



Clinical Practice Procedures: Drug administration/Central Venous Access Device

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Date	February, 2021
Purpose	To ensure a consistent procedural approach to the Central Venous Access Device.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Author	Clinical Quality & Patient Safety Unit, QAS
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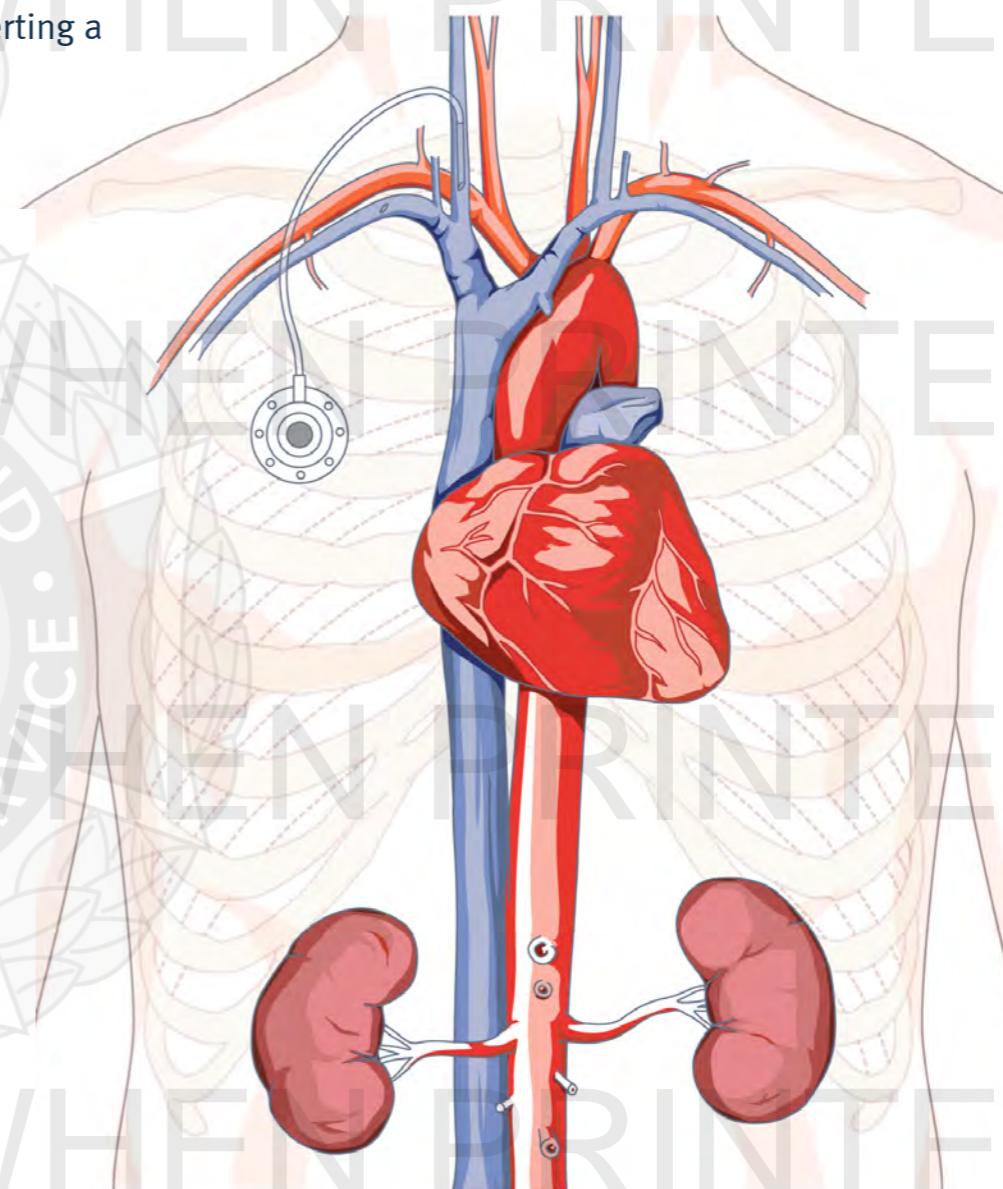
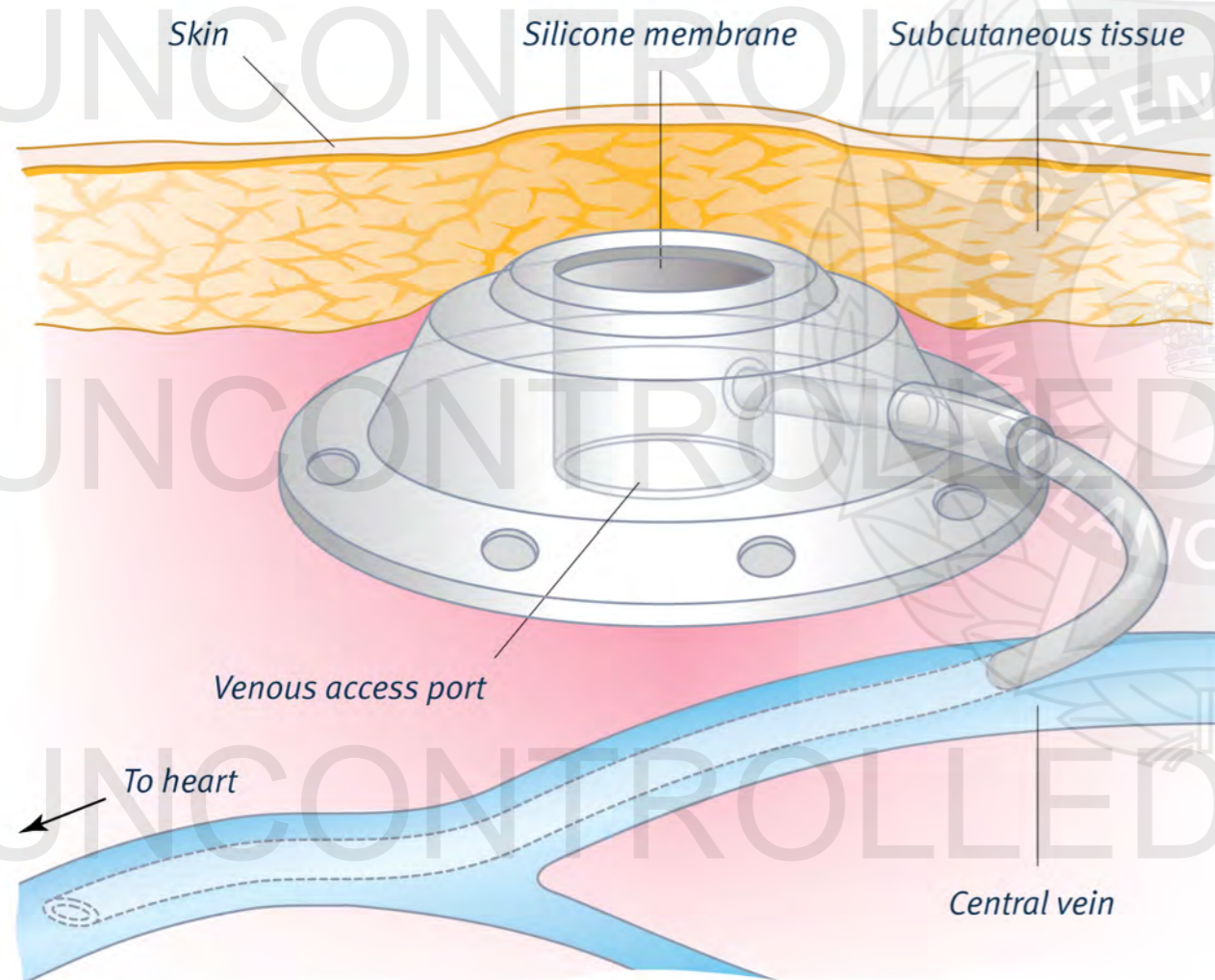
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Central Venous Access Device – implanted venous port

February, 2021

An Implanted Venous Port (IVP), also known as a port-a-cath or port, is a dome-shaped intravascular device used for long-term (greater than three months), intermittent central venous medication and/or fluid administration. An IVP has no external components and is surgically positioned beneath the skin within a subcutaneous pocket, most commonly in the chest. IVPs are accessed by inserting a specifically designed non-coring needle into the IVP's silicon membrane.

