Return of Spontaneous Circulation (ROSC)

This protocol should be followed for all cardiac arrests with ROSC. If an arrest is of a known traumatic origin, refer to the **2.7 Traumatic Arrest-Treatment Protocol** and MCA Transport Protocol. If it is unknown whether the arrest is traumatic or medical, consider other treatable causes. Initiate ALS response if available. After ROSC, patients should be stabilized on scene prior to transport, ideally for at least five minutes before moving the patient. Refer to **4.9 Pediatric Crashing Patient/Impending Arrest-Treatment Protocol.**

1. Pediatric patients (≤ 14 years) utilize MI MEDIC cards for appropriate medication dosage. When unavailable utilize pediatric dosing listed within protocol.
2. If ventilation assistance is required, ventilate at 10-12 breaths per minute. Do not hyperventilate.
3. Reassess patient, if patient becomes pulseless
    a. Begin CPR
    b. Follow **6.1 Pediatric Cardiac Arrest-Treatment Protocol**.
4. Monitor vital signs.
5. Check blood glucose (may be MFR skill, see **7.21 Blood Glucose Testing-Procedure Protocol**)
6. Start an IV/IO **NS** or **LR** KVO**.**
7. Treat hypotension with an IV/IO fluid bolus 20 ml/kg consistent with **1.5 Shock-Treatment Protocol**.
8. May perform 12- lead ECG (Per MCA selection, may be BLS skill per **7.1 12 Lead ECG- Procedure Protocol**) but must not delay or take precedence over other critical assessments and interventions.
9. Monitor waveform ETCO2. If ventilation assistance is required, target ETCO2 of 35-45 mm Hg per **7.24 End Tidal Carbon Dioxide Monitoring-Procedure Protocol**
10. If hypotension persists after IV/IO fluid bolus, administer push dose **epinephrine** (diluted boluses) according to MI MEDIC cards.
    a. If MI MEDIC cards are not available prepare (10 mcg/mL) by adding 1mL of 1mg/10mL **epinephrine** in 9mL **NS**, then
        i. Administer 1 mcg/kg (0.1 mL/kg **epinephrine** 10 mcg/mL)
        ii. Maximum dose 10 mcg (1 mL)
        iii. Repeat every 3-5 minutes
        iv. Titrate to age appropriate SBP per MI MEDIC cards. If MI MEDIC cards are unavailable titrate SBP > 70 mmHg + (2 x age in years) up to 100 mmHg.
2. Anticipate airway intolerance and prepare for patient sedation. If patient becomes agitated with advanced airway in place, refer to **7.17 Patient Procedural Sedation-Procedure Protocol.**

<u>Medication References</u>
Epinephrine

Protocol Source/Reference: Michigan 6.4 Peds Return of Spontaneous Circulation; Version 6/6/23