	OBSTETRICS AND PEDIATRICS	Release for Public Comment	Due	
4.1	Pediatric Medication Emergency Dosing and Intervention Cards	TBD		
4.2	Obstetrical Emergencies	TBD		
4.3	Neonatal Assessment and Resuscitation	TBD		
4.4	Pediatric Altered Mental Status	6/28/2022	8/29/2022	Revised
4.5	Pediatric Respiratory Distress, Failure or Arrest	6/28/2022	8/29/2022	Revised
4.6	Pediatric Fever	6/28/2022	8/29/2022	Revised
4.7	Pediatric Seizures	6/28/2022	8/29/2022	Revised
4.8	Safe Transport of Children in Ambulances	6/28/2022	8/29/2022	Revised
4.9	Crashing Pediatric Patient/Impending Arrest NEW	TBD		

Pediatric Altered Mental Status

The purpose of this protocol is to provide for the assessment and treatment of pediatric patients with altered mental status of unknown etiology such as alcohol, trauma, poisonings, seizures, behavioral problems, stroke, environmental causes, infection, etc.

- For pediatrics less than < 24 hours old – refer to **Neonatal Assessment and Resuscitation** Protocol
- For critically ill patients refer **to Pediatric Crashing Patient/Impending Arrest Pro**tocol

1. Follow **Patient Assessment Protocol**.
2. Restrain patient if necessary, refer to **Patient Restraint Procedure**.
3. Ensure adequate oxygenation, ventilation and work of breathing
   A. Consider use of pulse oximetry and capnography
4. Measure blood glucose level (per MCA selection).

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

☐YES ☐NO

5. Start IV/IO if needed
6. Altered and able to swallow – administer oral glucose
   A. 2 months old or younger and glucose is less than 40 mg/dL
   B. 3 months old or older and glucose is less than<60 mg/dL .
7. Not alert – administer Dextrose according to MI-MEDICS CARDS or table below
   A. 2 months old or younger and glucose is <40 mg/dL
   B. 3 months old or older and glucose <60 mg/dL

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

8. Per MCA selection, if unable to start IV, administer Glucagon according to MI-MEDIC cards.

Glucagon Included?
☐ Yes ☐ No

9. If MI-MEDIC unavailable
   A. For patients less than 5 years of age, administer Glucagon 0.5 mg IM
   B. For patients aged 5 or greater, administer Glucagon 1 mg IM
10. If respiratory depression is present, administer Naloxone according to MI-MEDIC cards. If MI-MEDIC is unavailable, administer Naloxone 0.1 mg/kg IV/IO/IN/IM.
11. Repeat Dextrose as indicated.
12. Repeat Naloxone as indicated.

NOTE:

1. Instructions for Diluting Dextrose
   a. 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;
   b. 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 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).

Pediatric[AG1] *Altered Mental Status*

The purpose of this protocol is to provide for the assessment and treatment of pediatric patients with altered mental status of unknown etiology such as alcohol, trauma, poisonings, seizures, behavioral problems, stroke, environmental causes, infection, etc.

- For pediatrics less than < 24 hours old – refer to **Neonatal Assessment and Resuscitation** Protocol
- For critically ill patients refer **to Pediatric Crashing Patient/Impending Arrest Pro**tocol

1. Follow ~~Pediatric~~ Patient **Assessment** ~~and Treatment~~ **Protocol**.
   ~~1.~~
2. Restrain patient if necessary, refer to **Patient Restraint Procedure**.
3. Ensure adequate oxygenation, ventilation and work of breathing
   ~~2.~~A. Consider use of pulse oximetry and capnography
~~3. For a known diabetic, consider small amounts of oral glucose paste, buccal or sublingual.~~
4. ~~If the patient is **alert** but demonstrating altered mental status~~[KK(C2]~~,~~ mMeasure blood glucose level (per MCA selection).
   ~~4.~~

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

☐~~☒~~YES ☐NO

S 5. **Start IV/IO if needed**
6. Altered and able to swallow – administer oral glucose
   A. ~~If g~~2 months old or younger and glucose is less than ~~less than~~ 40 mg/dL
   ~~5.~~B. 3 months old or older~~for patients less than 1 year or~~ and glucose is less than~~6~~<60 mg/dL ~~for patients 1 year and above and patient is alert but altered,~~, ~~administer small amounts of oral glucose paste, buccal or sublingual~~.
S 7. Not alert – administer Dextrose according to MI-MEDICS CARDS or table below
   A. 2 months old or younger and glucose is <40 mg/dL
   B. 3 months old or older and glucose <60 mg/dL ~~If glucose is less than 40 mg/dL for patients less than 1 year or 60 mg/dL for patients 1 year and above, and patient is not alert, administer Dextrose according to MI-MEDIC cards.~~

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

6.

7. If MI-MEDIC unavailable, administer Dextrose 0.5 g/kg

For patients up to 2 months of age, utilize Dextrose 12.5%

- 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;
- Administer 4 mL/kgxxxxx

A.

For patients between 2 months and 6 years of age, utilize Dextrose 25%

- To obtain **Dextrose 25%,** discard 25 ml out of one amp of D50, then draw 25 ml of NS into the D50 amp Dilute

B. Administer 2 mL/kg

C. For patients age 7 or greater, utilize Dextrose 50%[BE(C3]

May utilize 10% for all ages 5 ml/kg (0.5 gm/kg) up to 250 ml, according to **Dextrose Protocol**.

