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Royal Cornwall Hospitals NHS Trust

Venepuncture Specimen Collection and Handling Policy

V8.0

June 2023

Summary

- This policy describes a safe method of obtaining blood from an adult patient.
- The roles and responsibilities are defined.
- How to obtain competency is described.
- The procedure is detailed in a step-by-step manner to guide staff to safely complete the venepuncture.
- The use of the electronic labelling system to take transfusion Samples is described.

Table of Contents

Data Protection Act 2018 (General Data Protection Regulation – GDPR) Legislation

The Trust has a duty under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

1. Introduction

1.1. Venepuncture is a clinical procedure commonly performed in a variety of health care settings. It is carried out to obtain routine and emergency blood samples for diagnostic purposes and/or to monitor levels of blood components.

1.2. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

This should provide an explanation of the intent/purpose of the document and the rationale for its development. Where appropriate, reference should be made to statutory or legal requirements or to evidence-based good practice. An outline of the objectives and intended outcomes should be provided for the process or system being described.

3. Scope

This policy applies to all clinical staff regardless of grade or profession who undertakes venepuncture across the Trust. This includes permanent, temporary, and locum and bank health care staff working in both clinical outpatient and inpatient areas.

4. Definitions / Glossary

Term	Definition
Venepuncture	The procedure of inserting a needle into a vein
Blood Culture	Used to detect bacteria and yeasts in blood
ESR	Electronic staff record that has access to training protocols
Haemolysis	The destruction of red cells with the release of Haemoglobin into the red cells.
Luer adaptor	A standardised system of fittings to make a leak free connection.
Electronic labelling system	A system for the identification of patients and the safe labelling of samples
Vasoconstriction	Narrowing of the blood vessels that results from contraction of the Muscular walls of the vessels.
Antecubital fossa	The anterior area of the elbow (Elbow pit)

5. Ownership and Responsibilities

5.1. **Role of the Managers**

Managers are responsible for:

- Senior Clinical staff have overall clinical responsibility for patients. The consultant will supervise medical staff in training to ensure that all patients have a documented medical management plan including the type and frequency of blood sampling. The Consultant will be responsible for guiding clinical staff in their monitoring, interpreting and management of abnormal parameters in relation to blood results.

- Matrons, Wards Sisters and Charge Nurses are responsible for ensuring this policy is disseminated to clinical staff carrying out.

- Venepuncture in their areas of responsibility. In collaboration with clinical staff, matrons and ward managers must ensure that any adverse clinical incidents in relation to venepuncture in their clinical areas are reported on, investigated and that an action plan is produced to prevent further occurrence.

- Matrons and ward managers have a responsibility to ensure that staff carrying out venepuncture have undergone appropriate training/assessment and have been assessed as competent.

- Senior manager's matrons and ward managers have a responsibility to ensure that all clinical staff can access the appropriate equipment.

5.2. **Role of Individual Staff**

All staff members who undertake venepuncture have a professional responsibility to ensure:

- They are competent, within their scope of profession practice, to carry out venepuncture safely and competently.

- Abide by this policy and associated policies and procedures.

6. Standards and Practice

6.1. The skill must be performed in accordance with RCHT/ Local policies, procedure (Appendix 3), associated guidelines and protocols.

6.2. Staff must have access to RCHT/ Local policies, procedures, guidelines and protocols via the document library.

6.3. There is validated education and training in place to enable staff to attain competency in this skill. The competency framework for venepuncture is available through learning and development. Further training and competency evidence is required for obtaining blood cultures. (Refer to RCHT Guidelines on Blood Culture Collection).

6.4. Staff taking samples for Blood Transfusion must complete a separate competency prior to taking any samples. Please refer to RCHT Transfusion Policy or contact the Transfusion Practitioners on ext. 3093.

6.5. Additionally, there must be written evidence of attained competence following a period of supervised practice.

6.6. Staff must provide evidence of competency validation every 3 years. This is achieved by completing one supervised practice as per additional sign off process. Evidence must be sent to the learning and development administration department for uploading on to ESR.