The patient's right internal jugular vein is the preferred site for IVP placement as it has the lowest risk of complications associated with insertion and subsequent use.



Indications



- Administration of medication AND/OR fluids (as specifically authorised in AMP 139/12)

Contraindications



- Suspected IVP infection

Complications



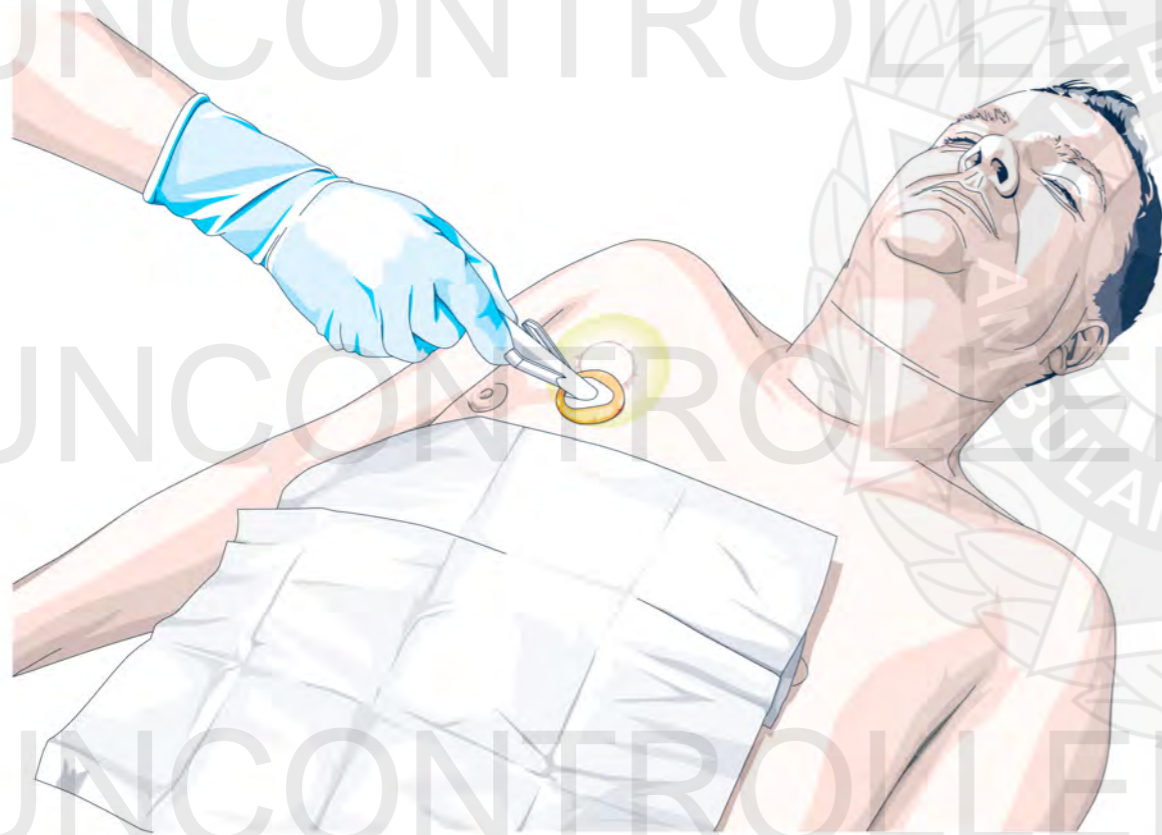
- Air embolus
- Infection, bacteraemia or sepsis
- A misplaced or dislodged catheter resulting in extravasation and possible necrosis

