

Velindre Cancer Centre (VCC) – Community PICC guide

Based on the South Wales Intravenous Access Advisory Group

Dear Colleague. Your patient has a PICC in situ with a **Securacath device**. This document gives instructions for the care and maintenance of the PICC.

PLEASE FOLLOW STEP BY STEP GUIDE ENCLOSED



Please make sure that the external portion of the PICC loops in a half circle as in the picture



Please clean the exit site thoroughly every week with a chloraprepp.



Some patients will have biopatch dressings – advice in this booklet.

Training

For training sessions contact: 029 2061 5888 ext 4645 in Velindre Cancer Centre

For advice concerning the management of patient complications please contact Velindre 02920615888 ask for the **chemo pager 194 or 135 out of hrs.**

Information: Google; Velindre Cancer Centre + PICC; IV Access PICC/Hick

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Introduction

A Peripherally Inserted Central Catheter or PICC is used for medium to long-term intra-venous access. It is a long hollow tube made of silicone or polyurethane.

The catheter is inserted into a peripheral vein in the arm at the ante-cubital fossa or in the upper arm using ultrasound guidance and threaded along the vein until the tip rests in the superior vena cava (SVC). In this location, maximum blood flow allows the immediate dilution of drugs or fluids administered via the PICC.

The PICC can be used for the administration of fluids, drugs, parenteral nutrition and blood products along with the ability to withdraw blood for laboratory sampling.

PICCs may have single or dual lumens and each lumen is separate along the full length of the line and should be treated as **TWO** separate catheters when flushing.

Routine care and maintenance

The routine care and maintenance of a PICC involves weekly flushing and dressing. However, if the PICC is used for the administration of drugs or fluids, the PICC has to be flushed immediately post completion of the infusion.

When performing both the dressing and flushing as one procedure, it is considered best practice to flush the catheter prior to re-dressing the exit site. This aims to prevent the contamination of the hub by skin bacteria which could lead to a systemic infection.

The first dressing should be performed within 72hrs of placement if a gauze dressing is applied or the biopatch is soiled.

PICC care and maintenance can be performed using aseptic technique or using aseptic non-touch technique (ANTT). This document will describe the care using ANTT.

ANTT

ANTT can be described as a standardised aseptic technique where key parts are identified and protected in order to prevent the introduction of infection. Key elements are; to perform effective hand hygiene, institute a non-touch technique to protect key parts and key sites. It incorporates the essential infection control measures in preventing pathogenic micro-organisms on hands, surfaces or equipment from being introduced to susceptible sites during clinical practice (RCN, 2010; Rowley, 2001). Further information concerning ANTT can be found in appendix I.

Hand hygiene

According to the epic3 guidelines (National based guidelines for preventing healthcare-associated infections 2014) hand decontamination refers to both hand-washing using liquid soap and water the use of alcohol based hand rub. Both will be referred to throughout this document. Hand hygiene must be performed immediately prior and post each episode of direct contact or care. Alcohol based hand rub can be used for decontamination when there is NO contact with potentially contaminated body fluids; when hands are NOT visibly soiled and when NOT caring for a patient with vomiting and diarrhoea illness. For staff, all wrist and hand

jewellery should be removed; wear short sleeved clothing and cover any abrasions with a waterproof dressing.

In the community – the tray can be substituted with a dressing pack.

Assessment

Prior to any catheter care, it is important to observe the PICC and the surrounding area for any signs of complications and to complete a short assessment: Observe for:

Pyrexia or a history of rigors post flushing.

Pain – arm, shoulder neck or chest

Redness at any point along the arm

Swelling, engorged veins in the arm, neck or chest.

Exudate, redness, pain at exit site

Dressing allergy – redness, blistering, itching, pain under the dressing.

PICC movement – line looking longer or shorter

Leaking of fluid beneath the dressing

All patients will have clear documentation of the external length of the catheter visible outside the body at time of placement written in a standard letter. This will enable any practitioner caring for the PICC to determine if the catheter has moved since the insertion.

Any signs or symptoms of complications should be reported to the placement hospital without delay.

Important notes:

When a chemotherapy pump is attached to the PICC, no attempt should be made to flush the catheter until the pump is disconnected by an appropriately trained practitioner.

Currently in Velindre, the type of catheter used is a CT polyurethane PICC with a proximal valve (valve on the end of the PICC outside the body). The PICC can be used for CT scans to inject contrast.