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

~~D.~~

8. Per MCA selection, if unable to start IV, administer Glucagon[KK(C4)] according to MI-MEDIC cards.

Glucagon Included?
☐☒ Yes ☐ No

9. If MI-MEDIC unavailable
   A. For patients less than~~up to~~ 45 years of age, administer Glucagon 0.5 mg IM
   B. For patients age ~~d~~ 5 or greater, administer Glucagon 1 mg IM
10. If respiratory depression is present, administer Naloxone according to MI-MEDIC cards. If MI-MEDIC is unavailable, administer Naloxone 0.1 mg/kg IV/IO/IN/IM.
    ~~10. Consider other causes of depressed respirations such as head injury, BRUE (brief resolved unexplained event, overdose, stroke)~~
11. Repeat Dextrose as indicated.
12. Repeat Naloxone as indicated.

NOTE:

~~1. 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; administer as indicated above.~~

~~2. To obtain **Dextrose 25%,** discard 25 ml out of one amp of D50, then draw 25 ml of NS into the D50 amp; administer as indicated above.~~

1. ~~To avoid extravasation, a patent IV must be available for IV administration of Dextrose[KK(C5]. Dextrose should always be pushed slowly (e.g., over 1-2 minutes).~~[KK(C6] Instructions for Diluting Dextrose

a. 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;
b. 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 Protocol**.

2. 2. To avoid extravasation, a patent IV must be available for IV administration of Dextrose[KK(C7)]. Dextrose should always be pushed slowly (e.g., over 1-2 minutes).[KK(C8)]

~~3.~~

Pediatric Respiratory Distress, Failure or Arrest

1. Follow **Patient Assessment and Treatment Protocol.**
2. Assess the patient's airway
   - **A.** Complete obstruction refer to **Emergency Airway Procedure**
   - B. Partial airway obstruction and unable to ventilate patient after airway reposition refer to Emergency Airway Procedure
   - C. Consider Foreign Body refer to Emergency Airway Procedure
   - D. Consider anaphylaxis refer to **Pediatric Anaphylaxis Protocol**
3. Allow the patient a position of comfort that also maintains an open airway
4. Titrate oxygen saturation to 94%
   - A. Have a parent assist with blow or mask support
5. Airway should be managed by least invasive method possible.
6. Suction as needed if excessive secretions are present.
7. Consider CPAP if available, per **CPAP/BiPAP Procedure**.
8. Do not delay transport for interventions.

Attempt vascular access only if necessary for patient treatment.

Suspected Bronchospasm (Wheezing):

1. Assist the patient in using their own Albuterol Inhaler, if available
2. Administer inhaled medications according to **Nebulized Bronchodilators Procedure**.
3. Consider CPAP, if available, per **CPAP/BiPAP Procedure.**
4. In cases of respiratory failure:
   - A. If child appears to weigh less than 10 kg (approx. 20 lbs.), contact medical control prior to Epinephrine if possible.
   - B. If child weighs between 10-30 kg (approx. 60 lbs.); administer Pediatric Epinephrine Auto-Injector.
   - C. Child weighing greater than 30 kg; administer Epinephrine Auto-Injector.
   - D. If child weighs between 10-30 kg (approx. 60 lbs.) administer Epinephrine (concentration of 1mg/1mL) 0.15 mg (0.15mL) IM
   - E. Child weighing 30 kg or greater; administer Epinephrine (concentration of 1mg/1mL) 0.3 mg (0.3 mL) IM
5. Per MCA selection, if a second nebulized treatment is needed also administer Prednisone **OR** Methylprednisolone.

Medication Options:
Prednisone
50 mg tablet PO
(Children 6 and above, if tolerated)

☐ YES ☐ NO

Methylprednisolone
2 mg/kg IV/IO/IM
(Maximum dose 125 mg)

☐ YES ☐ NO

6. For MCA with both selected, Prednisone PO is the preferred medication. Methylprednisolone is secondary and reserved for when a patient can't take a PO medication.

Stridor/Suspected Croup:

1. Croup is most common in children 6 months to 6 years of age
2. Commonly associated with recent upper airway infection or fever .
3. If foreign body is suspected, contact Medical Control prior to administration of nebulized racepinephrine/epinephrine.
4. Consider humidified oxygen
5. If patient presents with stridor at rest without suspected airway obstruction administer nebulized Epinephrine per MCA selection:

MCA Selection
☐ Racepinephrine 2.25% inhalation solution via nebulizer Administer by placing 0.5 mL of Racepinephrine 2.25% inhalation solution in nebulizer and dilute with 3 mL of normal saline.
☐ Epinephrine 5 mg (1mg/1ml) nebulized

6. Do not delay transport.

Respiratory Failure or Arrest:

1. Ventilate the patient using an appropriately sized BVM with supplemental oxygen.
   A. Chest rise is the best indicator of successful ventilation
   B. Ventilate at a rate appropriate for the patient:
      i. Infant: 30 breaths per minute
      ii. Child: 20 breaths per minute
2. Bag Valve Mask is the preferred method of ventilation for kids under 8 years old.
   A. When unable to ventilate with BVM and basic airway adjuncts, consider advance airway see **Emergency Airway Protocol**
3. If opioid overdose is suspected, administer Naloxone according to MI-MEDIC cards. If MI-MEDIC is unavailable, administer Naloxone per **Naloxone Administration Procedure**.

Pediatric Respiratory Distress, Failure or Arrest

1. Follow ~~Pediatric~~ Patient **Assessment and Treatment Protocol.**
2. Assess the patient's airway
   - **A.** ~~; if the airway i~~Complete obstruction ~~s obstructed,~~ refer to **Emergency Airway Procedure**
   - B. Partial airway obstruction and unable to ventilate patient after airway reposition refer to Emergency Airway Procedure
   - Consider Foreign Body refer to Emergency Airway Procedure
   - C.
   - ~~A.~~ Consider anaphylaxis refer to **Pediatric Anaphylaxis Protocol** ~~Consider possibility of partial airway obstruction presents[TC1] with acute respiratory distress of sudden onset accompanied by fever, drooling, hoarseness, stridor, and tripod positioning[TC2].~~
   - ~~B.~~D. ~~If unable to ventilate patient after airway repositioning, assume airway obstruction.~~
3. ~~2.~~ Allow the patient a position of comfort that also maintains an open airway
4. Titrate oxygen saturation to 94%
   - ~~3.~~A. ~~(~~Have~~ing~~ a parent assist with blow or mask support ~~by may be necessary[TC3])~~
5. ~~4.~~ Airway should be managed by least invasive method possible.
6. ~~5.~~ Suction as needed if excessive secretions are present.
7. ~~6.~~ Consider CPAP if available, per **CPAP/BiPAP Procedure**[TC4].
8. ~~7.~~ Do not delay transport for interventions.
9. ~~8.~~ Attempt vascular access only if necessary for patient treatment.