PROCEDURE

1. Apply required infection control measures (refer to the *QAS Infection Control Framework*).
2. If possible, position the patient supine with their head turned away from the IVP.
3. Palpate the IVP to identify its position and level of stability.
4. Perform appropriate hand hygiene.
5. Open a sterile dressing pack onto a clean flat surface.
6. Open and place the following equipment from the patient's own supplies, onto the dressing pack's sterile field:
 - a. 1 x Deltec® GRIPPER PLUS® (22 G x 25 mm) non-coring safety needle;
 - b. 1 x BD SmartSite™ Needle Free Valve (bung);
 - c. 1 x 18G drawing up needle;
 - d. 1 x 3 mL ChloraPrep™ (with tint) applicator (2% w/v chlorhexidine gluconate/70% w/v isopropyl alcohol)
 - e. 1 x Tegaderm™ I.V. Advanced (10 cm x 12 cm) securement dressing;
 - f. 1 x 10 mL Luer-Lok™ syringe; and
 - g. 1 x 20 mL Luer-Lok™ syringe.
7. Open 3 x 10 mL sodium chloride 0.9% ampoules and place them onto the dressing pack's sterile field.
8. Perform appropriate hand hygiene and don sterile gloves (refer to *CPP: Other/Donning and doffing of medical gloves*).
9. While maintaining an aseptic non-touch technique, prepare the syringes:
 - a. 20 mL syringe – to contain 20 mL of sodium chloride 0.9%, and
 - b. 10 mL syringe – to contain 5 mL of sodium chloride 0.9%.
10. Place the syringes back onto the sterile field.
11. Attach the BD SmartSite™ Needle Free Valve (bung) to the non-coring needle's distal connector.
12. Using the syringe containing 5 mL of sodium chloride 0.9%, prime the non-coring safety needle with 3–4 mL of sodium chloride 0.9%, leaving the syringe connected.
13. Position a sterile drape from the dressing pack near the patient's IVP.

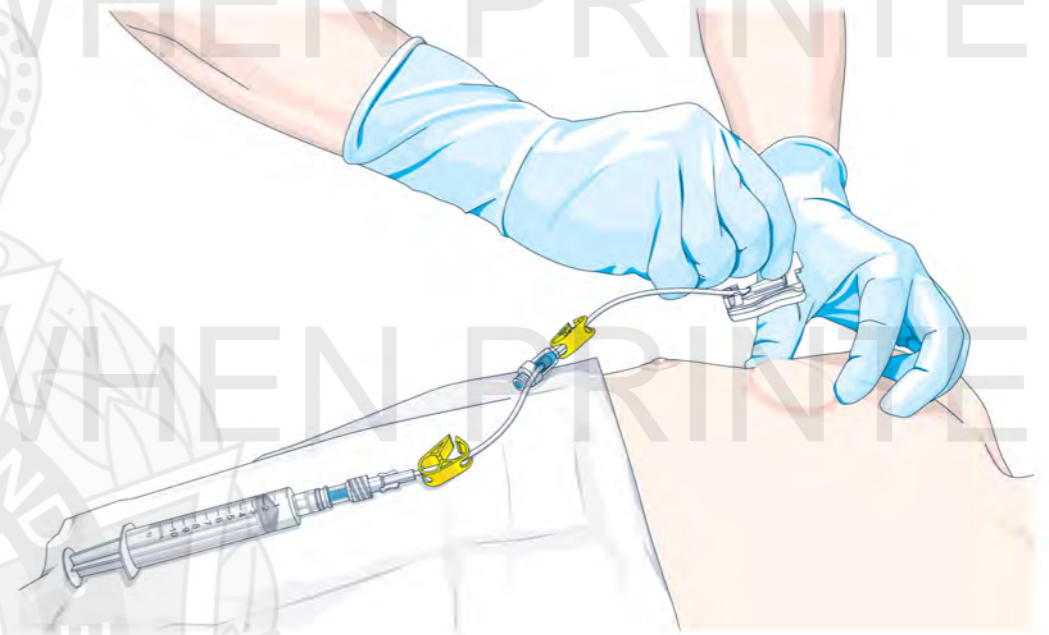
Procedure – Central Venous Access Device - implanted venous port