Flushing a PICC

The PICC needs to be flushed **once weekly** with 10mls of 0.9% Sodium Chloride to maintain patency when not in use or after any infusion or bolus injection. **There is no need to withdraw blood into the syringe prior to a routine flush with saline (RCN 2010).**

As with all Central lines, 10 mls is the minimum size syringe to be used to flush a PICC line. Using smaller syringe size can result in excessive pressure being exerted which could result in a damaged catheter.

PICCs should be routinely flushed using a turbulent and positive pressure flush.

A turbulent flush can be described as using a rapid push pause action when flushing. The turbulence created will cleanse the internal lumen of the catheter more efficiently. A positive pressure flush takes place when the syringe is removed from the end of the PICC whilst still flushing – this is to close the valve to prevent blood reflux back into the catheter which could cause an occlusion.

The needle free connector needs to be changed **weekly** (Loveday et al 2014, O'Grady et al 2011).

It is considered less problematic to use a side tip syringe to flush a valved PICC rather than a luer-lock syringe.

The Procedure – **see picture guide**

The procedure for flushing a PICC will be described using ANTT (aseptic non-touch technique)

Equipment

Clean plastic tray – or you can use a sterile pack in the community if no tray is available.

Detergent wipes/70% alcohol wipes to clean the tray – if using

1 x pair of non-sterile gloves (powder free)

Sterile chlorhexidine 2% in alcohol 70% solution or swab (e.g Clinell) or solution

1 x 10ML or larger syringe – preferably side tip

10ML 0.9% Sterile Sodium Chloride for IV use

Needle to draw up Sodium Chloride

End connector if required (need changing weekly)

Sharps bin

Procedure

- Wash hands thoroughly
- The ANTT key parts to consider when flushing a PICC are: The end connector or the end of the PICC (with end connector removed); the tip of the syringe; the tip of the needle and the part of the chlorhexidine swab that will clean the end connector.
- Clean tray or open sterile pack

- Prepare the equipment on the clean tray or onto the dressing pack – **keep all within their packaging**
- If using a pre-filled sodium chloride syringe, open onto the clean tray – ensure that the cap remains on the tip of the syringe.
- Put on non-sterile gloves
- Open the syringe and needle packages and place the needle onto the syringe, open the saline vial and draw up the saline flush and dispel any air – you can hold on to the saline pod with your non-sterile gloved hand.
- Place the syringe back into the syringe packaging to protect the syringe tip.
- If the end connector needs changing – change prior to flushing. Remove old connector; hold onto the end of the PICC; open the clinell and cleanse the **very end** of the PICC using the chlorhexidine 2% in alcohol 70% swab. Make sure that the part of the clinell used to cleanse the end of the PICC has not been contaminated. Leave to dry! Replace with new end connector.
- If the end connector does not need to be changed hold the end of the PICC, open the clinell and clean the very end of the end connector thoroughly with the chlorhexidine/alcohol swab for at least 15 seconds and allow to dry. It is **imperative** that the solution is left to dry naturally for at least a minute. **Visually check that the end of the end connector is dry**
- Ensure that the PICC end connector does not touch any clothing – keep clean!
- Flush the PICC. When flushing a PICC line routinely with 0.9% sodium chloride **there is no need to withdraw blood from the catheter. However, if any drug or a solution other than saline is to be used, a blood return has to be verified prior to use in order to verify location within a vein.**
- Attach a syringe containing 10mls of 0.9% Sodium Chloride onto the end connector. Flush using a turbulent, (pulsating push pause) action, finishing with a positive pressure. Positive pressure flushing means continuing to simultaneously flush as the syringe is removed from the end connector i.e the pressure of your thumb remains on the plunger as the syringe is removed from the end connector.

Flushing a PICC using ANTT (Aseptic Non-touch Technique).



