patient level out the angle and continue to insert needle to the hub. Secure with tape in a *Chevron* (see Figure 2) fashion. Cannulate second needle using the above-described technique. **RELEASE TOURNIQUET.** Remember, the needles should be at least two fingers width apart to prevent a condition called recirculation. The arterial needle should be cannulated first. This will allow for a greater margin of error, if there is an infiltrate or a missed "stick."

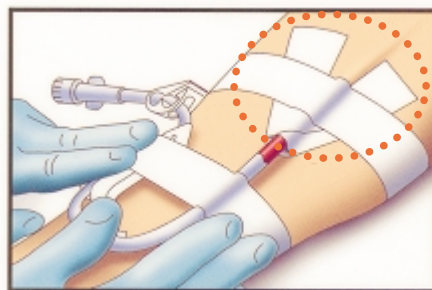


Figure 2**

5. Show patient how to secure the needles with additional tape or alternative unit protocol.
6. At any time during this self-cannulation procedure, encourage patient to ask for assistance.

This protocol is a guideline and should be tailored to each individual patient.

**Graphics courtesy of Medisystems.

Instruct patient to ALWAYS notify the charge nurse/staff if an infiltration occurs. Educate patients on the uses of heat and/or ice packs.

CANNULATION TEACHING TIPS:

- ❖ **ALWAYS USE A TOURNIQUET**, even with well-developed fistulas. **NO EXCEPTIONS!**
- ❖ **TRACTION** is important when cannulating a fistula to straighten the fistula and prevent rolling.
- ❖ Cannulate fistulas slowly and watch for the flash back to prevent puncture of posterior wall of fistula.
- ❖ In the event of inadvertent puncture of the posterior wall of the fistula, pull needle, apply pressure, and ice. Notify charge nurse. Assess fistula to locate a new puncture site or use catheter if applicable.

