Clinical Practice Procedures: Other/Venous phlebotomy – BD Vacutainer® (push button collection set with holder)

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<thead>
<tr>
<th>Date</th>
<th>April, 2016</th>
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<tr>
<td>Purpose</td>
<td>To ensure a consistent procedural approach to Venous phlebotomy – BD Vacutainer® (push button collection set with holder).</td>
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<td>Scope</td>
<td>Applies to all QAS clinical staff.</td>
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<td>Clinical Quality &amp; Patient Safety Unit, QAS</td>
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<td>Review date</td>
<td>April, 2018</td>
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Phlebotomy is the process used to describe accessing a vein for the purpose of collecting a blood specimen for laboratory sampling.

The BD Vacutainer® Push Button Collection Set and holder is a single use only device allowing for the safe and simplistic collection of venous blood. Activation of the in-built safety mechanism reduces the risk of exposure to a contaminated needle, provides easy activation and is ideal for use in high-risk environments.

**Indications**
- Patients enrolled in the PROPHIICY study (requiring pre-hospital blood collection for the purpose of laboratory analysis).

**Contraindications**
- Infection at the venepuncture site (phlebitis / cellulitis)
- Trauma at the venepuncture site
- Existing intravenous access (+/- fluid administration) on the same limb

**Complications**
- Haematoma or haemorrhage from puncture site
- Infection or phlebitis
- Arterial puncture
1. Identify the appropriate antecubital fossa or forearm venepuncture site.

2. Apply a Haines® (single patient use) tourniquet approximately 10 cm above the proposed venepuncture site.

3. Clean the intended insertion site with a 3M™ Solu-IV™ antiseptic swab using a ‘back and forth’ motion in two different directions (cross hatch method) for 15 seconds in each direction (total 30 seconds).

4. Allow insertion site to completely dry.

5. With thumb and index finger grasp the wings of the collection set’s butterfly.

6. Remove needle’s protective sheath.

7. Stabilise the vein by placing a thumb below the venepuncture site.

8. Swiftly enter the vein at a 30 degree angle (or less) until flashback is observed.

9. If possible, slightly advance the needle to ensure optimal placement within the vein.

10. Secure the needle with thumb to prevent inadvertent dislodgement.
11. With the free dominant hand insert the required blood pathology tubes into the BD Vacutainer® Holder until the desired volume of blood is collected (refer to 'Additional information' regarding the collection order).

12. Remove tourniquet.

13. Once adequately filled, gently remove the blood tube from the BD Vacutainer® Holder and mix thoroughly by inverting 5–6 times.

14. Place dressing on the venepuncture site ensuring that the nose of the front barrel is also covered.

15. Stabilise the butterfly's body with the thumb and middle finger and with a single action using the index finger, activate the needle retraction by pressing the button.

*Needle retraction button*
16. Confirm the needle is appropriately retracted and secured.

17. Secure dressing over the venepuncture site and request an officer apply gentle but firm pressure.

18. Dispose of shielded needle immediately into sharps container.

19. Label and securely store blood pathology tubes in accordance with trial documentation.

**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 are to be applied.
- Under no circumstances are QAS paramedics permitted to collect blood samples for the purpose of blood alcohol or drug analysis.
- Allow the natural vacuum of blood pathology tube to draw specimen. Evacuated tubes are designed to draw the exact volume of specimen required. Filling is complete when the vacuum no longer continues to draw.[2]
- All blood tubes must be labelled in accordance with trial documentation.
- To minimise the risk of injury the needle and tube holder should be discarded as a complete unit.

**Collection order**

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<thead>
<tr>
<th>Visual reference / volume</th>
<th>Blood Tube Content</th>
<th>Key Determinations</th>
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<tbody>
<tr>
<td>2.7 ml Blue</td>
<td>Adult sodium citrate</td>
<td>Coagulation studies, ROTEM</td>
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<tr>
<td>4 ml Lavender</td>
<td>EDTA</td>
<td>FBE</td>
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