

Phlebotomy/Venepuncture For York & Scarborough

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Changes from last version of this document

Updated into new laboratory format
Practitioners supervising students
Venipuncture on feet or other parts of the body

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1 Purpose and Scope

This SOP describes the standard procedure for collecting blood samples (venepuncture) used by phlebotomists employed by York Teaching Hospital NHS Foundation Trust.

This SOP is intended to:

- Ensure an appropriate, safe and reliable phlebotomy service is provided for patients with the purpose of obtaining routine blood samples from patients, as requested by authorised persons in clinical areas in this hospital and from other NHS, Private Hospitals and PCT's, for the assessment, diagnosis, treatment and monitoring of a patients health status.
- Support the production of high quality results through correct patient identification, collecting specimens in correct manner from a suitable site, at a pertinent time into the right specimen container.
- Ensure phlebotomy staff perform tasks with the underpinning knowledge and experience required and in accordance with relevant Trust policies (see References).
- It is expected that those undertaking phlebotomy will have completed the prescribed training and development relating to the collection of blood from venous sites and will be able to complete such blood collection unsupervised. This will require an understanding of the relevant anatomy and physiology (see Clinical Development training package) and assessment of competency by Objective Structured Clinical Examination (OSCE).

This SOP is to be used only in conjunction with approved clinical skills training.

All practitioners have a professional accountability to attend formal training and attain competence before carrying out the skills identified in this handbook.

Failure to follow this process will result in disciplinary action.



- Venepuncture describes the procedure of entering a vein with a needle to obtain a sample of the circulating blood for haematological, biochemical or bacteriological laboratory testing.
- Venepuncture is classified as an invasive procedure, and carries significant risk to both patients and staff. It is essential therefore that health and safety, and infection control precautions, are applied rigorously whenever these procedures are undertaken.
- Practical skills need to be underpinned by theoretical knowledge, and the development of practitioner competence.


2 Tasks, Responsibilities and Authorisations


- These procedures must only be carried out by staff trained in phlebotomy whose competence has been established and recorded.
- All Phlebotomists must be trained by the Trust and undertake the Venepuncture Training Package provided by the Clinical Development Team.
- All staff should undertake Customer Care Training and training to deal with Violence and Aggression


3 Chemicals and Reagents

Where available, copies of Material Safety Data Sheets for the products listed below are available as an electronic copy (in the LHS column) or as a hardcopy in the Phlebotomy Office (check for updates when reviewing this document)

Name	COSHH Ref. No.	Classification & Specific Instructions Summary
<p>GOJO Mild Lotion Soap with Moisturisers</p>  <p>X:\Haematology\ C.O.S.H.H\GOJODel</p> <p>GOJO Hand Medic</p>  <p>X:\Haematology\ C.O.S.H.H\GOJOHAN</p>	<p>N/a</p>	<p>Description: Hand wash soap / moisturiser</p> <p>Preparation: Supplied ready for use</p> <p>Storage: Store in tightly sealed original containers. Avoid freezing temperatures.</p> <p>Supplier: GOJO</p> <p><u>Risk Statement & First Aid Measures:</u></p> <p>These products are unlikely to cause harmful effects under normal conditions of use but may cause irritation.</p> <p>Eye contact: May cause irritation. Do not rub eyes & irrigate with water for 15 minutes. Seek medical attention if condition worsens or irritation persists.</p> <p>Skin contact: No irritation expected</p> <p>Inhalation: N/A</p> <p>Ingestion: May cause upset stomach. Do not induce vomiting. Seek medical attention / contact Poison Control Centre.</p> <p><u>Disposal:</u></p> <p>Used product and empty containers may be disposed of via clinical waste bags.</p>

<p>Clinell Universal Sanitising Wipes</p>  <p>X:\Haematology\ C.O.S.H.H\MSDS-Clin</p>	<p>LM-COSHH-2</p>	<p>Description: A disinfectant and detergent wipe for hands surfaces and equipment</p> <p>Preparation: Supplied ready for use</p> <p>Storage: Store in tightly sealed original containers at ambient room temperature. Avoid heat, sparks and flames</p> <p>Supplier: GAMA Healthcare Limited</p> <p><u>Risk Statement & First Aid Measures:</u></p> <p>There are no specific hazards associated with the normal use of this product and it is suitable for use on skin. Avoid contact with eyes (may cause irritation). If irritation occurs, seek medical attention.</p> <p><u>Disposal:</u></p> <p>Suitable for landfill or incineration. Used wipes should be disposed of into a clinical waste bag.</p>
<p>Purell Instant Hand Sanitiser (various)</p>	<p>N/a</p>	<p>Description: Hand Sanitizer Gel / Foam</p> <p>Preparation: Supplied ready to use</p> <p>Storage: Keep away from fire or flame, store at room temperature</p> <p>Supplier: GOJO Industries Inc</p> <p><u>Risk Statement & First Aid Measures:</u></p> <p>There are no specific hazards associated with the normal use of this product and it is intended for use on skin. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention. MSDS available from: http://www.gojo.com/canada/msds.aspx</p> <p>Eye contact: Do not rub eyes. Flush open eye with water for 15 minutes. Seek medical attention if condition worsens or irritation persists.</p> <p>Skin contact & Inhalation: N/A</p> <p>Ingestion: Do not induce vomiting. Seek medical attention or contact Poison Control Centre</p> <p><u>Disposal:</u></p> <p>Empty containers may be disposed of via clinical waste bags.</p>

