STANDARD OPERATING PROCEDURE
NIHR Sheffield Clinical Research Facility
Venepuncture using Vacutainer and Syringe Butterfly
Standard Operating Procedure: NIHR Sheffield Clinical Research Facility
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This SOP has been written to give general guidance to study personnel on performing
venepuncture. There are no GCP Guidelines concerning venepuncture.

Background
It is important that all staff in the CRF perform venepuncture to Sheffield Teaching Hospitals
NHS Foundation Trust standards to ensure participant and staff safety.

Definition
Venepuncture is the term used for the procedure of entering a vein with a needle.
Venepuncture is carried out for 2 reasons:
1. To obtain a blood sample of diagnostic purpose.
2. Monitor levels of blood components.

The CRF at RHH refers to the Clinical Research Facility, O Floor, Royal Hallamshire
Hospital.
The CRF at NGH refers to the Clinical Research Facility, 1st Floor, Centre for Biomedical
Research, Northern General Hospital.

Procedure A (Vacutainer Butterfly)
1. The investigator is responsible for performing venepuncture according to protocol.
   This duty can be delegated to other appropriately qualified members of the research
team as recorded on the Project Delegation Log.

2. Prior to the procedure the investigator or delegated person must ensure the correct
   participant is identified and cross referenced with appropriate request forms. The
   areas to be checked are surname, forename, date of birth, research study name and
   study subject number if appropriate, hospital registration number and current
   address.

3. The investigator or delegated person must perform the procedure in accordance with
   the trust relevant Health and Safety Policy.

4. The investigator or delegated person must ensure constant attention to an
   appropriate aseptic technique whilst procedure is being performed as identified in the
   Sheffield Infection Control Guidelines.

5. The investigator or delegated person will refer to the protocol to ensure specific
   requirements for performing venepuncture are identified.

6. The investigator or delegated person must ensure that the patient has been prepared
   for any specific blood tests, e.g. fasting bloods.

7. The investigator or delegated person will explain the procedure to the participant.

8. The investigator or delegated person should ensure the participant has had no
   previous problems when having blood taken and if they have any known allergies to
   tape.

9. The investigator or delegated person should wash their hands according to STHFT
   Hand Hygiene Policy.
10. The investigator or delegated person will clean and prepare trolley/work area.

11. The investigator or delegated person will prepare all equipment required ensuring all study specific equipment is obtained.

12. Equipment required:
   - Sharps bin
   - Vacutainer butterfly needle or syringe butterfly needle
   - Vacutainer® body
   - Syringe
   - Blood transfer unit – if using syringe
   - Vacutainer bottles/study specific blood kits
   - Mediswab
   - Cotton wool swab
   - Micropore tape
   - Plaster
   - Non-sterile gloves
   - Tourniquet
   - Trolley
   - Plaster

13. The investigator or delegated person will ensure all study specific documentation is prepared and any local request forms are completed.

14. The investigator or delegated person must wash their hands according to STHFT Hand Hygiene Policy and check for broken skin and cover with waterproof dressing.

15. The investigator or delegated person will apply gloves.

16. The investigator or delegated person will loosely apply tourniquet. Position of the tourniquet may be varied depending on where the sample is to be obtained from.

17. The investigator or delegated person will ask the participant to rest their arm on an arm rest (if available) or place a pillow under their elbow.

18. The investigator or delegated person will tighten the tourniquet and assess the patients arm for suitable veins. If necessary, access the participants other arm until a suitable vein is identified.
19. The investigator or delegated person should not make more than 3 attempts to obtain a venous sample.

20. The investigator or delegated person must prepare participants skin with a mediswab for at least 30 seconds (allow the skin to dry). Do not repalpate the vein or touch the skin.

21. The investigator or delegated person will remove the vacutainer white sheath and dispose.

22. The investigator or delegated person should remove the white end of the vacutainer luer lock connector and connect to the butterfly hub connector.

23. The investigator or delegated person will remove the sheath from the butterfly needle and place in a receptacle.

24. The investigator or delegated person must anchor the skin by applying manual traction a few centimetres below the proposed insertion site.

25. The investigator or delegated person must follow the line of the vein and insert the needle through the skin at an angle of 15 degrees, ensuring the eye of the needle is completely in the vein to prevent haematoma formation and/or blood leakage.

