PURPOSE:

To promote consistency of practice and minimize the occurrence of healthcare-associated blood stream infections related to intravenous lines, and consequently reduce the potential for patient harm.

POLICY:

Infusion patients under the care of this Agency with peripherally or centrally inserted catheters will have a qualified and trained registered nurse perform dressing change procedures every 7 days and PRN.

DEFINITIONS:

Aseptic Technique: a technique that protects patients during invasive clinical procedures by employing infection control measures that minimize, as far as practically possible, the presence of pathogenic organisms. While the principles of aseptic technique remain constant for all procedures, the level of practice will change depending upon a standard risk assessment.

Chlorhexidine impregnated sponge or dressing: A dressing product that is applied to the insertion site to reduce the bacterial load and therefore reduce the risk of central line associated sepsis. It is available as an impregnated disc (e.g.BiopatchTM) or a gel (Tegaderm CHGTM) and requires a weekly change, or sooner if clinically indicated

Insertion site: the site where the catheter exits from the skin.

Flush: denotes a 0.9% sodium chloride flush. Required before and after all treatment administrations, blood sampling and whenever directed.

Peripherally Inserted Central Catheter (PICC): a single, double, or triple lumen, open or closed (valved) catheter; mainly inserted in peripheral veins (brachial, basilic and cephalic).

Central Venous Cather (CVC): a single, double, or triple lumen, open or closed (valved) cathether; inserted in large central veins (subclavian, internal jugular, etc.)

Adhesive Securement device: a type of securement device used to provide additional securement of the catheter including adhesive securement device, sutures, or subcutaneous securement

Semi-permeable transparent dressing: a dressing which has a high moisture vapor transmission rate (MVTR). These dressings help to reduce the accumulation of moisture under the dressing; this can help to maintain the integrity

SUPPLIES:

- Non-sterile gloves x1 pair
- Sterile gloves x1 pair
- Needleless connector for each lumen
- Sterile dressing kit
- Large transparent semi permeable dressing (e.g.Tegaderm, Opsite IV 3000)
- 10mL 0.9% normal saline x2
- Heparin flush or other lock solution as ordered (e.g. Ethanol)
- Needleless blunt connector x2 (if required)
- Adhesive securement device (e.g.StatLock, GripLok, Winguard)
- 70% alcohol and/or 2% / 70% chlorhexidine/alcohol impregnated swabs
- Plastic backed protector sheet
- Tape measure
- Wastepaper bag / bin

PROCEDURE:

1. Check patient ID and verify patient information.
2. Check date of last dressing change. Confirm / Review orders and check for special instructions for new dressing.
3. Prepare for procedure:
    a. Explain procedure to patient/caregiver.

Remove Old Dressing:

1. Perform hand hygiene. (Refer to Hand Hygiene policy.)
2. Don non-sterile disposable gloves.
3. Gently remove existing dressing. Loosen the dressing around the edges while using one hand to anchor the catheter at the insertion site. Pull very gently and slowly toward the insertion site to avoid inadvertently dislodging the catheter, as it may have adhered to the dressing.

Reference: PDN Policy 13018, 13203

4. Hold the skin firmly and close to the transparent film edge to prevent the skin from tearing as the dressing is removed
5. Apply adhesive strip if required.
6. Remove adhesive securement device according to manufacturer's directions for use. Remove gently; 70% alcohol maybe used to assist removal where required.
7. Take care not to touch the insertion site, dislodge, or accidentally withdraw the unsecured catheter. If the catheter migrates out, **DO NOT** attempt to feed/push the catheter back in. Report the amount of migration to the Clinical Supervisor and document the migration.

   Note: If the external length of the catheter migrates more than 2 cm, report to a Clinical Supervisor so that the MD can be notified.

8. Assess insertion site for any visible abnormalities (e.g. redness, tenderness, swelling, or exudate). Gently palpate the insertion site and ask the patient if there is any tenderness or pain. If there are any abnormal signs or symptoms report to Clinical Supervisor and document in the clinical record.
9. If sutures have been used, carefully assess their integrity. If loose, other methods of stabilization may be necessary. Do not remove sutures without an order.
10. Remove gloves, discard waste.
11. Perform hand hygiene. (Refer to Hand Hygiene policy.)