<p>Sani-Cloth CHG 2%</p>  <p>X:\Haematology\ C.O.S.H.H\Sanicloth_</p>	<p>HA-HSR- SANICLOTH</p>	<p>Description: Medical Device Disinfectant</p> <p>Preparation: Supplied ready to use</p> <p>Storage: Store in tightly sealed original containers Ambient temperature. Avoid heat, sparks and flames</p> <p>Supplier: Professional Disposables International Inc.</p> <p><u>Risk Statement & First Aid Measures:</u></p> <p>This product is unlikely to cause harmful effects under normal conditions of use but may cause irritation.</p> <p>Eye contact: May cause irritation – irrigate with water for at least 10 minutes. Seek medical attention.</p> <p>Skin contact: May cause mild skin irritation – rinse with water and seek medical attention if irritation persists</p> <p>Inhalation: May cause irritation – remove from exposure, rest & keep warm</p> <p>Ingestion: May cause irritation if ingested in large amounts. Wash mouth with water. Do not induce vomiting and give water to drink if conscious. Seek medical attention if unwell</p> <p><u>Disposal:</u></p> <p>Used product and empty containers may be disposed of via clinical waste bags.</p>
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<p>Powder and Latex Free Examination Gloves</p>  <p>Acrobat Document</p>	<p>N/a</p>	<p>Description: Nitrile, powder free, non sterile gloves. Specification: Powder and latex free. Preparation & Storage: Room temperature storage Supplier: Schottlander Flexible Nitrile (via Purchasing Dept.)</p> <p><u>Risk Statement & First Aid Measures:</u></p> <p>Eye contact: No identified hazards – seek medical attention if irritation occurs. Skin contact: N/A (intended use): report any skin problems that may be related to use of this or any other product to your line manager or Occupational Health. Inhalation: N/A Ingestion: N/A <u>Disposal:</u> May be disposed of via clinical waste bags.</p>
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4 Equipment & Personal Protective Equipment (PPE)

- All equipment for blood sampling is single use only. The preferred supplier of blood collection tubes is Starsedt (Monovette system).
- For blood cultures you will need a set of culture bottles, two neutral sterile syringes and at least three needles

Venepuncture Equipment

- 21 g needles
- Vacuette Quickshield, complete needle and holder
- Request form
- Blood sample bottles
- A supply of cotton wool balls
- Sani-cloth Alcohol wipes, 2% Chlorhexidine in 70% Alcohol
- Alcohol gel with moisturiser e.g. Purell with derma glycerine
- Sharps Bin
- Yellow and Black clinical waste bag
- Bag or “pod” for sample transportation
- Micro pore tape
- Tourniquet (single use)

- Daniel tray

Uniform & Gloves

- An approved uniform must be worn at all times when in clinical areas.
- The phlebotomy department is now a latex free environment and the wearing of gloves is compulsory. An alcohol hand rub is the other recommended product for ensuring effective hand hygiene. The following gloves are provided:
- Purple / Blue Nitrile gloves (Schottlander)
- Silver Sterling Nitrile gloves (Kimberly-Clark)

Tourniquet Usage

- It may not be appropriate to use a tourniquet (e.g. ionised calcium) – check requested tests and refer to a senior phlebotomist for guidance if needed
- A disposable tourniquet should always be used to prevent the spread of infection. This type is latex-free and may be used on patients with known latex allergy.

Equipment Cleaning

- At the end of each session ensure each trolley / laptop / workstation is cleaned with a Clinell universal sanitising wipe, and re-stocked as appropriate.
- Sharps containers should be cleaned externally and the protective cover partially closed to prevent access / injury. Close lid firmly and dispose of when $\frac{3}{4}$ full or over 1 week since first use.

5 Risk Assessment (Environmental and Safety Controls)



Staff carrying out this procedure should have read and understood the Local Rules or Health and Safety Manual applicable to their department & site which should be followed at all times during the procedure.

- The department is committed to reducing needle stick injuries through the risk assessment process. Actual incidents are managed through the DATIX process and Clinical Governance procedures which includes a review and learn
- Risk reduction measures include the use of closed system sampling with the use of sterile disposable equipment and plastic syringe/sample containers. However the risk still exists and good health and safety practices must be employed
- To reduce the effects of static posture and bending, the senior member of staff in each area should organise a break of 15-20 minutes. Ideally, this break should be taken in the middle period of each shift but a presence must be maintained in each location by the rotation of staff and there should not be the need for the whole team to go on break together.
- When entering closed/barrier rooms/bays, instructions for the use of Personal Protective Equipment (PPE) will be displayed at the point of entry. If you are unsure of the instructions, guidance should be sought from the clinical staff on duty. Examples of PPE might include: Gloves, Apron and Face Mask
- Ensure sharps containers are not over filled and are disposed of in accordance with Trust policy (see References)

- The use of gloves is compulsory and should always be used for routine blood collection. However, it should be noted that gloves will not protect against needlestick injury.
- A location based risk assessment supports this procedural risk assessment.

Exposure to Bio-Hazardous Material

All human blood samples must be treated as potentially BIO-HAZARDOUS.

In the event of a needle stick injury or accidental blood splashes to eyes or mouth:

- If skin has been punctured encourage bleeding by gently squeezing. Wash with soap and running warm water then dry and dress the wound.
- Splashes to the eyes: irrigate eyes thoroughly with eye wash / saline
- Splashes to the mouth: gargle with drinking water (avoid swallowing)

Contact the Occupational Health Department / Emergency Department for guidance and report all adverse incidents to your line manager / complete a DATIX form.

