Reference Number: UHB 450 **Version Number:** 2	**Date of Next Review:** *01/05/2026* **Previous LHB Reference:** UHB 450 **Number:** 1

Parenteral Nutrition
Procedures for Adult Patients

Introduction and Aim

These procedures provide essential guidance in the delivery of care for a patient receiving Parenteral nutrition. The procedures aim to enhance the patient's experience, standardise practice and minimise the risk of patient harm.

Objectives

- To standardise the procedures for the administration of Parenteral Nutrition and ongoing care of a Peripheral and Central Venous Catheter in patients receiving Parenteral Nutrition
- To ensure adherence to the national Aseptic Non-Touch Technique

Scope

These procedures apply to all staff deemed competent in the care and management of an adult patient receiving Parenteral Nutrition.

Equality and Health Impact Assessment	An Equality and Health Impact Assessment (EHIA) has been completed and this found there to be no negative impact. Key actions have been identified and these can be found incorporated within this procedure.
Documents to read alongside this Procedure	Consent to Examination or Treatment policy Mental Capacity Act ANTT Practice Framework and All Wales ANTT policy UHB Hand Hygiene Procedure The Medicines Management Policy (2018) 1000 Lives Plus: 2013: Reducing Health Care Associated infections: the appropriate and timely use of invasive devices EPIC3: National Evidence Based Guidelines for Preventing Healthcare-Associated Infections in NHS Hospital in England RCN Standards for Infusion Therapy (2016)
Approved by	Nursing and Midwifery Board

Accountable Executive or Clinical Board Director	Executive Nurse Director
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Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the Governance Directorate.

Summary of reviews/amendments

Version Number	Date of Review Approved	Date Published	Summary of Amendments
1	11/04/19	07/05/19	New standardised PN procedures
2	1/05/2023	12/09/23	Revision of existing procedures and update of equipment Addition of procedures for administering PN via a PICC. Approved by NMB.

1. Introduction

Parenteral Nutrition (PN) is nutrition administered directly into the bloodstream via an intravenous catheter. The most prevalent risk associated with PN feeding is an infection of the intravenous catheter used to administer PN. Patients requiring parenteral nutrition are usually short-term (Intestinal Failure type 1) and administered as inpatients. Patients with Intestinal Failure type 2 and 3 are required for longer periods, sometimes lifelong and patients are discharged into the community either self-caring or with nursing support. The Nutrition Support team like to promote independence and autonomy and therefore provide the service to train patients to perform their own catheter care and administer feeds at home. A full multidisciplinary risk assessment must be made and documented, before a patient requiring PN feeding via a central catheter is discharged from acute care to community and before delegation of care.

2. Statement

These procedures have been produced to support staff to administer PN and maintain the catheter, including routine care such connection, disconnection and dressing changes and specialist care such as blood sampling.
The procedures demonstrated in this document are in line with the All Wales Policy for Aseptic Non Touch Technique (ANTT).

3. Aim

To standardise procedures in PN administration to maintain patient safety and minimise the risk of patient harm.

4. Objectives

To standardise the procedures for the administration of Parenteral Nutrition and ongoing care of a Central Venous Catheter in patients receiving Parenteral Nutrition.
To ensure adherence to the national Aseptic Non-Touch Technique.

5. Competence, accountability and responsibility

5.1 Registered Practitioners

All professionals undertaking this procedure must be appropriately trained and competent registered practitioners, that is:

- Registered Adult Nurse

The registered healthcare professional must:
1. Have undertaken training by the PN Nutrition Nurse Specialists
2. Have undertaken supervised practice with a registered practitioner who is competent in this skill

3. Have been assessed as competent in performing these procedures
4. Keep a documented record of their competence/sign off
5. Update their practice every 3 years (to include a one off assessment of competence)

The practitioner is accountable for their own practice. Evidence of continuing professional development and maintenance of competence level will be required.

5.2 Students

Student nurses and Medical students are not authorised to undertake this skill.

5.3 Patients and relatives

Patients and relatives/other carers - i.e. spouse, carer, involved in the patient's care can undertake this procedure if they have been trained by a Nutrition Nurse Specialist or Home Care Company Nurse and have been assessed as competent.

6. Consent

Informed verbal consent for the procedure must be sought under the guidance of the UHB Consent to Examination or Treatment Policy. (Section 8.8, 8.6 deals with treatment of children and *Gillick Competence)*. Please refer to the Mental Capacity Act toolkit (UHB Mental Capacity Act intranet page) for guidance on how to assess mental capacity if you suspect the patient does not have the capacity to provide their consent and the actions to be taken e.g. a best interest decision. Please use the documentation provided in the Mental Capacity Act Toolkit to document mental capacity assessments and best interest decisions.

7. Contraindications

The practitioner should apply clinical judgement and expertise combined with these procedures in deciding if it is safe to perform them, for example assessing for a damaged line.

Individual patients must be assessed by the multidisciplinary team as there may be a contraindication for the commencement of PN such as refusal on religious beliefs or allergy to eggs.

