

# Practice Alert

## Push Dose Pressors (PDP)



Audience: ICU/ER RNs

Level of education II: **YELLOW**

July 2021

### Situation:

Prefilled syringes of select Push Dose Pressors (PDP) will be available in all AAHC Adult ICUs and the Emergency Department Pyxis machines beginning the week of July 20, 2021

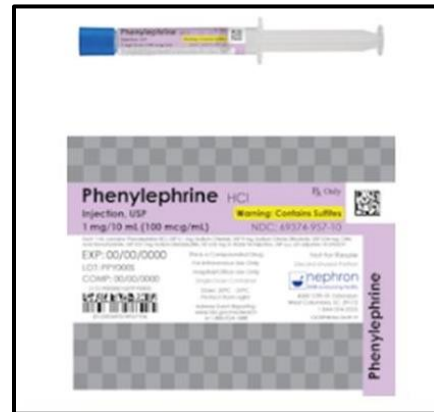
### Common Indications for Use:

- Transient hypotension with procedural sedation or intubation
- A bridge until continuous infusion vasopressors are ready
- Interim use until central access is placed if peripheral continuous infusion vasopressors are unable to be started
- Additional bolus dose in patients on maximum doses of continuous infusion vasopressors

### **EPINEPHrine 10 mCg/mL (10 mL syringe)**



### **PHENYLEphrine 100 mCg/mL (10 mL syringe)**



### Background:

Use of Push Dose Pressors in the ICU and ER environments have resulted in 96 medication administration variances in the last 2 years. To promote high reliability the IU Health Medication Safety Advisory Council (MSAC) focused on evaluating current state and recommending best practices for safe administration.

### Assessment:

The Medication Safety Advisory Council (MSAC) identified that current medication administration practices for Push Dose Pressors (PDP) were **HIGH RISK** for errors due to the:

1. Need for bedside dilution/compounding of **CODE DRUG** concentrations
2. Use of unlabeled syringes
3. Use of inappropriate syringe types making dose accuracy difficult
4. Documentation errors

## **Recommendation:**

Medication administration for Push Dose Pressors (PDP) should use the prefilled syringes available in the pyxis of all AAHC Adult ICUs and the Emergency Department.

**\*Be aware of look-alike products!\***

	<b>EPINEPHrine</b>	<b>PHENYLEphrine</b>
<b>Receptor</b>	$\alpha$ , $\beta$ -1, $\beta$ -2	$\alpha$
<b>Onset</b>	1 minute	1 minute
<b>Duration</b>	5-10 minutes	10-20 minutes
<b>Dose</b>	5-20 mCg IVPush Q2-5 min (0.5-2 mL)	50-200 mCg IVPush Q2-5 min (0.5-2 mL)
<b>Adverse Effects</b>	Tachycardia	Reflex bradycardia

## **Administration:**

- PDP may be given via IV or IO route by fast IV push.
  - If given via endotracheal tube, a larger dose (2-2.5x more) must be given.
  - Endotracheal tube should be the last choice for administration if no other access sites are available and new access is unable to be obtained.
- PDP may be given via peripheral access if a central line is unavailable.
- If PDP extravasates during administration
  1. Aspirate the solution
  2. Remove the canula
  3. Elevate the extremity
  4. Apply a warm compress
  5. Contact provider to evaluate need for phentolamine
- Use clear and complete closed loop communication to clarify the dose ordered to prevent confusion between PDP dosing and ACLS dosing.

## **Safety Concerns:**

- PDP should not be given in lieu of fluid replacement. Fluid resuscitation should be attempted in patients if appropriate.
- PDP should not be given during cardiac arrest. Follow ACLS algorithm for patients without a pulse.
- PDP syringe should not be used to compound vasopressor infusions at bedside.
- When discussing how much should be administered, use clear and complete instructions. Appropriate = 10 mCg or 1 mg (for ACLS) vs Inappropriate = 1 mL or 1 syringe