



INITIATING A PERIPHERAL INTRAVENOUS (PIV)



PROCEDURE	Rationale
<p>1. DETERMINE need for peripheral venous access and if you have the relevant competencies to initiate a peripheral intravenous (PIV).</p>	<p><i>Performing an initial assessment and establishing peripheral venous access in anticipation of the prevention of fluid and electrolyte imbalances or to provide IV access for intermittent or emergency medication falls within RN scope of practice (HPA, the Nurse (Registered) and Nurse Practitioners Regulation).</i></p> <p><i>Relevant competencies developed through education, preceptorship and clinical practice.</i></p>
<p>2. CHECK chart for health care provider order for infusion therapy. The order must specify type of solution, amount and rate of infusion, and bloodwork to be drawn at time of initiation, if any required.</p> <p>NOTE: In the Emergency Department all patients will have their blood glucose checked with a glucose meter at the time of initiation of a PIV.</p>	
<p>3. DETERMINE if local anesthetic cream application is appropriate and apply if needed to a maximum of 2 sites. REFER to Comparison Table of Ametop, Emla and Pain Ease. Medworxx CC.06.20B</p> <p>CONSIDER use of Sucrose for management of pain in infants up to 12 months. REFER to Sucrose for Procedural Analgesia in Infants. Medworxx CC.06.25</p>	<p><i>Topical anesthetic cream must be applied for a specific time period in order to be effective. Administration of sucrose and non-nutritive sucking are effective non-pharmacological interventions for relief of procedural pain in neonates and infants and may help reduce pain in infants up to 12 months of age</i></p>
<p>4. ASSEMBLE equipment. NOTE: If PIV is being initiated by another health care professional, gathering and preparation of supplies (specifically the IV administration set-up and blood drawing supplies) is done in advance by primary RN to assist health care professional that is inserting PIV.</p> <ul style="list-style-type: none"> • IV tubing(s), solution(s) • Appropriate safety engineered IV catheter BD Nexiva; BD Insite Autoguard; ProtectIV • T-connector extension set needed only with Autoguard and ProtectIV • 10 mL syringe with normal saline without preservative • One-piece needleless connector (ie: Smartsite cap) • Sterile transparent dressing (eg. Tegaderm IV) • Disposable latex free tourniquet • 2 dry wipe (chits) • One 2x2 gauze • Chlorhexide 2% in 70% alcohol swabs x3 • Clean disposable gloves (non-sterile) - unless patient is immunocompromised or if drawing blood cultures, then use sterile gloves) • Clear tape (paper tape for sensitive skin). • Armboard, cotton balls and protective cover as needed • Clippers or scissors if needed • Statlock securement device if needed for Autoguard and ProtectIV 	<p><i>Facilitates completion of task in a timely manner. Delays in performing procedure can increase the patient's anxiety.</i></p> <p><i>Multiuse IV trays/baskets are not supported by Infection Control. Use single use disposable trays to collect necessary equipment required for one patient only.</i></p> <p><i>Sharps containers should be placed at point of care.</i></p>
<p>If drawing blood with venipuncture, add:</p> <ul style="list-style-type: none"> • appropriate size syringe for blood draw and appropriate blood tubes • patient labels • biohazard bag for blood tubes once filled <p>REFER to eLab Handbook or quick reference chart to determine appropriate blood tubes and volumes and any special handling instructions.</p>	
<p>5. CLEAN your work surface with a hospital grade cleaning and low level disinfectant wipe such as Cavi wipes or accel TB wipes.</p>	<p><i>Cleaning work surface before any aseptic procedure reduces transmission of microorganisms</i></p>

