

**Treatment Protocols****Date: 07/01/2021*****Dysrhythmia - Adult*****Policy #9100A****Adult BLS Standing Orders**

- **Universal Patient Protocol**
- Vitals
- Apply continuous monitoring including, pulse oximetry, and blood pressure cycling
- Determine peripheral pulses
- Ensure patent airway, O<sub>2</sub> and/or ventilate PRN per **Airway Policy**
- Measure glucose PRN, treat hypoglycemia per **Altered Mental Status Protocol**
- Consider **Chest Pain Protocol** PRN

**Stable Brady and Tachydysrhythmias:**

- Supportive care until hospital arrival
- Frequent reassessments
- Consider that dehydration, high blood sugar and/or fever may cause tachycardias; >200 bpm
  - Intervene as able on reversible causes

**Unstable Dysrhythmias:**

Includes abnormal heart rate and any of the following:

- Poor perfusion (cyanosis, delayed capillary refill, mottling)
- Altered LOC
- Dyspnea or shortness of breath
- Chest pain
- SBP < 90 mmHg
- Diminished or absent peripheral pulses

Follow **Shock Protocol** and the specific dysrhythmia algorithm, if known, as below.**Treatment:**

- Apply and use AED if available
- Follow **Shock Protocol**
- Begin CPR if patient becomes unconscious. After first 30 compressions, give first ventilations
- Refer to **Cardiac Arrest and Airway Protocols** PRN

**Adult LALS Standing Order Protocol**

- Establish IV
- Administer NS 0.9% 500-1,000 mL IV PRN hypotension and without signs of heart failure
- Apply and use AED if available and patient is unstable
- Begin CPR if patient becomes unconscious
- Go to **Cardiac Arrest and Airway Protocols** PRN

**Adult ALS Standing Order Protocol**

- Monitor EKG
- Establish IV/IO
- Capnography
- Obtain 12 Lead ECG

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If hypotensive, suspected dehydration, or high glucose (> 200 mmol/L), administer 500-1,000 ml IV/IO bolus (Avoid if evidence of, or known heart failure)

- Refer to **Shock Protocol** for further management

**Bradycardias:****Stable:**

- Apply monitor pads, anterior and posterior placement PRN
- Frequent reassessments

**Unstable:**

- Atropine sulfate 0.5 mg IV/IO. MR x 2 q3min
- For high-degree AV blocks, or atropine is unsuccessful, use Transcutaneous Pacing
- Transcutaneous Pacing (TCP) to maintain HR of 60 bpm, or SBP > 100 mmHg until perfusion is improved
- **Pain Medication Protocol** during pacing
- Midazolam 1-4 mg slow IV/IO push prn for TCP for anxiolysis. For SBP < 100 mmHg **BH**

**Unstable bradycardia, refractory to atropine and pacing**

- Push-dose epinephrine 1:100,000 (0.01 mg/ml) 1 mL IV/IO **BHP** q3 min, titrate to SBP  $\geq$ 90 mmHg **BHP**

**Push-dose Epinephrine mixing instructions**

- Remove 1 mL normal saline (NS) from the 10 mL NS syringe
- Add 1 mL of epinephrine 1:10,000 (0.1mg/mL) to 9 mL NS syringe
- The mixture now has 10 mL of epinephrine at 0.01 mg/mL (10 mcg/mL) concentration.

**Tachycardias:****Narrow Complex Tachycardia:****Stable:**

- Apply monitor pads, anterior and posterior placement PRN
- Frequent reassessments

**Stable SVT ONLY** (Not atrial fibrillation or atrial flutter)

- Valsalva Maneuver (MVM)

**If unsuccessful**

- Adenosine 6 mg IV/IO rapid push immediately followed by NS 20 ml IV/IO rapid push
  - Verify rhythm between doses. If rhythm is irregular, use Atrial Fibrillation pathway. **Do not use adenosine with an irregular rhythm. If patient has known asthma or COPD BH.**

**If no response or refractory to initial 6 mg after 3 min**

- Adenosine 12 mg IV/IO (humeral IO) rapid push immediately followed by NS 20 ml rapid push

**Unstable SVT or atrial fibrillation/atrial flutter:**

- Apply defibrillation pads, anterior and posterior placement
- Fluid bolus 500ml IV/IO prn for hypotension and without evidence of heart failure, MR x1
- Administer synchronized cardioversion per manufacturer's recommended dose
- Consider **Pain Medication Protocol** pre cardioversion
- Consider midazolam 1-4 mg IV/IO slow push prn pre cardioversion for anxiolysis. For SBP < 100 mmHg **BH**

**Treatment Protocols****Date: 07/01/2021*****Dysrhythmia - Adult*****Policy #9100A****Ventricular Tachycardia/Wide Complex Tachycardia:****Stable:**

- Apply defibrillation pads, anterior and posterior placement preferred
- Frequent reassessments

**Can administer lidocaine OR amiodarone:****Lidocaine:**

- Administer lidocaine 1-1.5 mg/kg slow IV/IO push. MR at 0.5-0.75 mg/kg q5-10 min, until patient converts or to max of 3 mg/kg total (including initial bolus)
- Following lidocaine administration – provide follow-up dosing \*\*\*

**Amiodarone:**

- Administer 150 mg amiodarone IV/IO over 10 minutes
- Following amiodarone administration – provide follow-up dosing \*\*\*

**Unstable VT:**

- Perform synchronized cardioversion at manufacturer's recommended energy dose. MR x3
- Consider **Pain Medication Protocol** prior to cardioversion
- Consider midazolam 1-4 mg IV/IO slow push prn prior to cardioversion for anxiolysis. For SBP < 100 mmHg **BH**
- Perform unsynchronized cardioversion/defibrillation if patient unresponsive or monitor does not sync
- If patient becomes unresponsive, move to **Cardiac Arrest and Airway Protocols**
- **Following cardioversion, provide lidocaine/amiodarone dosing (BHP for hypotension) \*\*\***

**Adult Base Hospital Orders****For Bradycardia:**

- BH - Repeat Atropine 0.5 mg IV/IO push q 5 min (max total dose 3 mg)

**For Narrow Complex Tachycardia:**

- BH – To administer adenosine for SVT (NOT Atrial Fibrillation or Flutter) with known COPD or asthma
- BH – Repeat synchronized cardioversion. MR x3

**For Wide Complex Tachycardia:**

- Stable - BH - Synchronized cardioversion. MR x3
- Lidocaine 1-1.5 mg/kg slow IV or IO push. May repeat at 0.5-0.75 mg/kg every 5-10 min, until patient converts or to max of 3 mg/kg total (including initial bolus)

**or**

- Amiodarone 150 mg IV/IO over 10 minutes, max 450 mg total

**For All Dysrhythmias:**

- BH – Dopamine drip for persistent hypotension per **Shock Protocol**
- BH – Repeat pain medication dosing. May repeat x three (3)
- BH – Midazolam 1-4 mg IV/IO for SBP < 100 mmHg for cardioversion

APPROVED:

Signature on File

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EMS Medical Director

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