Hong Kong Phlebotomists Association
Risk Management Framework and Policy Manual

1.0 Introduction

1.1 Policy Statement

It is the policy of the registered phlebotomists undertaking venipuncture and IV cannulation and operates electrocardiogram must have successfully achieved competence having completed an education programme that is compliant with. The Hong Kong Phlebotomists Association established framework for the training and competence.

1.2 Purpose

The purpose of this policy is to:

a. Outline the roles and responsibilities of phlebotomists undertaking the skill of venipuncture, IV cannulation and ECG operation.
b. Set out procedures based on best evidence, aligned with the WHO standardized approach which safeguard the patient.

1.3 Scope

This policy applies to all nurses and midwives, who have successfully completed the required education, training and competence assessment to carry out venipuncture, IV cannulation and ECG operation.

1.4 Disclaimer

The information contained within this policy is the most accurate and up to date, at date of approval. The policy contains a procedural guideline and it is the responsibility of the local organization (HKPA), to update this guideline, according to best practice.

Role and Responsibility of the Phlebotomists

It is the responsibility of each registered phlebotomist to:

1. Work within their Scope of Practice -Scope of Practice Framework
2. Comply with local organizational venipuncture policy and procedures therein, when undertaking venipuncture IV cannulation and ECG operation.

3. Become competent in the skill of venipuncture, IV cannulation and ECG operation:
   i. the equipment specific to the procedure

ii. the use of blood collection systems used
iii. the relevant blood collection bottles and related blood tests used in their area.

4. The Colours of the blood tubes will vary depending on the system used in the organization and /or depending on the laboratory processing the sample
5. Be familiar and comply with the organization's infection prevention and control, health and safety procedures and risk management policies as they apply to venipuncture, IV cannulation and ECG operation.

Indications for the Venipuncture Procedure

Venipuncture is the procedure of entering a vein with a needle and is undertaken to:
• Obtain a blood sample for diagnostic purposes using haematological, biochemical and bacteriological analysis
• Monitor levels of blood components.

Considerations When Undertaking the Venipuncture

Venipuncture is one of the most common invasive procedures and can be traumatic for the patient . It should only be ordered when necessary. A clinical assessment should be undertaken prior to the venipuncture procedure.

Vein Selection in Adults

Choosing the correct vein is important. When selecting the appropriate site of vein for venipuncture, it is best practice to begin in the most distal aspect of the vein. This allows for further attempts above the selected vein which will not have been impeded. When cannulating adults, the specific advantages and disadvantages of potential venipuncture sites must be considered. These are outlined below:

Median Cubital Vein in the Antecubital Fossa

Advantages
• Clearly visible and accessible
• Deep veins with rich blood supply
• Easy to palpate
• Well supported by subcutaneous tissue (prevents vein rolling under the needle)
• Accessible in thin people

Disadvantages
• Brachial artery and radial nerve in close proximity
• Difficult to locate in child with increased subcutaneous fat

Metacarpal Veins in the Dorsal Venous

Advantages
• Easily accessible, easily visualised and palpable
• Prominent in obese patients

Disadvantages
• Difficult to secure
• Skin can be delicate and subcutaneous tissue is diminished (small veins may only offer small volumes of blood)
• Only suitable for small blood collection set (23G Butterfly system)

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Cephalicand Basilic Veins in the Forearm

Advantages
• Easy to locate
• Larger veins

Disadvantages
• Cannot be used if site is used for arteriovenous fistula
• Not well supported by subcutaneous tissue (vein can roll from needle)

• Brachial artery close to both veins
• Median nerve close to basilic vein
• Radial nerve close to cephalic vein

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Venipuncture Procedure-Adult

1. The venipuncture procedure follows aseptic principles using a non-touch technique. In undertaking the procedure, it is important that only the equipment required is brought to the bedside.

2. This is to ensure that cross-contamination does not occur, increasing the risk to other patients.

3. Equipment required should be based on an assessment of the patient and is as follows:

Venipuncture Procedure –Adult

List of Equipment

• A clean clinical tray
• Small kidney dish for Healthcare Risk Waste (placed in tray)
• Sharps container (large enough to accommodate the blood collection system)
• Disposable non sterile sheet –(optional in case of blood spillage)
• *Personal Protective Equipment
(e.g., 2 pairs of well fitting non-sterile gloves, protective plastic apron, safety goggles/visor/mask with eye shield)
• Skin disinfectant – 70% impregnated alcohol wipes or 2% Chlorhexidine in 70% alcohol when supply available
• Alcohol hand rub/gel
• Clean tourniquet