This SOP and the associated risk assessment(s) have considered all hazards and necessary precautions required to control any risks identified. Where appropriate this is detailed in the COSHH assessment and Risk Assessment. Any risk; where possible is mitigated and or monitored with health surveillance to ensure health and safety for all those affected by this procedure

6 Hand Hygiene

- Alcohol hand rubs are the recommended products for ensuring effective hand hygiene in all patient care situations except when;
 - Hands are visibly soiled and/or there are known cuts or abrasions
 - The patient is experiencing vomiting and/or diarrhoea
 - There is an outbreak of Norovirus, or Clostridium Difficile
 - There is direct contact with body fluids
- In these circumstances hands should be cleaned with liquid soap and warm water and the wearing of gloves is mandated. Hands should be washed and dried following glove use.
- In the clinical area additional guidance may be sought from the nursing staff. In the OPD setting information may be obtained from the request form or patient.

7 Isolation and High Risk Patients

A patient presenting an infection risk to other patients, staff and visitors OR at risk from other persons (immunocompromised) needs to be barrier nursed usually in a single bedded ward.

Preparation

A notice on the side room door will dictate which personal protective equipment (PPE) needs to be worn (gloves and disposable apron)

This will be found on a trolley outside the side room.

- Enter side room and obtain blood from patient - using a disposable tourniquet.

- Once blood is taken and put into bottles, dispose of sharps / syringe in the sharps bin in the side room.
- Label bottles and place in the specimen bag.
- Remove gloves and apron and put in the clinical waste bag.
- Wash hands.
- Wipe down Daniel tray with Disinfectant wipes (found on trolley)

8 Customer Care and Consent

- Failure to seek valid consent may be viewed as ‘assault and battery’ on a patient, with both legal and professional implications. It is important that the practitioner ensures the patient fully understands the proposed intervention and is happy to proceed. Health professionals must ensure that they are satisfied the patient has the mental capacity to make a decision about their own care and treatment
- Adhere to the Trust “Bare Below the Elbows” Policy and dress code (see Trust Uniform & Dress Code Policy on Horizon) and remain courteous and focused on your patient at all times.
- To make effective use of the time allocated to each ward area, the team should introduce their arrival to staff at the nurses station and ascertain if there are any priorities
- Approach the patient in a confident manner. Explain and discuss the procedure with the patient. Gain patient consent by asking if they are happy for you to proceed.
- Allow the patient to ask questions and discuss any problems which have arisen on previous occasions. This will help relax the patient and reduce any anxiety.
- If the patient does not verbally consent, respect their wishes and refer the patient back to the requesting clinician (see ‘Consent to Examination or Treatment Policy’ –copy on Staff Room)

9 Patient Identification and the Request Form

- All staff have a responsibility to ensure patients are identified in accordance with the Trust Positive Identification of Patients Policy
- Review the request form and check that all required details are present - note the full name and date of birth of the patient.
- Ask the patient their name and date of birth and confirm that they agree with the details on the request form (asking a patient to confirm a name or date of birth verbalised by a member of staff is not acceptable).
- In the case of hospital inpatients also confirm these details with the patient’s wristband. If a patient does not have a wrist band inform the nursing staff that you cannot take the samples and (if possible) agree to return later when the patient can be positively identified.
- In the case of positively identifying children, this must be confirmed with the parent or guardian.
- If details are erroneous or incomplete:-
 - *In the inpatient setting, bring this to the attention of the ward staff. They are responsible for ensuring all patients have wristbands and the details are complete and correct. Ask them to supply a hand-written request form with correct patient details if necessary.*
 - *If the patient arrives with a blood form displaying another patient’s details you must confiscate the form and advise the patient that they will need to obtain a new blood form. Complete a Datix form online and dispose of the blood form via confidential*

waste. If working in a satellite location put in an envelope and send to the phlebotomy office where the blood form will be disposed of.

- *Any paid carer (e.g. registered nurse / HCA / carer providing 1:1 support) can confirm the identity of a patient and affix a wrist band*
 - *In the outpatient setting, liaise with specimen reception / laboratory staff as it may be appropriate to take and process samples and include a suitable disclaimer on the report form. If this is not appropriate the patient must be asked to return to the requesting practitioner.*
- Amendments should **not** be made to a request form. Examples include:-
 - *Confirmation of name spelling; confirmation of date of birth*
 - *If you are unsure seek advice from a senior member of staff*

10 Fasting Samples & Timed Collections

- Review the request form for the requested tests and select the appropriate bottles. Check that it is the right time to take the sample (contact the laboratory for advice if needed).
- Fasting samples can only be obtained when the patient has “fasted”, not taken any food or liquid (except water) for a period of time. Within this hospital this is a 12-14 hours fast.
- If this is annotated on the request, then the patient needs to be asked directly; “Have you had anything to eat or drink, except water, in the past 12 to 14 hours?” If they have not “fasted” then the test cannot be performed.
- Timed or urgent samples would normally be taken by staff in the clinical area. If the timings coincide with the ward round and no special specimen requirements (e.g. on ice, keep warm, keep dark) are needed, it is acceptable to take the specimens.
- Ensure all specimens and the request form are labelled with the date and time of the draw

11 Order of Draw

- The order of draw is:
 - Blood Culture, followed by
 - Plain or serum, followed by
 - Coagulation tests, followed by
 - Additive syringes e.g. EDTA, lithium, heparin

12 Specific Sample Requirements

Information on all sample requirements is available on the Laboratory Medicine Website:

<https://www.yorkhospitals.nhs.uk/our-services/a-z-of-services/lab-med/test-directory/>

The information is also available in the document: LM-INF-BOTTLETYP (Sample Requirements)

- **Coagulation** samples should be a free flowing sample so activation does not occur and affect results. Coagulation bottles must be correctly filled (under-filled and overfilled samples are unacceptable as the anticoagulant in the bottle influences the results).