Apply Clean Dressing:

1. This is a sterile procedure. Begin work on a clean work surface. Establish a sterile field.
2. Ensure the care area is controlled to maintain aseptic technique. Anyone not directly involved in the patient's care or the dressing change procedure should attempt to remain at least six (6) feet away from the area where care is being provided.
3. Using aseptic technique open the dressing kit and add sterile items. Open dressing kit by the corners and don a mask. Even though your hands are clean do not touch anything until you get your gloves on.

   Note: If the kit contains one mask, the nurse should wear the mask and instruct the patient to turn head away from the site. If the kit contains two masks, the nurse and patient should both wear a mask.

4. Don sterile gloves.

5. Disinfect the insertion site with 2% chlorhexidine in 70% alcohol solution using a gauze swab from the dressing kit or a commercially pre-prepared sterile 2% chlorhexidine in 70% alcohol swab stick.

   Note: If the patient has sensitivity to chlorhexidine, you may use alcohol in an outward circular motion and then allow the site to dry. The catheter and tubing are then cleaned with alcohol from the insertion site upwards. Then clean the site with povidone-iodine in an outward circular motion and allow to dry.

6. Disinfection should be performed using a circular motion moving in concentric circles from the insertion site outwards or by using a back-and-forth motion for 30 seconds to kill bacteria and fungus

   a) This step should be repeated a total of three times using a new gauze or impregnated sponge for each application, and each application should be allowed to air dry prior to the next application.

   b) Allow to air dry which may take approximately 30 – 60 seconds.

      Note: Care should be taken not to dislodge the unsecured catheter

6. If the catheter has migrated or been dislodged during dressing change, **DO NOT** attempt to feed catheter back into the insertion site. Continue dressing change and report the amount of migration to the Clinical Supervisor so that it can be reported to the MD. Document the amount of migration in your visit note.

   Note: If the external length of the catheter migrates more than 2 cm, report to the Clinical Supervisor so that the MD can be notified.

7. Measure external length of catheter using tape measure. Measure from the catheter insertion site to the proximal end of the wings. If a tape measure is not available, then count the exposed lines between the insertion site and the wings. Document in centimeters.

8. Measure the arm circumference. Using tape measure, measure 4 cm up from the catheter insertion site, then measure around the arm at the 4 cm mark. Document in centimeters.

9. Use skin preparation if supplied, prior to application of securement device. If used, allow skin preparation solution to completely dry.

10. Apply the adhesive securement device as per manufacturer's instructions.

11. If a CHG sponge is used (e.g., Biopatch) be sure the sponge is right side up (blue side up or smooth foam against skin). Ensure 360-degree contact with the skin. Align the catheter tubing underneath the slit of the CHG sponge for easier removal when changed. The slit sides should touch but not overlap.

12. Apply a large semi permeable transparent dressing. The insertion site should be positioned in the center of the dressing. The adhesive securement device must also be completely covered. Use an additional large semipermeable transparent dressing if required.

13. Gently press the transparent dressing to ensure firm skin contact.

14. If adhesive tape / strip was used – remove this now.

15. Prepare new needleless clave connectors.

    Note: Needleless clave connectors should be changed every 7 days with the dressing change or PRN (after lab draws).

16. Prime new clave connectors with 0.9% normal saline using a 10mL syringe, leaving the syringe attached.

17. Remove old connectors.

    Note: A non-valved catheter requires clamping of each lumen before removing connectors; a valved catheter does not require clamping prior to removal of connectors.

18. Disinfect / scrub lumen(s) for 15 seconds with 70% alcohol or 2% chlorhexidine in 70% alcohol impregnated swabs and allow to air dry.

19. Apply new clave connector (and primed extension set if applicable), unclamp lumen if required, and flush the catheter with 0.9% sodium chloride followed by the ordered lock solution (e.g. Heparin, Ethanol, etc.).

    Note: If adding an extension set to the end of the PICC line, there should be one clave connector placed at the end of the extension. There **should not** be a clave connector between the end of the line and the extension set.

20. Write the date, time, and your initials on the border of the transparent film dressing.

21. Remove sterile gloves.

Reference: PDN Policy 13018, 13203

22. Dispose of sterile gloves and other waste in waste bin

23. Perform hand hygiene. (Refer to Hand Hygiene policy.)

24. Document the catheter dressing change, clinical assessment of site, external measurement length, and arm circumference in the clinical record.

Reference: PDN Policy 13018, 13203