

VASCULAR ACCESS DEVICE (VAD) GUIDE

Device	PIV Peripheral Intravenous Catheter	MC Midline Catheter	PICC Peripherally Inserted Central Line Catheter
Site	Inserted into a peripheral vein and ends just proximal to the insertion site.	Inserted into a peripheral vein (basilic, cephalic, or brachial vein) and ends at the mid-chest.	Inserted into a peripheral vein (usually basilic or brachial) and ends at the superior vena cava.
Insertion	A vein that can support an IV catheter.	Ultrasound-guided insertion by a qualified provider.	Chest x-ray to ensure proper placement.
Indications	Administration of medications, fluids, blood products and to collect blood specimens.		
	Access needed short term.	Access needed for 2-4 weeks.	Access needed long-term (>4 weeks), TPN, chemotherapy, and irritant therapies that can cause chemical phlebitis (e.g., Vancomycin and Nafcillin).
Complications/Risks	Infiltration, inflammation of vein (phlebitis), infection at insertion site, bruising (hematoma), or bleeding at insertion site.		
	Blood clot formation around the catheter (thrombosis), catheter dislodgement, and/or blown vein.	Artery, vein, or nerve damage, air embolism, device fragment embolization, and catheter dislodgement.	Peripheral or DVT. Because the PICC line is deep within the bloodstream, it can provide a pathway for bacteria to enter the body causing bloodstream infections.

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Artery, vein, or nerve damage, air embolism, device fragment embolization, and catheter dislodgement.	Access needed for 2-4 weeks.	Ultrasound-guided insertion by a qualified provider.	Inserted into a peripheral vein (basilic, cephalic, or brachial vein) and ends at the mid-chest.	MC Midline Catheter
Peripheral or DVT. Because the PICC line is deep within the bloodstream, it can provide a pathway for bacteria to enter the body causing bloodstream infections.	Access needed long-term (>4 weeks), TPN, chemotherapy, and irritant therapies that can cause chemical phlebitis (e.g., Vancomycin and Nafcillin).	Chest x-ray to ensure proper placement.	Inserted into a peripheral vein (usually basilic or brachial) and ends at the superior vena cava.	PICC Peripherally Inserted Central Line Catheter

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Contraindications	Limitations to arm due to surgery (e.g., mastectomy or AV graft/ fistula in same extremity) or skin conditions affecting the insertion area. Local skin/tissue factors which will prevent device stabilization or device access.		
	Local skin infection, inflammation, trauma or burns, need for long-term IV access, lymphedema, or deep vein thrombosis (DVT) in the extremity of the intravenous device.	Continuous infusions with a substance that can cause tissue blistering, sloughing, or necrosis when it escapes from the vein into surrounding tissue, total parenteral nutrition (TPN), chemotherapy, history of venous thrombosis, restricted blood flow to extremities, peripheral circulatory impairment, peripheral neuropathy, or lymph node dissection.	History of venous thrombosis and/or vascular surgical procedures at the prospective placement site.
Advantages	Easier to place. Does not require ultrasound or chest x-ray for verification.	Reduces the risk of infection and venous stenosis. Reduces repeated venipunctures.	Preserves peripheral veins, reduces risk of phlebitis, infiltration, and air embolism, eliminates complications such as pneumothorax and great vessel perforation associated with central line insertions in the neck or chest, allows central venous pressure (CVP) monitoring.



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