

Document Control

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Management and Removal of Non Tunnelled Central Catheters Standard Operating Procedure			
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0.4	May 2009	Draft	Amendments following infection control comments.
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1.2	Jun 2011	Revision	Minor amendments by Corporate Affairs to document control report and formatting for document map navigation.
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2.0	Oct 14	Final	Published on Bob
2.1	Jan 2018	Revision	Transferred to latest template Section 5 clarification regarding gloves 6.5, 7.5 & 8.4 Effective Hand Hygiene technique added 6.6 & 7.3 ANTT included 6.12, 7.12, 8.17 & Appx A Addition of CLIP score tool Section 8 Removal of line added
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1. Background

- 1.1. This document sets out Northern Devon Healthcare NHS Trust's system for management of a non-tunnelled central catheter (multi lumen) and this procedure replaces all existing guidance/ superseded procedures.
- 1.2. A non-tunnelled central catheter is a device inserted into a superficial central vein commonly in the neck and the tip sits in the superior vena cava which is used in patients in acute settings. Insertion may be in response to an emergency or planned event.

2. Purpose

- 2.1. The Standard Operating Procedure (SOP) has been written to:
 - Identify the procedures for the management of a non-tunnelled central catheter.
 - Reduce the risks associated with having a non-tunnelled central catheter by identifying evidence based safe systems of work.

3. Scope

- 3.1. This Standard Operating Procedure (SOP) relates to the following staff groups who may be expected to manage a non-tunnelled central catheter and should be used in conjunction with standard operating procedures which refer to the administration of injectable medications:
 - Registered Nurses
 - Registered Midwives
 - Medical Staff
 - Operating Department Practitioners
- 3.2. Staff undertaking this task must be able to demonstrate attendance at relevant Trust training and be reassessed as competent as per NDHT Assessment and Maintenance of Clinical and Medical Device Competence in Nurses, Midwives, AHPs and Support Workers Policy.
- 3.3. Student healthcare practitioners may be given increased responsibility as they progress with their training, but must remain directly supervised by a competent Registrant at all times until registration, according to their professional body and standards; the supervising registrant will need to make themselves aware of the previous experience of the student, the stage of the course and assess current competencies.

4. Location

- 4.1. This Standard Operating Procedure can be implemented in all settings where competent staff are available to perform this skill and asepsis maintained.

5. Equipment

5.1. Equipment:

- 0.9% sodium chloride flushes (10mls)
- Ampoules of heparinised solution if prescribed
- 10ml syringes (*smaller syringes will increase pressure exerted on veins and could damage the line*)
- Blunt fill and/or filter needles for drawing up
- 2% chlorhexidine gluconate in 70% alcohol wipes
- Sterile dressing pack
- Sterile transparent dressing with high moisture/vapour transmission rate e.g. IV3000
- Appropriate line securing device eg Griplik
- Needlefree access device eg Codan Swanlock
- Sharps bin
- Protective eye/face wear if required
- Medications for administration
- Gloves

- 5.2. The use of non-sterile or sterile gloves will depend on the procedure being undertaken and its technical difficulty, contact with susceptible sites or clinical devices and the risks involved, including the risk of exposure of the health care worker to blood and / or body fluids (RCN 2016).

- 5.3. Heparinised solution flush may be considered in some cases especially if the line is left dormant for long periods of time but should not be used routinely and should be discussed with medical staff and prescribed. If a heparinised flush is indicated this should be administered after the final sodium chloride flush and again administered under pressure using a push pause technique.

6. Procedure for administering medications through a non-tunnelled central catheter

- 6.1. Explain the procedure to the patient checking patient identity against relevant prescription documents, check allergy status and gain informed consent.
- 6.2. Prepare equipment as required in section 5. Prepare the medications prescribed as per the relevant standard operating procedures and 0.9% sodium chloride flushes. You will need enough flushes to flush the line pre administration of medications, between each medication and to flush on completion of administration.
- 6.3. Position the patient appropriately, ensuring they are comfortable, with line exposed respecting individuals privacy and dignity as necessary.
- 6.4. Consider the use of protective eye / face wear and aprons if there is an increased risk of splash inoculation (e.g. unpredictable patients).
- 6.5. Wash hands using an effective Hand Hygiene (HH) technique and apply gloves.
- 6.6. Use aseptic non-touch technique (ANTT) at all times.
- 6.7. Thoroughly disinfect needlefree access device with 2% chlorhexidine gluconate in 70% alcohol and allow to air dry. This should be repeated for each lumen.
- 6.8. If the line is not in constant use, attach an empty syringe, release clamp and attempt to aspirate 5mls blood to verify position. This is not always possible but attempts should be made to verify position of the catheter. This should be repeated for each lumen. Further advice should be sought if you are unable to verify position.
- 6.9. Flush the line under constant pressure and then administer any medications as per prescription flushing between each medication.
- 6.10. If the flush is a maintenance flush or upon completion of medication administration the final flush should be done utilising a brisk push pause technique (1ml/time) and clamped under positive pressure i.e. before syringe is removed from needle free device. This should be done for each lumen.
- 6.11. Dispose of all sharps and consumables immediately at point of treatment according to NDHT Waste Management Policy.
- 6.12. Document the process within the patient notes including a record of the CLIP score.
- 6.13. Lines not being routinely used should be flushed weekly and needlefree access devices changed on a weekly basis also. When needle free access devices are replaced, the end of the line should be cleaned with 2% chlorhexidine gluconate in 70% alcohol.

