



# Montgomery County Fire and Rescue Service

## Division of Operations

### Emergency Medical and Integrated Healthcare Services

#### *Office of Medical Oversight Clinical Practice Guideline*

#### ***Vasopressor Infusions CPG***

#### ***Attachment B: Norepinephrine***

Norepinephrine is a potent vasopressor medication with large Alpha-1 (vasoconstriction) effects and moderate Beta-1 (cardiac output) effects. It is the preferred medication for the management of patients with cardiogenic, neurogenic, septic, and hypovolemic shock. It is indicated only for patients 18 years of age or older.

#### **Indications:**

- *Post-Return of Spontaneous Circulation (ROSC) hypotension*
- *Cardiogenic, hypovolemic, septic, or neurogenic shock*
- *Pseudo-PEA (positive carotid blood flow via ultrasound without a palpable pulse)*

**Patient Population:** Patients 18 years of age or older

#### **Goals of therapy (consistent with guidelines in Maryland Medical Protocol Norepinephrine for Treatment of Hypotension/Shock):**

1. To maintain a minimum SBP of 110 mmHg or a MAP of 80 mmHg in post-ROSC patients.
2. To maintain a SBP between 90-140 or MAP between 65-90 mmHg in patients with cardiogenic, hypovolemic, or septic shock.
3. To maintain a SBP between 110-140 or MAP 85-100 mmHg in neurogenic shock.

#### **General Procedure (All indications):**

1. Use pre-mixed solution of 4mg/250mL when available or reconstitute 4mg of norepinephrine into 250 mL of 5% Dextrose solution.
2. The infusion must be administered via IV pump through the largest and most proximal IV/IO access available (IV preferred).
3. Repeat blood pressures (on the extremity opposite the infusion) every 2 minutes and titrate the infusion based on these criteria:
  - d. If SBP/MAP is lower than the goal, increase by 10 mcg/min.
  - e. If SBP/MAP meets the goal, maintain the infusion rate.
  - f. If SBP/MAP is above the goal, decrease by 10 mcg/min.
4. The minimum dose is 2 mcg/min.
5. The maximum dose is 200 mcg/min.



# **Montgomery County Fire and Rescue Service**

## **Division of Operations**

### **Emergency Medical and Integrated Healthcare Services**

#### *Office of Medical Oversight Clinical Practice Guideline*

#### **Procedure (Cardiogenic, hypovolemic, neurogenic, or septic shock)**

1. Follow the initial procedure for preparation and infusion site selection.
2. Begin the infusion via IV pump at 10 mcg/min.
3. Follow the titration and blood pressure goals and minimum and maximum dosages in the General Procedure section.

#### **Procedure (Pseudo-PEA)**

1. Follow the initial procedure for preparation and infusion site selection.
2. Begin the infusion via IV pump at 20 mcg/min.
3. Stop push-dose epinephrine unless there is a change in cardiac rhythm.
4. If pulses are not palpable, continue CPR.
5. If POCUS is not available after the initial determination of carotid blood flow and the ECG is unchanged, continue upward titration every 2 minutes.
6. Follow the titration increments and minimum and maximum dosages in the General Procedure section.