8. Administration

Practitioners are permitted to administer intravenous medicines provided they have received UHB delivered or endorsed appropriate education, training and assessment of competence. All intravenous medicines and fluids should be prepared and administered in accordance with Cardiff and Vale UHB approved local procedures.

Administration of intravenous medication requires two registrants, which is recommended practice to reduce the risk of adverse drug events in accordance with The Medicines Management Policy (2018).
Before administering any Parenteral Nutrition, consult the patient's prescription chart (Check PN prescription on blue PN chart or HPN chart corresponds to PN bag/attached sticker)

- Patient identity
- Patient allergies
- Dose/rate
- Date and time of administration
- Route and method of administration
- Validity of prescription
- Signature of prescriber

Parenteral Nutrition should come to room temperature, this can be achieved by taking the feed out of the fridge 1-2 hours before the procedure. Check the bag has the correct patient identifiable data, is within the expiry date and has no leaks or noticeable particles. Cover to protect contents from light.

9. Documentation

The practitioner administering the medication must record the administration as soon as possible after the event. This includes completing the surveillance (Appendix 1) and fluid balance chart and ensuring both registrants sign the prescription chart.

10. Resources

This procedure is a revision of existing guidelines within the UHB. There are specific resources required for implementation. All equipment required is available via CSSD or the Adult Nutrition Support Team.

11. Training

The Adult Nutrition Support Team provide general education and training, and the PN Nutrition Support Nurses and ward cascade trainers undertake the training and assessment of the PN procedures. This training is open to qualified nursing staff and is arranged by contacting them and arranging a mutually convenient time to attend a formal study session and then train in the ward environment. It is the responsibility of the Ward Sister/Charge Nurse to ensure PN is administered to patients when PN is prescribed and is readily available for administration on the ward. It is the responsibility of the Ward Sister/Charge Nurse to delegate PN procedures to the ward staff to ensure

PN is administered. When delegating procedures to other members of staff or patient/relatives:

Nurses must be accountable for their decisions to delegate tasks and duties to other people as per the NMC Code of Conduct (2018).
To achieve this, you must:
11.1 only delegate tasks and duties that are within the other person's scope of competence, making sure that they fully understand your instructions
11.2 make sure that everyone you delegate tasks to is adequately supervised and supported so they can provide safe and compassionate care, and
11.3 confirm that the outcome of any task you have delegated to someone else meets the required standard.

12. Responsibilities

Healthcare professionals must ensure that they have undertaken the required training and assessment of competence prior to them being involved with PN procedures.

Individual PN designated wards are responsible for implementing the procedures. The Adult Nutrition Support Team will continue to provide the training and support of staff undertaking the PN procedures in adults.
Incident forms must be completed for non-compliance with this procedure or other adverse events associated with their use e.g. catheter related infections, and the incident escalated through the appropriate directorate channels. Serious clinical incidences must be escalated to the Patient Safety and Quality Department e.g. feeding via a damaged line.

13. Implementation

The procedure will be circulated to all PN designated wards and will be available on the UHB Intranet site. Adherence to the procedure will be audited on an ad hoc basis by the Nutrition Support Team. It is encouraged that directorates include this to their audit calendars as appropriate.

14. Equality and Health Impact Assessment

An Equality and Health Impact Assessment has been undertaken to assess the relevance of this procedure to equality and potential impact on different groups, specifically in relation to the General Duty of the Race Relations (Amendment) Act 2000 and the Disability Discrimination Act 2005 and including other equality legislation. The assessment identified that the procedure presented a low risk to the UHB.
The Equality and Health Impact assessment can be found in Appendix 3.

Hand hygiene procedures

Hand washing

This is the single most important step in avoiding a line infection therefore the UHB Hand Hygiene Infection Control Procedure must be followed at all times.

All staff present in a clinical environment MUST adhere to the following principles of Bare Below the Elbows to enable effective hand hygiene:

- Wear short sleeves (rolled up sleeves are acceptable), or elbow length sleeves.
- No wrist watches or bracelets to be worn.
- Keep nails short and clean.
- Artificial nails and nail varnish must not be worn.
- One plain band ring can be worn.
- Any cuts and abrasions on hands and arms should be covered with a non-permeable dressing.

Technique

- If a ring is worn, either remove it or ensure that the area underneath is washed.
- Turn on taps. Adjust water temperature and flow to desired settings.
- Wet hands under running water.
- Apply soap to hands. Utilise the technique illustrated on the hand washing posters and shown on page 10.
- Ensure all areas of the hands are covered, including the wrists and forearms if applicable.
- Pay particular attention to fingertips, nails, thumbs and the area between the fingers.
- All areas of the hands and wrists should be vigorously rubbed. Rinse hands under running water.
- Dry hands with disposable paper towels. Use a used or new paper towel to turn off the running water then discard.
- Dispose of the paper towels using the foot pedal on the bin, ensuring that hands are not re-contaminated in the process.