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<p>6. WASH hands as per Hand Hygiene standard in Infection Control Manual. Before any aseptic procedure wash with plain soap or CHG soap and water for 20 seconds, OR use 1-2 pumps of ABHR and rub until hands are dry. Medworxx IC.03.03</p>	<p><i>Proper hand hygiene is the first step in decreasing catheter-related blood stream infections (CR-BSI).</i></p>
<p>7. PREPARE IV solutions and label and date tubing.</p> <ul style="list-style-type: none"> • IF collecting Blood Culture specimen remove the tab from the cap, swab the septum with 70% isopropyl alcohol prep pad for 30-60 seconds and allow to air dry for 30-60 seconds before inoculation. 	<p><i>Facilitates completion of task in a timely manner.</i></p> <p><i>Disinfecting the vial septum reduces risk of accidental contamination of blood specimen.</i></p>
<p>8. ATTACH NS syringe to smartsite cap, flush to prime; attach to T-connector if using ProtectIV or Autoguard and flush both with normal saline. If blood sampling, attach empty syringe to T-connector.</p>	
<p>9. PREPARE IV initiation equipment aseptically. Medworxx IC.02.01</p>	
<p>10. IDENTIFY patient and EXPLAIN procedure. Apply warm blankets to appropriate limbs.</p>	<p><i>Failure to correctly identify patients prior to procedures may result in errors.</i></p> <p><i>Reduces child and family's anxiety.</i></p> <p><i>Evaluates and reinforces understanding of previously taught information and confirms consent for medication administration.</i></p> <p><i>Warm compresses will dilate the veins.</i></p>
<p>11. ENGAGE child life to assist with distraction or other psychological intervention as needed.</p>	<p><i>Psychological interventions can help to reduce the pain and distress associated with needle-related procedures.</i></p>
<p>12. POSITION patient in comfortable position and hold as necessary. OBTAIN help of second HCP as needed. It is not recommended for parents to restrain their child.</p>	<p><i>Lessens chance of patient moving during insertion procedure, which might lead to venous perforation</i></p>
<p>13. SELECT appropriate site for venipuncture. Avoid areas of flexion, such as wrist or antecubital fossa. Avoid feet after walking age and in children older than 10 years.</p>	<p><i>Appropriate site must be identified before catheter placement.</i></p>
<p>14. Remove hair using electric clippers or scissors if needed to secure catheter.</p>	<p><i>Hair removal should be performed in a manner that preserves skin integrity.</i></p> <p><i>Shaving should not be done with a razor because of the potential for causing micro-abrasions, which increase the risk of infection</i></p>
<p>15. Remove topical anaesthetic from all sites with dry wipes.</p>	
<p>16. GLOVE and don PPE as necessary. Medworxx IC.03.04</p>	<p><i>Decreases risk of infection.</i></p> <p><i>Air drying is essential to increase efficacy of chlorhexidine</i></p>
<p>17. CLEANSE venipuncture site with chlorhexidine/alcohol swab using friction for 30 seconds and ALLOW to air dry for 30 seconds. DO NOT touch the site after cleaning. If area is touched it will require re-cleaning as above using a new swab</p>	<p><i>Decreases risk of infection.</i></p> <p><i>Air drying is essential to increase efficacy of chlorhexidine.</i></p>
<p>18. APPLY tourniquet (not to be used for scalp sites).</p>	<p><i>Promotes venous distention, which assists in catheter placement.</i></p>
<p>19. PERFORM venipuncture:</p> <ol style="list-style-type: none"> STABILIZE selected vein using the non-dominant hand; PENETRATE skin at a 10-30 degree angle with the bevel end up; Lower catheter almost parallel to skin. ADVANCE catheter into the vein; Do Not reinsert needle/stylet once it has been partially or completely withdrawn from the catheter. Pull back the stylet, push the catheter forward into the vein. 	<p><i>Stabilizing the vein with the non-dominant hand prevents vein from rolling during venipuncture. Advancing into the vein until hub is in contact with skin seats the length of the catheter in the vein and promotes stability.</i></p> <p><i>No more than 2 attempts by any clinician should be made in order to avoid multiple unsuccessful attempts, causing unnecessary trauma to the patient and limiting future vascular access.</i></p>
<p>NOTE: Only two initiation attempts are allowed per clinician and only a total of four-six consecutive initiation attempts per patient, provided the child is allowed to rest between attempts. Discuss alternate IV access</p>	

