

### POST-CARDIAC ARREST

#### Optimize Ventilation and Oxygen

- Maintain SaO<sub>2</sub> >94 –99 %
- Consider advanced airway and ETCO<sub>2</sub> (35-40)
- Avoid hyperventilation

#### TREAT HYPOTENSION

- IV/IO BOLUS (1-2 L)
- Vasopressor Infusion
- Treatable causes H's & T's
  - 12 Lead EKG



Consider Induced Hypothermia 32—36° C >24 hours

NO

FOLLOW COMMANDS?

YES

STEMI Or High Suspicion of AMI

YES

PCI Reperfusion

NO

Advanced Critical Care

#### REVERSIBLE CAUSES H's & T's

- Hypovolemia
- Hypoxia
- Hydrogen Ion (H<sup>+</sup>)
- Hypo/hyperkalemia
- Hypothermia
- Toxins
- Tamponade
- Tension Pneumothorax
- Thrombosis
  - Pulmonary
  - Coronary

Based on AHA ECC 2015 Guidelines

### TACHYCARDIA

HR typically > 150 BPM

#### UNIVERSAL ASSESSMENT

Reversible Causes? H's & T's

- Airway? BVM as necessary
- Oxygen if Hypoxic
- Pulse, and Blood Pressure
- Cardiac Monitor
- IV Access
- 12 Lead EKG. DO NOT delay therapy

#### REVERSIBLE CAUSES

H's & T's

- Hypovolemia
- Hypoxia
- Hydrogen Ion (H<sup>+</sup>)
- Hypo/hyperkalemia
- Hypothermia
- Toxins
- Tamponade
- Tension Pneumothorax
- Thrombosis
  - Pulmonary
  - Coronary

#### Persistent tachyarrhythmia with HYPOPERFUSION:

- Hypotension
- Altered Mental Status
- Shock
- Ischemic Chest Pain/ discomfort
- Acute heart failure

YES

#### SYNC Cardioversion

- Consider Sedation
- If regular narrow complex, consider adenosine

NO

Wide QRS? > .12 second

YES

- Consider Adenosine if regular and monomorphic
- Consider antiarrhythmic infusion
- EXPERT CONSULTATION

NO

- Vagal Maneuvers
- Adenosine (SVT)
  - 6mg IV Bolus
  - 12mg IV Bolus
- β-Blocker or Calcium Channel Blocker
- EXPERT CONSULTATION

#### Wide Complex Antiarrhythmic Infusion

- Procainamide - 20-50 mg/min
- Amiodarone - 150 mg over 10 min
- Sotalol - 100 mg (1.5 mg/kg) over 5 min

# BRADYCARDIA WITH A PULSE

Heart Rate typically < 50 BPM with complaint

## UNIVERSAL ASSESSMENT

Reversible Causes? H's & T's

- Airway? BVM as necessary
- Oxygen if Hypoxic
- Pulse, and Blood Pressure
- Cardiac Monitor
- IV Access

### Persistent bradyarrhythmia with HYPOPERFUSION:

- Hypotension
- Altered Mental Status
- Shock
- Ischemic Chest Pain/discomfort

Monitor and Observe  
Expert Consultation

**NO**

**YES**

### CONSIDER ATROPINE

#### Atropine Dose:

- First Dose: 0.5 mg IV Bolus
- Repeat Dose: 0.5 mg IV Bolus
- Repeat every 3 - 5 minutes
- Max total dose: 3 mg

#### If Atropine is not effective:

- Transcutaneous Pacing  
OR
- Dopamine infusion - 2-20 mcg/kg/min  
OR
- Epinephrine infusion - 2-10 mcg min

#### Consider:

Expert Consultation  
Transvenous Pacing

# CARDIAC ARREST ALGORITHM

HELP—ACTIVATE EMERGENCY RESPONSE

### START *High Quality* CPR

30:2  
100—120 per minute  
Compression Fraction > 60—80 %

- Give Oxygen
- Attach Monitor/Defibrillator

CHECK  
RHYTHM

VF/VT  
SHOCK

### Drug Therapy

IV/IO Access  
Epinephrine 1 mg 3-5 min  
Amiodarone 300 mg VF/VT

CONSIDER ADVANCED AIRWAY

TREAT  
REVERSIBLE  
CAUSES  
H's & T's

**ROSC**

**YES**

POST CARDIAC ARREST CARE

REVERSIBLE CAUSES  
H's & T's  
Hypovolemia  
Hypoxia  
Hydrogen Ion (H+)  
Hypo/hyperkalemia  
Hypothermia  
Toxins  
Tamponade  
Tension Pneumothorax  
Thrombosis  
Pulmonary  
Coronary

AT 2 MINUTE CYCLE—  
RE-EVALUATE RHYTHM

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