Suspected Bronchospasm (Wheezing):

1. Assist the patient in using their own Albuterol Inhaler, if available
2. Administer inhaled medications according to **Nebulized Bronchodilators Procedure**.
3. Consider CPAP, if available, per **CPAP/BiPAP Procedure**[TC5].
4. In cases of respiratory failure[BE(C6)]:
   - A. If child appears to weigh less than 10 kg (approx. 20 lbs.), contact medical control prior to Epinephrine if possible.
   - B. If child weighs between 10-30 kg (approx. 60 lbs.); administer Pediatric Epinephrine Auto-Injector[TC7].
   - C. Child weighing greater than 30 kg; administer Epinephrine Auto-Injector.
   - D. If child weighs between 10-30 kg (approx. 60 lbs.) administer Epinephrine (concentration of 1mg/1mL) 0.15 mg (0.15mL) IM
   - E. Child weighing 30 kg or greater; administer Epinephrine (concentration of 1mg/1mL) 0.3 mg (0.3 mL) IM

   - ~~Push dose Epinephrine IV/IO dd draw up epi to this protocolmay be used when Epinephrine Auto-Injector is not available[TC8].~~

- ~~Prepare (Epinephrine 10 mcg/mL) by combining 1mL of 1mg/10mL Epinephrine in 9mL NS, then~~
- ~~Administer 1 mcg/kg (0.1 mL Epinephrine 10[BE(C9)] mcg/mL) IV/IO[KK(C10)]~~
- ~~Maximum dose 10 mcg (1 mL)~~
- ~~Repeat every 3-5 minutes[KK(C11)]~~
- ~~C.~~

5. Per MCA selection, if a second nebulized treatment is needed also administer Prednisone **OR** Methylprednisolone.

Medication Options:
Prednisone
50 mg tablet PO
(Children 6 and above, if tolerated)

☐ YES ☐ NO

Methylprednisolone
2 mg/kg IV/IO/IM
(Maximum dose 125 mg)

☐ YES ☐ NO

6. For MCA with both selected, Prednisone PO is the preferred medication. Methylprednisolone is secondary and reserved for when a patient can't take a PO medication.

~~7. If[BE(C12)] patient is in respiratory failure:~~
- ~~A. If child appears to weigh less than 10 kg (approx. 20 lbs.), contact medical control prior to Epinephrine if possible.~~
- ~~B. If child weighs between 10- 30 kg (approx. 60 lbs.); administer Epinephrine 1:1000, 0.15 mg (0.15 ml) IM OR via Pediatric Epinephrine Auto-injector, if available.~~
- ~~C. Child weighing greater than 30 kg; administer Epinephrine 1mg/ 1mL, 0.3 mg (0.3 ml) IM OR via Epinephrine Auto-Injector, if available.~~

Stridor/Suspected Croup:

1. Croup is most common in children 6 months to 6 years of age ~~Notes:~~

~~A.~~ Commonly associated with recent upper airway infection or fever ~~Croup is most common in the fall and winter with the onset of symptoms at night.~~

~~B.~~2. ~~Croup is most common in children 6 months to 6 years of age~~.

~~C. Patients will likely have a recent history of upper airway infection or fever.~~

~~D.~~3. If foreign body is suspected, contact Medical Control prior to administration of nebulized reacepinephrine/epinephrine.

~~2.~~4. Consider humidified oxygen

~~3.~~5. [BE(C13]If patient presents with ~~moderate to severe croup~~stridor at rest without suspected airway obstruction~~,~~ ~~contact medical control,~~ administer nebulized Epinephrine[TC14] per MCA selection:

MCA Selection

☐Racepinephrine 2.25% inhalation solution via nebulizer

Administer by placing 0.5 mL of Racepinephrine 2.25% inhalation solution in nebulizer and dilute with 3 mL of normal saline.

☐ Epinephrine 5 mg (1mg/1ml) nebulized

~~4.~~6. Do not delay transport.

~~5. Symptom improvement should occur within 10 to 30 minutes.~~

Respiratory Failure or Arrest:

1. Ventilate the patient using an appropriately sized BVM with supplemental oxygen.
   A. Chest rise is the best indicator of successful ventilation
   B. Ventilate at a rate appropriate for the patient:
      i. Infant: 30 breaths per minute
      ii. Child: 20 breaths per minute
2. Bag Valve Mask is the preferred method of ventilation for kids under 8 years old.
   ~~2.~~A. When unable to ventilate with BVM and basic airway adjuncts, consider~~Airway management should take place in order of~~ advance airway see **Emergency Airway Protocol** ~~least invasive to most invasive, titrating to effective ventilation and oxygenation.~~
3. If opioid overdose is suspected, administer Naloxone according to MI-MEDIC cards. If MI-MEDIC is unavailable, administer Naloxone ~~0.1 mg/kg IV/IO/IN/IM while ventilating with the BVM~~per **Naloxone Administration Procedure**.

Pediatric Fever

This protocol is intended to assist EMS providers in reducing fever in the pediatric patients prior to arrival to the emergency department**. Fever is defined as a measured (orally, axillary, or rectally) temperature of 100.4 degrees Fahrenheit (38 degrees Celsius) or greater.** Emergency management of the febrile child involves an assessment to determine if any associated problems are present which may require emergency treatment.