- **Cholesterol** testing should be done with minimal tourniquet as this can cause collection of lipids at the site - affecting results.
- **Ionised calcium** must be done without a tourniquet as this affects results.
- **Vancomycin / Gentamycin** levels are measured at York Hospital in the Microbiology department. Please send both trough and peak levels together with the request form. If the level is urgent, please telephone the Lab (ext. 5856). Refer to IV Guidelines handbook for further information.
- **Digoxin** samples should not be taken within 6 hrs of the previous dose being taken – ask the patient or their carer if unsure.
- Specimens requiring protection from light* - some test components are broken down in the presence of light, causing falsely decreased values. The most common of these are **Bilirubin and Porphyrins**. These can easily be protected using brown paper bags (provided in the department).
- Specimens that need to be chilled* - certain metabolic processes continue even after the sample has been taken. Chilling the specimen slows down this process. Specimens should be immersed in a slurry of crushed ice and water. The use of large ice cubes without water prevents the adequate cooling of the entire sample. Placing the sample in contact with a solid piece of ice can lead to freezing of those areas, resulting in haemolysis. Chilled samples include **Renin**.
- Specimens that need to be kept warm* - some specimens need to be transported at or near body temperature. Examples are specimens for **cold agglutinins, cryoglobulin and cryofibrinogen**. Contact the laboratory for advice on extension 6366.

*These specimens require taking to the laboratory immediately after being taken. If this is on the wards, before taking the sample, ensure that there is someone available to take the sample directly to the laboratory, either a phlebotomist or a member of the ward staff. Never leave a sample of this nature for a porter to collect.

13 Venepuncture Procedure

- Help the patient into a comfortable position in a chair or bed (never perform venepuncture on a patient who is standing).
- Identify patient (see section 10) and check request form is completed correctly.
- Confirm which investigations have been requested and gather the equipment and required collection tubes (see Order of Draw – section 11)
- Ask the patient if they have a 'preferred arm' - support the arm and ensure there is adequate lighting.
- Attach the needle to the first Monovette tube.
- For Vacuette Quickshield remove the valve section of the needle. Thread needle into QUICKSHIELD Safety Tube Holder ensuring the needle is firmly seated so that it does not unthread during use.
- The first Monovette should not be 'vacuumed' before blood sampling. All follow-up tubes can be 'pre vacuumed' before attaching to needle
- For blood cultures, DO NOT pre vacuum the two neutral tubes.
- Clean hands using alcohol gel (unless elements in section 7 apply)
- Remove EMLA cream if applied using a cotton wool ball
- Apply the tourniquet. Pull it tight enough to trap venous blood without cutting off the arterial flow. A pulse should be palpable below it.
- Prolonged use of a tourniquet may affect some test results and it should be applied only if necessary and removed as soon as possible.

- Ask the patient to assist by straightening their arm and clenching their hand into a fist. Patients must avoid a hand pumping action and hard 'tapping' of the veins is discouraged.
- Determine a suitable vein by palpation. Place your index finger over the vein and press lightly, then release the pressure to assess the vein's elasticity and rebound.
- Wipe the skin (in one direction only) with an alcohol wipe for a minimum of 30 seconds, then leave to dry for a further 30 seconds.
- If testing for blood alcohol levels, do not clean with alcohol swab as this may affect results- use soap and water.
- For blood cultures remove the seal from the top of each bottle. Do not touch the surface. Insert a Monovette needle size 21g into each rubber top.
- Remove the sheath from the needle. Do NOT bend the needle as this can cause red blood cells to haemolyse during the procedure.
- Anchor the position of the vein and carefully insert the needle, bevelled-side uppermost quickly and smoothly at an angle of 15-30 degrees, into the chosen vein.
- Level off the needle as soon as a flashback of blood is seen or when the puncture of the vein wall is felt.
- Throughout the procedure anchor the needle by holding the base between thumb and forefinger.
- Withdraw the plunger slowly. Wait until blood flow stops the remove the Monovette by pushing against the needle lightly and twisting anticlockwise.
- For blood cultures, take two neutral tubes. Pull back on the plunger allowing the tube to fill, DO NOT ALLOW THE PLUNGER TO 'CLICK' INTO LOCKED POSITION! Wait until blood flow stops. Re-place the first Monovette tube with the second neutral. DO NOT ALLOW THE PLUNGER TO 'CLICK' INTO LOCKED POSITION!
- For Vacutainer system push the first tube into the guard/cup, piercing the rubber top with the lower needle, ensuring the upper needle does not move within the vein. Wait until blood flow stops. Remove the bottle by 'pulling off' the tube. If further samples are required, ensuring the needle does not move within the vein, remove by 'pulling off' the first tube and pushing on and pulling off the second, third etc.
- If further samples are required: The next tube should then be pushed into position and twisted (clockwise) to lock into position. Continue this way until all samples are collected.
- For tubes that contains an anticoagulant, invert the tube several times to mix the blood and the anticoagulant. Do not shake.
- If the tube fails to fill and the needle is in the vein, move the needle slightly forwards or backwards, by approximately 1mm. If the tube starts to flow but then stops, adjust the needle and syringe position this adjustment will usually increase the blood flow.
- Terminate the venepuncture if a haematoma develops and press hard with a cotton wool swab for a minimum of 60 seconds before checking the site
- When blood collection has been completed remove the final Monovette from the needle.
- When using the Vacutainer system when blood collection has been completed remove the final Vacutainer tube from the needle/cup.
- Release the tourniquet.
- Withdraw the needle as soon as possible and dispose into the sharps bin
- When using the Vacutainer system withdraw the needle, activate safety device and dispose into the sharps bin.
- Cover puncture site with cotton wool and press firmly
- Ask the patient to relax their hand and apply firm pressure to the site for at least 60 seconds whilst keeping their arm straight. This will avoid haematoma formation and help seal the vein wall. If the patient is on anticoagulant/Warfarin therapy pressure may need to be maintained for longer.

