

Trust Standard Operating Procedure

SOP for taking a Blood Sample (including blood cultures) from a Central Venous Catheter or Midline using a Surgical Aseptic Non Touch Technique (ANTT) approach.

Issue Date	Review Date	Version
July 2019	July 2024	3

Purpose

To provide guidance for the identification of appropriate taking Blood Samples from a Central Venous Catheter or Midline using a Surgical Aseptic Non Touch Technique (ANTT) approach.

Who should read this document?

All personnel within Plymouth Hospitals NHS Trust involved in caring for patients with a central vascular catheter or Midline.

Key Messages

Whilst the safest and most accurate method of blood sampling is via peripheral veins there are occasions where sampling via a Central Venous Catheter or Midline is necessitated.

This Standard Operating Procedure outlines the procedure to follow to ensure blood sampling from these devices is performed accurately and safely.

Core accountabilities

Owner	Colin Fairhurst, Clinical Nurse Specialist Vascular Access
Review	Vascular Access Team
Ratification	Dr Andrew Porter, Clinical Lead Vascular Access
Dissemination (Raising Awareness)	Trust-wide
Compliance	All staff performing blood sampling from central venous catheters and midlines.

Links to other policies and procedures

Central Venous Catheter Care Guidelines
Aseptic Non-Touch Technique (ANTT) Policy

Version History

V1	March 2015	
V2	May 2016	
V3	July 2019	Changed to SOP and reviewed and updated

The Trust is committed to creating a fully inclusive and accessible service. Making equality and diversity an integral part of the business will enable us to enhance the services we deliver and better meet the needs of patients and staff. We will treat people with dignity and respect, promote

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equality and diversity and eliminate all forms of discrimination, regardless of (but not limited to) age, disability, gender reassignment, race, religion or belief, sex, sexual orientation, marriage/civil partnership and pregnancy/maternity.

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Standard Operating Procedure (SOP)

Standard Operating Procedure for taking a Blood Sample (including blood cultures) from a Central Venous Catheter using a Surgical Aseptic Non Touch Technique (ANTT) approach.

1 Introduction

Whilst the safest and most accurate method of blood sampling is via peripheral veins there are occasions where sampling via a Central Venous Catheter or Midline is necessitated.

Sampling through these devices increases the risk of complications such as occlusion and infection. Furthermore, laboratory tests performed on these specimens may be inaccurate because of flushing solutions, medications or sampling technique.

If sampling via these devices is required the procedure below should be followed when a surgical aseptic non-touch technique (ANTT) is warranted.

2 Definitions

Before blood sampling through Central Venous Catheters or Midlines using a surgical aseptic non-touch technique (ANTT) is performed the user must be assessed as competent to do so and signed off as competent by a trained assessor.

3 Regulatory Background

Plymouth Hospitals NHS Trust Guidelines for Aseptic Technique (2012).

Dougherty L et al (Eds) (2011) Royal Marsden Manual of Clinical Nursing Procedures (8th edition) London, Blackwell Publishing.

Department of Health (DH) (2007) Saving Lives: Reducing Infection, Delivering clean and safe care, London, DH.

4 Key Duties

All Practitioners must perform the task as per the guidelines within this SOP after completion of training and having been assessed as competent in the skill.

Staff must acknowledge any shortcomings in their ability and further training will be organised through their line manager. Staff requiring further training will not be able to continue with this skill until assessed as competent by a trained assessor.

5 Procedure to Follow

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This procedure should only be undertaken when all other venepuncture options have been considered.

Assemble equipment:

Sterile Dressing pack * containing receptacle, low-linting swabs, sterile gloves	Trolley / clean tray
Sterile towel and disposable bag.	Appropriate hand hygiene preparation
Sterile gloves (if second pair required)	Sharps Bin
2% Chlorhexidine/70%Alcohol wipe x 2	Blood bottles
10ml syringe	
10ml 0.9% Sodium Chloride	
Order of Draw Card	
Relevant blood form /ISOFT system and wristband scanner	

Action	Rationale
1) Decontaminate hands using alcohol rub	
2) Positively identify correct patient. Explain and discuss the procedure to ensure that the patient understands.	To ensure correct patient. To ensure the patient understands the procedure and gives his/her valid consent (refer to PHNT Consent to examination or treatment policy)
3) Put on a plastic apron.	To protect clothing and reduce the risk of spreading infection
4) Wash hands thoroughly up to the elbow using liquid soap. Dry thoroughly	To reduce risk of cross infection
5) Clean the trolley with detergent wipe.	To provide a clean working surface.
6) Place all the equipment required for the procedure on the bottom of a dressing trolley.	To maintain the top shelf as a clean working surface
7) Take the patient to the treatment room or screen the bed area. Position the patient comfortably so that there is easy access to the central line without exposing the patient unduly	To allow dust and airborne organisms to settle before the sterile field and the central line is exposed. Maintain patient's dignity and comfort.
8) Take the trolley to the treatment room or patient's bedside, disturbing the screens as little as possible	To minimize airborne contamination
9) Check the pack is sterile (i.e. the pack is undamaged, are intact and dry and check the expiry date) open the outer cover of the sterile pack and slide the contents onto the top shelf of the trolley.	To ensure only sterile products used

