	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9007.01
	PROGRAM DOCUMENT: **Pediatric Diabetic Emergency (Hypoglycemia/Hyperglycemia)**	Initial Date:	07/26/21
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Signature on File

EMS Medical Director

Signature on File

EMS Administrator

Purpose:

A. To establish treatment standard for patients exhibiting signs and symptoms of a diabetic emergency.

Authority:

A. California Health and Safety Code, Division 2.5
B. California Code of Regulations, Title 22, Division 9

Protocol:

A. The ability to maintain temperature in prehospital settings in pediatric patients is a significant problem with a dose dependent increase in mortality for temperatures below 37°C or 98.6°F. Simple interventions to prevent hypothermia can reduce mortality. During transport warm and maintain normal temperature, being careful to avoid hyperthermia.
B. Perform blood glucose determination.

Hypoglycemia:

1. Blood Glucose Level ≤ 60 mg/dl
2. History of Diabetes
3. Weakness
4. Confusion
5. Nausea/Vomiting
6. Coma

BLS

1. Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.
2. Airway adjuncts as needed.
3. If trauma suspected, assess for traumatic injury and/or need for Spinal Motion Restriction (SMR) when indicated per PD# 8044.
4. If patient is seizing, protect the patient from further injury.
5. If Blood Glucose is ≤ 60 mg/dl:
   - If the patient is alert and oriented consider: Orange juice sweetened with sugar, regular soft drinks, oral glucose paste or 50% dextrose. Have the patient swallow a small amount of water, and if tolerated, EMT may give glucose.
6. Transport.

ALS

1. Initiate vascular access. Titrate to an appropriate Systolic Blood Pressure for patients age.
2. If blood glucose > 60 mg/dl, consider other causes of decreased sensorium.
3. If blood glucose ≤ 60 mg/dl, treat as follows:
   - Dextrose 0.5 gm/kg IV/IO up to 12.5 gm.
4. If blood sugar remains ≤ 60 mg/dl give additional
   - Dextrose 0.5 gm/kg up to 12.5 gm
5. If IV access is unavailable or delay is anticipated, treatment options are:
   - Glucagon 0.5 mg Intramuscular (IM) if blood sugar < 60 mg/dl OR
   - Dextrose 0.5 gm/kg IO.
   - If blood sugar remains ≤ 60 mg/dl, give additional Dextrose 0.5 gm/kg for a total of 1 mg/kg
6. Airway management as needed per PD# 8020.

NOTE: Concentrations of 10% Dextrose (D10) or 50% Dextrose (D50) may be used.

- If IV access is unavailable and the blood sugar ≤ 60 mg/dl or decreased responsiveness continues for more than fifteen (15) minutes after administration of Glucagon, IO access should be established.
- In the event of a glucometer failure, administer 10-12.5 grams of Dextrose or 0.5 mg of Glucagon IM based on clinical assessment.
- Cardiac monitoring.

Hyperglycemia:

1. Blood Glucose Level ≥ 350mg/dl
2. History of Diabetes
3. Weakness
4. Confusion
5. Nausea/Vomiting
6. Fruity-smelling breath
7. Shortness of Breath
8. Coma

BLS

1. Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.
2. Pediatric Airway Management as needed per PD# 8837.
3. Spinal motion restriction when indicated per PD# 8044.
4. Perform blood glucose determination.
5. If patient is seizing, protect the patient from further injury.
6. Transport

ALS

1. Perform blood glucose determination, if blood glucose ≥ 350 mg/dl and no evidence of fluid overload, initiate vascular access, and administer a Normal Saline bolus of 20 mg/kg.
2. Airway adjuncts as needed
3. Cardiac Monitoring
4. Ondansetron when indicated for Nausea/Vomiting per PD# 9020

Cross Reference:

PD# 8044 – Spinal Motion Restriction
~~PD# 8829 – Noninvasive Ventilations~~
PD# 9020 – Nausea and Vomiting
PD# 8015 – Trauma
~~PD# 8020 – Respiratory Distress: Airway Management~~
PD# 9016 – Pediatric Parameters
~~PD# 9019 – BRUE~~
PD# 8837 - Pediatric Airway Management
~~PD# 9013 – Pediatric Shock~~

Consider AEIOUTIPS:

Alcohol	Trauma
Epilepsy	Infection
Insulin	Psychiatric
Overdose	Stroke or Cardiovascular
Uremia	