- For blood cultures, place one neutral tube containing blood onto each of the Monovette needles already inserted in the blood culture bottles. Allow the blood to be 'taken' by the vacuum into each bottle, remove the Monovette tubes then the needles. Dispose of the needles and tubes into the sharps container.
- Ensure all samples are correctly labelled at the patient's side. For those patients who have or are suspected of having any blood borne infection, the request form must be marked accordingly. Ensure all known or suspected high risk samples are double bagged using Biohazard bags.
- Check the puncture site has stopped bleeding and apply a dressing.
- Dispose of all packaging in a clinical waste container
- Remove your gloves and dispose in a clinical waste container.
- Clean hands using alcohol gel unless elements in section 7 applies (in which case use soap and water)
- Refer the procedure to a Senior Phlebotomist/ or a more experienced practitioner if you are unsuccessful after two attempts
- If at any time the patient becomes unwell, refer to the Medical Emergency Flowchart displayed next to the telephone. (See Appendix 1)
- If working from a phlebotomy chair in a dedicated blood taking facility (i.e. non-ward areas) ensure the arm of the chair is cleansed between patients using Clinell universal sanitising wipe

14 Alternative Method (Vacutainer System) This is an ANTT procedure.

- Clean patient skin with Sani-Cloth for 30 sec in multi directions and allow to dry. DO NOT re-palpate the skin
- Taking hold of the butterfly needle flanges between thumb and forefinger, place the holder
- Puncture the vein with butterfly needle
- Secure butterfly in place with tape across the flanges – this allows the needle to retract into the safety shield at the end of the procedure Do not contaminate puncture site with tape.
- Remove the plastic lids from the culture bottles and clean the rubber tops with Clinell 2% wipe
- Take blood for cultures before any other samples
- Your fingertips are now **not** sterile, so do not touch the bottle top (Fingers aren't sterile for this procedure as it is an ANTT procedure). Keeping the culture bottle upright pick up the aerobic bottle (blue top) by holding it around the base and place into the butterfly holder
- Position holder and bottle below puncture site to prevent reflux of culture medium into vein
- Fill the aerobic (blue top) bottle with 8-10 mls of blood – see scale gradients on the side of the bottle
- Be aware that the bottles are not a pre-set vacuum and will continue to fill beyond amount required
- Repeat this process with the anaerobic bottle (yellow top)
- Having taken both samples of blood for culture any further blood samples required can now be taken following the order of draw
- Activate safety device whilst removing the needle from the patient.

15 Manual Specimen Labeling

- At the patient's side label the tube with:-
 - *Surname/Family name*

- *First/given name*
- *Date of Birth*
- *Unique numeric identifier e.g. Hospital or NHS No. (essential for Blood Transfusion – use both if stated on request form)*
- *Patient location*
- *Date taken & your initials*
 - Add the date and time taken on the request form

16 Specimen Labeling Order Comms

- 07.00 - print all request labels for the daily ward visits, bag up and distribute to the teams allocated to each area
- Attach the large request label to the sample bag and place remaining labels into the sample bag.
- Before leaving for the wards at 8am recheck & print any new orders
- In the clinical area, log onto CPD
- At the patients bed side and after completing the venepuncture attached the bar-coded labels to the specimen tubes
- Updated the order screen on CPD with “sample taken”
- If there is no facility to mark samples as taken (e.g. laptop failure) please ring Specimen Reception to let them know

Duplicate Order Comms Requests

- If there are multiple or duplicate requests for the same patient, ensure enough samples are taken to cover all tests.
- MLA staff in Specimen Reception will ensure the correct tests are requested on the laboratory computer system.
- Ensure any request forms / items containing patient information are disposed of into confidential waste bags (available in the office and in all ward areas)

Request form and specimen MUST be labelled in accordance with the Trust Policy for Completing Request Forms and Labelling Samples. Further information can be found on the Laboratory Medicine Website:

<https://www.yorkhospitals.nhs.uk/our-services/a-z-of-services/lab-med/general-information/information-for-health-care-professionals1/request-form-and-specimen-labelling/>

17 Storage of samples before transport

All samples should be dispatched to the laboratory as soon as possible after collection to ensure best turnaround times and most accurate results. It is highly recommended blood samples should arrive in the laboratory within 24 hours of collection – the laboratory may not be able to process samples received after this time. Overnight storage of blood samples before dispatch to the laboratory is not recommended and actively discouraged.