1. Obtain baseline temperature and document method used.
2. For patients less than 60 days, do not administer antipyretics.
3. For those who are 60 days or greater with a fever, administer antipyretic according to MCA selection

MCA Antipyretic Selection

☐ **Ibuprofen**
☐ **Acetaminophen**

4. Administer Ibuprofen if child is over 6 months old, has not been given ibuprofen (Motrin/Advil) in the last 6 hours and is alert.
    i. If patient's weight is known, utilize that weight and MI-MEDIC for dosing.
    ii. If patient's weight is not available, utilize length-based tape and MI-MEDIC for dosing.
    iii. If MI-MEDIC is not available, give **ibuprofen 10 mg/kg PO or see chart below.**

OR

5. Administer acetaminophen if the child is over 60 days old, has not been given acetaminophen in last four (4) hours and is alert. , and: *delete 0-2 months on table
    i. If patient's weight is known, utilize that weight and MI-MEDIC for dosing.
    ii. If patient's weight is not available, utilize length-based tape and MI-MEDIC for dosing.
    iii. If MI-Medic is not available, give **Acetaminophen 15 mg/kg PO or see chart.**

6. If any question concerning alertness or ability to swallow, **DO NOT ADMINISTER.**
7. Dosing questions should be directed to online medical control.

Dosing Table

Child's Weight (AGE)	Children's Acetaminophen Elixir (160 mg/5ml)	Children's Ibuprofen Elixir (100 mg/5 ml)
6-12 lbs. (0-2 mos.)	DO NOT GIVE	DO NOT GIVE
13-16 lbs. (3-6 mos.)	3 mL (96 mg)	DO NOT GIVE
17-20 lbs. (7-10 mos.)	4 mL (128 mg)	4 mL (80 mg)
21-25 lbs. (11-18 mos.)	5 mL (160 mg)	5 mL (100 mg)
26-31 lbs. (19 mos-3yrs)	6 mL (192 mg)	6 mL (120 mg)
32-35 lbs. (3-4 yrs.)	7 mL (224 mg)	7.5 mL (150 mg)
36-40 lbs. (4-5 yrs.)	8 mL (256 mg)	8.5 mL (170 mg)
41-45 lbs. (5-6 yrs.)	9 mL (288 mg)	9.5 mL (190 mg)
41-51 lbs. (5-6 yrs.)	10 mL (320 mg)	11 mL (220 mg)
52-64 lbs. (7-9 yrs.)	12 mL (384 mg)	13 mL (260 mg)
65-79+ lbs. (10-14 yrs)	15 mL (480 mg)	15 mL (300 mg)

Pediatric Fever

This [KK(C1)]protocol is intended to assist EMS providers in reducing fever in the pediatric patients prior to arrival to the emergency department. **Fever is defined as a ~~core~~measured (orally, axillary, or[KK(C2)] rectally) temperature of 100.4~~1~~[KK(C3)] degrees Fahrenheit (38 degrees Celsius[KK(C4)]) or greater.** Emergency management of the febrile child involves an assessment to determine if any associated problems are present which may require emergency treatment.

1. Obtain baseline temperature and document method used.
2. ~~Facilitate passive cooling by removing excess clothing and blankets.~~ For patients less than 6~~9~~0 days, do not administer antipyretics.
3. ~~For~~ For those who are 6~~9~~0 days or greater[KK(C5)] with a fever, administer antipyretic according to MCA selection~~:~~

MCA Antipyretic Selection

☐ **Ibuprofen**
☐ **Acetaminophen**

4. Administer Ibuprofen i~~I~~f child is over 6 months old, h~~, and~~ [KK(C6)]~~has~~ not been given ibuprofen (Motrin/Advil) in the last 6 [KK(C7)]hours and~~,~~ is alert. ~~, and:~~
   i. ~~The~~ If patient's weight is known, utilize that weight and MI-MEDIC for dosing.
   ii. If ~~The~~ patient's weight is not available, utilize ~~length based~~length-based tape and MI-MEDIC for dosing.
   iii. If MI-MEDIC is not available, give **ibuprofen 10 mg/kg PO or see chart below.**

OR

~~2.~~

~~3.~~5. Administer acetaminophen ~~I~~if the child is over 60 days old, ~~and~~ has not been given acetaminophen in last four (4) hours[KK(C8)] and~~,~~ is alert. , and: *delete 0-2 mos on table
   ~~a.~~i. If~~The~~ patient's weight is known, utilize that weight and MI-MEDIC for dosing.
   ~~b.~~ii. If~~The~~ patient's weight is not available, utilize ~~length based~~length-based tape and MI-MEDIC for dosing.
   ~~c.~~iii. If MI-Medic is not available, give **Acetaminophen 15 mg/kg PO or see chart.**

~~4.a. If child is over 6 months and [KK(C9)]has not been given ibuprofen (Motrin/Advil) in the last 6 [KK(C10)]hours, is alert, and:~~
   ~~a.i. The patient's weight is known, utilize that weight and MI-MEDIC for dosing.~~
   ~~b.i. The patient's weight is not available, utilize length based tape and MI-MEDIC for dosing.~~
   ~~c.i. If MI-MEDIC is not available, give **ibuprofen 10 mg/kg PO or see chart**~~

~~5.~~6. If any question concerning alertness or ability to swallow, **DO NOT ADMINISTER.**