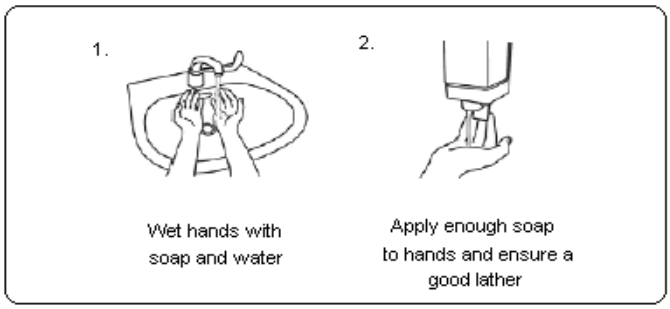
Alcohol hand gel

This is used during the procedures in addition to hand washing. Utilise the technique illustrated on the hand washing posters and shown on page 10.

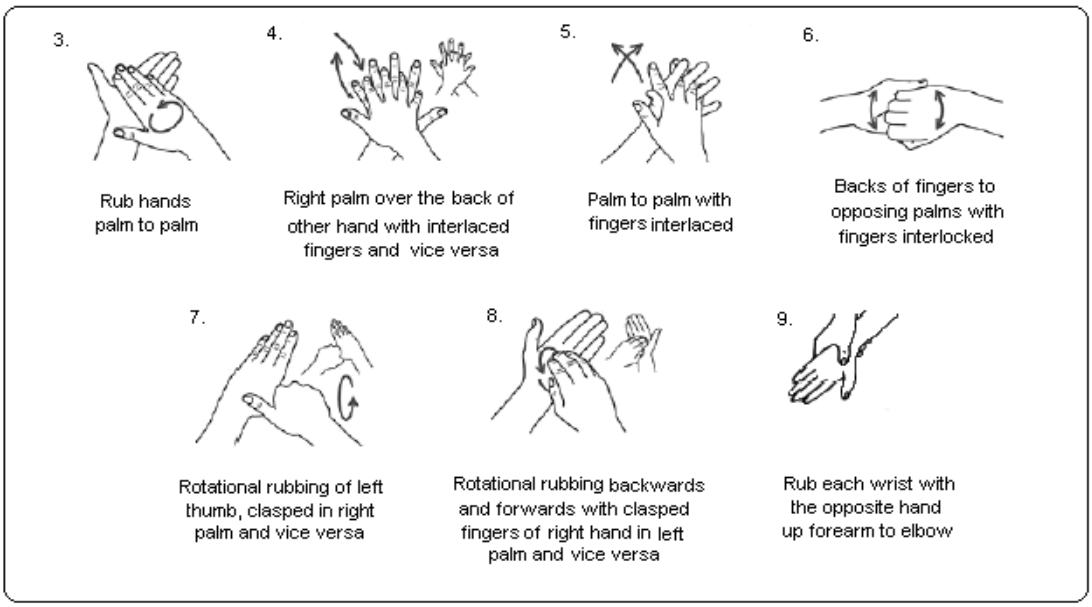
- Ensure it is rubbed into all area of the hands.
- Allow alcohol to evaporate fully so that hands are completely dry.

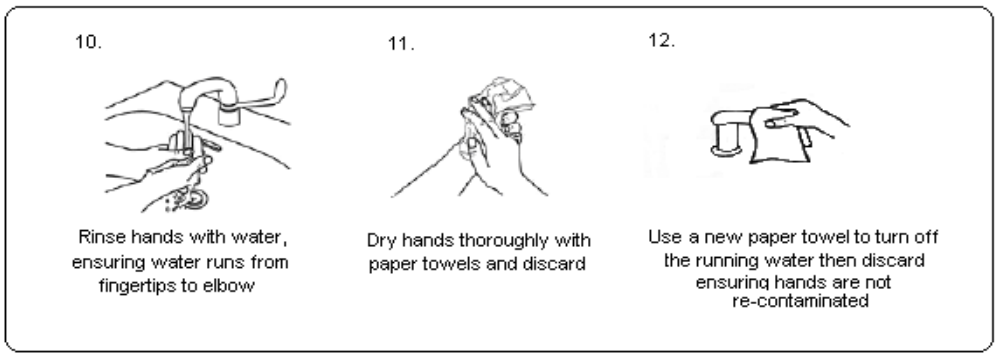
Skin Care: Report any skin irritation to the Occupational Health Department

Handwashing Technique for Parenteral Nutrition Procedures



The Steps Below should Take 40- 60 seconds





National Patient Safety Agency (2008) Hand Cleaning Techniques. How to Hand Wash? With soap and water. www.npsa.nhs.uk/cleanyourhands

Cardiff and Vale University Health Board (2013) Infection Control Procedure for Hand Decontamination.

Welsh Healthcare Associated Infection Programme. National Model Policies for Infection Prevention and Control. part 1: Standard Infection Control Precautions. (2014). Public Health Wales.

Trolley and equipment Preparation for All Procedures

Prior to use, the trolley must be cleaned according to the Aseptic Non Touch Technique (ANTT) Approach.

When starting your preparation, wash your hands and then clean work surfaces and procedure trolley with Clinell Universal Sanitising Wipes. Do not scrub surfaces, firmly wipe over each part of the surface once using an S shaped movement and work from the top to the bottom of the trolley.

Leave to air dry.

Sterile field

A Critical Aseptic Field should be used at all times to ensure key-sites and key parts are protected.