Further information on simple measures to minimise deterioration of samples can be found on the Laboratory Medicine Website:

<https://www.yorkhospitals.nhs.uk/our-services/a-z-of-services/lab-med/general-information/information-for-health-care-professionals1/storage-of-samples-before-analysis/>

18 Specimen Transport (See LM-SOP-TRANSPORT)

- Place all specimens in the specimen bag and seal securely and check for leaks
- All urgent requests taken in OPD must be phoned to Specimen Reception and dispatched by the most appropriate means
- Avoid sending single samples via the air tube system to help prevent haemolysis (i.e. try to fill each pod with multiple samples).
- It is not advisable to send known High Risk specimens via the pneumatic tube system.

19 Service Failures

- On return from ward areas return audit sheets to phlebotomy office
- Report any service failures to senior phlebotomist who should contact the ward(s) affected and inform the ward manager of the action that will be taken: wherever possible a member of staff should be sent to the areas concerned to collect any samples not taken as part of the normal round.
- Mitigation of the risks to practitioners following an actual incident includes prompt reporting to line management and referral to Occupational Health or the Emergency Department for appropriate action.
- Some patients are not comfortable having the procedure performed by a phlebotomist undergoing training / or may express an individual preference. This can be mitigated by asking the patient.

CPD Failures

- If is known in advance that the CPD system will be unavailable, ensure request forms are printed off before it becomes unavailable. Any further requests will need to be hand-written.

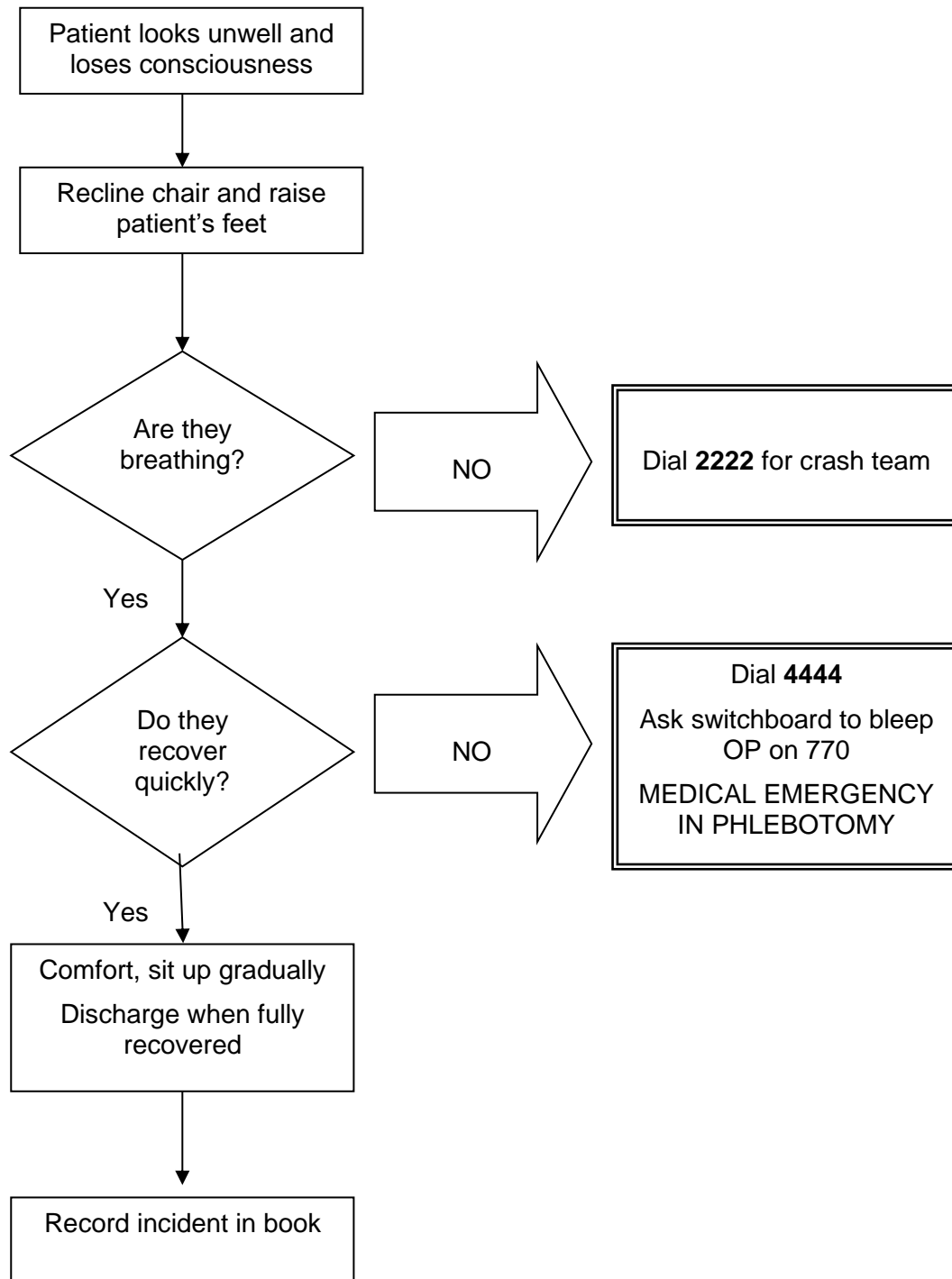
- Related Forms/Templates and Documents
- Relevant references available on Q-Pulse include:
- LM-POL-LABELLING (Sample Labelling Policy)
- LM-SOP-TRANSPORT (Sample Transport Policy)
- LM-INF-BOTTLETYP (Sample Requirement)