6.7. The policy and procedure (Appendix 3) support proper preparation of the patient, specimen collection and safe handling. Compliance with the policy also ensures meeting requirements of relevant ISO Standards applicable to medical laboratories assessed by United Kingdom Accreditation Service (UKAS). Standards are adhered to:

- Request card information.
- Primary sample collection and handling.
- General sample collection and handling.
- Instructions for pre collection activities.
- Instructions for collection activities.
- Sample Transport.
- Sample reception.
- Pre-examination handling, preparation, and storage.

7. Dissemination and Implementation

7.1. This document will be implemented and disseminated through the organization immediately following ratification and will be published on the organization intranet and internet site.

7.2. Dissemination will include staff notification via the daily bulletin and the Learning and Development Newsletter.

7.3. The Pathology Department, Senior Matrons and Matrons will be informed of the documents ratification and will be responsible for communicating / notifying staff working within their areas of responsibility. Senior Clinicians will be responsible for notifying their clinical teams of their policy.

7.4. Access to this document is open to all staff.

7.5. This policy will be highlighted through the Learning and Development competency framework. The competency framework for Venepuncture consists of a theoretical knowledge and assessment obtained via an e-learning module on ESR, simulated practice and supervised practice using a workbook.

7.6. The nurse in charge of the clinical area must ensure that staff holds the appropriate competency before delegating that task.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	• Pathology form completed correctly. • Positive Patient identification assured. • Patient consent obtained. • Infection prevention methods adhered to. • Correct equipment utilized. • Sharps managed and disposal of waste (COSHH) policy adhered to. • Procedure carried out as per policy. • Correct documentation and dissemination of essential information carried out.
Lead	Rose Lannon, Clinical Practice Educator – Clinical Skills
Tool	Pathology Audit Blood Transfusion Data
Frequency	Annually
Reporting arrangements	Pseudo bacteremia Incidents are reported directly to the infection prevention lead nurse. Root, Cause, Analysis (RCA) will take place in conjunction with designated ward /area leads to establish the cause. Audit will identify incidences of mislabelled / unlabelled specimens or high wastage from other causes (such as Haemolysis) and this will be reported to service leads.
Acting on recommendations and Lead(s)	The care group is responsible for initiating the required actions. This may be designated to a named lead where appropriate and documented in the meeting minutes. Special considerations Pseudo bacteremia: Following RCA, appropriate actions may be initiated such as further monitoring through audit, or training and education. Where audit identifies incidences of mislabelled / unlabelled specimens or high wastage from other causes (such as Haemolysis), individual areas should be informed through their directorate leads to enable service improvements measures to be put in place. Where necessary, incidences must be entered onto Datix to enable incidences to be escalated and urgent action taken.
Change in practice and lessons to be shared	Designated leads will forward lessons learned to the relevant stakeholders.

9. Updating and Review

9.1. The document review process is managed via the document library. Document review will be every three years unless best practice dictates otherwise. The author remains responsible for the policy document review. Should they no longer work in the organisation or in the relevant practice area then an appropriate practitioner will be nominated to undertake the document review by the designed director.

9.2. Revision activity will be recorded in the versions control table to ensure robust document control measures are maintained.

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Venepuncture Specimen Collection and Handling Policy V8.0
This document replaces (exact title of previous version):	Policy for Venepuncture Specimen Collection and Handling V7.0
Date Issued / Approved:	May 2023
Date Valid From:	June 2023
Date Valid To:	June 2026
Author / Owner:	Rose Lannon, Clinical Practice Educator – Clinical Skills.
Contact details:	01872 254981 01872 256489
Brief summary of contents:	The policy outlines safe and evidence-based practice relating the venepuncture. (The handling and collection of blood samples for testing in RCHT)
Suggested Keywords:	Venepuncture Blood Collection Specimen Collection Pathology
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	RCHT Pathology Department
Manager confirming approval processes:	RCHT Learning and Development Department CSCS Governance DMB
Name of Governance Lead confirming consultation and ratification:	Ian McGowan

