

Vasoactive Meds Via PIV

I. Purpose:

To define the standard processes for ordering, administering, and monitoring of vasoactive medications via a peripheral intravenous (PIV) line in the Surgical Intensive Care Unit (SICU) and Trauma Intensive Care Unit (TICU) at Vanderbilt University Adult Hospital (VUAH).

II. Process:

A. Medication Ordering:

1. Provider deems patient a candidate to receive vasoactive medications through a PIV and places a nursing order.
2. The following vasoactive medications may be infused through a PIV when ordered as standard concentrations and maintained at the specified infusion rate:
 - a. Norepinephrine ≤ 15 mcg/min; and
 - b. Phenylephrine ≤ 75 mcg/min.

B. Peripheral IV (PIV) Line Requirements:

1. PIV is in the upper extremities, on the opposite arm of the blood pressure cuff or tourniquet.
2. Location of PIV is antecubital or a more proximal location – no hands, wrist, or chest.
3. PIV size is a 20 gauge or larger; preferably placed by ultrasound guidance.
4. Prior to administering vasopressors through the PIV, the RN confirms a brisk blood return with no resistance when flushing the PIV.
5. PIV is dedicated to only the vasoactive medication and no other medications are infused through this access site, even if medications are compatible.
6. Only one vasoactive medication is infused through a PIV. If the patient requires a second vasopressor or intermittent pushes of another vasoactive medication, a central line is required.

C. Duration of Infusion:

1. Infusions via PIV are limited to a 48 hour duration, where possible.
2. When necessary, infusions may be renewed beyond 48 hours but require the use of a new PIV site. Each vein or peripheral site may only

be used once, for no more than 48 hours.

D. Administration and Monitoring:

1. No other medications are administered via the PIV utilized for vasoactive medication infusion.
2. PIV function is assessed every 2 hours including:
 - a. Site check and assessment for any signs of extravasation;
 - b. PIV has a brisk blood return; and
 - c. PIV flushes with no resistance.
3. If signs of extravasation are identified, the provider team is immediately notified and the patient is treated as outlined in [MM SOP – Infiltration/Extravasation Management](#) and extravasation order set.
4. Vasoactive medications cannot be infused through a PIV in the following situations:
 - a. Sluggish or no blood return from the PIV;
 - b. Resistance met when flushing the PIV ;
 - c. Signs or symptoms of extravasation;
 - d. Any concern about the overall function of the PIV;
 - e. Patient reports pain or discomfort around the PIV site;
 - f. Patient receiving vasoactive infusion at a higher concentration than standard infusion concentrations;
 - g. Patient requires vasoactive doses higher than the approved rates of administration;
 - h. Patient requires a second vasopressor or an intermittent push of another vasoactive medication; or
 - i. Provider otherwise deems patient not an appropriate candidate for infusion of vasoactive medications via peripheral IV.

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IV. **Endorsement:**

Pharmacy, Therapeutics, and Diagnostics Committee	8/2021
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V. References:

Cardenas-Garcia, J., Schaub, K. F., Belchikov, Y. G., Narasimhan, M., Koenig, S. J., Mayo, P. H. (2015). Safety of peripheral intravenous administration of vasoactive medication. *Journal of Hospital Medicine*. doi: 10.1002/jhm.2394

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Medication Management Category:

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