6.14. Advice should be sought if:

- There is a history of difficulty with this procedure
- You are unsure of the catheter position
- You observe any signs of infection, phlebitis or infiltration
- You are concerned that the line has occluded

7. Procedure for dressing a non-tunnelled central catheter

7.1. Change dressing every 7 days or sooner if contaminated.

7.2. Explain the procedure to the patient checking patient identity and gain informed consent.

7.3. Using the principles of Aseptic Non Touch Technique (ANTT) prepare the equipment as required from list in section 5.

7.4. Put on gloves and loosen the dressing, removing it without touching the catheter and exit site - lifting from the base of the dressing upwards reduces the risk of dislodging the catheter.

7.5. Wash hands using an effective Hand Hygiene (HH) technique and apply sterile gloves.

7.6. Thoroughly disinfect entry site with 2% chlorhexidine gluconate in 70% alcohol for at least 30 seconds and allow to air dry.

7.7. Ensure sutures are in place and securing the line.

7.8. Place new dressing over site.

7.9. Replace needlefree access devices.

7.10. Dispose of all sharps and consumables immediately at point of treatment according to NDHT Waste Management Policy.

7.11. Remove gloves and use effective hand hygiene.

7.12. Document the process within the patient notes including the CLIP score.

7.13. Advice should be sought if:

- There is a history of difficulty with this procedure
- You are unsure of the catheter position
- You observe any signs of infection, phlebitis or infiltration
- You are concerned that the line has occluded

8. Procedure for removal of a non-tunnelled central catheter

- 8.1.** This line can be removed in all settings providing asepsis is maintained.
- 8.2.** Assemble equipment as required from list in section 5.
- 8.3.** Explain the procedure to the patient checking patient identity as per local policy and gain informed consent.
- 8.4.** Assist the patient into the Trendelenburg position, ie head slightly lower than feet, to prevent air entering vein on catheter removal.
- 8.5.** Wash hands using an effective Hand Hygiene (HH) technique and prepare equipment.
- 8.6.** Remove dressing carefully – lifting from the base of dressing upwards reducing the risk of dislodging the catheter.
- 8.7.** Remove securing device or tapes.
- 8.8.** Thoroughly disinfect entry site with 2% chlorhexidine gluconate in 70% alcohol for at least 30 seconds and allow to air dry.
- 8.9.** Cut and remove any skin suture securing the catheter.
- 8.10.** Apply gauze to insertion site.
- 8.11.** Ask the patient to perform the Valsalva manoeuvre ie breathe in and then try to force the air out with the mouth and nose closed, to reduce the risk of air embolus.
- 8.12.** Remove the line by gently pulling the device until the line is completely removed from the patient, applying pressure to puncture site through the gauze.
- 8.13.** Check the catheter integrity and length to ensure the line is intact.
- 8.14.** If the catheter is removed due to infection send the tip for microbiological investigation.
- 8.15.** Inspect the site prior to applying a sterile dressing.
- 8.16.** Dispose of all sharps and consumables immediately at point of treatment according to NDHT Waste Management Policy.
- 8.17.** Document the process within the patient notes including the CLIP score and any signs of potential complications upon removal.
- 8.18.** The patient should be encouraged to lie flat for a short time (20-30 minutes) after catheter removal to maintain intrathoracic pressure and allow the tissue tract time to seal.

9. References

- Loveday H. P. et al (2013) National Evidence Based Guidelines for preventing Healthcare Associated Infections in NHS Hospitals in England (epic 3)
http://www.his.org.uk/files/3113/8693/4808/epic3_National_Evidence-Based_Guidelines_for_Preventing_HCAI_in_NHSE.pdf
- NHS Improvement High Impact Interventions
https://www.ips.uk.net/files/6115/0944/9537/High_Impact_Interventions.pdf
- Nicol M, Bavin C, Cronin P, Rawlings-Anderson K, Cole E. and Hunter J. (2012) Essential Nursing Skills 4th Edition. Mosby, London.
- The Royal Marsden Manual of Clinical Nursing Procedures
www.rmmonline.co.uk/

10. Associated Documentation

10.1. Northern Devon Healthcare NHS Trust Policies for :

- Aseptic Techniques Policy
- Assessment and Maintenance of Clinical and Medical Device Competence in Nurses, Midwives, AHPs and Support Workers Policy
- Injectable Medicines Policy
- Intravascular Devices Policy
- Standard Infection Control Precautions Policy
- Waste Management Policy

10.2. Northern Devon Healthcare NHS Trust Standard Operating Procedures SOPs:

- Administering Injectable Medicines
- Obtaining Blood Samples from Central Venous Catheters
- Preparing Injectable Medicines

APPENDIX A

CLIPS (Central Line Infection Prevention Score)