14. Starting at the portal's septum, prepare the insertion site with a BD Chloraprep™ cutaneous solution applicator:
 - a. *Squeeze* – hold with the sponge facing downward, and gently squeeze the wings.
 - b. *Prime* – saturate the sponge by repeatedly pressing gently against the skin in the treatment area.
 - c. *Apply* – apply the solution in a thorough and systematic circular motion, cleaning outwards to a 10 cm diameter.
 - d. *Dry* – allow the solution covered area to dry naturally.

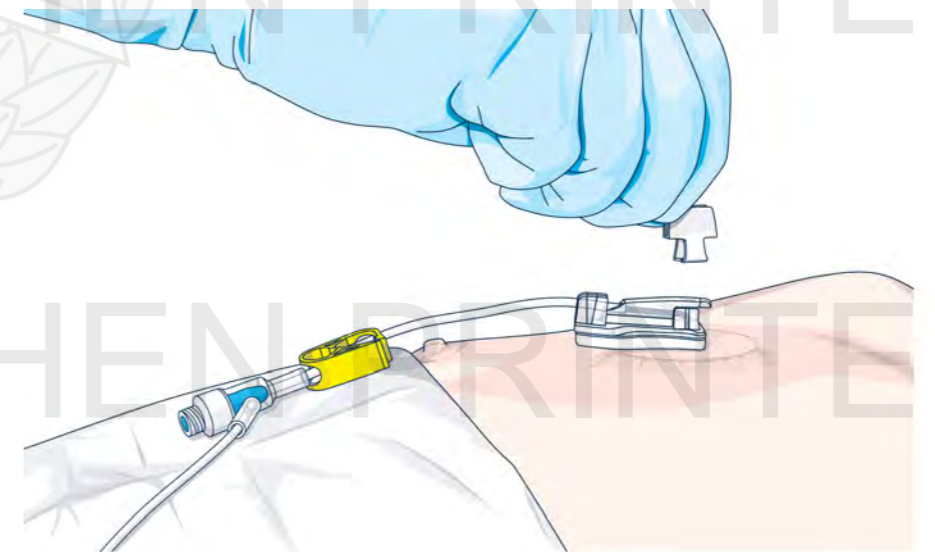


15. Remove the non-coring needle's safety sleeve.

16. Stabilise the port with the non-dominant hand and insert the needle firmly through the skin at a 90° angle. Push gently until resistance is felt (indicating the needle is positioned at the bottom of the port chamber).