Information Category	Detailed Information
Links to key external standards:	CQC The Health Act Code of Practice European Federation of Clinical Chemistry and Laboratory Medicine International organization of standardization (ISO 15189:2012 Medical laboratories – Requirements for quality and competence)
Related Documents:	RCHT Positive Patient Identification Policy and Procedures RCHT policy for Consent to Examination and Treatment RCHT Aseptic Non-Touch Technique Policy RCHT Pathology Specimen Acceptance Policy RCHT Blood Transfusion Policy RCHT Procedure for Obtaining Blood cultures RCHT Infection Prevention and Control-Roles and Responsibilities
Training Need Identified:	Yes. Competency framework available through the RCHT learning and development department.
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical / Haematology

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
	V1	G28 Procedure for venepuncture	Practice Development
	V2	G28 Procedure for Venepuncture	Practice Development

Date	Version Number	Summary of Changes	Changes Made by
July 2008	V3	G28 procedure for venepuncture	Practice Development
November 2011	V4	G28 Procedure for Venepuncture	Amanda Thompson
December 2012	V5	Complete revision	Malcolm Owen – Pathology Department
May 2016	V6	UKAS replacing CPA, Glossary and summary added. Updated to most recent Royal Marsden Procedure (2015)	Malcolm Owen Amanda Thompson
February 2020	V7	Complete revision in line with the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) recommendations 2018	Louise Silver
February 2023	V8.0	Minor changes to Appendix 3 Transposed to latest Trust template	Rose Lannon, Clinical Practice Educator

All or part of this document can be released under the Freedom of Information Act 2000

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Venepuncture Specimen Collection and Handling Policy V8.0
Department and Service Area:	General Surgery and Cancer Services, Haematology.
Is this a new or existing document?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Rose Lannon, Clinical Practice Educator
Contact details:	01872 256489

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	This policy outlines the minimum standard expected from clinical staff who obtain venepuncture samples from patients receiving treatment and care within RCHT
2. Policy Objectives	The primary purpose of the policy is to ensure that practice is safe and based on the best available evidence.
3. Policy Intended Outcomes	Safe collection of venepuncture samples.
4. How will you measure each outcome?	See section 8 of this policy.
5. Who is intended to benefit from the policy?	All patients.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/ visitors: No • Local groups/ system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/ groups:** RCHT Pathology Department RCHT Learning and Development Department CSCS Governance DMB
6c. What was the outcome of the consultation?	Agreed
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff or patient surveys:** No

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	

Protected Characteristic	(Yes or No)	Rationale
Marriage and civil partnership	No	
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Rose Lannon.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis

Appendix 3. Venepuncture Procedure

The following procedure is for venepuncture in **adults**. For Child Health Directorate (RCHT) – Please refer to Paediatric procedure.

Essential Equipment

- Clean tray or receiver Tourniquet.
- 21 swg multiple sample **safety** needle **or** 21/23 swg winged **safety** infusion device and multiple sample Luer adaptor.
- Plastic tube holder, standard Appropriate vacuumed specimen tubes.
- Swab saturated with 2% chlorhexidine in 70% alcohol.
- Low-linting gauze swabs (5 packs individually wrapped. Not from multi-pack) Sterile adhesive plaster or hypoallergenic tape.
- Specimen request forms Non-sterile, well-fitting gloves Plastic apron (optional).
- Sharps bin (Ensure correct assembly and below fill level).

If a blood transfusion sample is required the electronic labelling system **must be taken to the bedside.**

RCHT does not advocate the use of needles and syringes for obtaining blood samples, as the sample may be compromised and there is greater risk of sample contamination and needle-stick injury.

Procedure recommendations 10.1 Venepuncture Adapted from the Royal Marsden Manual of Clinical Nursing procedures (2015) 9th Edition & Joint EFLM-COLABIOCLI v1.1 2018.

