	P02.2 - MEDICATION & FLUID ADMINISTRATION BY SUBCUTANEOUS PORT	
	Version date: 2025-05-20	Effective Date: 2025-06-03 (07:00)
PCP ¹ / ICP ¹ / ACP / CPP		All ages

INDICATIONS

- Accessing and de-accessing an implanted subcutaneous port (e.g. Port-A-Cath™) to administer medication(s) or intravenous (IV) fluid

WARNINGS

- **Strict sterile technique is essential.** Because the tip of the port catheter sits in the distal superior vena cava, line contamination can lead to infection of the heart.
- **Never leave an infusion set or administration set open to the air.** Because the tip of the port is intrathoracic, the negative pressure generated during active inspiration can entrain air, causing an air embolism.
If an air embolism is known or suspected, place and transport the patient in the Trendelenburg position (i.e. head's down / leg's up)

EQUIPMENT

FOR ACCESSING / DE-ACCESSING THE PORT:

- Personal protective equipment (PPE) for contact & droplet precautions
 - Nonsterile gloves (2 pair)
 - Sterile gloves (2 pair)
 - Procedure masks (1 per individual)
- Disposable blue soaker pad
- Sterile sheet (or towel)
- Sterile fenestrated drape
- Chlorhexidine gluconate 2% with 70% alcohol swab stick
- Infusion set with Huber needle (figure 1)
- Biopatch™ protective disc (figure 5)
- Tegaderm-Film™ dressing
- Sterile saline flush syringe (3)
 - Adults / adolescents - 20 ml
 - Infants / children - 10 ml
- Syringe prefilled with 100 units / ml heparin
 - Large port - 6 ml
 - Small port - 3 ml
- Sterile gauze
- Bandage
- Biohazard container

FOR MEDICATION ADMINISTRATION:

- Prescribed medication prepared in Mini-BAG Plus™
- Administration set with micro-drip chamber (figure 2)

FOR FLUID ADMINISTRATION:

- Standard IV bag of the appropriate type & volume of fluid
- Administration set with macro-drip chamber (figure 2)

PROCEDURE

1. A paramedic with the primary (PCP) or intermediate (ICP) work scope can access a subcutaneous port only in an emergency when vascular access by any other route cannot be obtained. ERS requires additional employer-based training to perform this procedure (A06.2).
2. Explain the procedure to the patient / proxy and obtain verbal consent if time allows.
3. Prepare a clear and clean area. Gather all equipment.
4. Perform hand hygiene and don PPE with nonsterile gloves.
5. If administering a medication, prepare it in a Mini-BAG Plus™ as per P02.3
6. Attach the mini-bag or standard IV bag to an administration set with the appropriate drip chamber.
 - a. Ensure the roller clamp is closed.
 - b. Remove the protective cap and insert the spike into the infusion port of the bag.
 - c. Squeeze the drip chamber to ensure it is half full.
 - d. Remove the end cap and open the roller clamp. Allow a sufficient volume of fluid to purge the line of all air, then close the roller clamp.
 - e. Replace the end cap and hang the bag and administration set on an IV pole or a hook.
7. Put a procedure mask on. Place a mask on the patient, as well as any other individuals who will remain in the vicinity.
8. Have the patient lay supine, and turn their head away from the port. Place the soaker pad under their torso.
9. Establish a sterile field with the sheet (or towel) in the center of your clear area. Drop all equipment onto the sterile field, taking care to not touch anything with your non-sterile gloves.

During the procedure, discard all used (contaminated) supplies away from your sterile field.
10. Palpate the port site and note the location of the septum in the center of the device. Visually inspect for any open areas, warmth, redness, swelling or drainage. **Do not use the port if there is any evidence of overlying infection.**
11. Remove your nonsterile gloves, repeat hand hygiene, and replace with sterile gloves.

ACCESSING:

12. Clean the port site with the chlorhexidine / alcohol swab stick for 30 seconds in a back and forth motion. Reverse the swab stick and repeat for another 30 seconds in the perpendicular direction. Allow to air dry (figure 3).
13. Establish a sterile field around the port site with the drape.
14. Remove the end cap from the access set injection port.