1. Wash hands thoroughly and clean tray with detergent wipes – or in community – can use dressing packs



2. Need: 10ml syringe; needle; non-sterile gloves; clinell; 10mls saline; end connector. Put in tray or dressing pack **don't open packaging**



3. Put on non-sterile gloves. Draw up 10mls saline into a syringe. You may hold onto the saline pod with your gloved hand



4. Place the prepared syringe back into the syringe packaging to protect the tip.



5. Open the clinell. Take care not to touch the part of wipe which will have contact with end of PICC.



6. If not changing the end connector, cleanse the very end of the connector thoroughly for **15 seconds and leave to dry.**



7. Observe end of the connector to ensure it is dry allow at least 30 sec



8. If changing the end connector, remove and discard connector, clean the very end of the PICC thoroughly – **leave to dry**



9. Replace with a sterile end connector once dry.



10. **NO blood return required with routine saline flush!**



11. Flush the PICC using push pause (stop-start) turbulent flush



12. End with positive pressure flush withdraw syringe whilst flushing.

Dressing a PICC

A PICC will require a dressing in situ at all times as it provides anchorage and protection against infection.

If the patient has a statlock dressing in situ, please refer to internet guide – address on front of document.

Some, not all patients will have a biopatch dressing at the exit site. The decision whether to use biopatch dressings will be determined during PICC placement based on criteria to identify an increased risk of developing infection. A biopatch is a small disk like dressing that slowly releases chlorhexidine at the exit site over 7 days. It needs changing every 7 days. It must **always** be changed if blood stained or soiled!



A: Dressing a PICC with a SecurAcath

A PICC exit site needs to be cleansed **weekly** and the occlusive semi-permeable dressing changed weekly. **The securacath device is left in situ for the duration of the lifespan of the PICC. It is important to note that if a patient has a biopatch dressing that is changed weekly, the PICC still needs to be cleaned with chloraprepp prior to placing the biopatch on the exit site.**

Assessment

Inspect the catheter exit site for swelling, redness, or discharge through the occlusive dressing. If there are symptoms present, contact the referring hospital.

You will need to cleanse the exit site routinely every week with Chlorhexidine 2% in alcohol 70% eg Chloraprepp single use applicator chloraprepp or povidone iodine in alcohol for patients with sensitivity to chlorhexidine. (Loveday et al 2014, O'Grady et al 2011,).

Equipment Required

- 2 x pairs of non-sterile gloves
- Detergent wipes/70% alcohol wipes to clean the tray
- Ttray – or in the community you can use a dressing pack if no tray available
- Semi-permeable dressing i.e tegaderm or IV 3000 10x12cm
- Chlorhexidine cleaning solution 2% in alcohol 70 % eg chloraprepp
- If changing a biopatch you will need sterile gloves and a new sterile biopatch

Additional equipment may be required if there is debris between the securacath and the PICC close to the exit site:

- Sterile plastic forceps in order to access the small space between the PICC and the securacath to remove debris.



Procedure

Step by step guide to dressing a PICC

The ANTT key part to consider when dressing a PICC is the exit site of the PICC.

Please follow picture guidelines overleaf: Guide A.

For biopatch dressing please follow: Guide B

When problems occur with indentation from the securacath, please follow the picture guide for instructions on how to manage indentation. **Guide C.**

Guide A: Dressing a PICC with a Securacath using ANTT (Aseptic Non-touch Technique).



1. Wash hands. Clean tray and allow to dry. If in community open dressing pack to act as your tray.



2. Place **unopened** equipment in tray or dressing pack.



3. Put on non-sterile gloves and remove the semi-permeable dressing.



4. Take extreme care when removing dressing from the securacath. Hold onto securacath. Remove gloves.



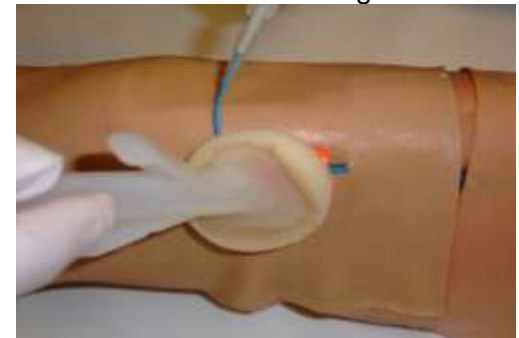
5. Put on pair of **non-sterile** gloves. If area between the PICC and securacath has debris, clean with forceps.



6. Clean the exit site thoroughly with the chloraprepp by dabbing the site.



7. Lift the PICC gently, cleanse the site beneath securacath



8 Dab the securacath itself with the chloraprepp giving it a thorough clean.



9. Make sure that you allow the chlorhexidine to dry for 2 mins.



10. When drying, make sure securacath is lifted **off** the skin!



11. Ensure the PICC loops without kinks prior to applying dressing



12. Ensure that the dressing has good contact with skin

Guide B: Dressing a PICC with a Securacath and biopatch using ANTT (Aseptic Non-touch Technique).