20 References

- General References:
- Venepuncture Training Package provided by Clinical Development YTHFT – available from senior phlebotomy staff
- McCALL R.E./TANKERSLEY C.M: Phlebotomy Essentials 2nd Edition 1998. Lippincott Williams & Wilkins.
- STEVENSON B: Venepuncture; Community Nurse 21-22 October 1997
- The following references are available on Trust Intranet site:
- Laboratory Medicine Website available through Staff Room Quick Links
- Infection Control Policy and Positive Patient Identification Policy
- Policy and Procedure for the Prevention and Management of Latex Allergy for Patients and Staff
- Policy for Effective Hand Hygiene
- Trust Dress Code and Uniform Policy
- Infection Prevention Policy Safe Use, Handling and Disposal of Sharps
- Policy and Procedure for the Management of Exposure to Blood Born Viruses, including Sharps Injuries
- Consent to Examination or Treatment Policy

21 Appendix 1: Emergency Flowchart

- This procedure should be followed in the event a patient becoming unwell



22 Appendix 2: Known Risks and Limitations

Patient Identification

Correctly identifying your patient is a known risk. This can be mitigated by following Trust policy and ensuring you ask the patient to volunteer their details and check this information against that on the request form.

Haematoma

A haematoma is a collection of blood. It can be formed following a leakage of blood from the vein into the tissues surrounding the insertion site. It can occur as a result of failure to puncture the vein properly during needle insertion. If haematoma formation is noted, the tourniquet should be released to reduce venous pressure and the cannula or needle removed. Direct pressure should then be applied for at least three minutes. To avoid a haematoma, the needle should be inserted immediately over the chosen vein in a smooth fashion. It should not be manipulated whilst under the skin.

Puncturing an Artery

This should not occur if the vessel is palpated, as arterial pulsation will be felt. However if an artery is punctured bright red blood will pump out under force; in this situation, release the tourniquet, remove the needle and apply direct pressure for at least 5 minutes to ensure haemostasis. You can send arterial blood for testing (ensure that it is recorded on the request form).

Puncturing a Nerve

It is rare to puncture a nerve, but if this does occur the patient will complain of severe pain, and may have paraesthesia or a tingling sensation. The tourniquet should be released and the needle removed immediately. Patients often feel faint and need to lie down. If the nerve has not been damaged these symptoms will resolve. Explain to the patient what has happened and reassure them. If symptoms do not settle inform the medical staff.

Needlestick Injury

Sharps or blood splash injuries to the practitioner are known risks. Refer to advice posters displayed in clinical areas for guidance on immediate care. Ensure all needlestick injuries (to staff or patients) are fully documented and reported to a senior phlebotomist (AIR form required)

Vasovagal Response

A vasovagal response (faint) is more likely to occur if patients have venepuncture whilst sitting up compared to lying down. Patients should be asked if they have a history of fainting or are needle-phobic, so that they are allowed to lie down whilst having venepuncture. Minimal movement of the needle can help avoid nerve irritation.

Infection

Introduction of infection during venepuncture may occur from a number of sources. These include contamination from the practitioner's hands during insertion, local infection, contamination of the needle and syringe, and the patient's own skin flora. It is therefore vital that procedures for washing hands, cleaning the patient's skin and non-contamination of either the skin or needle are rigorous.

Perceived lack of effectiveness

Bruising and haematoma are the most common complaints and patients should be made aware that these are possible side effects of the procedure. These can be mitigated by asking the patient to maintain pressure on the cotton wool pad and avoid carrying heavy loads or straining the arm for a few hours afterwards.

Perceived lack of customer care

This can be mitigated by remaining patient focussed, courteous and professional at all times. Refer to a senior phlebotomist where appropriate.

23 Appendix 3: Additional Guidance

Patients with Renal Failure

For patients who have Chronic Renal Failure and have an AV fistula, or are known to need a fistula in the future, the full length of the cephalic vein in both arms must be avoided at all times (i.e. wrist and antecubital fossa). Veins in the non-fistula arm (either on the hand or other forearm veins) should always be the first choice. In the event where a suitable vein cannot be found in the non-fistula arm, the hand and forearm veins of the fistula arm may be used (not the cephalic). Venepuncture must not be performed via the fistula, except for the purpose of dialysis, or under the supervision of the renal team. If you are unsure whether the patient is awaiting fistula development, which arm this may be, or any of the above, seek advice from the Renal Unit or Ward 33.

Post Mastectomy / Lymphadenectomy

Most mastectomy patients are told not to offer the affected arm for blood sampling, however there may be no option. With venepuncture, the arm on the affected side is unlikely to cause any damage.

Amputation / Fracture / Limb paralysis

Avoid collecting samples from areas close to surgery, or from fractured / paralysed limbs as there is likely to be reduced circulatory function and sensation, or may cause the patient undue pain.

Patients receiving IV fluids

Avoid taking blood samples from a site on an arm that is receiving intravenous fluids. If there is no other option, consult a member of medical staff as it may be feasible for the IV fluids to be switched off for 15 mins prior to venepuncture. Ensure medical or nursing staff are informed when finished so that the fluids are restarted.

Hickman Lines

Phlebotomists should not attempt to take blood from a Hickman lines under any circumstances – can contact Wd 31 / Haematology Oncology nurses in OPD for advice if needed (ext 2031 / 5815)

- Do NOT take blood from Hickman Lines

IVDA's / High-Risk Patients

It can sometimes be appropriate to allow patients to take their own blood samples and this is permissible if the patient is already known to staff and/or they are judged to be competent and trustworthy. Because phlebotomists are not trained to make such judgements, it is NOT permitted for IVDA's to take their own samples in OPD. If necessary, these patients should be referred back to the requesting clinician or specialist nurse.

