



Ultrasound Guided Peripheral Intravenous (USGPiV) Procedure Checklist

Adapted from: INS Clinical Competency Validation Program for Infusion Therapy
Vascular Access Device Site Selection and Placement Competencies, 4th Ed.

Procedure: Ultrasound-Guided Peripheral IV Catheter (USGPiV) Site Preparation and Placement

Purpose: Validation of skills associated with the placement of an USGPiV for a defined therapeutic or diagnostic indication.

Decision Criteria	Met	Not Met	Not Applicable
1. Purpose of prescribed infusion therapy a. Intended outcome			
2. Patient assessment a. Physical assessment b. Allergies c. Education and consent d. Infusion history			
3. Site selection based on: a. Patient age and physical condition b. Prescribed therapy c. Need for vascular access d. Anticipated device dwell time e. Vein preservation			
4. Equipment selection based on: a. Patient age and physical condition b. Prescribed therapy			
Performance Criteria	Met	Not Met	Not Applicable
1. Obtains and reviews authorized prescriber's order			
2. Verifies the patient's identity using 2 independent identifiers, according to organizational policy (ie. name and date of birth)			
3. Provides the patient with information on USGPiV insertion procedure, including specific device benefits, management, and potential complications and alternatives			
4. Gathers supplies			

5. Places patient in sitting or recumbent position, as appropriate			
6. Provide teaching sheet and explain procedure to patient			
7. Performs hand hygiene			
8. Assesses vasculature using ultrasound <ul style="list-style-type: none"> a. Sanitizes ultrasound probe with a disinfectant wipe b. Applies liberal amount of ultrasound gel to the insertion site 			
9. Applies probe to the skin: visualizes and notes the location of the veins, arteries, and nerves surrounding the proposed insertion site			
10. Without a tourniquet, assesses veins for vessel size, path, round shape, and compressibility <ul style="list-style-type: none"> a. Assesses depth of intended vessel for venipuncture b. Assesses for adequacy of vessel size comparative to proposed outer catheter diameter to promote hemodilution and preserve vessel health c. Avoids smaller vessels to prevent phlebitis and thrombosis d. If desired, marks intended insertion site 			
11. Prepares for insertion by: <ul style="list-style-type: none"> a. Repositioning patient for comfort and visualization of the vasculature 			
12. Performs hand hygiene			
13. Prepares the insertion site <ul style="list-style-type: none"> a. If visibly soiled, cleanses with antiseptic soap and water b. Removes excess hair, if necessary, by clipping 			
14. Applies topical anesthetic, if needed			
15. Cleanses insertion site with antiseptic solution; allows to dry completely <ul style="list-style-type: none"> a. If using chlorhexidine solution (preferred), applies to skin in a back-and-forth motion for at least 30 seconds b. If using povidone-iodine solution, applies to skin using applicator and allows it to remain on skin for 1.5 to 2 minutes or longer to completely dry 			
16. Prepares equipment <ul style="list-style-type: none"> a. Adds supplies to sterile field b. Applies a bead of ultrasound gel to the probe 			
17. Applies tourniquet			

18. Do hand hygiene and don sterile gloves			
19. Place sterile drape over patients arm			
20. Applies a small amount of sterile ultrasound gel to the prepped area			
21. Covers ultrasound probe with sterile probe cover			
22. Relocates intended vein with ultrasound probe, verifying it is nonpulsatile			
23. Proceeds with insertion, using ultrasound-guided technology following manufacturer's directions for use			
24. Aligns the path of the needle to enter the centermost superficial area of the vein wall, and observes the needle tip entering the lumen of the vein			
25. Confirms slow venous blood return is the color and consistency of whole blood <ul style="list-style-type: none"> a. If blood return is pulsatile, immediately STOPS the procedure by removing the needle and tourniquet b. Applies pressure to the area for 10 minutes or until hemostasis is achieved 			
26. Places ultrasound probe on the sterile field			
27. Decreases the angle of the catheter and advances catheter into the vein			
28. Releases tourniquet			
29. If needed, activates safety mechanism <ul style="list-style-type: none"> a. If needed, applies pressure to the vein proximal to the tip of the catheter, using caution not to contaminate insertion site 			
30. Attaches needleless connector and any other appropriate add-on device primed with preservative-free 0.9% sodium chloride			
31. Flushes catheter <ul style="list-style-type: none"> a. If needed, retrieves probe from the sterile field and positions over the catheter tip in the longitudinal view and flushes catheter while viewing in longitudinal view on ultrasound to ensure catheter is properly seated in the vein 			
32. Observes for signs of swelling or patient complaints of discomfort or pain, and removes catheter if signs are present			
33. Stabilizes catheter with engineered stabilization device, if using			

34. Confirms blood return is the color and consistency of whole blood, lack of resistance to flush, and absence of swelling or tenderness at site			
35. Applies a transparent semipermeable membrane (TSM) dressing over the insertion site			
36. If necessary, curls the extension set to the side and tapes to patient's arm			
37. Discards used supplies in appropriate receptacles			
38. Removes gloves and performs hand hygiene			
39. Labels dressing as per protocol			
40. Performs probe disinfection			
41. Documents in the patient's health record: <ul style="list-style-type: none"> a. Date and time of insertion, number of attempts, functionality of device, local anesthetic, if used b. Use of ultrasound for catheter placement, catheter gauge and length, vessel depth and insertion location c. Identification of the insertion site by anatomical descriptors, laterality, landmarks, or appropriately marked drawings d. Dressing and stabilization method used e. Patient's response to the procedure f. Patient education 			

Clinician Name: _____

Unit: _____

Date: ____/____/____

Validated by: _____

Comments: _____

Date of next competency validation: ____/____/____