7. Dosing questions should be directed to online medical control.

TABLE EDITED

Dosing Table

Child's Weight (AGE)	Children's Acetaminophen Elixir (160 mg/5ml)	Children's Ibuprofen Elixir (100 mg/5 ml)
6-12 lbs. (0-2 mos.)	DO NOT GIVE	DO NOT GIVE
13-16 lbs. (3-6 mos.)	3 mL (96 mg)	DO NOT GIVE
17-20 lbs. (7-10 mos.)	4 mL (128 mg)	4 mL (80 mg)
21-25 lbs. (11-18 mos.)	5 mL (160 mg)	5 mL (100 mg)
26-31 lbs. (19 mos-3yrs)	6 mL (192 mg)	6 mL (120 mg)
32-35 lbs. (3-4 yrs.)	7 mL (224 mg)	7.5 mL (150 mg)
36-40 lbs. (4-5 yrs.)	8 mL (256 mg)	8.5 mL (170 mg)
41-45 lbs. (5-6 yrs.)	9 mL (288 mg)	9.5 mL (190 mg)
41-51 lbs. (5-6 yrs.)	10 mL (320 mg)	11 mL (220 mg)
52-64 lbs. (7-9 yrs.)	12 mL (384 mg)	13 mL (260 mg)
65-79+ lbs. (10-14 yrs.)	15 mL (480 mg)	15 mL (300 mg)

Pediatric Seizures

I. Follow **Patient Assessment Protocol**.
II. For focal seizure contact medical control
III. **IF PATIENT IS ACTIVELY TONIC CLONIC SEIZING :**
A. Protect patient from injury.
B. Maintain airway and provide supplemental oxygen
C. Consider Trauma
D. Administer Midazolam 5 mg IM or IN according to the MI-MEDIC cards
a. If MI-MEDIC unavailable administer Midazolam 0.2 mg/kg IM or IN
b. Maximum individual dose 10 mg
IV. Further evaluation
Measure blood glucose level (per MCA selection)

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

☐YES ☐NO

E. Start IV/IO if needed
F. Altered and able to swallow – administer oral glucose
a. 2 months old or younger and glucose is less than 40 mg/dL
b. 3 months old or older and glucose is less than<60 mg/dL .
G. Not alert – administer Dextrose according to MI-MEDICS CARDS or table below
a. 2 months old or younger and glucose is <40 mg/dL

3 months old or older and glucose <60 mg/dL

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

H. Per MCA selection, if unable to establish vascular access, administer Glucagon according to MI-MEDIC cards.

Glucagon Included?
☐ Yes ☐ No

a. If MI-MEDIC unavailable
   1. For patients less than 5 years of age, administer Glucagon 0.5 mg IM
   2. For patients aged 5 or greater, administer Glucagon 1 mg IM

V. Persisting Seizure

A. If seizures persist after single dose (IM/IN/IV/IO) repeat additional full dose of **Midazolam** (IM/IN/IV/IO) one time per MCA selection

☐ **Pre Radio**
☐ **Contact Medical Control**

B. If seizures persist after second dose, consider underlying causes and contact medical control for further instructions.

VI. If patient is not currently seizing, has a single seizure of less than 5 minutes, monitor and treat known underlying causes, if possible:

A. Check Glucose
B. Check temperature
C. **Consider trauma**
   a. **If evidence or suspicion of trauma, see Spinal Injury Assessment and Immobilization protocol.**
D. For patients with respiratory depression and high suspicion opioid involvement, administer naloxone…
E. Monitor oxygenation and mental status, administer oxygen to maintain 94%, including ventilatory support as needed according to the **Airway Management Protocol**
F. Keep environment safe for the child, padding around the patient, if possible

NOTE:

1. Instructions for Diluting Dextrose
   a. 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;
   b. 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 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).

Pediatric Seizures

I. Follow **Patient Assessment Protocol**.
~~I.~~II. For focal seizure contact medical control
III. **IF PATIENT IS ACTIVELY TONIC CLONIC SEIZING ~~on arrival or a witnessed seizure of 5 minutes or greater~~:**[KK(C1]
~~II.~~ **~~For focal seizure contact medical control~~**
A. Protect patient from injury.[KK(C2]
B. Maintain airway and provide supplemental oxygen ~~Do not force anything between teeth.~~
~~B.~~C. Consider Trauma
~~C.~~D. Administer Midazolam ~~(5 mg/ml)~~ IM or IN according to the MI-MEDIC cards
a. If MI-MEDIC unavailable administer Midazolam 0.2 ~~1~~mg/kg IM or IN
b. Maximum individual dose 10 mg
IV. Further evaluation

~~D.~~ Measure blood glucose level (per MCA selection)~~.~~

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

☐YES ☐NO

E. Start IV/IO if needed
F. Altered and able to swallow – administer oral glucose
a. 2 months old or younger and glucose is less than 40 mg/dL
b. 3 months old or older and glucose is less than<60 mg/dL .
G. Not alert – administer Dextrose according to MI-MEDICS CARDS or table below
a. 2 months old or younger and glucose is <40 mg/dL
3 months old or older and glucose <60 mg/dL

~~E. .(copy and paste alt mental status section)~~
~~F. If glucose is less than 40 mg/dL for patients less than 1 year or 60 mg/dL for patients 1 year and above, administer Dextrose according to MI-MEDIC cards.~~ [KK(C3]
~~G. If MI-MEDIC unavailable, administer Dextrose 0.5 g/kg~~
~~For patients up to 2 months of age, utilize Dextrose 12.5%~~
~~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;~~
~~Administer 4 mL/kg xxxxxx~~

~~For patients between 2 months and 6 years of age, utilize Dextrose 25%~~

~~To obtain **Dextrose 25%,** discard 25 ml out of one amp of D50, then draw 25 ml of NS into the D50 amp Dilute~~
~~Administer 2 mL/kg~~
~~For patients age 7 or greater, utilize Dextrose 50%~~[BE(C4]
~~Dosing? Administer 1-2ml/kg~~[KK(C5]

~~May utilize 10% for all ages 5 ml/kg (0.5 gm/kg) up to 250 ml, according to **Dextrose Protocol**.~~

~~a.~~

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

~~a.For patients up to 2 months of age, utilize Dextrose 12.5%~~
~~b. For patients between 2 months and 6 years of age, utilize Dextrose 25%~~
~~c. For patients age 7 or greater, utilize Dextrose 50%~~
~~d. *May utilize 10% for all ages 5 ml/kg (0.5 gm/kg) up to 250 mL, according to **Dextrose Protocol**.*~~[BE(C6]

H. Per MCA selection, if unable to establish vascular access~~start IV~~, administer Glucagon according to MI-MEDIC cards.

