

Title: IV Cannulation by Midwives (Royal Marsden)  
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## IV Cannulation by Midwives (Royal Marsden)

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The latest approved version of this document is online.  
If the review date has passed please contact the Author for advice.

Powys Teaching Health Board is the operational name of Powys Teaching Local Health Board  
Bwrdd Iechyd Addysgu Powys yw enw gweithredol Bwrdd Iechyd Lleol Addysgu Powys

## Version Control

Version	Summary of Changes/Amendments	Issue Date
1	Initial Issue	July 2019
2	Reviewed – Royal Marsden chapter now copied rather than just link on intranet	June 2021
2	Guidance document reviewed 1/07/2024 and no updates to the guidance document required so remains as version 2. Document had previously been archived on 26/08/2022 in error. Guidance reinstated on SharePoint on 08/07/2024	08/07/2024

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## ENGAGEMENT & CONSULTATION

### Key Individuals/Groups Involved in Developing this Document

Role / Designation
Consultant Midwife

### Circulated to the following for Consultation

Date	Role / Designation
18/5/2021	Powys Maternity Leadership and Management Team
18/5/2021	Powys Midwives
18/5/2021	Safeguarding link
18/5/2021	Director of Nursing
18/5/2021	Women and Children's Leadership team

### Groups approved at

08/06/2021	Maternity Policies and Procedures Group
1/07/2024	Maternity Guidelines group – reapproved no change

## Evidence Base

### **Please list any National Guidelines, Legislation or Health and Care Standards relating to this subject area?**

The Royal Marsden Manual of Clinical and Cancer Nursing Procedures (2020)

Health and Care Standards:

Theme 3 – Effective care

Theme 4 – Dignified care

Theme 5 – Timely care

## 1. Detail

The detail in this section is taken straight from the Royal Marsden Manual of Clinical and Cancer Nursing Procedures – Chapter 17.4 – Peripheral cannula insertion (2020).

For direct access to the chapter please follow the link below:

[Peripheral cannula insertion - Royal Marsden Manual \(rmmonline.co.uk\)](http://rmmonline.co.uk)

**Midwives must have completed appropriate cannulation training prior to commencing cannulation within Powys. They must also maintain their skills through annual assessment.**

### **Essential equipment:**

- Personal protective equipment
- Sterile pack
- Various gauges of cannula
- Alcohol-based skin preparation, e.g. 2% chlorhexidine in 70% alcohol
- Extension set (if needed)
- Needle-free connector
- Semi-permeable transparent IV film dressing
- Bandage or tubular bandage (if needed)
- 5 mL syringe
- Blunt drawing-up needle
- Tourniquet (disposable)
- Sharps container
- Labels

### **Optional equipment**

- Securing device, e.g. StatLock
- Topical local anaesthetic

## Medicinal products

- 0.9% sodium chloride: 5 ml

## Pre-procedure

1. Introduce yourself to the patient, explain and discuss the procedure with them, and gain their consent to proceed.
2. If the patient requires topical local anaesthetic, apply it to the chosen venepuncture site and leave in place for 30–60 minutes prior to cannulation.
3. Assemble all the equipment necessary for cannulation.
4. Check all packaging before opening and preparing the equipment to be used.

## Procedure

5. Wash your hands using bactericidal soap and water or an alcohol-based handrub and dry.
6. Check your hands for any visibly broken skin, and cover any breaks with a waterproof dressing.
7. Ensure adequate lighting and privacy, and assist the patient into a comfortable position.
8. Support the chosen limb on a pillow.
9. Apply a tourniquet to the chosen limb, or use other methods if appropriate.
10. Assess the veins and select one for use (**Action figure 10**).
11. Release the tourniquet.
12. Select a device based on the vein size.
13. Wash hands with soap and water, or an alcohol-based handrub, and dry.
14. Open a pack, empty all equipment onto the pack and place a sterile dressing towel under the patient's arm (**Action figure 14**).
15. Prime the extension set with a syringe containing 0.9% sodium chloride (unless taking blood samples immediately after cannulation). *Note:* when using a closed system integrated peripheral intravenous cannula, there is no need to prime the system.
16. Reapply the tourniquet.
17. Clean the patient's skin over the selected vein for at least 30 seconds using 2% chlorhexidine using back-and-forth strokes with

friction and allow to dry (see Figure [17.18](#)). Do not repalpate the vein or touch the skin.

**18.** Put on gloves.

**19.** Remove the needle guard and inspect the device for faults (**Action figure [19](#)**).

**20.** Anchor the vein with the non-dominant hand by applying manual traction on the skin a few centimetres below the proposed site of insertion.

**21.** Holding the cannula in the dominant hand, ensure that it is in the bevel-up position and place the device directly over the vein; insert the cannula through the skin at the selected angle according to the depth of the vein (**Action figure [21](#)**).

**22.** Wait for the first flashback of blood in the flashback chamber of the stylet (see **Action figure [21](#)**).

**23.** Level the device by decreasing the angle between the cannula and the skin. Advance the cannula slightly to ensure entry into the lumen of the vein.

**24.** Withdraw the stylet slightly with the dominant hand and a second flashback of blood will be seen along the shaft of the cannula (**Action figure [24](#)**).

**25.** Maintaining skin traction with the non-dominant hand, slowly advance the cannula off the stylet and into the vein using the dominant hand.

**26.** Release the tourniquet.

**27.** Apply digital pressure to the vein above the cannula tip and remove the stylet (**Action figure [27](#)**). *Note:* when using an integrated closed system peripheral intravenous cannula there is no need for digital pressure as blood is contained within the system by a vent plug.

**28.** Immediately dispose of the stylet in an appropriate sharps container (**Action figure [28](#)**).

**29.** Attach a primed extension set, needleless injection cap or administration set (**Action figure [29](#)**). *Note:* when using an integrated closed system peripheral intravenous cannula, there is no need to attach an extension set as it is integrated.

**30.** Using the sterile tape provided in the dressing package, secure the cannula using, for example, the method illustrated in **Action figure 30**, always allowing visualization of the insertion site.

**31.** Aspirate to check for blood flashback then flush the cannula with 0.9% sodium chloride using a pulsatile flush ending with positive pressure.

**32.** Observe the site for signs of swelling or leakage and ask the patient whether they are experiencing any discomfort or pain.

**33.** Cover the entry site with a semi-permeable transparent IV film dressing (unless contraindicated) and apply a date and time label (**Action figure 33**).

### Post-procedure

**34.** Remove gloves and discard waste, making sure it is placed in the appropriate containers.

**35.** Document date and time of insertion, site, size of cannula, number of attempts, and volume and type of flushing solution, and sign in the patient's notes or care plan.



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**Action Figure 10** Palpating the vein.



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**Action Figure 14** Opening the equipment.



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**Action Figure 19** Checking the needle tip.



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**Action Figure 21** Inserting the cannula and waiting for first flashback. (a) Open cannula. (b) Integrated closed system cannula.



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**Action Figure 24** Second flashback. (a) Open cannula. (b) Integrated closed system cannula.



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**Action Figure 27** Applying digital pressure and removing the stylet.



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**Action Figure 28** Disposing of the stylet into a sharps bin.



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**Action Figure 29** Flushing the cannula. (a) Open cannula. (b) Integrated closed system cannula.



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**Action Figure 30** Method of taping a peripheral cannula.



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**Action Figure 33** Semi-permeable transparent IV film dressing.