Action	Rationale
Pre-procedure	
Take the essential equipment to the bedside, approach the patient in a confident manner, introduce yourself and explain and discuss the procedure with the patient.	To ensure that the patient understands the procedure and gives their valid consent.
Allow the patient to ask questions and discuss any problems which have arisen previously.	Anxiety results in vasoconstriction; therefore, a patient who is relaxed will have dilated veins, making access easier.
Consult the patient as to any preferences and Problems that may have been experienced at previous venepunctures. Check if they have any allergies.	To involve the patient in the treatment. To acquaint the nurse fully with the patient's previous venous history and identify any changes in clinical status, for example mastectomy, as both may influence vein choice. To prevent allergic reactions, for example to latex or Chlorhexidine.
Obtain consent. Check that the identity of the patient matches the details on the request form by asking for their full name and date of birth and checking their identification bracelet (where appropriate). If the patient is unable to communicate then check the identity band for full name, date of birth and Hospital number. Clarity may need to be gained with a relative/carer or registered nurse/doctor to whom the patient is known.	To ensure the sample is taken from the correct patient.

Action	Rationale
Procedure	
Assemble the equipment necessary for venepuncture.	To ensure that time is not wasted and that the procedure goes smoothly without unnecessary interruptions.
Carefully wash hands using bactericidal soap and water or bactericidal alcohol hand rub, and dry before commencement.	To minimize risk of infection.
Check hands for any visibly broken skin and cover with a waterproof dressing.	To minimize the risk of contamination to the practitioner.
Check all packaging before opening and preparing the equipment on the chosen clean receptacle.	To maintain asepsis throughout and check that no equipment is damaged.
Take all the equipment to the patient, exhibiting a confident manner.	To help the patient feel more at ease with the procedure.

Action	Rationale
Procedure	
Support the chosen limb on a pillow.	To ensure the patient's comfort and facilitate venous access.
If used, apply a tourniquet to the upper arm on the chosen side, making sure it does not obstruct arterial flow. The tourniquet should be in situ for a maximum one minute. If the radial pulse cannot be palpated, then the tourniquet is too tight. The position of the tourniquet may be varied; for example, if a vein in the hand is to be used it may be placed on the forearm.	To dilate the veins by obstructing the venous return. To increase the prominence of the veins. To promote blood flow and therefore distend the veins.
If the tourniquet does not improve venous access, the following methods can be used. To improve venous access: The arm may be placed in a dependent position. The patient may be asked to clench their fist. **Or**: The veins may be tapped gently or stroked. **Or**: Remove the tourniquet and apply moist heat, for example a warm compress, soak limb in warm water or, with prescription, apply glyceryl trinitrate ointment/patch.	To prevent possible contamination of the practitioner.
Select the vein by careful palpation to determine size, depth and condition.	To prevent inadvertent insertion of the needle into other anatomical structures.
Release the tourniquet.	To ensure patient comfort.
Select the device, based on vein size, site and volume of blood to be taken. Use a 23 swg winged infusion device for small veins, metacarpal or feet veins.	To reduce damage or trauma to the vein and prevent Haemolysis.
Wash hands with bactericidal soap and water or Bactericidal alcohol hand rubs.	To maintain asepsis and minimize the risk of infection.
Put on gloves.	To prevent possible contamination of the practitioner.
Clean the patient's skin carefully for 30 seconds using an appropriate preparation, for example chlorhexidine in 70% alcohol, and allow to dry. Do not re-palpate or touch the skin.	To maintain asepsis and minimize the risk of infection. To prevent pain on insertion.
Reapply the tourniquet.	To dilate the veins by obstructing the venous return.
Remove the cover from the needle and inspect the device carefully.	To detect faulty equipment, for example bent or barbed needles. If these are present place them in a safe container, record batch details and return