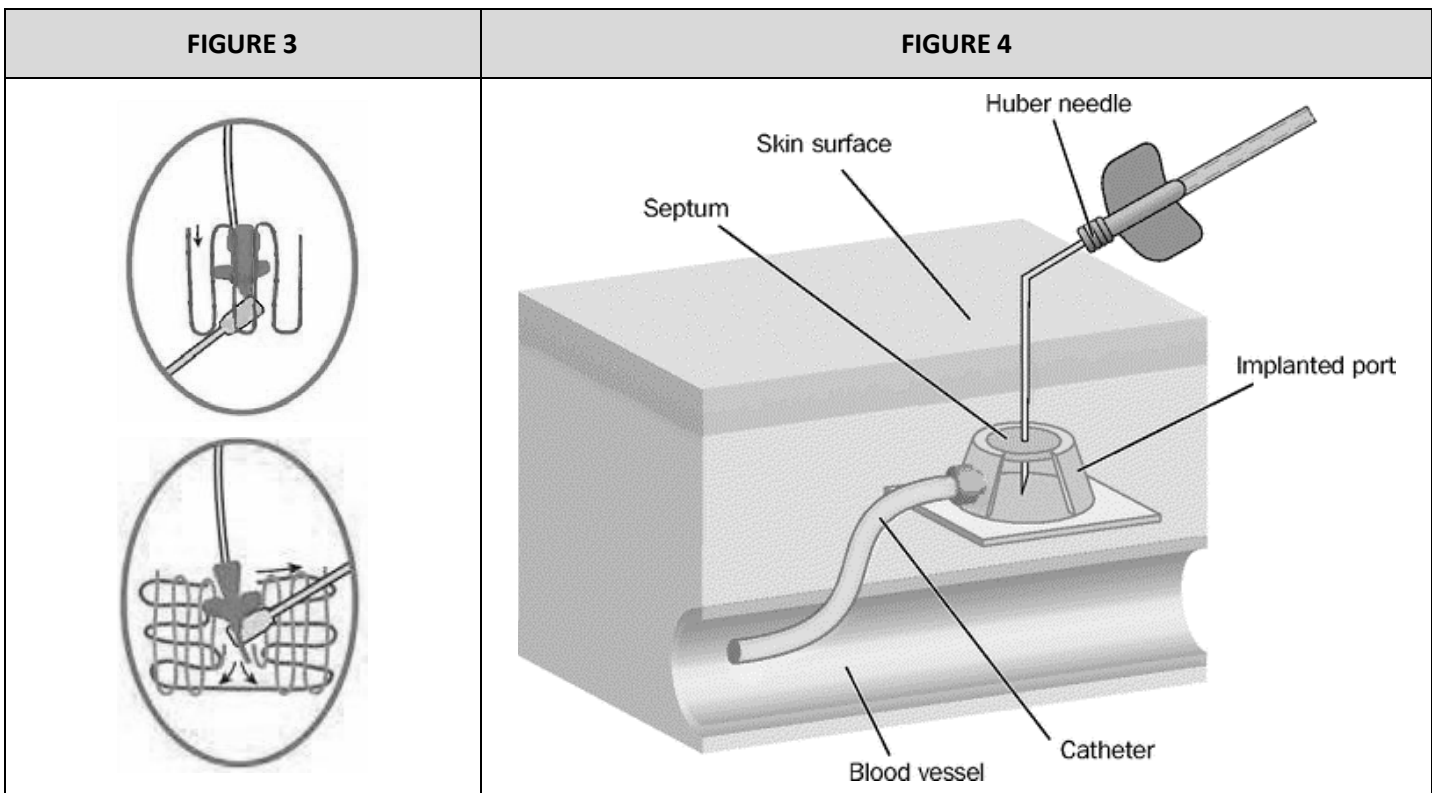
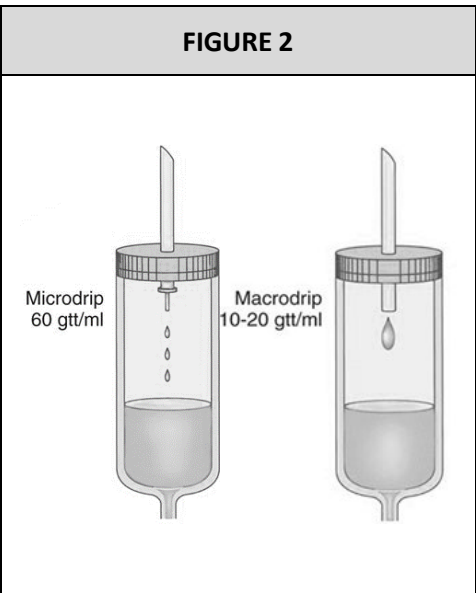
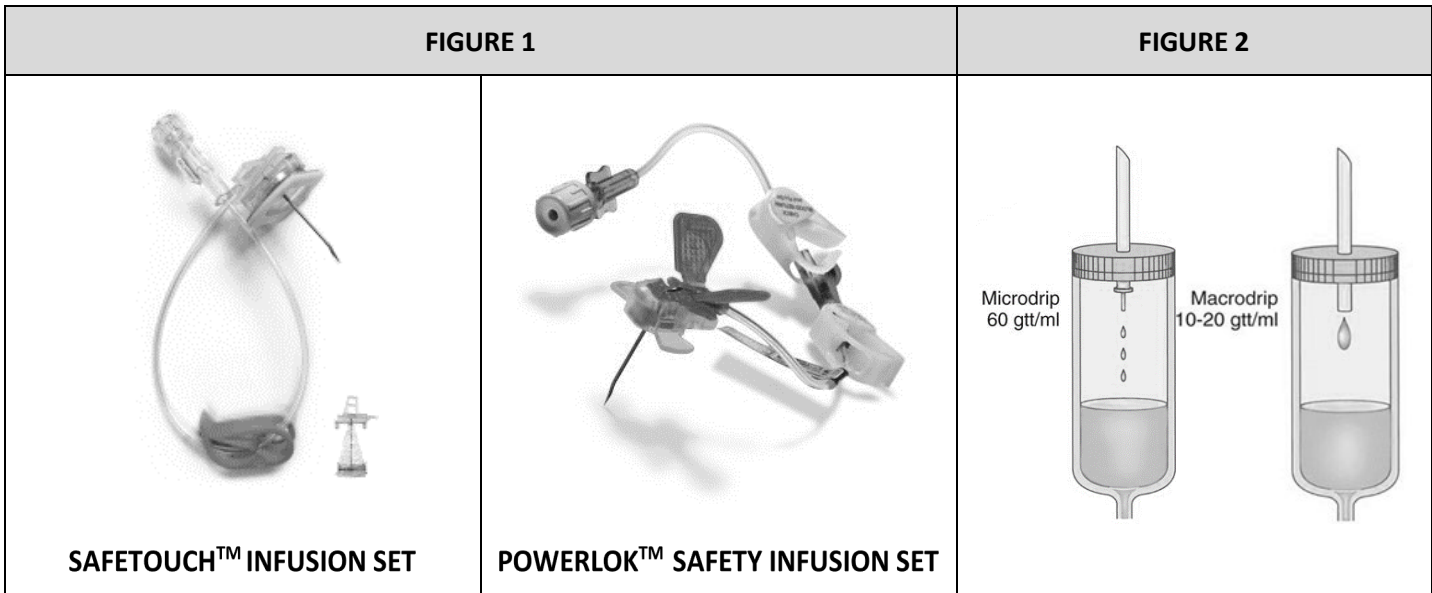
15. Attach a flush syringe, open the access set line clamp, and inject saline to purge all the air out of the line. Leave the syringe attached to keep the line closed to the air.
16. Stabilize the port with one hand. With your other hand insert the access set needle at a 90-degree angle into the center of the septum, until resistance is met at the back of the port (figure 4).
17. Aspirate with the attached syringe. Correct placement is verified by the return of blood.
18. Close the line clamp and remove the syringe.
19. Apply the Biopatch™ around the needle and cover with the Tegaderm dressing (figure 5).
20. Attach the second flush syringe, open the line clamp, and flush the port chamber with the entire volume of saline.
21. Close the line clamp, remove the syringe, and attach the administration set connector to the access set injection port.