Key-Sites: are open wounds, including insertion and puncture sites.

Key-Parts: are the parts of the procedure equipment or medical devices that come into direct or indirect contact with Parenteral Nutrition (PN) feed e.g. needle free device, syringe.

'Key-Parts and Key-Sites provide a direct route for the transmission of pathogens into the patient.'

Key-Parts and **Key-Sites** must only come into contact with other **active aseptic Key-Parts or Key-Sites or sterile liquid infusions.**

For IV infusions the key parts will be the whole infusion from the bag of fluid, the giving set, needle-free device and central venous line.

Key-Parts may be **active or non active**. For example, an IV port not in use is inactive. Non active key-parts must be rendered aseptic prior to use by cleaning and disinfecting.

Scrub the Hub

Needle free devices (e.g. Bionector or Clave) on cannulas or lines and the necks of ampoules/vials should be disinfected by performing a minimum 15 second scrub with friction using a Clinell wipe (2% chlorhexidine, 70% alcohol) and allowed to dry for 30 seconds.

Pre- Connection Procedure

1. Ensure the intravenous access device is safe to use and position is documented in the medical notes before administering Parenteral Nutrition.
2. A single lumen catheter should be used for the administration of Parenteral Nutrition. If a multi-lumen catheter is used, Parenteral Nutrition should be administered via a dedicated lumen kept exclusively for this purpose and strict Aseptic Non Touch Technique implemented when handling the line.
3. To bring the Parenteral Nutrition to room temperature, take the feed out of the fridge 1-2 hours before the procedure. Check the bag has the correct patient identifiable data, is within the expiry date and has no leaks or noticeable particles. Cover to protect contents from light.
4. The bag can then be 'hung' on the drip stand or placed on the work surface in the treatment room until ready to administer.
5. All IV medication should be checked with a second nurse.
6. Before administering any Parenteral Nutrition, consult the patient's prescription chart (Check PN prescription on blue PN chart or HPN chart corresponds to PN bag/attached sticker). Both nurses should check:
    a. Drug
    b. Dose/rate
    c. Date and time of administration
    d. Route and method of administration
    e. Validity of prescription
    f. Signature of prescriber
    g. Patient identity
    h. Patient allergies

Connection Procedure (CVC or Broviac)

Equipment

Trolley and large Clinell Universal wipes **(only used for trolley preparation)**

Giving set

Filter (1.2 µm)

Dressing pack

1 pair sterile gloves

1 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)

Small Clinell wipes (2% Chlorhexidine, 70% Alcohol)

Alcohol gel

Disposable apron

Pump

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Open all items onto the sterile field (keep one clinell wipe in tray).
9. Using the remaining clinell wipe, clean port on bag; remove cap and discard.
10. Expose line and assess site.
11. Wash and dry hands. Put on sterile gloves.
12. Open out clinell wipes and sterile field if you wish.
13. Hold a clinell wipe in each hand. Use one to hold up the line and the other to clean down the line.
14. Remove and discard swabcap, whilst keeping line elevated (only touching line with a wipe). Use a clean wipe to clean the end of the needle free device.

15. Attach sterile drape to chest, keeping line elevated. Drop line onto sterile drape and discard wipes.
16. Expel airlock from saline posiflush, connect to line. Unclamp the line.
17. Using a push-pause technique, flush the line. As the last 1ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.
18. Attach the filter to the giving set and ensure the giving set clamp is closed.
19. Using gauze to hold the port, insert giving set spike into port of PN bag.
20. Prime the giving set and filter ensuring all air is expelled. Clamp the giving set.
21. Remove the end cap of the giving set and connect to the needle free device.
22. Remove gloves and alcohol gel hands.
23. Thread the giving set into the pump as per manufacturer's guidance.
24. Switch on the infusion pump and set the required volume to be infused over the required time.
25. Unclamp the line and start the infusion.
26. Dispose of all waste as per UHB policy.
27. Wash hands.
28. Complete surveillance form, prescription chart, fluid balance chart and record procedure and any concerns in the medical notes. If white sticker available on TPN bag, please stick in medical notes.

Disconnection Procedure (CVC or Broviac)

Ensure the line is clamped after the feed has finished. The line must be flushed with 10ml of Sodium Chloride (0.9%) as soon as the feed is stopped to avoid the risk of blockage. Resistance when flushing the line is an early sign of impending blockage. If resistance is felt, do not exert excessive pressure as this may cause the line to rupture. Please inform the Nutrition Support Team.

Equipment

Trolley and large Clinell Universal wipes **(only used for trolley preparation)**

Dressing pack

1 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)

Small Clinell wipes (2% chlorhexidine, 70% alcohol)

Alcohol gel

1 pair sterile gloves

Disposable apron

Swabcap

Procedure

1. Prepare the patient for the procedure: explain procedures and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. Open all remaining items onto the sterile field.
10. Expose line and assess line site.
11. Wash and dry hands. Put on sterile gloves.
12. Open out clinell wipes and sterile field if you wish.