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<p>options with physician if venipuncture not successful after 4-6 attempts. Exception: in OR suite additional attempts may be acceptable.</p> <p>NOTE: In critical or emergency care situations, an intraosseous needle placement is performed by the physician if venipuncture is not successful after 2 attempts</p>	<p><i>The purpose of an intraosseous needle placement is to obtain vascular access in arrest or decompensated shock state when vascular access cannot be obtained through conventional means</i></p>
<p>20. OBSERVE for positive blood return in catheter or flashback chamber.</p>	<p><i>Confirms venous access</i></p>
<p>21. REMOVE stylet activating the safety feature as per manufacturer's guidelines. For Autoguard and ProtectIV Press fingers of non-dominant hand over vein path to prevent flow of blood until extension tubing attached.</p>	<p><i>Prevents needlestick injury</i></p>
<p>22. If blood sampling:</p> <ol style="list-style-type: none"> a. Nexiva: Pinch clamp, remove vent plug and attach empty syringe and unclamp. b. ProtectIV or Autoguard: attach T-connector with empty syringe to hub of IV catheter. c. GENTLY withdraw required volume of blood for specimens required. d. Clamp tubing. e. RELEASE tourniquet. f. REMOVE syringe with blood sample and set aside in catheter packaging g. ATTACH smartsite with syringe with pre-filled normal saline. h. Unclamp tubing i. FLUSH tubing and CLAMP using positive pressure. LEAVE syringe attached until ready for IV tubing connection and IV securement is completed. j. GENTLY agitate blood-filled syringe. Using a blunt needle or blood transfer device, TRANSFER blood into appropriate vacutainers/bottles as soon as possible to avoid hemolysis. k. Proceed to Step 24. 	<p><i>Blood sampling at time of peripheral IV initiation prevents an additional venipuncture to obtain blood specimens.</i></p>
<p>23. IF NOT Blood sampling – release the tourniquet, clamp and attach the primed smart site, unclamp and gently flush with 3 – 10 mLs of NS.</p>	<p><i>To flush catheter and verify patency.</i></p>
<p>24. APPLY sterile transparent dressing over site as per manufacturer's instructions. Example using Tegaderm® transparent dressing:</p> <div style="display: flex; justify-content: space-around;">   </div> <p>NOTE: Cavilon® no sting barrier film may be applied to skin prior to applying dressing to promote adhesion.</p>	<p><i>Provides barrier site protection while allowing visual inspection without changing dressing.</i></p>

<p>25. SECURE tubing using securement device (StatLock®) with ProtectIV and Autoguard if necessary. Example using transparent dressing and Statlock® device:</p> 	<p><i>Protects catheter from dislodgement.</i></p>
<p>26. APPLY appropriate restraints as needed (eg. Armboard, cotton balls and protective cover).</p> 	
<p>27. CONNECT IV tubing and adjust rate as per physician's order.</p>	<p><i>Initiates ordered therapy</i></p>
<p>28. REMOVE equipment and DISPOSE appropriately.</p>	<p><i>Any wrapped/unwrapped supplies entering the patient environment must be cleaned and disinfected before use with another patient. Items that cannot be cleaned must be discarded.</i></p> <p><i>Maintain clear separation of clean and dirty items.</i></p>
<p>29. WASH hands as per hand hygiene standards.</p>	
<p>30. DOCUMENT on appropriate record(s):</p> <ul style="list-style-type: none"> • procedure, date and time • IV site location • Site condition before and after insertion • IV catheter type, gauge and length • type of solution(s), additives and rate of infusion. See Guidelines for Maintaining Infusion Therapy Medworxx CV.01.01 • adverse events or unusual responses and interventions • number of attempts and by whom • patient comments or how patient tolerated procedure • patient/family teaching or instructions given and explain TLC protocol. • individual initiating IV and title • any other pertinent actions or interventions • Complete the phlebitis and infiltration scale on daily flow sheets. See Medworxx CV.01.01A 	<p><i>Communication of procedure to additional members of the health care team.</i></p> <p><i>Assists with meeting Professional Standards for documentation and legal requirements.</i></p>

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