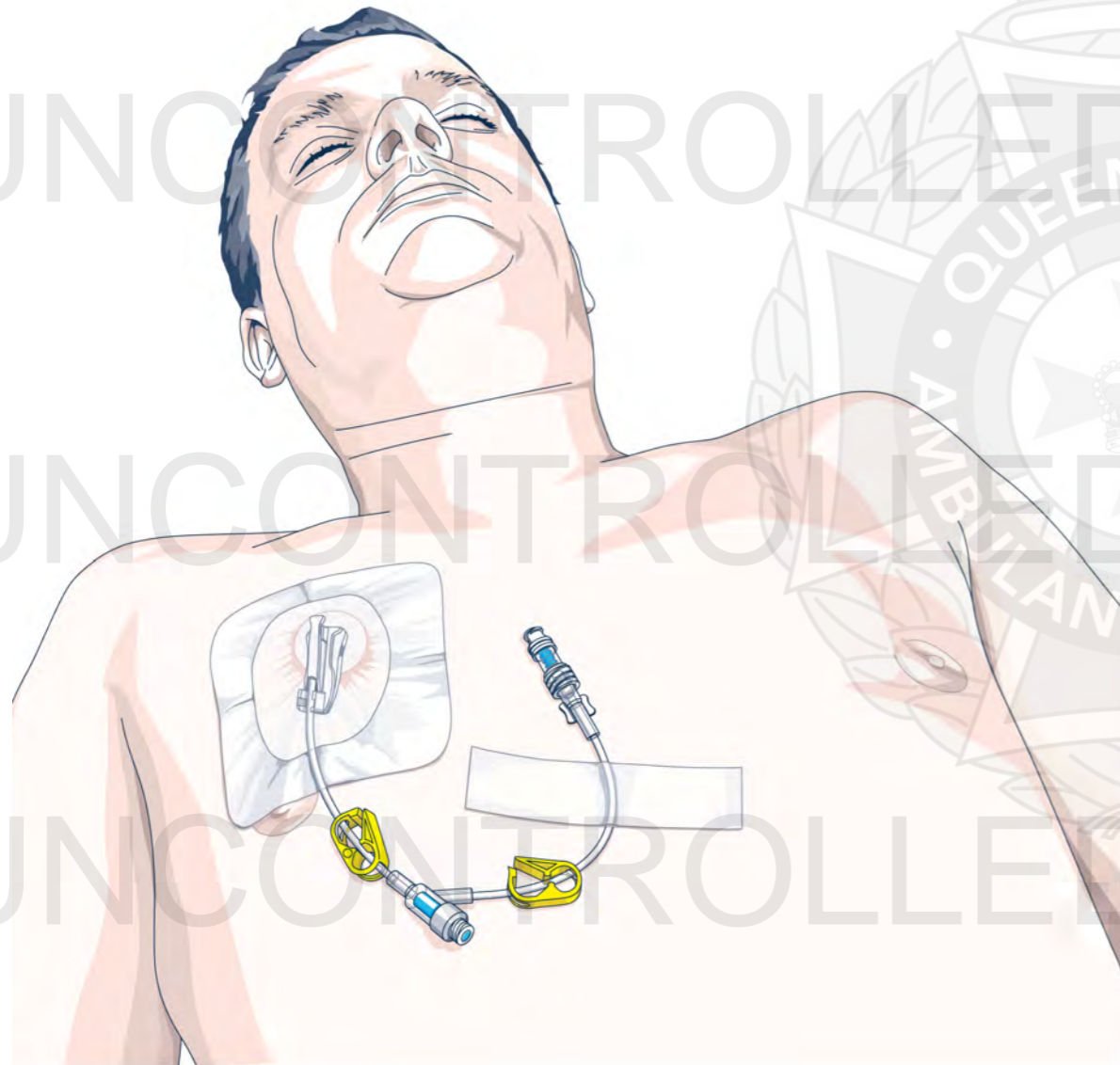


17. Remove the GRIPPER PLUS® clip from the correctly positioned needle.



Procedure – Central Venous Access Device - implanted venous port

18. Using the attached 10 mL syringe, aspirate 6–10 mL of the patient's blood and safely discard the syringe.
19. Using a pulsatile (rapid start-stop) technique, flush the catheter with the entire contents of the syringe containing 20 mL of sodium chloride 0.9% to ensure patency.
20. Apply a dressing and secure the tubing with tape.
21. Administer drugs and/or fluids as necessary.
22. Flush with 5 mL sodium chloride 0.9% after each drug is administered.
23. Frequently monitor the insertion site for extravasation.
24. After the final medication delivery, flush with 20 mL sodium chloride 0.9% (using a pulsatile technique) and lock under positive pressure. Positive pressure should be applied and maintained until the IVP's lumen is clamped. The technique involves clamping the catheter while injecting the last part of the flush, so that 0.5–1 mL of solution is left in the syringe, then immediately release pressure on the syringe.



+ Additional information

- The potential for exposure to blood and body fluids during this procedure is **HIGH**. All precautions that serve to minimise risk to the clinician and patient must be applied.
- IVPs are only to be accessed by patient supplied non-coring safety needles.
- Eye protection must be worn by all clinicians.
- Using a syringe smaller than 10 mL can cause catheter damage due to increased pressure. All drug and/or fluid administrations (including a sodium chloride 0.9% flush) must be in a 10 mL or 20 mL syringe.

NUMBER OF ATTEMPTS

- This procedure is limited to **two** attempts.