13. Hold a clinell wipe in each hand. Use one to hold up the line, use the other to clean down the line (only touching line with a wipe). Disconnect giving set, discard set and wipe. Keep the line elevated.
14. Use a clean wipe to clean the end of the needle free device. Attach sterile drape to chest.
15. Drop line onto sterile drape and discard wipes.
16. Expel airlock from saline posiflush, connect to line.
17. Unclamp the line.
18. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.
19. Peel off the tab of the Swabcap and attach to the end of the needle free device.
20. Remove gloves and alcohol gel hands.
21. Dispose of all waste as per UHB policy.
22. Wash hands.
23. Complete surveillance form, prescription chart, fluid balance chart and record procedure and any concerns in the medical notes.

Alcohol flush, Needle Free Device and Dressing change procedure (Broviac lines)

This is usually done together once a week and can be completed as part of the disconnection procedure.

Flushing the line with alcohol reduces the risk of blockage and infection and is used for tunnelled lines only. Occasionally it may be used more frequently if advised by the NST, and must be omitted if the patient is prescribed the antibiotic Metronidazole.

The needle free device reduces the risk of infection. Occasionally it is changed more frequently e.g. if blood is taken from the line.

The dressing helps to secure the line and reduces the risk of infection. It should be covered when showering and changed if loose, wet or soiled.

Chloroprep should only be used once a week (an alternative, such as povidone iodine in alcohol should be used in patients with chlorhexidine allergy). If the dressing is changed more frequently, sodium chloride (0.9%) should be used to avoid skin irritation.

Equipment

Trolley and large Clinell Universal wipe **(only used for trolley preparation)**

Dressing pack

2 pairs sterile gloves

2 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)

Chloroprep 2% one-step applicator (3 ml)

Transparent dressing

Needle free device

Swabcap

10 ml syringe

Red blunt fill needle

10 ml alcohol (20%) vial (Broviac only)

Small Clinell wipes (2% Chlorhexidine, 70% Alcohol)

Alcohol gel

Disposable Apron

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. Using clinell wipe, clean alcohol vial thoroughly, drop onto sterile field and discard wipe.
10. Open all remaining items onto sterile field.
11. Expose line and assess line site.
12. Wash and dry hands. Put on sterile gloves.
13. Open out clinell wipes and sterile field if you wish.
14. Hold a clinell wipe in each hand. Use one wipe to hold up the line and the other to clean down the line (only touching line with a wipe). Disconnect giving set, discard set and wipe. Keep the line elevated.
15. Use a clean wipe to clean the end of the needle free device.
16. Attach sterile drape to chest. Drop line onto sterile drape and discard wipes.
17. Expel airlock from saline posiflush and connect to line.
18. Unclamp the line.
19. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.
20. Draw up 5 ml of alcohol using the red blunt fill needle and syringe. Remove needle and discard safely.
21. Attach the syringe to the needle free device. Flush the alcohol slowly over 2 – 3 minutes. Clamp the line and discard syringe.
22. Remove the needle free device. Keep the line elevated and off the sterile drape and clean the end of the line using a clinell wipe. The line can now be dropped onto the sterile drape. Discard clinell wipe. Allow line to dry.

23. Attach saline posiflush to new needle free device, expel airlock, then attach to line.
24. Unclamp the line.
25. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, clamp the line to provide positive pressure. Discard syringe.
26. Peel off the tab of the Swabcap and attach to the end of the needle free device.
27. Gently loosen and remove dressing. Be mindful not to pull the line from the skin.
28. Discard dressing and remove gloves.
29. Put on second pair of sterile gloves.
30. Pick up Chloroprep applicator and activate by squeezing the wings and pointing downwards.
31. Clean the skin around the exit site. Discard the applicator and allow to dry for 30 seconds.
32. Pick up the new dressing and remove the backing paper, ensure site is protected and visible through the new dressing. If re-dressing a Broviac line, position line using a loop and apply dressing to cover the exit site and loop. Dressing should be fixed well with no trapped air.
33. Remove gloves and alcohol gel hands.
34. Dispose of all waste as per UHB policy.
35. Wash hands.
36. Complete surveillance form, prescription chart, fluid balance chart and record procedure and any concerns in the medical notes.

Blood Sampling Procedure for Biochemistry

This can be done as part of the procedures above. If bloods are required after disconnecting an infusion there must be a minimum of 5 minutes after the infusion is completed prior to taking blood sample. Check the patient's ID against the blood form before you commence the procedure.

Equipment

Trolley and large Clinell Universal wipe **(only used for trolley preparation)**

Dressing pack

1 pair Sterile gloves

2 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)

Needle free device

Swabcap

10 ml syringes (as many as appropriate for blood tests required +1 additional for discard)

Red blunt fill needle

Appropriate blood bottles

Small Clinell wipes (2% Chlorhexidine, 70% Alcohol)

Alcohol gel

Disposable Apron

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. Clean the blood bottles with a clinell wipe, taking extra care to clean the neck and top of the bottles, and place onto edge of sterile field. Discard clinell wipe.

