Step-by-step guide

Cannulation

Reviewed June 2021
Gather your equipment

- Tourniquet (disposable)
- Sterile pack, including dressing towel
- Hand sanitiser
- Alcohol Swab/chloprep
- Gauze
- Sterile dressing
- Sharps Bin
- Gloves & Apron
- Cannula
- Needle free extension set
- Saline for Flushing
Procedure

**Check Patient Identity**
- Confirm patient identity both verbally and via the ID band
- Explain the procedure to the patient
- Gain consent

**Apply Tourniquet**
- Apply the tourniquet
- Assess and select a vein
- Gentle tapping may help, encourage venous access using gravity, you can ask the patient to open and close their fist, also using a warm pack can help

**Release the Tourniquet**
- The tourniquet needs to be released whilst you prepare for the procedure
- Select all the equipment—ensuring the correct size cannula
- Open a sterile pack and add equipment to tray
- Prime the extension set with 0.9% sodium chloride. Place a sterile towel under the patient’s arm to create a clean working area

**Reapply the Tourniquet**
- Reapply the tourniquet when ready to commence procedure
- If necessary, re-palpate vein
Procedure

**Clean the Skin**
- Using 2% chlorhexidine gluconate in 70% isopropyl to clean the area of the selected vein for 30 seconds
- Use several strokes back and forth with friction
- Allow the area to air dry for 30 seconds, do not repalpate or touch the skin after cleaning

**Apply appropriate PPE**
- Cleanse hands with either hand gel or washing with soap and water
- Apply gloves, these do not need to be sterile
- Open cannula and inspect for faults

**Stabilise the vein**
- Using your non dominant hand stabilise the vein by applying traction on the skin
- Ensure the bevel is pointing up (eye to the sky)
- Insert the cannula through the skin between 10° and 40° depending on the depth of the vein

**Insert cannula**
- Place the cannula directly over the vein
Procedure

**Observe for flashback**
- Look for the flashback of blood in the flashback chamber, this confirms access to the vein.

**Level the cannula**
- Decrease the angle of the cannula from the skin. The cannula needs to be lowered to roughly an angle of 15° with the skin, but the angle can be less.
- Advance (push the cannula further into vein) the cannula slightly to ensure entry into the lumen of the vein.

**Withdraw the needle**
- After seeing the first flashback, withdraw the stylet through the cannula.
- You should see a second flash of blood along the shaft of the cannula.

**Advance the cannula**
- Whilst keeping the traction on the skin, slowly advance the cannula off the needle and into the vein using your dominant hand.
- Release traction and then release the tourniquet.
## Procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Do not reintroduce the needle</td>
<td>If the cannula does not advance, do not reintroduce the needle, you may pierce the cannula or the vein.</td>
</tr>
<tr>
<td>2. Remove the needle</td>
<td>Whilst applying pressure to the vein, remove the needle. As the needle is withdrawn, if present, the safety device may activate itself or the practitioner may need to activate it; follow manufacturer’s instructions. Dispose of needle in sharps bin immediately.</td>
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<tr>
<td>3. Flush the cannula</td>
<td>Attached the primed needle free device and flush the cannula. Use a pulsatile (push-pause) technique to inject the 0.9% sodium chloride, this aims to create a turbulent flow that will remove blood from the internal wall of the cannula.</td>
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<tr>
<td>4. Observe the site</td>
<td>Whilst flushing observe the entry site for leakage and swelling. Ask the patient if they have any discomfort.</td>
</tr>
</tbody>
</table>
Procedure

Remove the syringe
Whilst removing the syringe from the injection cap, maintain pressure on the plunger with your thumb, this creates positive pressure and prevents blood reflux into the cap
Dispose of waste

Secure the cannula
Close the clamp on the needle free device
Secure the cannula to the skin, ensuring that the tape does not cover the insertion site
Use only sterile tape or the tapes supplied with the dressing
Always secure following local policy

Apply the dressing
Follow trust policy when applying a dressing
Always date the dressing
Document the following details in the patient’s notes: date and time, size and location of device, reason for reinserting (if appropriate) and signature of person inserting the cannula

Dispose of waste
Dispose of all waste according to trust policy
Procedure

Decontaminate hands

Remove PPE and wash hands

Document procedure

Document according to trust policy