Glucagon Included?
☐ Yes ☐ No

a. If MI-MEDIC unavailable
1. For patients less than 5 years of age, administer Glucagon 0.5 mg IM
2. For patients aged 5 or greater, administer Glucagon 1 mg IM

~~I.~~
~~a. For patients up to 4 years of age, administer Glucagon 0.5 mg IM~~
~~For patients aged 5 or greater, administer Glucagon 1 mg IM~~

~~b.~~

~~*Assess temperature, if greater than 100.4[KK(C7], administe[KK(C8]r…(bring from fever protocol* *The IO route is a last resort if IV cannot be established and glucagon is not available with online Medical Control approval.~~
~~*IV access if not already obtained*~~
~~*By this time – 5 minutes if still sezing IO if not I can do an IV, if stopped do an IV*~~

~~If IV established and **Midazolam**[BE(C9] **IM/IN** has NOTnot been administered, administer **Midazolam, or Lorazepam** IV/IO according to MI-MEDIC cards.~~
~~J. If MI-MEDIC unavailable administer 0.05 mg/kg IV/IO, maximum individual dose 5 mg per MCA selection[BE(C10].~~

~~**Medication Options:**~~
~~**(Choose One)**~~
~~☐ Midazolam 0.05 mg/kg IV/IO, maximum individual dose 5 mg~~
~~**OR**~~
~~☐ Lorazepam 0.1 mg/kg IV/IO, max single dose 4 mg, may repeat in 5 minutes if seizure activity continues; not to exceed 0.2 mg/kg total (maximum of 8 mg)~~

If seizures persist after single dose (IM/IN/IV/IO) ~~, per MCA selection,~~ repeat additional full dose of **Midazolam~~, or Lorazepam~~** (IM/IN/IV/IO) ~~at the same dose~~ ~~o~~one time per MCA selection~~.~~

~~Pre~~

☐ **Pre Radio**
☐ **Contact Medical Control**

B. If seizures persist after second dose, consider underlying causes and ~~or~~ contact medical control for further instructions.

VI. If patient is not currently seizing, has a single seizure of less than 5 minutes, monitor and treat known underlying causes, if possible:

A. Check Glucose

B. Check temperature
C. **Consider trauma**
If evidence or suspicion of trauma, see Spinal Injury Assessment and Immobilization protocol. ~~O.If evidence or suspicion of trauma, see Spinal Inury Assessment and Immobilization protocolspine should be immobilized~~[KK(C11]
~~K.~~
~~If patient is not currently seizing, has a single seizure of less than 5 minutes, but has altered mental status, refer to **ALTERED MENTAL STATUS PROTOCOL.**monitor and treat known underlying causes, if possible:~~
~~**Check glucose**~~
~~**Check temperature**~~
~~**Consider trauma**~~
~~If evidence or suspicion of trauma, see Spinal Inury Assessment and Immobilization protocol~~[KK(C12]
a.
D. For patients with respiratory depression and high suspicion opioid involvement, administer naloxone…
~~Assess temperature, if greater than 100.4~~[KK(C13], ~~administe~~[KK(C14]~~r…(bring from fever protocol)~~
E. Monitor oxygenation and mental status, administer oxygen to maintain 94%[KK(C15], including ventilatory support as needed according to the **Airway Management Protocol**
F. Keep environment safe for the child, padding around the patient, if possible
~~In an infant, [KK(C16]a seizure may be the only evidence of a closed head injury.~~

~~IV.~~

NOTE:
1. Instructions for Diluting Dextrose
   a. 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;
   b. 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 Protocol**.
2. 2. To avoid extravasation, a patent IV must be available for IV administration of Dextrose[KK(C17]. Dextrose should always be pushed slowly (e.g., over 1-2 minutes).[KK(C18]

Safe Transportation of Children in Ambulances

Safe transportation of children in ambulances is very important. This protocol will serve as a guideline to the safe transportation of children in an ambulance. These are a limited set of circumstances that may not fit every situation.

Definitions:

1. Child restraint system is a device that is designed for child safety in a vehicle. This includes:
    a. all types of car seats that are used in personal vehicles, forward and reward facing and booster seats
    b. ambulance child restraints
2. Ambulance child restraints are a specific type of child restraint system that is designed to be used in ambulances and on ambulance stretchers.
3. Car seats, for the purpose of this protocol, are child restraint systems used not on an ambulance stretcher.

Criteria for Transport

1. This protocol applies to every EMS response resulting in the need to transport pediatric patients who are of an height/weight that require the use of a child safety seat from the scene of an emergency. Pediatric patients that do not require a child safety seat should be transported following the same procedure as adult patients.
2. Any pediatric patient transported not in an ambulance child restraint device must be documented as such and reported to the MCA.
3. This protocol is based on recommendations, as published by the National Highway Traffic Safety Administration (NHTSA), for the transportation of children in five possible situations:
    a. The transport of a child who is not injured or ill.
    b. The transport of a child who is ill and/or injured and whose condition does not require continuous and/or intensive medical monitoring or intervention.
    c. The transport of an ill or injured child who does require continuous and/or intensive monitoring or intervention.
    d. The transport of a child whose condition requires spinal motion restriction and/or lying flat, refer to Spinal Precautions Procedure
    e. The transport of a child or children who require transport as part of a multiple patient transport (newborn with mother, multiple children, etc.)