1. Wash hands thoroughly and clean tray with detergent wipes or use dressing pack as a tray in community.



2. Need: tegaderm, Chloraprep, non sterile gloves x 2 pairs; biopatch sterile gloves. Leave in packaging.



3. Put on **non-sterile** gloves, remove the tegaderm dressing. Hold the securacath!



4. Remove biopatch by separating the two parts either side of slit. Then remove your gloves!



5 Put on second pair of **non-sterile** gloves. Clean the exit site thoroughly with the chloraprep.



6. Lift the PICC gently, cleanse the site beneath securacath



7. Dab the securacath itself with the chloraprep giving it a thorough clean.



8. Let area dry for 2 mins making sure the securacath not touching the skin! Needs to dry underneath



9. Open pair of sterile gloves, open biopatch into sterile field.



10. Put on sterile gloves, ask pt to lift up PICC and place biopatch at site.



11. Place tegaderm onto the PICC. Ensure good contact with skin.



12. Ensure the PICC loops without kinks.

Guide C: Dressing a PICC with Securacath INDENTATION using ANTT (Aseptic Non-touch Technique).



1. Wash hands thoroughly and clean tray with detergent wipes or use dressing pack in community as tray



2. Need: Tegaderm/IV3000; sterile scissors; gauze; chloraprep; non-sterile gloves



3. Cleanse the PICC using the step by step guide for dressing a PICC.



4. Put on sterile gloves, using the sterile scissors cut two pieces out of the gauze.



5. Cut two small pieces.



6. Place one piece of gauze under the securacath.



7. Place the other piece **on top** of the securacath.



8. Place clear dressing over the PICC ensuring a nice curved PICC.



9. **Alternatively**, if excoriated skin use small piece duoderm.



10. Cover the duoderm with semi-permeable dressing.

Blood sampling from a PICC

Follow picture guide: guide E

The vacutainer system of collecting blood samples should be used with PICC lines.

The Procedure

The procedure for blood sampling from a PICC will be described using ANTT.

Equipment

Clean plastic tray or dressing pack

Detergent wipes/70% alcohol wipes to clean the tray

1 x pair of non-sterile gloves (powder free)

Sterile chlorhexidine 2% in alcohol 70% solution or swab (e.g Clinell)

Luer adaptor

Vacutainer holder/blood collection system

Blood bottles

1 x 10ml syringe

1 x 20ml syringe

20mls 0.9% sterile Sodium Chloride for IV use – additional volume in case flushing is required to aid blood return

Green or blue needle to draw up Sodium Chloride

Needle-free connector

Sharps bin

Procedure

- Wash hands thoroughly
- The ANTT key parts to consider when taking blood from a PICC are: The end connector or the end of the PICC (with end connector removed); the tip of the syringe; the tip of the needle; the part of the chlorhexidine swab that will clean the end connector and the luer adapter.
- Clean tray or open sterile pack
- Place the equipment on the clean tray or onto the dressing pack – **keep all within their packaging**
- Screw the luer adaptor onto the vacutainer holder firmly and leave the cover on loosely – leave in the tray or dressing pack
- If using a pre-filled sodium chloride syringe, open onto the clean tray
- Put on non-sterile gloves
- Open the 20ml syringe and needle packages and place the needle onto the syringe, open the saline vial/s and draw up the 20ml saline flush and dispel any air – you can hold on to the saline pod with your non-sterile gloved hand. Remove the needle and place the filled syringe back into the syringe packaging to protect until required.
- If the end connector needs changing – change prior to flushing. Remove old connector; hold onto the end of the PICC; open the clinell and cleanse the **very end** of the PICC using the chlorhexidine swab and leave to dry. Replace with new end connector.
- It is best practice to change the end connector **after** taking blood samples except when taking blood cultures – remove the end connector – take blood cultures and replace end connector. This is to prevent a build up of blood within the connector which increases the risk of infection.