Action	Rationale
Procedure	
	to manufacturer.
Anchor the vein by applying traction on the skin a few cms below the proposed insertion site.	To immobilize the vein and provide counter tension which will facilitate smoother entry
Insert the needle smoothly at an angle of approximately 30°. However, the angle will depend on size and depth of the vein.	To facilitate a successful, pain-free venepuncture.
Reduce the angle of descent of the needle as soon as a flashback of blood is seen in the tubing of a winged infusion device or when puncture of the vein wall is felt.	To prevent advancing too far through vein wall and causing damage to the vessel
Slightly advance the needle into the vein, if possible.	To stabilize the device within the vein and prevent it becoming dislodged during withdrawal of blood.
Do not exert any pressure on the needle. Ask patient to relax arm/wrist and avoid clenching fist.	To prevent a puncture occurring through the vein wall. Clenching fist causes Haemolysis in sample
Withdraw the required amount of blood using a vacuumed blood collection system Collect blood samples in the correct order: blood culture (See RCHT procedure for collection of blood cultures and ensure correct extended winged collection set is used), coagulation serum tube with or without clot activator or gel separator (glass, non-additive tubes can be filled before the coagulation tube), additive tubes such as: gel separator tubes (may contain clot activator or heparin) heparin tubes. EDTA all other tubes (See RCHT pocket guide). Invert each tube X1 at 180 degrees.	To minimize the risk of transferring additives from one tube to another and bacterial contamination of blood cultures
Release the tourniquet. In some instances, this may be necessary at the beginning of sampling as inaccurate measurements may be caused by haemostasis, for example when taking blood to assess calcium levels.	To decrease the pressure within the vein.
Remove tube from plastic tube holder.	To prevent blood spillage caused by vacuum in the tube.
Place a low-linting swab over the puncture point.	To apply pressure.
Remove the needle, but do not apply pressure until the needle has been fully removed.	To prevent pain on removal and damage to the intima of the vein.

Action	Rationale
Procedure	
Activate safety device and then discard the needle immediately in sharps bin.	To reduce the risk of accidental needle stick injury
Apply digital pressure directly over the puncture site. Pressure should be applied until bleeding has ceased; approximately 1 minute or longer may be required if current disease or treatment interferes with clotting mechanisms.	To stop leakage and haematoma formation. To preserve vein by preventing bruising or haematoma formation.
The patient may apply pressure with a finger but should be discouraged from bending the arm if a Vein in the antecubital fossa is used.	To prevent leakage and haematoma formation
Gently invert the tube at least another 5 times.	To prevent damage to blood cells and to mix with additives
Label the bottles with the relevant details **at the patient's side.**	To ensure that the specimens from the right patient are delivered to the laboratory, the requested tests are performed and the results returned to the correct patient's records

Blood Transfusion Samples	
The electronic labelling system and a completed transfusion request form (addressograph labels are acceptable on forms) must be taken to the bedside prior to the sample being taken. The iPod should be switched on (grey button on front) before the printer is switched on (green button on front). Follow all instructions on iPod screen for electronic labelling procedure, ensuring staff ID badge barcode and patient wrist band 2d barcode are scanned either side of venepuncture. Apply the electronic label to the transfusion specimen whilst at the bedside. There should be no additional label or handwritten information on the tube. Check the demographics match the form and complete the sample date and time on the request form. In the case of failure of the electronic labelling system, sample should be handwritten without leaving the bedside. (note: it is possible that the requirement to confirm gender may be removed from the electronic system in the future)	To ensure positive patient identification and remove the risk of a wrong blood in tube event.

Post-procedure	
Inspect the puncture point before applying a dressing.	To check that the puncture point has sealed.
Confirm whether the patient is allergic to adhesive plaster.	To prevent an allergic skin reaction.
Action	**Rationale**
Apply an adhesive plaster or alternative dressing.	To cover the puncture and prevent leakage or contamination.
Ensure that the patient is comfortable.	To ascertain whether patient wishes to rest Before leaving (if an outpatient) or whether any other measures need to be taken.
Remove gloves and discard waste, making sure it Is placed in the correct containers, for example sharps into a designated receptacle.	To ensure safe disposal and avoid laceration or Other injury of staff. To prevent reuse of equipment.
Follow hospital procedure for collection and transportation of specimens to the laboratory.	To make sure that specimens reach their intended Destination.
Document the procedure in the patient's records if taken whilst an inpatient.	To ensure timely and accurate record keeping.