Procedure

1. Children who are transported on a stretcher **must be** secured with ambulance child restraint.
2. The child's height and weight will be considered when determining an appropriate restraint system. Child seat models offer a wide range of height/weight limits, so each individual device must be evaluated to determine the appropriateness of use. A child's age will only be used when height or weight are not available for determination.
3. **DO NOT** transport a child in their own safety seat if the seat was involved in a motor vehicle crash.
4. Transportation of a child in any of the following ways is not allowed except under catastrophic (MCI) circumstances:
    a. On a parent/guardian/other caregiver's lap or held in their arms;

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

   b. On the multi-occupant bench seat or any seat perpendicular to the forward motion of the vehicle, even if the child is in a child safety seat.
5. For infants and newborns, be sure to maintain body heat.

Situation Guidelines:
(*Appropriate transport method is in bold, with alternatives for consideration during catastrophic situations listed below.)

1. Transport of an uninjured/not ill child
   a. **Transport child in a vehicle other than a ground ambulance using a properly-installed, size-appropriate car seat**.
   b. Transport in a size-appropriate car seat properly-installed in the front passenger seat of the ambulance with the airbags off and moved to the furthest back position or in another forward-facing seat.
   c. Transport in a size-appropriate car seat properly-installed on the rear-facing EMS provider's seat.
   d. Consider delaying the transport of the child (ensuring appropriate adult supervision) until additional vehicles are available without compromising other patients on the scene. Consult medical control if necessary.
2. Transport of an ill/injured child not requiring continuous intensive medical monitoring or interventions
   a. **Transport child in a size-appropriate ambulance child restraint secured appropriately on the cot.**
   b. Transport child in the EMS provider's seat in a size-appropriate car seat
3. Transport of an ill/injured child whose condition requires continuous intensive monitoring or intervention.
   a. **Transport child in a size-appropriate ambulance child restraint secured appropriately to the cot.**
   b. With the child's head at the top of the cot, secure the child to the cot with three horizontal straps and one vertical strap across each shoulder. If assessment/intervention requires the removing of restraint strap(s), restraints should be re-secured as quickly as possible.
4. Transport of an ill/injured child who requires spinal motion restriction or lying flat.
   a. **Secure the child in a size-appropriate ambulance child restraint, use Cervical Collar when appropriate, and secure child to the cot.**
   b. If the child is already secured to a spine board and it is detrimental to remove the child from the device, ensure padding is added as needed and secure to the cot (i.e.: extrication prior to arrival of transporting ambulance). (See **Spinal Precautions protocol).**
5. Transport of a child or children requiring transport as part of a multiple patient transport (newborn with mother, multiple children, etc.)
   a. **For multiple patients, transport each as a single patient according to the guidance provided for situations 1 through 4. Use additional units to accomplish safe transport, remembering that non-patient children should be transported in non-EMS vehicles, if possible.**
   b. For mother and newborn, a newborn is always a patient, and:

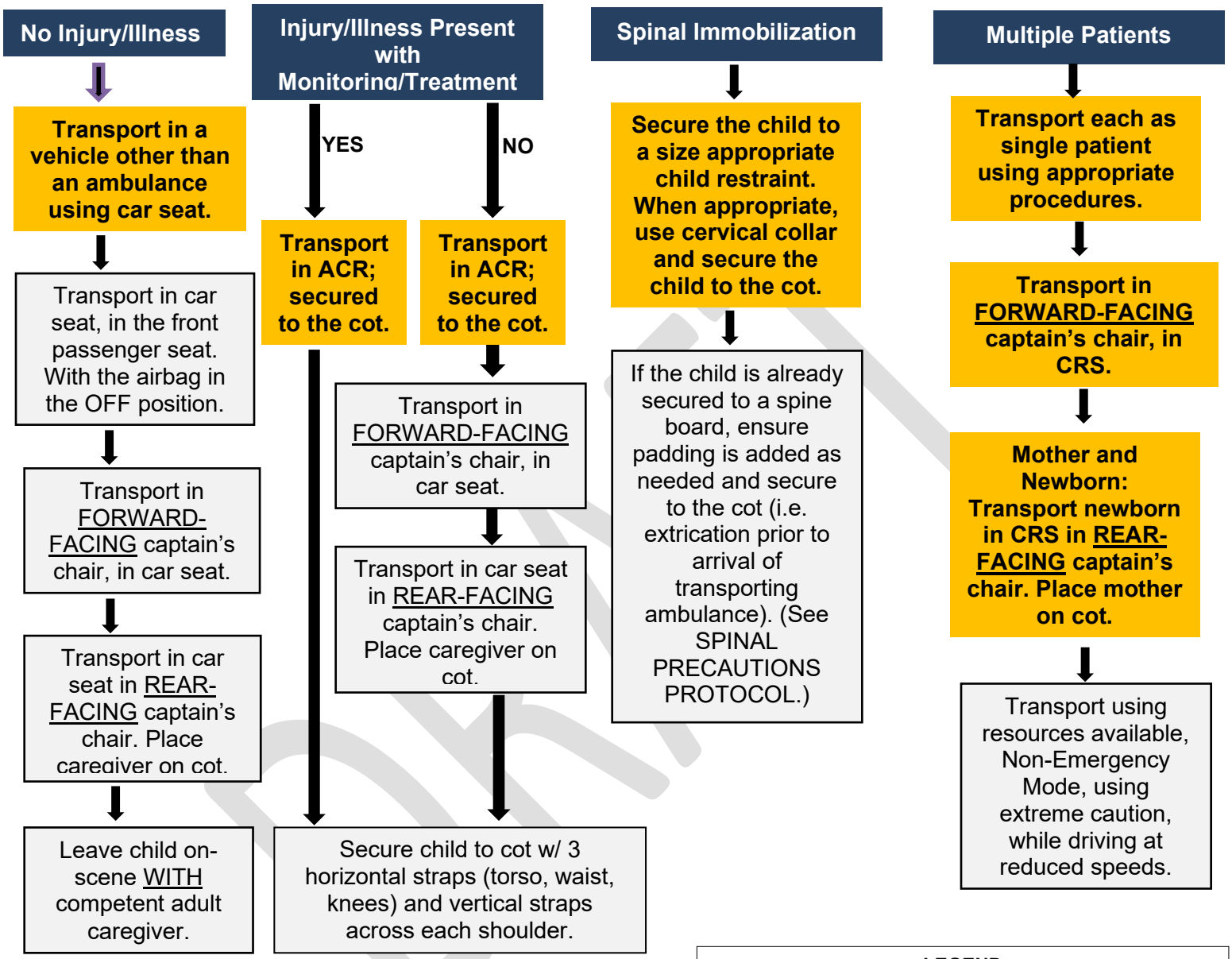
Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

