

Removal of a Midline/PICC Catheter

PURPOSE

To safely and completely remove a midline or peripherally inserted central catheter (PICC).

POLICY

1. Aseptic technique shall be used for this procedure.
2. Removal of a midline/PICC catheter shall be performed by an RN on the order of the physician.
3. The nurse shall be competent in the process of the midline/PICC catheter removal, including identification of potential complications, appropriate nursing interventions and/or emergency measures as needed, and patient and caregiver education.
4. The midline catheter is indicated for those peripheral infusion therapies prescribed for a duration of 1-4 weeks. For therapies requiring dwell times greater than 4 weeks, extension of catheter dwell should be based on the professional judgment of the nurse after consideration of the following factors, including, but not limited to, length and type of therapy remaining, peripheral vascular status, condition of the vein in which the catheter is indwelling, skin integrity, and patient condition. The maximum dwell time of a PICC catheter is unknown; ongoing and daily monitoring of the device necessity should be performed.
5. Midline/PICC catheters shall be removed upon unresolved complication, therapy discontinuation, if the tip location is no longer appropriate for the prescribed therapy, or if deemed unnecessary.
6. The decision to remove or salvage a catheter due to suspected or confirmed catheter-related bloodstream infection (CR-BSI) should be based on blood culture results, specific type of cultured organism, patient's current condition, available vascular access sites, effectiveness of anti-microbial therapy, and physician direction.
7. The catheter shall be measured and the tip inspected for a bevel or angle, if applicable, upon removal.
8. Caution should be used in the removal of a midline/PICC catheter, including precautions to prevent air embolism. Digital pressure should be applied until hemostasis is achieved by using manual compression and/or other adjunct approaches such as hemostatic pads, patches, or powders that are designed to potentiate clot formation. Petroleum-based ointment and a sterile dressing may be applied to the access site to seal the skin-to-vein tract and decrease the risk of air embolus. When removing the midline/PICC catheter, the nurse should position

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the patient so that the IV insertion site is at or below the level of the heart to reduce the risk of air embolus.

9. If resistance is encountered when the catheter is being removed, the catheter should not be forcibly removed, and the physician should be notified and discussion should occur related initiating appropriate interventions for successful removal.
10. If the catheter breaks during removal and a suspected fragment remains in the patient, apply a tourniquet to the upper arm by the shoulder. Do not occlude arterial flow. Notify the physician immediately and access emergency response system, as appropriate. Stay with the patient and continue to monitor.

EQUIPMENT

Sterile dressing change kit **OR** the following supplies:

Liquid soap and sanitizing gel

Clean gloves

Sterile gloves

Antiseptic cleanser (alcohol, povidone-iodine, Chloro-Prep®)

Antiseptic ointment (optional and with physician order)

Sterile 2x2" gauze

Tape

Measuring tape

Tourniquet

1-inch tape or Band-Aid®

PROCEDURE

1. Verify physician order. Explain procedure to patient. Place patient in a supine position with arm at a 90 degree angle to the body. Educate patient on the Valsalva maneuver.
2. Wash hands thoroughly with soap and water. Dry with clean paper towel.
3. Arrange supplies on a clean surface.

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4. Put on gloves. Remove tape and dressing.
 5. Assess catheter and skin insertion site. Put on new pair of sterile gloves and cleanse around the catheter site with Chloro-Prep® or other cleanser.
 6. Have the patient perform the Valsalva maneuver and gently but firmly grasp the catheter below the hub and pull straight out a few inches at a time, parallel to the vein. Use a slow and steady motion. Gather the catheter into hand to avoid splattering of blood on the tip.
If resistance is met, STOP. The catheter should not be forcibly removed and the physician should be notified.
- Note: When removing a silastic catheter at the completion of therapy, resistance may be felt because of venous spasm, vasoconstriction, phlebitis, valve inflammation, thrombophlebitis or when a fibrin sheath is present. The application of warm moist compresses may alleviate venous spasm and vasoconstriction, resulting in easier removal of the catheter. NEVER stretch or force the catheter. If resistance continues, notify the physician.
7. Place a sterile 2x2 gauze on the insertion site and apply pressure for at least one minute, or longer if needed.
 8. Assess the integrity of the catheter, and measure to assess for catheter breakage.
 9. Tape a sterile dressing over the site and instruct the patient to leave in place for at least 24 hours.
 10. Document procedure, including catheter length, outcome and patient's response on the Midline/PICC progress record or other form as applicable.

RESPONSIBILITY

The Clinical Specialist has the responsibility for approval of, compliance with, and revisions to this policy.

MODIFICATION/REVISION

This policy is subject to modification or revision in part or its entirety to reflect changes in conditions subsequent to the effective date of this policy.

REFERENCES

1. Infusion Nursing Standards of Practice – Revised 2016; Journal of Infusion Nursing, Supplement to January/February 2016, Volume 39, Number 1S.

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2. Infusion Nursing: An Evidence-Based Approach, Third Edition edited by Mary Alexander, Ann Corrigan, Lisa Gorski, Judy Hankins, and Roxanne Perucca.
3. INS (Infusion Nurses Society) Policies and Procedures for Infusion Nursing, 3rd Edition.