26. The investigator or delegated person must ensure the vacutainer body and needle is kept still, and attach the sample tubes as appropriate. If necessary, release tourniquet before all samples are taken.

27. Once all the samples are taken the investigator or delegated person will release the tourniquet if not already done.

28. The investigator or delegated person will place a cotton wool ball swab over the puncture site.

29. The investigator or delegated person must remove the needle and apply sufficient pressure to prevent bleeding (Do not apply pressure until the needle has been completely removed). If able, the investigator or delegated person can ask the participant to maintain pressure for 2 minutes.

30. Once all the samples are taken the investigator or delegated person must dispose the needle and syringe as a whole unit into an appropriate sharps bin in accordance with STHFT Waste Strategy & Policy. The needle must not be re sheathed prior to disposal.

31. If any blood spillage occurs the investigator or delegated person should clean up the spillage in accordance with STHFT policy using the appropriate spillage kits. The spillage kits are located in the Phlebotomy Room and Laboratory in the CRF at RHH and in the Laboratory and Dirty Utility Room in the CRF at NGH.

32. The investigator or delegated person must mix all the specimens well if the specimens contain an additive or as dictated by the protocol.

33. The investigator or delegated person must inspect the puncture site before applying the dressing. The cotton swab should be taped down firmly.
34. The investigator or delegated person must ensure the participant is comfortable.

35. The investigator or delegated person must ensure all the samples are correctly labelled.

36. The investigator or delegated person will ensure all procedures for the obtained samples outlined in the study protocol are followed.

37. If the samples are for STH labs the investigator or delegated person must ensure prompt transport to the appropriate laboratories.

38. The investigator or delegated person must remove gloves and discard into appropriate clinical waste bag.

39. The investigator or delegated person must wash their hands in accordance with STHFT Hand Hygiene Policy.

40. The investigator or delegated person must record all samples obtained on the relevant source documentation for the study or in the participant’s medical notes.

Procedure B (Syringe butterfly)

1. Repeat 1 – 20 above

2. The investigator or delegated person removes the end of the butterfly needle connector and attach the butterfly needle to the appropriate size syringe.

3. The investigator or delegated person will remove the sheath from the butterfly needle and place in a receptacle.

4. The investigator or delegated person must anchor the skin by applying manual traction a few centimetres below the proposed insertion site.

5. The investigator or delegated person must follow the line of the vein and insert needle through the skin at an angle of 15 degrees, ensuring the eye of the needle is completely in the vein to prevent haematoma formation and/or blood leakage.

6. The investigator or delegated person must ensure the butterfly needle and syringe is kept steady and slowly withdraws the required volume of blood.

7. Once all the samples are taken the investigator or delegated person will release the tourniquet if not already done.

8. The investigator or delegated person must detach the butterfly needle from the syringe and dispose of it into appropriate yellow sharps bin.

9. The investigator or delegated person must attach a blood transfer unit to the syringe and insert into blood specimen tubes and allow the appropriate amount of blood to be drawn in.

10. The investigator or delegated person must dispose of the transfer unit and the syringe as a whole into an appropriate yellow sharps bin in accordance with STHFT waste Strategy and Policy.

11. Repeat 28 – 40 above
Related Documentation

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<td>Project Delegation Log</td>
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<td>STH Hand Hygiene Policy</td>
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<td>STHFT Health and Safety at Work Policy Statement</td>
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<td>STHFT Infection control guidelines</td>
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<td>Blood and Body Fluid Exposure Incident Management Pack</td>
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<td>STHFT venepuncture and intravenous cannulation open learning programme</td>
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<td>STHFT Policy for the Decontamination of Hospital equipment &amp; medical devices</td>
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<td>Sheffield Waste Strategy &amp; Policy</td>
<td>J Watts &amp; M Mahon</td>
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1 The location(s) of any related document(s) are listed in the CRF SOP Referenced Documents Directory.

The CRF SOP Referenced Document Directory and any Related SOPs, listed on page 1 of this SOP, can be accessed electronically at www.sheffield.crf.nihr.ac.uk or can be requested by contacting Sheffield Clinical Research Facility, O Floor, Royal Hallamshire Hospital, Glossop Road, Sheffield, S10 2JF, 0114 2713339.