10. Open all remaining items onto the sterile field.
11. Expose line and assess line site.
12. Wash and dry hands. Put on sterile gloves.
13. Open out clinell wipes and sterile field if you wish.
14. Hold a clinell wipe in each hand. Use one wipe to hold up the line and the other to clean down the line (only touching line with a wipe). Remove Swabcap/giving set and discard. Keep the line elevated.
15. Use a clean wipe to clean the end of the needle free device.
16. Attach sterile drape to chest. Drop line onto sterile drape and discard wipes.
17. Connect a 10 ml syringe to needle free device on end of line.
18. Unclamp line. Take 3 -5ml ml of blood, disconnect syringe and discard as this will be mixed with saline/feed.
19. Using another syringe, withdraw appropriate amount of blood from line for sampling and disconnect syringe.
20. Connect syringe to the red blunt needle, and insert sample into relevant blood bottles, according to Manufacturers recommended order of draw. Invert/agitate bottles as per manufacturer's direction.
21. Expel air lock from saline posiflush and connect to line.
22. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.
23. Remove the needle free device. Keep the line elevated and off the sterile drape and clean the end of the line using a clinell wipe. The line can now be dropped onto the sterile drape. Discard clinell wipe.
24. Attach saline posiflush to new needle free device, expel airlock, then attach to line.
25. Unclamp the line.
26. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, clamp the line to provide positive pressure.
27. Discard syringe.
28. Peel off the tab of the Swabcap and attach to the end of the needle free device.
29. Remove gloves and alcohol gel hands.

30. Dispose of all waste as per UHB policy.
31. Wash hands.
32. At the bedside, recheck patient identity, label blood samples and forms. If all correct, send to the laboratory according to UHB policy.
33. Complete surveillance form, and record procedure and any concerns in the medical notes.

Blood Culture Procedure

This can be done as part of the procedures above. If blood is being collected for biochemical sampling and cultures at the same time, the culture bottles should always be filled first to prevent cross contamination from other blood bottles. Check the patient's ID against the blood form before you commence the procedure.

Equipment

Trolley and large Clinell Universal wipe **(only used for trolley preparation)**
Dressing pack
1 pair Sterile gloves
2 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)
Needle free device
Swabcap
20 ml syringe
Red blunt fill needle
Blood culture bottles
Small Clinell wipes (2% Chlorhexidine, 70% Alcohol)
Alcohol gel
Disposable Apron

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. Place the blood culture bottles at the edge of the sterile field. Using clinell wipes, clean the neck and lid of the bottles. Take off lids. Discard wipes.

10. Open all remaining items onto the sterile field.
11. Expose line and assess line site.
12. Wash and dry hands. Put on sterile gloves.
13. Open out clinell wipes and sterile field if you wish.
14. Hold a clinell wipe in each hand. Use one to hold up the line, use the other to clean down the line (only touching line with a wipe). Remove Swabcap/giving set and discard. Keep the line elevated.
15. Use a clean wipe to clean the end of the needle free device.
16. Attach sterile drape to chest. Drop line onto sterile drape and discard wipes.
17. Hold the blue lid culture bottle with gauze. Thoroughly clean access port with a clinell wipe. Allow to dry. Repeat for gold bottle with clean wipe.
18. Connect 20 ml syringe to needle free device.
19. Unclamp line. Withdraw 20 ml of blood and disconnect syringe. This will be used as the sample for the culture bottles.
20. Connect syringe to red blunt needle and insert the needle into the AEROBIC bottle first (blue top). Release 10 ml and withdraw needle.
21. Insert needle into the ANAEROBIC bottle second (gold top) and release remaining 10ml.
22. Expel air lock from saline posiflush and connect to line.
23. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.
24. Remove the needle free device. Keep the line elevated and off the sterile drape and clean the end of the line using a clinell wipe. The line can now be dropped onto the sterile drape. Discard wipe.
25. Attach saline posiflush to new needle free device, expel airlock, then attach to line.
26. Unclamp the line.
27. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, clamp the line to provide positive pressure. Discard syringe.
28. Peel off the tab of the Swabcap and attach to the end of the needle free device.
29. Remove gloves and alcohol gel hands.

30. Dispose of all waste as per UHB policy.
31. Wash hands.
32. At the bedside, recheck patient identity, label blood samples and forms. If all correct, send to the laboratory according to UHB policy.
33. Complete surveillance form, and record procedure and any concerns in the medical notes.

Drug Line Lock Procedure (vial or pre-filled syringe)

Equipment

Trolley and large Clinell Universal wipe **(only used for trolley preparation)**

Dressing pack

1 pair sterile gloves

1 x 10 ml sterile pre-filled sodium chloride (0.9%) syringe (saline posiflush)

Swabcap

Small Clinell wipes (2% Chlorhexidine, 70% Alcohol)

Alcohol gel

Disposable Apron

Vial equipment

Medication vial

Water for injection or saline ampoule if reconstitution required

10 ml syringe

Red blunt needle/filtered needle as appropriate

Or pre-filled medication syringe

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. If using medication vial, clean the vial and water for injection/saline ampoule thoroughly with clinell wipes, taking extra care to clean the neck and top of the bottles, then drop onto sterile field. Discard Clinell wipe.

   If using pre-filled medication syringe, handle with gauze/clinell wipes as it is not sterile.

