Pediatric Seizures

I. Follow **General Pre-Hospital Care -Treatment Protocol**.
II. For focal seizure contact Medical Control
III. **IF PATIENT IS ACTIVELY SEIZING (GENERALIZED TONIC CLONIC):**
   A. Protect patient from injury.
   B. Maintain airway and provide supplemental oxygen
   C. Administer **midazolam** according to the MI-MEDIC cards
      a. If MI-MEDIC unavailable administer **midazolam** 0.1mg/kg IM maximum individual dose 10 mg.
      b. If IV established prior to seizure activity administer **midazolam** 0.05 mg/kg IV/IO maximum single dose of 5 mg.
      c. Monitor SpO2, EKG and waveform capnography (per **End Tidal Carbon Dioxide Monitoring-Procedure Protocol)** after **midazolam** administration.
   D. Consider trauma if evidence or suspicion of trauma treat according to applicable protocol in addition to stopping the seizure.
   E. Check blood glucose (may be MFR skill, see **Blood Glucose Testing-Procedure Protocol**).
      S a. Start IV/IO if needed
      S b. Administer **dextrose** according to MI-MEDICS CARDS when:
         i. ≤ 2 months old and blood glucose is <40 mg/dL
         ii. ≥ 3months old and blood glucose is <60 mg/dL
         iii. If MI MEDIC cards are unavailable, utilize the table below

Color	Age	Weight	Dose	Concentration	Volume		Concentration	Volume
Grey	0-2 months	3-5 kg (6-11 lbs.)	2.5g	Dextrose 12.5%	20 mL	**OR**	Dextrose 10%	25 mL
Pink	3-6 months	6-7 kg (13-16 lbs.)	3.25g	Dextrose 25%	13 mL	**OR**	Dextrose 10%	33 mL
Red	7-10 months	8-9 kg (17-20 lbs.)	4.25g	Dextrose 25%	17 mL	**OR**	Dextrose 10%	43 mL
Purple	11-18 months	10-11 kg (21-25 lbs.)	5g	Dextrose 25%	20 mL	**OR**	Dextrose 10%	50 mL
Yellow	19-35 months	12-14 kg (26-31 lbs.)	6.25g	Dextrose 25%	25 mL	**OR**	Dextrose 10%	63 mL
White	3-4 years	15-18 kg (32-40 lbs.)	8g	Dextrose 25%	32 mL	**OR**	Dextrose 10%	80 mL
Blue	5-6 years	19-23 kg (41-50 lbs.)	10g	Dextrose 25%	40 mL	**OR**	Dextrose 10%	100 mL
Orange	7-9 years	24-29 kg (52-64 lbs.)	12.5g	Dextrose 50%	25 mL	**OR**	Dextrose 10%	125 mL
Green	10-14 Years	30-36 kg (65-79 lbs.)	15g	Dextrose 50%	40 mL	**OR**	Dextrose 10%	150 mL

c. If unable to start IV, administer **glucagon** IM/IN (if available per MCA selection), (may be EMT skill per MCA selection).

Glucagon administration

☑ **Not included**

		Glucagon IM	**Glucagon IN**
		A. Patients < than 5 years of age administer **glucagon** 0.5 mg IM B. Patients ≥ 5 years of age administer **glucagon** 1 mg IM	A. Patients < than 5 years of age administer **glucagon** 0.5 mg IM B. Patients ≥ 5 years of age administer **glucagon** 1 mg IM
	Paramedic	☐	☐
	Specialist	☐	☐
	EMT	☐	☐

d. If seizure persists 10 minutes after initial dose of **midazolam** and correction of low blood glucose repeat one time **midazolam** (per MCA selection)

☑ Pre radio **midazolam** administration (without Medical Control contact)

☐ Post radio **midazolam** administration (contact Medical Control) prior to administration.

i. 0.1mg/kg IM maximum single dose of 10 mg
OR
ii. If IV already available 0.05 mg/kg IV/IO maximum single dose of 5 mg.

F. If seizures persist after second dose, consider underlying causes and contact Medical Control for further instructions.

IV. For PATIENT NOT CURRENTLY SEIZING, monitor and treat known underlying causes, if possible:

A. Check blood glucose (may be MFR skill, see **Blood Glucose Testing-Procedure Protocol**) and treat as outlined above (III. E.)
   a. If patient is altered and able to swallow – administer **oral glucose** when:
      i. ≤ 2 months old and blood glucose is <40 mg/dL
      ii. ≥ 3months old and blood glucose is <60 mg/dL

B. Check temperature and refer to **Pediatric Fever-Treatment Protocol** if applicable.

C. Monitor oxygenation and mental status, administer oxygen to maintain 94%, including ventilatory support as needed according to the **Airway Management-Procedure Protocol**
   a. For patients with respiratory depression and high suspicion opioid involvement, administer **naloxone** per **Opioid Overdose Treatment and Prevention-Treatment Protocol**.
D. Consider trauma, if evidence or suspicion treat according to applicable protocol.
E. Keep environment safe for the child, padding around the patient, if possible

NOTE:

1. Instructions for diluting **dextrose**
   a. To obtain **dextrose 10%,** discard 40 ml out of one amp of D50, then draw up 40 ml of **NS** into the D50 ampule
   b. To obtain **dextrose 12.5%,** discard 37.5 ml out of one amp of D50, then draw 37.5 ml of **NS** into the D50 amp;
   c. To obtain **dextrose 25%,** discard 25 ml out of one amp of D50, then draw 25 ml of **NS** into the D50 amp
   b. May utilize 10% for all ages 5 ml/kg (0.5 gm/kg) up to 250 ml, according to **Dextrose-Medication Protocol**.
2. 2. To avoid extravasation, a patent IV must be available for IV administration of **dextrose**. **Dextrose** should always be pushed slowly (e.g., over 1-2 minutes).

Medication Protocols
Dextrose
Glucagon
Midazolam
Naloxone