- Open the 10ml syringe and place it onto the end of the PICC and withdraw 3 mls of blood from the PICC and discard. If the PICC fails to give a blood return, flush the PICC with saline and ask the patient to move position, take a deep breath or cough whilst attempting to get a blood return. If blood withdrawal remains absent, flush the PICC with 3-5mls of saline. See end note if problem persists. When using the saline syringe, place back within the syringe packaging to protect.
- If the end connector does not need to be changed hold the end of the PICC, open the clinell and clean the very end of the end connector thoroughly with the chlorhexidine/alcohol swab for at least 15 seconds and allow to dry. It is **imperative** that the solution is left to dry naturally for at least a minute. **Visually check that the end of the end connector is dry**
- Ensure that the PICC end connector does not touch any clothing – keep clean!
- Attach the luer adaptor firmly into the end of the PICC and take the blood bottles according to your local hospital order of draw. Invert the bottles of blood 5-8 times.
- Without delay, attach a syringe containing 20mls of 0.9% Sodium Chloride onto the end connector. Flush using a turbulent, (pulsating push pause) action, finishing with positive pressure. Positive pressure flushing means continuing to simultaneously flush as the syringe is removed from the end connector i.e the pressure of your thumb remains on the plunger as the syringe is removed from the end connector.
- Dispose of equipment as per area procedure, wash hands effectively and document.

Inability to withdraw blood

The following strategies can be initiated:

- Observe for kinks or damage to the PICC through the dressing
- Extend arm out to shoulder level
- Flushing briskly with a small amount of 0.9% Sodium Chloride before withdrawal using a turbulent action
- Ask the patient to lie flat
- Using a 20ml syringe with 5-10mls of saline use a 'push pull' method to try to obtain blood from the PICC

If none of the above leads successfully to blood withdrawal – **flush the PICC** and report to Hospital where insertion took place.

Guide E: Taking blood from a PICC using ANTT (Aseptic Non-touch Technique).



1. Wash hands thoroughly and clean tray with detergent wipes or use dressing pack in community



2. 10ml + 20ml syringe; green needle; non-sterile gloves; clinell; 20mls saline; luer adaptor and holder; end connector



3 Put on non-sterile gloves. Draw up 20ml saline, place back into the syringe packaging to protect.



4. Open the clinell.



5. If changing end connector, remove.



6. Cleanse the very end of the PICC thoroughly and leave to dry. Replace with a new end connector.



7. Observe end of the connector to ensure it is dry allow at least 30 sec



8. If not changing end connector – clean thoroughly with clinell for 15 seconds and leave to dry! Check!



9. Remove 10ml syringe from packaging and place in connector, withdraw and **WASTE** 3mls of blood
SW PICC Guideline: Updated June 2016



10. **Alternatively**; you can **WASTE** The first blood into a spare blood bottle (order of draw!) and discard..



11. Take samples using order of draw and invert bottles 5-8 times.



12. Flush the PICC using push pause turbulent flush + pos pressure

Dual Lumen PICCs

A Dual Lumen PICC refers to a PICC with two separate lumens within one catheter.

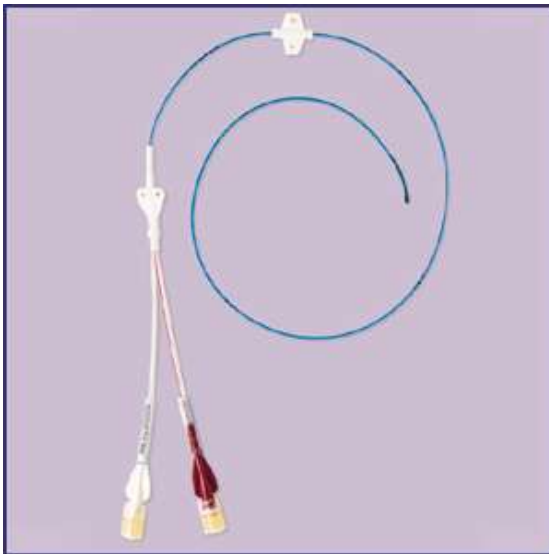
Each lumen of a Dual Lumen PICC should be treated separately in line with other multi lumen central catheters.

When not in use both lumens need to be flushed ONCE WEEKLY with 10mls 0.9% Sodium Chloride to maintain patency using a turbulent pulsating flush, and maintaining positive pressure as the syringe is removed. See flushing a PICC at the beginning of this document for further information.

As Dual Lumen PICCs have smaller lumens, they have an increased risk of occluding if not correctly flushed using the method described above. Flushing should be performed IMMEDIATELY after blood sampling, after each bolus injection or pump change.

Please note that if one lumen is attached to a chemotherapy pump, the other lumen will need to be flushed.

