PUSH-DOSE EPINEPHRINE

INDICATIONS

- Unstable Anaphylaxis
- Severe hypotension with signs of shock
- Septic shock
- Unstable bradycardia

ACTIONS

- Increases cardiac output
- Increases heart rate
- Increases mean arterial pressure (MAP)

APPLICABLE PROTOCOLS

- Policies Referenced:
  - 533-05: Abdominal Pain
  - 533-07: Anaphylaxis Allergic Reaction
  - 533-11: Chest Pain
  - 533-12: Symptomatic Bradycardia
  - 533-18: Shortness of Breath
  - 533-20: Shock – Hypovolemia
  - 533-25: Potential Crush Injury/Crush Syndrome

ONSET

- One (1) min

MIXING THE CONCENTRATION

- Double check your concentration prior to mixing
- Maintain sterile technique
- Label the bag and syringe(s) with the drug name and final concentration
  - Example: **"Epinephrine 10mcg/mL"**

Mixing Concentration Using "Cardiac Preloads" – ***Epinephrine 1mg/10mL*** *(0.1mg/mL; 100mcg/mL)*

- Supplies needed (1 of each):
  - 0.1mg/mL **Epinephrine** syringe (preload)
  - 100mL bag of 0.9% **Normal Saline**
  - 10mL syringe
- Mixing instructions:
  - 10mL of 0.1mg/mL Epinephrine into 100 mL **Normal Saline** bag
  - Final concentration is **Epinephrine 10mcg/mL**

Mixing Concentration Using Ampule – ***Epinephrine 1mg/mL***

- Supplies needed (1 of each):
  - **Epinephrine** 1mg/mL (1mg) ampule or vial
  - Filtered Needle (for ampule)
  - Regular needle
  - 100mL bag of 0.9% **Normal Saline**
  - 10mL syringe
- Mixing instructions:
  - 1mL of 1mg/mL **Epinephrine** into 100 mL **Normal Saline** bag
  - Final concentration is **Epinephrine 10mcg/mL**

ADULT	PEDIATRIC – (14 years and under)
BLS Procedures	
N/A	N/A
Expanded Scope	
N/A	N/A
ALS Prior to Base Hospital Contact	

• Vascular Access
• Cardiac monitor
 	
Epinephrine 10mcg/mL – Push-Dose
• Withdraw 10mL of solution using 10mL syringe
• Administer 10mcg (1mL) every 3 mins IV push
• Titrate to SBP > 90mmHg
 	
Hypotension in Sepsis Patient Refractory to ***Normal Saline***
• Administer **Epinephrine 10mcg/mL** as indicated above
	• Vascular Access
	• Cardiac monitor
	
	Epinephrine 10mcg/mL – Push-Dose
	• Withdraw 10mL of solution using 10mL syringe
	  ○ *Weight <10kg:* Administer 1mcg/kg (0.1mL/kg) q 3min IV push
	  ○ *Weight ≥10kg:* Administer 10mcg (1mL) q 3 mins IV push
	○ Titrate to weight-appropriate SBP (refer to Appendix A)
	
	Hypotension in Sepsis Patient Refractory to ***Normal Saline***
	• Administer **Epinephrine 10mcg/mL** as indicated above

Base Hospital Physician Orders Only	
Consult with ED Physician for further treatment measures	Consult with ED Physician for further treatment measures
Additional Information	
*Potential complications – **Sodium Bicarbonate** ($NaHCO_3$)* • **Epinephrine** is neutralized by, and may precipitate with, **Sodium Bicarbonate**; consider establishing secondary vascular access site • Do <u>not</u> administer **Epinephrine** and **Sodium Bicarbonate** in the same vascular access line <u>unless</u> the line has been flushed with ≥ 10mL of **Normal Saline** between med administrations *Documentation* • Time and amount of each **Push-Dose Epinephrine** given • Patient response 1 min after administration *Base Hospital Report* • Communicate the use of **Push-Dose Epinephrine** • Report the final concentration delivered • Report the total amount of **Push-Dose Epinephrine** given, the elapsed time of total dosage, and the patient response	*Potential complications – **Sodium Bicarbonate** ($NaHCO_3$)* • **Epinephrine** is neutralized by, and may precipitate with, **Sodium Bicarbonate**; consider establishing secondary vascular access site • Do <u>not</u> administer **Epinephrine** and **Sodium Bicarbonate** in the same vascular access line <u>unless</u> the line has been flushed with ≥ 10mL of **Normal Saline** between med administrations *Documentation* • Time and amount of each **Push-Dose Epinephrine** given • Patient response 1 min after administration *Base Hospital Report* • Communicate the use of **Push-Dose Epinephrine** • Report the final concentration delivered • Report the total amount of **Push-Dose Epinephrine** given, the elapsed time of total dosage, and the patient response