10. Open all remaining items onto sterile field.
11. Expose line and assess line site.
12. Wash and dry hands. Put on sterile gloves.
13. Open out clinell wipes and sterile field if you wish.
14. Hold a clinell wipe in each hand. Use one to hold up the line, use the other to clean down the line (only touching line with a wipe). Remove Swabcap/giving set and discard. Keep the line elevated.
15. Use a clean wipe to clean the end of the needle free device.
16. Attach sterile drape to chest. Drop line onto sterile drape and discard wipes.
17. If lock in line, aspirate 3ml and discard.
18. Expel airlock from saline posiflush and attach to line.
19. Using the push-pause technique, flush the line. As the last 1 ml is being flushed, close the line clamp to provide positive pressure. Discard syringe.

(If using pre-filled medication syringe, skip steps 20 and 21).

20. Using the 10 ml syringe and needle, reconstitute the medication with the water for injection/saline as (and if) directed by prescription.
21. Obtain the correct volume and dose required as per prescription in the 10 ml syringe and remove the needle, discarding safely.
22. Attach the syringe containing the medication to the end of the needle free device on the line.
23. Unclamp line.
24. Slowly inject the medication solution into the line – as the last 0.5 ml is injected, clamp the line to provide positive pressure and to ensure the medication is ‘locked’ in the line. Discard syringe.
25. Peel off the tab of the Swabcap and attach to the end of the needle free device.
26. Remove gloves and alcohol gel hands.
27. Dispose of all waste as per UHB policy.
28. Wash hands.
29. Complete surveillance form, prescription chart, fluid balance chart and record procedure and any concerns in the medical notes.

PICC Line Procedures

PICC Line Safety

When giving TPN or any IV therapy through a PICC line there are some safety checks you must perform. Look at the radiology PICC care plan or welsh clinical portal for the external measurement at insertion and then observe the PICC measurements on the line: count from zero inwards towards the body, each white dot is 1cm. The insertion measurement should also be stated on the top of the surveillance form. If the line has displaced by more than 2cm from the insertion measurement, do not use the line and promptly ask your nutrition nurse or ward doctor for advice. You must also check for a blood aspirate and flush well before giving anything through the PICC line. If you are unable to obtain a blood aspirate contact your nutrition nurse/ward doctor for advice.

Flushing a PICC Line

PICC lines require double flushing as their internal diameter is narrow and prone to block. Use the push-pause technique. As last the 1ml is being flushed, close the line clamp to provide a positive pressure.

Clamping a PICC Line

Certain brands of PICC lines have clamps, others do not. If you are caring for an unclamped PICC, this will have an internal clamp. Flush the line well and twist off syringe to provide positive pressure.

Disconnecting PN from a PICC

Equipment

Trolley and large Clinell Universal wipes **(only for trolley preparation)**

Dressing pack

2 x 10 ml sterile pre-filled sodium chloride (0.9%) syringes (saline posiflushes)

Small Clinell wipes (2% chlorhexidine, 70% alcohol)

Alcohol gel

1 pair sterile gloves

Disposable apron

Swabcap

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap using a clinell wipe and drop onto sterile field. Discard wipe.
9. Open all remaining items onto sterile field.
10. Expose line and assess line site; check measurements.
11. Wash and dry hands. Put on sterile gloves.
12. Open out wipes and sterile field if you wish.
13. Hold a clinell wipe in each hand. Use one to hold up the line, use the other to clean down the line (only touching line with a wipe). Disconnect giving set, discard set and wipe. Keep the line elevated.
14. Use a clean wipe to clean the end of the needle free device.

15. Attach sterile drape to arm. Drop line onto sterile drape and discard wipes.

16. Expel airlock from saline posiflush, connect to line. Unclamp line.

17. Using the push-pause technique, flush the line twice. As the last 1ml is being flushed, close the line clamp to provide positive pressure. Discard syringes.

18. Peel off the tab of the Swabcap and attach to the end of the needle free device.

19. Remove gloves and alcohol gel hands.

20. Dispose of waste as per UHB policy.

21.Wash hands.

22.Complete surveillance form, fluid balance and prescription chart and record procedure and any concerns in medical notes.

Connecting PN to a PICC

Equipment

Trolley and large Clinell Universal wipes **(only used for trolley preparation)**

Giving set

Filter (1.2 µm)

Dressing pack

1 pair sterile gloves

2 x 10 ml sterile pre-filled sodium chloride (0.9%) syringes (saline posiflushes)

Small Clinell wipes (2% Chlorhexidine, 70% alcohol)

Alcohol gel

Disposable apron

Pump

Follow the pre-connection advice on page 12

Procedure

1.Prepare the patient for the procedure: explain the procedure and obtain consent.

2.Gather equipment in a tray. Alcohol gel hands. Put large wipes on trolley.

3.Wash hands and prepare trolley as detailed on page 10-11.

4.Put on apron.

5.Open dressing pack outer packaging and drop it onto trolley.

6.Alcohol gel hands.

7.Only touching the edges, open out dressing pack creating a sterile field.

8.Open all remaining items onto the sterile field (keep one clinell wipe in tray).