Nb: It is not possible to repair a double lumen valved PICC should a problem occur. Therefore it is vital that the dressing procedure is strictly adhered to, in order to reduce the risk of PICC migration.



When to refer to specialist centre/practitioner

Please refer any patient to the Hospital where the PICC was placed

1. Rigors or feeling cold after flushing or any history – urgent referral!
2. Pyrexia – temperature over 37.5 degrees
3. Leaking of fluid at the exit site or at any location along the external portion of the PICC.
4. Swelling redness pain or exudate at the exit site
5. Inability to flush the catheter, or blood cannot be withdrawn - persistent withdrawal occlusion (PWO)
6. Line migration i.e PICC looks shorter or longer
7. Signs and symptoms of thrombosis, i.e., swelling of the arm, neck or chest, discoloration of limb or bleeding at the exit site
8. Allergy to dressings

Troubleshooting

This section gives examples of problems and possible solutions. Further advice and complication management needs to be undertaken by experienced PICC complication trained nurses within secondary care. Patients will need to be referred to the hospital where the PICC was placed.

A. Unable to flush the PICC

Possible causes:

- Blood clot within the catheter lumen
- Mechanical obstruction
- Drug or mineral precipitate
- Lipid residue
- Blocked needle-free connector

The following actions should be taken:

- Ensure that the arm is straight
- Observe for any external kinks – change the dressing - look for kinks.
- Attempt to flush without exerting force
- If the PICC remains blocked contact experienced practitioner for same day referral

B. Unable to obtain a blood sample from the PICC

Possible causes:

- Fibrin sheath – a collection of coagulative matter at the tip of the line
- Movement of the tip of the PICC into a location other than the SVC
- Catheter tip resting close to the vein wall
- Valve malfunction
- Mechanical obstruction

The following action should be taken:

- Ensure that the arm is straight
- Observe for any external kinks – the dressing may need to be removed to aid close observation
- Flush the PICC with saline using a push pause method
- If no blood return - attempt to flush with saline using a push pull method, ending on a flush
- Change the position of the patient and encourage deep breaths
- If blood withdrawal is not possible, flush the PICC with 15mls of saline and inform the relevant Hospital where PICC was placed.

C. Leaking of fluid at the exit site or along the PICC

Possible tear in the PICC.

Do not remove the dressing – refer to experienced practitioner in the hospital.

D. The PICC looks shorter or longer

The following action should be taken:

- Measure the external length of the
- Compare with the initial insertion length which will be recorded in the discharge letter to the Community team or on canisc in Velindre
- If there is discrepancy, contact the relevant hospital for advice and leave the dressing intact

E. The patient is experiencing any of the following symptoms:

- Pain in the arm shoulder, neck or chest
- Redness, swelling, exudate or pain at the exit site
- Swelling of the hand, arm, neck or shoulder
- Redness tracking up the arm
- Pyrexia or rigor post PICC flush

Referral to the Hospital responsible for the patient's care should be made whenever any of the symptoms above are present.

Equipment required to care for a PICC in the community.

Please order the following equipment:

1. **Tegaderm 10 x 12cm** (1626W) from 3M – on Welsh contract in Bridgend or if allergic to Tegaderm: IV 3000 dressing – on FP10
2. **End connectors:** either of the following:
 1. Swan Locks (currently used in Velindre) from Codan Ltd. Tel: 0118978663. Product code: 165267. Cost £56 per box 100.
 2. Bionectors (Needle-free end connectors): CAN BE PURCHASED FROM VYGON – Tel: 01285657051. Product Code: 896.03 Need to order the soft pack type
3. **Chloraprep 3ml:** Chlorhexidine cleansing agent for **exit site** of PICC – 3ml recommended
Company: Insight Health Ltd. Phone: 02083850303.
Product code: 3ml: 270400 Cost: £11 for pack of 20.
4. **Chlorhexidine 2% swabs in 70% alcohol** (Clinell): Chlorhexidine cleansing agent for **hub** of PICC line.
From: BM Browne, Pincets Kiln Industrial Park, Calcot, Reading.
Tel: 01189305333.
5. **Dressing packs – if required**
6. **Non-sterile gloves**
7. **Green needles - 21gauge**
8. **10 ml syringes – SIDE TIP**

Thank you.