IVDA's are NOT permitted to take their own samples in OPD and should not be given any phlebotomy equipment

For those patients who have or are suspected of having any blood borne infection, a specific request form will need to be used or the appropriate notification on Order Comms will need to be implemented. The request form is as the usual blood request form but is highlighted yellow/black around the whole of the outer edge of the form, allows for double-bagging and has a sealable strip that ensures sensitive clinical details are hidden from view once closed. There is a facility within Order Comms to alert to a hazardous or potentially hazardous sample, but additional written information may be put on the Order Comms form if necessary.

An alert MUST be given for all specimens from patients where the following is known or suspected:

- *Tuberculosis (TB); Typhoid; E coli 0157*

- *HIV; Hepatitis B; Hepatitis C*

Alerts need NOT be used for specimens from patients with:

- *MRSA; Clostridium difficile (C diff)*

Taking Blood Samples from Children

Do not take blood from children aged under 4yrs. Do not have more than one attempt without parental approval.

- See additional notes on taking samples from children with learning difficulties and therapeutic holding below.

Therapeutic Holding

In the phlebotomy setting, therapeutic holding refers to the use of minimal force to enable or assist the procedure. In many cases it will be reasonable for a phlebotomist colleague to assist with the procedure (e.g. patient finds it difficult to keep still) and, provided the patient consents, specialist help or advice will not be required.

NEVER use undue or excessive force and NEVER attempt to obtain a blood sample or employ therapeutic holding unless the patient has consented

In more difficult circumstances (e.g. severely disabled / vulnerable patients) seek advice from a senior phlebotomist: they will decide whether or not to proceed, based on the following general principles of good practice:

- *Consider if the procedure should be performed in an alternative setting, or by a more experienced phlebotomist or qualified practitioner (e.g. specialist nurse or doctor)*
- *If a patient is distressed by an examination or procedure to the extent that restraint is needed then the need for the intervention should be reviewed by the requesting clinician*
- *The use of restraint should be based upon the level of risk present, take account of the person's size, gender, age and medical conditions. It should be used for the minimum amount of time and with the least amount of intervention.*
- Carers cannot give consent - if you feel that the patient does not have capacity to consent then contact Liz Sweeting for advice (details above). If needed please seek guidance from a specialist Nurse / Physical Intervention Officer (details above)

Vulnerable Adults & Children with Learning Difficulties

These patients may be liable to express distress etc. at any time during the procedure and guidance should be sought from a parent or carer (if present) in advance wherever possible. The parent / carer may be willing and able to assist with holding the patient (see notes on Therapeutic Holding above).

If you require any advice or assistance from staff who have had specialist training in these issues you are advised to contact either:

- *Nicola Cowley - Acute Liaison Lead Nurse for Adults with a Learning Disability (ext 6296)*

- *Sarah Walker - Physical Intervention Officer for Patients with a Learning Disability, Systems House (ext 4172)*
- *Mike Waldie - Ward Manager, Clifton House (ext 4256)*
- *Elizabeth Sweeting - Mental Health Specialist Nurse, Ward 37 (ext 6037)*

Venepuncture For Kids

You have to be very patient and understanding. This procedure can be very stressful for the child and may only be performed on children aged 4 plus.

Explain the procedure to the child and parent.

You may want to sit the child on parent's knee.

You **must** get consent from parent/child before proceeding.

If the child is difficult to bleed or un-co-operative then you can send them to the children's ward but the House Officer/Ward must be informed before you send them over.

Very Difficult Patients

Under normal circumstances a maximum of 2 attempts should be made to collect a blood sample, and staff are advised not to try a 2nd time unless fairly certain of success (a senior / more experienced phlebotomist should perform the 2nd attempt if necessary). However, if a patient consents, a 3rd attempt can be made by the most experienced phlebotomist available.

An alternative site (e.g. back of hand) and/or a smaller gauge needle ('black' needle) may be used provided the phlebotomist has been adequately trained and deemed competent. Alternatively it may be appropriate to ask patient to return in 24-48 hours or refer back to requesting clinician.

For patients who are difficult to bleed, it is much better to send a correctly filled paediatric sample than an under-filled normal bottle. If a paediatric bottle is required but not available, contact the laboratory and one can be sent to you.

Butterfly sets must NOT be used unless you have received specialist training and have been authorised to use them by a senior phlebotomist.

Venipuncture on feet or any other parts of the body

You must not attempt to obtain samples from any other area of the body other than the areas that you have received full training in. Phlebotomy staff are not, medically trained to perform venipuncture on feet or any other part of the body other than arm and hand. Only appropriately trained medically trained staff with a doctors consent can attempt to obtain samples from feet and legs. These sites are more susceptible to infection and formation of clots, particularly in patients with diabetes, coagulation disorders and cardiac problems

Students and practitioners supervising students

At all times students should act within their professional ability, ensuring that they have the underpinning knowledge and evidence to support their actions. All practitioners supervising students must be competent in that aspect of care and are accountable for their own practice and for the supervision of the student. If students are deemed competent in another healthcare role, they must not practice, or undertake formal assessment to practice, venepuncture or cannulation independently in their student role. Students must only undertake venepuncture and cannulation under direct supervision, and must not practice independently in their student role in any circumstance"