9.Using the remaining clinell wipe clean port on the bag; remove cap and discard.

10.Expose line and assess line site; check measurements.

11.Wash and dry hands. Put on sterile gloves.

12.Open out clinell wipes and sterile field if you wish.

13.Hold a clinell wipe in each hand. Use one to hold up the line, use the other to clean down the line.

14.Remove and discard swabcap, whilst keeping the line elevated (only touching using a wipe). Use a clean wipe to clean the end of the needle-free device.

15.Attach sterile drape to arm, keeping line elevated. Drop line onto sterile drape and discard wipes.

16.Expel airlock from saline posiflush, connect to line. Unclamp the line.

17.Draw back until you get a small flashback of blood.

18.Using a push-pause technique, flush line twice. As the last 1ml is being flushed, close the line clamp to provide positive pressure. Discard syringes.

19.Attach the filter to the giving set and ensure the giving set clamp is closed.

20.Using gauze to hold the port, insert giving set spike into port of the PN bag.

21.Prime the giving set and filter, ensuring all air is expelled. Clamp giving set.

22.Remove end cap of the giving set and connect to needle free device.

23.Remove gloves and alcohol gel hands.

24.Thread giving set into the pump as per manufacturer's guidance.

25.Switch on the infusion pump and set the required volume to be infused over the required time.

26.Unclamp the line and start the infusion.

27.Dispose of all waste as per UHB policy.

28.Wash hands

29.Complete surveillance form, prescription and fluid balance charts and record any concerns in the medical notes. If white sticker available on TPN bag, please stick in medical notes.

Changing a PICC dressing and the needle-free device(s) (NFD)

Equipment

Trolley and large Clinell universal wipes **(only used for trolley preparation)**

Dressing Pack

Apron

2 pairs sterile gloves

1 IV Advanced dressing

1 PICC Statlock

1 3ml chloraprep wand

Alcohol gel

Disposable paper towels

1 Needle-free device per lumen (NFD)

Small Clinell wipes (2% Chlorhexidine, 70% alcohol)-4 per lumen

2 x 10ml sterile pre-filled sodium chloride (0.9%) syringes (saline posiflushes) per lumen

1 Swabcap per lumen

Procedure

1. Prepare the patient for the procedure: explain procedure and obtain consent.
2. Gather equipment. Alcohol gel hands. Put large wipes on trolley.
3. Wash hands and prepare trolley as detailed on page 10-11.
4. Put on apron.
5. Open dressing pack outer packaging and drop it onto trolley.
6. Alcohol gel hands.
7. Only touching the edges, open out dressing pack creating a sterile field.
8. Clean Swabcap(s) using a clinell wipe, and drop onto sterile field. Discard clinell wipe
9. Open all remaining items onto sterile field.
10. Expose line and assess site; check measurements.
11. Wash and dry hands. Put on sterile gloves.
12. Open out clinell wipes and sterile field if you wish.

13. Hold a clinell wipe in each hand. Use one to hold up the line and the other to clean down the line (only touching line with a wipe). Remove Swabcap. Discard Swabcap and wipe. Keep the line elevated.
14. Use a clean wipe to clean the end of needle free device (NFD).
15. Attach sterile drape to arm. Drop line onto sterile drape and discard wipes.
16. Expel air lock from saline posiflush, connect to line.
17. Using the push-pause technique, flush the line once. As the last 1ml is being flushed. Close the line clamp to provide positive pressure. Discard syringe.
18. Ensure line is clamped (if PICC has a clamp). Remove needle-free device and discard then use clean wipe to scrub the hub for 15 seconds. Allow to dry.
19. Attach saline posiflush to new needle-free device and prime, then attach to line and flush using a push-pause technique, closing on positive pressure.
20. Peel off the tab of the swabcap and attach to the end of the needle-free device.
21. If the PICC is a double lumen, repeat this process to change the other needle-free device.
22. Gently peel off IV advanced dressing, carefully separate this from the statlock, taking care not to pull the line.
23. Remove gloves then apply clean pair of sterile gloves.
24. Activate your chloraprep wand by squeezing the wings and pointing it downwards. Then clean the site using a hashtag motion. Allow to dry.
25. Ask a second nurse to apply sterile gloves and hold the line still (there is risk of line displacement at this point). Now carefully open statlock doors and gently lift the line out. Remove statlock from skin (use alcohol wipe if needed).
26. Once skin is dry, fix line into new statlock device and close doors. Assess for appropriate and comfortable position and then remove backing plasters and press down to secure.

27. Apply IV advanced dressing, ensure site and measurements are visible through the transparent section.
28. Dispose of all waste as per UHB policy.
29. Remove gloves and wash hands.
30. Complete surveillance form and record any concerns in the medical notes.

Securacath

Some PICC lines have a device called a securacath instead of a statlock. The metal clips hold the line in place under the skin-this stays in for the entire lifespan of the PICC line. To re-dress a PICC line with a securacath, a simple IV transparent dressing is required to be changed once weekly. Monitor the skin around the site for any pressure damage. If the PICC line needs to be removed, please contact your NNS for advice.