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10) Decontaminate hands with alcohol rub	Hand may become contaminated by handling outer packets, screens etc
11) Open the sterile field using only the corners of the paper	So that areas of potential contamination are kept to a minimum Creates a sterile working field.
12) Check any other packs for sterility and open. Tip contents gently onto the centre of the sterile field.	To prepare the equipment ensuring sterility.
13) Decontaminate hands with alcohol rub.	Hands may become contaminated by handling outer packets etc
14) Place hand in disposable bag, arrange contents for easy access.	To maintain sterility of the pack
15) Put on sterile gloves touching only the inside wrist end	To maintain asepsis
FROM THIS POINT ONWARDS DO NOT TOUCH THE VITAL PARTS e.g. ENDS OF LINES, TIPS OF SYRINGES, CONNECTORS ETC	
16) Place sterile towel under the central line	To provide a sterile environment
17) Draw up flush in a 10ml syringe using a sterile piece of gauze to hold ampoule or use sterile pre filled syringe.	Preparation of equipment. Using a 10ml or larger sized syringe reduces pressure which reduces potential damage to the catheter
18) Identify dedicated blood letting lumen. If Infusion in progress switch off, disconnect infusion from lumen and place sterile cap on the end.	To prevent contamination of the sample and maintain sterility of the line.
19) Scrub the closed connector with the chlorhexidine and alcohol wipe for at least 30 seconds and wait for it to dry before proceeding	To minimise the risk of infection. Drying action eradicates bacteria
a) Attach a 10ml syringe to the closed connector. Release clamp and withdraw discard of blood (minimum 6mls). <u>(Skip this step if performing sampling for blood cultures – instead withdraw required amount of blood without discarding to use as the culture sample followed by the required volume for any other required samples)</u>	To remove blood from the dead space in the line Blood cultures require all aspirate from the line to be analysed so there should not be any blood initially discarded. Blood cultures should be the first sample taken.
b) Clamp (if present) and remove syringe. Discard syringe into sharps bin.	
c) Attach new syringe of appropriate size, unclamp and withdraw required amount of blood..	To obtain the sample
d) Clamp (if present) and detach syringe.	To maintain a closed system and prevent needlestick injury
20) Flush with 10ml 0.9% Sodium Chloride using the push pause method and clean connector	To create turbulence and prevent occlusion

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with a new 2% chlorhexidine and alcohol wipe and allow to dry	
21) Reconnect IV infusion if appropriate	
22) Decant into blood bottles using a blood transfer device. Never use a needle to decant.	
23) Ensure all waste is discarded appropriately	
24) Remain at the patient's bedside to label all blood tubes with patient's full details/ print label. using the patient's ID band. Place in specimen bag and send to appropriate laboratory	To ensure the laboratory receive the correct sample and the patient receives the correct results.
25) Clean trolley with detergent wipe	To reduce the risk of spreading infection.
26) Wash and dry hands thoroughly	To reduce the risk of spreading infection.

If catheter fails to bleed, try the following whilst trying to aspirate:

- a) Ask patient to take a few deep breaths**
- b) Ask patient to try repositioning themselves**
- c) Flush with 2ml 0.9% Sodium Chloride in a 10ml syringe**

If these measures fail to work then contact the Acute Care Team 81829

6 Document Ratification Process

The design and process of review and revision of this policy will comply with The Development and Management of Formal Documents.

The review period for this document is set as default of five years from the date it was last ratified, or earlier if developments within or external to the Trust indicate the need for a significant revision to the procedures described.

This document will be reviewed by the Vascular Access Team and ratified by the Medical devices committee

Non-significant amendments to this document may be made, under delegated authority from the Director, by the nominated owner. These must be ratified by the Medical devices committee.

Significant reviews and revisions to this document will include a consultation with named groups, or grades across the Trust. For non-significant amendments, informal consultation will be restricted to named groups, or grades who are directly affected by the proposed changes.

7 Dissemination and Implementation

Following approval and ratification, this policy will be published in the Trust's formal documents library and all staff will be notified through the Trust's normal notification process, currently the 'Vital Signs' electronic newsletter.

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Document control arrangements will be in accordance with The Development and Management of Formal Documents.

The document owner will be responsible for agreeing the training requirements associated with the newly ratified document with the named Medical devices committee and for working with the Trust's training function, if required, to arrange for the required training to be delivered.

8 Monitoring and Assurance

All complications related to vascular access devices are currently reported via the Datix system and are regularly reviewed by the Infection Control Team.

Competency for the sampling of blood from Central Venous Catheters and Midlines can be achieved by completing ANTT Training and subsequent observed practice by a trained assessor within the individuals place of work.

9 Reference Material

Plymouth Hospitals NHS Trust Guidelines for Aseptic Technique (2012).

Dougherty L et al (Eds) (2011) Royal Marsden Manual of Clinical Nursing Procedures (8th edition) London, Blackwell Publishing.

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