BETA BLOCKER TOXICITY

ALL PROVIDERS/EMT/EMT

- ❑ Focused history and physical exam
  - Attempt to quantify type and amount of beta blocker ingested, whether accidental or intentional, and identify any potential co-ingestants.
- ❑ Cardiac monitor, ETCO2, and pulse oximetry monitoring, when available.
- ❑ Perform and transmit 12 lead EKG
- ❑ **Treatment Plan**
  - Patients suspected of intentional overdose do not have the right to refuse care and law enforcement may be needed to ensure appropriate treatment is received.
  - Do NOT treat unless the patient is symptomatic. Consult OLMC if unsure.
  - Identify specific medication taken: long-acting vs. immediate acting, dose, quantity, and time of ingestion.
  - Perform blood glucose assessment on all patients. Pediatric patients, particularly, may develop hypoglycemia.
- ❑ **Key Considerations**
  - Beta-blocker toxicity can result in severe bradycardia, hypotension, respiratory distress, and shock.
  - Pediatric lowest acceptable systolic blood pressures are birth to 1 month = 60mmHg, 1 month to 1 year = 70mmHg, 1 year to 10 years is = 70mmHg + (age x 2) and over 10 years = 90mmHg.Continuous ECG, ETCO2, and pulse oximetry monitoring when available.

ADULT

AEMT

- ❑ Supportive care of airway, vascular access and fluid therapy per ***IV/IO Access and Fluid Therapy Guideline.***
- ❑ **Atropine:** For bradycardia with hypotension
  - **1 mg IV**, repeat every 5 minutes as needed, to a Max total dose of 3 mg
- ❑ **Epinephrine:** For bradycardia/hypotension unresponsive to atropine
  - **0.1mg (1 cc of 1:10,000)** IV/IO push
  - Repeat every 3-5 minutes as needed to maintain SBP.

PARAMEDIC

A patient with a beta blocker overdose may require higher than usual doses of vasopressor medications than used in ACLS.

SYMPTOMATIC BRADYCARDIA

- ❑ **Transcutaneous pacing** (**TCP**) at an initial rate of 80 beats per minute if the patient does not respond to medications

Consider Sedation for TCP as per Pain and Anxiety Guideline in the General COG.

- ❍ **Contact OLMC for dosages above those provided or use of medication NOT fitting the guideline parameters.**
- ❍ **Epinephrine (1:1000) 2–10 mcg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >100 mmHg.

PEDIATRIC (<15 years of Age)

NOTE: Pediatric weight based dosing should not exceed Adult dosing.

AEMT

- ❑ Supportive care of airway, vascular access and fluid therapy per ***IV/IO Access and Fluid Therapy Guideline.***
- ❑ **Atropine:** For bradycardia with hypotension
  - **0.02mg/kg IV**, to a max of 1mg/dose, repeat every 5 minutes as needed, to a Max total dose of 3 mg.
- ❑ **Epinephrine:** For bradycardia/hypotension unresponsive to atropine
  - **0.1mg (1 cc of 1:10,000)** IV/IO push
  - Repeat every 3-5 minutes as needed to maintain SBP.

PARAMEDIC

- ❑ A patient with a beta blocker overdose may require higher than usual doses of vasopressor medications than used in PALS.

IF BRADYCARDIA IS SEVERE with SIGNS OF POOR PERFUSION

- ❍ **Transcutaneous pacing** (**TCP**) at an initial rate of 100 beats per minute if the patient does not respond to medications

Consider Sedation for TCP as per Pain and Anxiety Guideline in the General COG.

- ❍ **Contact OLMC for dosages above those provided or use of medication NOT fitting the guideline parameters.**
- ❍ **Epinephrine (1:1000) 0.1–2 mcg/kg/min** IV/IO infusion for hypoperfusion. Titrate to maintain a SBP >70 + (2xage-yrs) mmHg.