

NEVADA STATE BOARD OF NURSING

Practice Decision

Peripheral Vascular Access Device Insertion

The Nevada State Board of Nursing (NSBN) finds that a qualified registered nurse (RN) who has completed appropriate training and competency defined by the institution and in compliance with [NAC 632.225](#), may insert the following Peripheral Vascular Access Devices (PVADs)

Peripherally Intravenous Catheters (PIVC) and Radial Arterial Catheters (RAC) via direct puncture, Seldinger Technique, Modified Seldinger Technique (MST), or Accelerated Seldinger Technique (AST) or other techniques as endorsed by Infusion Nurses Society (INS) which include:

Definitions:

- **Short PIVC**-An over-the-needle catheter with a hollow metal stylet positioned inside the catheter, generally inserted in superficial veins.
- **Long PIVC**-Inserted in either superficial or deep peripheral veins and offers an option when short PIVCs are not long enough to adequately cannulate the available vein.
- **Midline**-Inserted into a peripheral vein of the upper arm via the basilic, cephalic, or brachial vein with the terminal tip located at the level of the axilla in children and adults; for neonates, in addition to arm veins, midline catheters may be inserted via a scalp vein with the distal tip located in the jugular vein above the clavicle. Lower extremity insertions with the distal tip located below the inguinal crease.
- **Radial Arterial Catheters (RAC)**- Catheter placed in the radial artery for hemodynamic monitoring, obtaining blood samples, and analyzing blood gas levels in critically ill patients.

Rationale:

Nursing practice has developed into several specialties, including vascular access. As the vascular access specialty has grown with research from a multi-disciplinary approach, evidence-based practice has changed and developed for a safer patient experience, including: an increase in first attempt success rates, especially with the use of ultrasound guidance and other image guidance technologies, as well as longer catheter dwell time leading to higher incidence of completion of therapies without the need for multiple replacement catheters.

The inserting RN should maintain practices outlined by the highest level of evidence-based measures set by the Infusion Nurses Society (INS) and the Association of Vascular Access (AVA.)

Considering associated risks with RAC insertion, an authorized provider should be readily accessible to assist, if needed with any associated procedural complication management.

Requirements: Short and Long PIVC

1. The agency/employer maintains written policies and procedures which addresses initial and ongoing qualifications, competence, scope and supervision requirements.
 - a. Qualifications: Completed facility approved training for specific procedure(s)
 - b. Successful supervised insertions, which the required number to be set by the policy of the organization in which the inserter practices, with documented competency in compliance with [NAC 632.225](#).
2. The trained RN:
 - a. Reviews the provider order for PIVC
 - b. Evaluates the patient and need for PIVC
 - c. Assesses the patient to determine safest/most appropriate line and makes recommendations for changes in orders if needed.
 - d. Inserts PIVC, utilizing aseptic non-touch technique with or without ultrasound guidance.
 - e. Documentation post procedure must include but not limited to:
 - Catheter size
 - PIV Location
 - Number of attempts
 - Patient tolerance
 - Dressing and securement
 - Any complications and performed complication mitigation along with patient response to actions if performed

Requirements: Midline:

1. The agency/employer maintains written policies and procedures which addresses initial and ongoing qualifications, competence, scope and supervision requirements.
 - f. Qualifications: Completed facility approved training for specific procedure(s)
 - g. Previous experience with ultrasound guided PIV insertions
 - h. Successful supervised insertions, which the required number to be set by the policy of the organization in which the inserter practices, with documented competency in compliance with [NAC 632.225](#).
2. The trained RN:
 - i. Reviews the midline order
 - j. Evaluates the patient and need for the ordered midline
 - k. Assess the patient to determine safest/most appropriate line and makes recommendations for changes in orders if needed.
 - l. Inserts midline, utilizing maximum barrier precautions and aseptic non-touch technique with ultrasound guidance.
 - m. Documentation post procedure must include but not limited to:
 - Catheter brand, size and lot number
 - Lidocaine used or other anesthetic amount
 - Total catheter length

- External catheter length
- Vessel accessed
- Number of attempts
- Patient tolerance
- Dressing and securement
- Arm circumference (Basilic, Brachial and Cephalic)
- Leg circumference (Lower Extremity)
- Any complications and performed complication mitigation along with patient response to actions if performed

Requirements: Radial Arterial Catheter

1. The agency/employer maintains written policies and procedures which addresses initial and ongoing qualifications, competence, scope and supervision requirements.
 - a. Qualifications: Completed facility approved training for specific procedure(s)
 - b. Previous experience with ultrasound guided PVAD insertions (PIVCs, and/or Midlines/PICCs)
 - c. Successful supervised insertions, which the required number to be set by the policy of the organization in which the inserter practices, with documented competency in compliance with [NAC 632.225](#).
2. The trained RN:
 - a. Reviews the provider order for arterial catheter placement
 - b. Evaluates the patient and need for the ordered arterial catheter
 - c. Ensures informed consent for procedure is signed and dated
 - d. Assess the patient to determine safest/most appropriate line and makes recommendations for changes in orders if needed including assessing for adequate arterial circulation.
 - e. Performs Time Out with witness reviewing informed consent prior to procedure
 - f. Inserts radial arterial catheter while utilizing a cap, mask, sterile gloves and eye protection. Fenestrated drape utilized for insertion site.
 - g. Documentation post procedure must include but not limited to:
 - Informed consent obtained
 - Time Out performed
 - Adequate radial and ulnar arterial circulation to hand verified prior to insertion via Allen's Test, doppler flow study or pulse oximetry
 - Catheter size
 - Lidocaine, if used or other anesthetic amount
 - Total catheter length
 - Catheter location
 - Number of attempts
 - Patient tolerance
 - Dressing and securement
 - Any complications and performed complication mitigation along with patient response to actions if performed

Training:

1. The RN must have completed an instructional program which includes supervised clinical practice. This would include training for peripheral vascular pathways, both venous and arterial with proficiency of vessels, structures and patient assessment.
2. The RN will be trained with appropriate insertion techniques per the procedure or other techniques as endorsed by Infusion Nurses Society (INS)
3. Training will include Insertion, securement, stabilization, maintenance and removal of PVAD
4. Established competency for ultrasound assessment and ultrasound guided catheter placement for Long PIVC, Midline and RAC insertion.
5. Training will include insertion and post-insertion related complications and management strategies.
6. Didactic and skills education, proctored insertions with demonstrated competency for PVADs are completed and files are kept with the employer/institution/agency.

References:

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