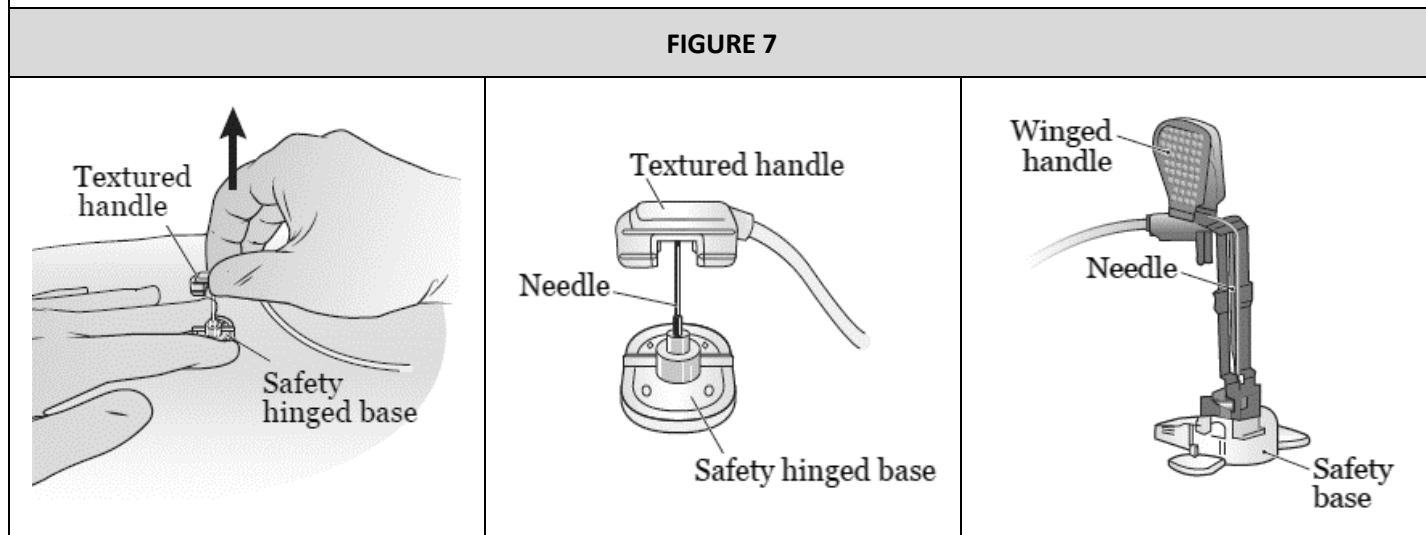
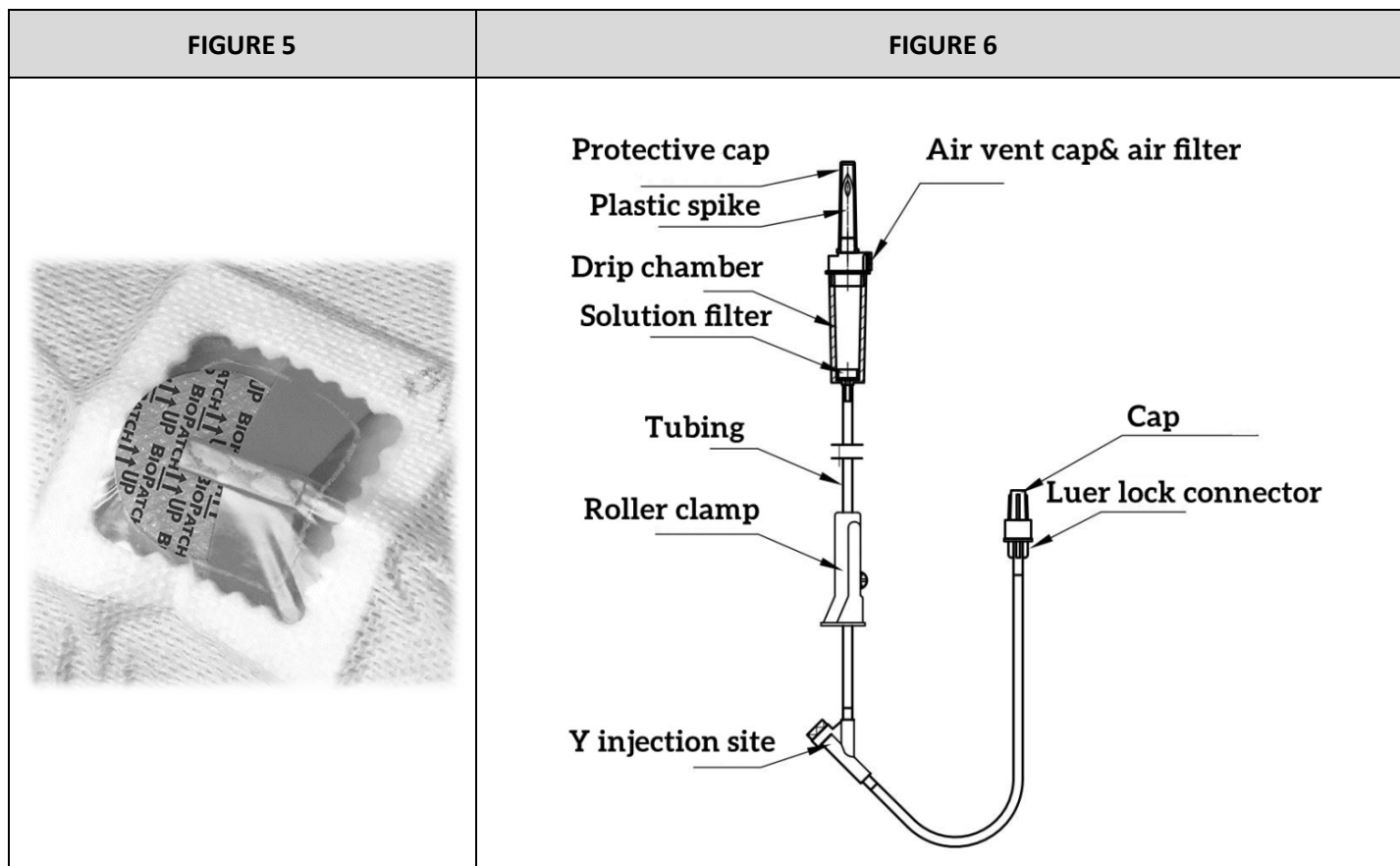
ADMINISTRATION:

22. Perform the Six Rights of Safe Medication Administration (H04).
23. Open the administration set roller clamp to begin the infusion (figure 6).
24. Regulate the drip rate to administer the infusion over the specified duration (figure 2). Monitor the flow rate and inspect for signs of extravasation every 15 minutes.
 - Micro-drip: 15 to 60 drops = 1 ml
 - Macro-drip chamber: 10 to 20 drops = 1 ml
25. Remove the patient's mask and allow them to resume a comfortable head position.

DE-ACCESSING:



26. Once the infusion is complete, close both the roller clamp on the administration set and the line clamp on the access set, then disconnect the administration set from access set injection port.
27. Clean the injection port with alcohol swab for 15 seconds, then repeat with second swab for 15 seconds. Allow to air dry.
28. Attach the final saline-containing syringe to the access set injection port, open the line clamp, and flush the line.
29. Close the line clamp, remove the empty syringe, and attach the heparin-containing syringe. Open the clamp and inject all of the heparin. Close the clamp and reattach the end cap.
30. Remove the Tegaderm dressing and Biopatch™.
31. Stabilize the port and gently push the safety base down against the skin. Pull the handle (or wings) of the infusion set out until you feel a firm stop, a click, or both (figure 7). This indicates that the needle is locked in the safety position.
32. Hold a sterile gauze over the insertion site until bleeding stops, then apply a bandage.
33. Remove the drape and soaker pad from the patient.
34. Discard all used supplies into the biohazard container.
35. Remove your PPE and repeat hand hygiene.
36. Document the procedure in the patient care record.





LINKS

- A06.2 - EMS Work Scope (Medical Functions & Procedures)
- H04 - Safe Medication Administration
- P02.3 - Medication Preparation with Mini-BAG Plus™

APPROVED BY	
	
EMS Medical Director	EMS Associate Medical Director

VERSION CHANGES (refer to X09 for change tracking)
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