M. Hughes. IV Access Sister
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Appendix I

ANTT – aseptic non-touch technique

Healthcare associated infection (HCAI) remains high on the agenda of the government agencies. These infections affect an estimated 100,000 people, resulting in 5,000 to 15,000 deaths and cost the National Health Service (NHS) in excess of £1 billion a year. It is also estimated that 30% of HCAIs are in fact preventable; therefore, effective prevention and control of infection needs to be embedded into everyday clinical practice (DH, 2005; DH, 08; National Audit Office, 2009).

In 2000, the National Audit office reported ‘unsatisfactory levels of compliance with hygiene standards’ and ‘a lack of adherence to hand-washing procedures’, recommending that staff apply ‘rigorously and consistently the measures known to be effective in reducing risks of healthcare associated infections’ (National Audit Office, 2009). The ANTT framework was developed at University College Hospital in London in the mid 90’s in order to raise clinical standards and standardise aseptic clinical practice. Over the years it has evolved to divide into standard and surgical aseptic technique and is endorsed by the Department of Health Saving lives: a delivery programme to reduce healthcare associated infection including MRSA (2005).

EPIC3: National evidence-based guidelines for preventing catheter-related healthcare-associated infections in NHS hospitals in England (2014) and the Royal College of Nursing Standards for infusion therapy (2010) advocate ANTT as an example of how to improve and standardise clinical practice whilst performing invasive procedures (Loveday et al 2014, Rowley 2001; DH, 2005; RCN, 2010).

ANTT incorporates the essential infection control measures in preventing pathogenic micro-organisms on hands, surfaces or equipment from being introduced to susceptible sites during clinical practice (RCN, 2010; Rowley, 2001).

Terminology

Key parts

Any part of a piece of equipment used during aseptic technique that will increase the risk of infection if contaminated by infectious material. Examples include: cannulae tip, injectable ports, hubs of catheters, syringe tip, needles, vacutainer needle/connector, giving set spike, vials, central venous catheters (CVCs), urinary catheters (Rowley, 2010).

Key site

The area on the patient for the procedure (e.g. insertion site, skin, wound) (Rowley, 2010).

Non-Touch Technique

Pathogenic organisms can not always be removed by effective hand washing. Therefore, a non touch-technique (i.e. being able to identify the ‘key-parts’ and not touching them either directly or indirectly) is perhaps the single most important component of achieving asepsis (Rowley, 09).

Asepsis

The complete absence of bacteria, fungi, viruses or other micro-organisms that could cause disease (Merriam-Webster, 2010).

Aseptic field

A clean working environment and an aseptic field are essential precautions for all clinical procedures.

Aseptic Non Touch Technique

A standardised aseptic technique where staff are taught to identify and protect the keyparts of any procedure, perform effective hand hygiene, institute a non-touch technique, wear only the appropriate personal protective equipment according to the type of procedure.

Aseptic Technique

A method developed to ensure that only uncontaminated objects/fluids make contact with sterile/susceptible sites. It is performed in the 'effort to keep a patients as free from hospital micro-organisms as possible' and unlike sterile techniques, aseptic technique is achievable in typical wards / home (Rowley, 01).

Invasive procedure

A medical procedure that invades (enters) the body, usually by cutting or puncturing the skin or by inserting instruments into the body cavity.

ANTT improves aseptic technique by:

- Promoting staff awareness and understanding of the various terms associated with asepsis and aseptic practice.
- Promoting awareness and understanding of the key-parts/key sites and how to protect them.
- Providing a step by step clinical guideline of best practice, helping to establish a safe, standardised aseptic technique for clinically invasive procedures.
- Promoting staff to perform effective hand hygiene, wear the appropriate protective clothing and institutes a non-touch technique.
- Providing an audit cycle whereby staff are trained and re-trained on an ongoing basis, promoting sustainability.
- Developing a culture of peer pressure, which in itself helps promote standardised and safe practice.

Performing ANTT

The ANTT step by step clinical guidelines are designed to allow the practitioner to:

- ensure effective hand decontamination is undertaken
- ensure appropriate personal protective equipment is used
- assess need for sterile/non-sterile gloves
- ensure effective decontamination and preparation of the aseptic field
- identify and protect the key parts during a procedure
- institute a non-touch technique

ANTT Rationale

ANTT aims to prevent the contamination of wounds and other susceptible sites, by ensuring that only uncontaminated equipment, referred to as 'key parts' come into contact with susceptible or sterile body