• Topical anaesthetic agent if prescribed
• **Required blood collection set
• **Required blood specimen bottles
• Blood Requisition Forms (fully completed with patient details)
• A biohazard bag for transport of specimens
• Sterile gauze – (to apply pressure and absorb blood spillages)
• Sterile plaster/band aid

*As per Standard Precautions, the use of a plastic apron and/or face protection should be assessed by each plebotomists based on the risk of blood splashing or spraying during the procedure. Range and type of equipment may vary depending on local organizational policy

Venipuncture Procedure - Adult

Prior to Procedure

1. Confirm indication for procedure, checking requisition forms for specific blood tests required

2. Disinfect a clean clinical tray, using 70% alcohol or equivalent as per local guidelines

3. Collect the appropriate equipment and inspect it's integrity

At the Bedside

1. Carry out hand hygiene for a minimum of 15 seconds and apply apron. Locate the patient and check their identification

2. Explain.the.procedure,.check.for.allergies.and.discuss.pain.relief.

3. Obtain informed consent

4. Ensure the patient is in a comfortable position

5. Apply the tourniquet. (5/6cms. above. chosen. site) and tighten slowly (Do not leave on for longer than one minute)

6. Ask the patient to open/close fist and keep fist closed or place arm below heart level to encourage venous filling

7. Palpate the site to check for rebound elasticity –press lightly with two fingers and release

8. Choose the appropriate vein

Preparation

1. Decontaminate.hands.using.alcohol.hand.rub/gel,.allow.to.dry.
2. Apply.gloves.(face.protection.if.required)
3. Open.the.sterile.gauze.using.the.packaging.as.the.sterile.field
4. Place disposable non sterile sheet under the patient's arm.(optional)
5. Disinfect the site using skin disinfectant (70% impregnated alcohol Wipes
6. Disinfect in a circular motion from insertion site outwards (5-10cms diameter)
7. Place the used alcohol wipes in the clinical tray ensuring not to contaminate the sterile swabs.
8. Allow to air dry do not repalpate the site

Venipuncture

1. Open.and.assemble.the.appropriate.blood.collection.set
2. Use.your.non.dominant.hand.to.achieve.skin.traction
3. Hold.the.blood.collection.set.between.your.thumb.and.index.finger.
4. Position.the.needle-facing.bevel.upwards Insert the needle,directly above the vein, through the skin (angle.10-30.degrees)
5. When the needle punctures the vein, observe for flashback in the chamber of the blood collection set (butterfly.system.only) The flashback is.not evident when using a tube holder and 21/22 gauge needle (Vacuum.method)
6. Decrease the angle between the needle and the skin
7. When using the tube hold and needle (Vacuum.method),.anchor the tube holder securely, using your thumb and index finger
8. Using your thumb gently but firmly push the blood collection bottle onto the interior needle and.allow.the.blood.collection.bottle.to.fill.to.the.appropriate.level

9. When using the monovette aspiration system, pull the plunger back slowly until the blood bottle is filled
10. When using the butterfly system, draw a discard bottle first, as air from the blood collection tubing will cause underfilling of the bottle
11. When multiple blood tests are required, ensure the blood tests are taken in the proper order of draw
12. Loosen and release the tourniquet
13. Invert bottles gently four to five times to mix appropriately, Do Not shake bottles
14. Apply sterile gauze over the puncture site, and remove the needle activating the needle safety device
15. Place the blood collection set into the sharps box.
16. Maintain digital pressure on the puncture site to prevent blood leakage
17. Arm can be elevated while applying pressure to prevent haematoma formation but do not bend the arm
18. Discard the blood contaminated gauze in the clinical tray
19. Apply sterile dressing or plaster over the puncture site..
20. Remove gloves and place in kidney dish
21. Carry out effective hand hygiene for a minimum of 15 seconds (alcohol hand rub/gel)

After Care

1. Inform the patient of potential complications and advise to report
2. Ensure the patient is in a comfortable position and reassure
3. Document the procedure, communicate and inform relevant staff
4. Apply alcohol hand rub/gel, allow to dry
5. Apply gloves and ensure blood collection bottles and requisition forms are correctly
6. labelled..New gloves are required for healthcare worker safety and to prevent any contamination of forms and bottles
7. Place all blood collection bottles and forms into the biohazard bag..and send to the laboratory as per local practice
8. Bring tray with used items to the dirty utility Dispose of healthcare risk and non risk waste appropriately. Clean and disinfect the clinical tray.
9. Clean and disinfect reusable eye shield as per manufacturer's instructions if.

applicable.

10. Remove.gloves.and.apron.and.carry.out.appropriate.Hand.Hygiene.