i. where the mother does not have complications arising from delivery, transport the newborn in an ambulance child restraint on the stretcher and the mother in the rear-facing EMS provider seat.
ii. where the mother has complications resulting from delivery and is in need of positioning on the cot, transport the newborn in an approved size-appropriate car seat in the rear-facing EMS provider seat with a belt-path that prevents both lateral and forward movement under continuous monitoring, securing the mother to the cot.

c. When catastrophic situations prevent meeting the criteria for situations 1 through 4 for any pediatric patient, transport using space available in a non-emergency mode, exercising extreme caution and driving at a reduced speed.
d. **Except in catastrophic circumstances,** it is not appropriate to transport a child held in the parent/guardian/caregiver's arms or on a parent/guardian/caregiver's lap.

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

[BE(C1]



TRANSPORTATION OF A CHILD IN ANY OF THE FOLLOWING WAYS IS NOT ALLOWED UNDER NORMAL CIRCUMSTANCES:

1) **Unrestrained**
2) **On someone's lap**
3) **Only using horizontal stretcher straps when the child does not fit according to the manufacturers recommendations**
4) **On the bench seat or any seat perpendicular to the forward motion of the vehicle, even if the child is in a child safety seat**

LEGEND
= Ideal Transport Method
= Acceptable Alternative Transport Method if Ideal is not achievable

CRS: Appropriately Sized Child Restraint Device (car seat, ACR, Pedi-Mate, Safe Guard, integrated captain's chair, etc.)

MUST REFER TO MANUFACTURER'S INSTRUCTIONS.

MCA Name: Click here to enter text.
MCA Board Approval Date: Click here to enter text.
MCA Implementation Date: Click here to enter text.

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

Safe Transportation of Children in Ambulances

Safe transportation of children in ambulances is very important. This protocol will serve as a guideline to the safe transportation of children in an ambulance. These are[BE(C1)] a limited set of circumstances that may not fit every situation.

Definitions:

1. Child restraint system is a device that is designed for child safety in a vehicle. This includes:
    a. all types of car seats that are used in personal vehicles, forward and reward facing and booster seats
    b. ambulance child restraints
2. Ambulance child restraints are a specific type of child restraint system that is designed to be used in ambulances and on ambulance stretchers.
~~1.~~3. Car seats, for the purpose of this protocol, are child restraint systems used not on an ambulance stretcher.

Criteria for Transport

1. This protocol applies to every EMS response resulting in the need to transport pediatric patients who are of an ~~age~~height/weight that require the use of a child safety seat from the scene of an emergency. Pediatric patients that do not require a child safety seat should be transported following the same procedure as adult patients.
~~1.~~2. Any pediatric patient transported not in an ambulance child restraint device must be documented as such and reported to the MCA.
~~2.~~3. This protocol is based on recommendations, as published by the National Highway Traffic Safety Administration (NHTSA), for the transportation of children in five possible situations:
    a. The transport of a child who is not injured or ill.
    b. The transport of a child who is ill and/or injured and whose condition does not require continuous and/or intensive medical monitoring or intervention.
    c. The transport of an ill or injured child who does require continuous and/or intensive monitoring or intervention.
    d. The transport of a child whose condition requires spinal motion restriction and/or lying flat, refer to Spinal Precautions Procedure
    e. The transport of a child or children who require transport as part of a multiple patient transport (newborn with mother, multiple children, etc.)

Procedure

1. Children who are transported on a stretcher **must be** secured with ambulance child restraint.
~~1.~~2. The child's ~~age~~ height and weight ~~shall~~ will be considered when determining an appropriate restraint system. Child seat models offer a wide range of ~~age~~height/weight limits, so each individual device must be evaluated to determine the appropriateness of use. A child's age will only be used when height or weight are not available for determination.
~~2.~~3. ~~When possible, and with the exception of a minor vehicle crash (e.g. "fender-bender"), avoid~~**DO NOT** transport~~ing~~ a child~~ren~~ in their own safety seat~~s~~ if the seat was involved in a motor vehicle crash. ~~Use of the child's own seat can be considered if no other restraint systems are available and the seat shows no visible damage/defect.~~

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

~~3.~~4. Transportation of a child in any of the following ways is not allowed except under ~~normal~~ catastrophic (MCI) circumstances:
   - ~~a. Unrestrained;~~
   - ~~b.~~a. On a parent/guardian/other caregiver's lap or held in their arms;
   - ~~c. Using only horizontal stretcher straps, if the child does not fit according to cot manufacturer's specifications for proper restraint of patients;~~
   - ~~d.~~b. On the multi-occupant bench seat or any seat perpendicular to the forward motion of the vehicle, even if the child is in a child safety seat.

~~4.~~5. For infants and newborns, be sure to maintain body heat.

Situation Guidelines:
(*~~Ideal~~ Appropriate transport method is in bold, with ~~acceptable~~ alternatives for consideration during catastrophic situations listed ~~if ideal is not achievable~~ below.)

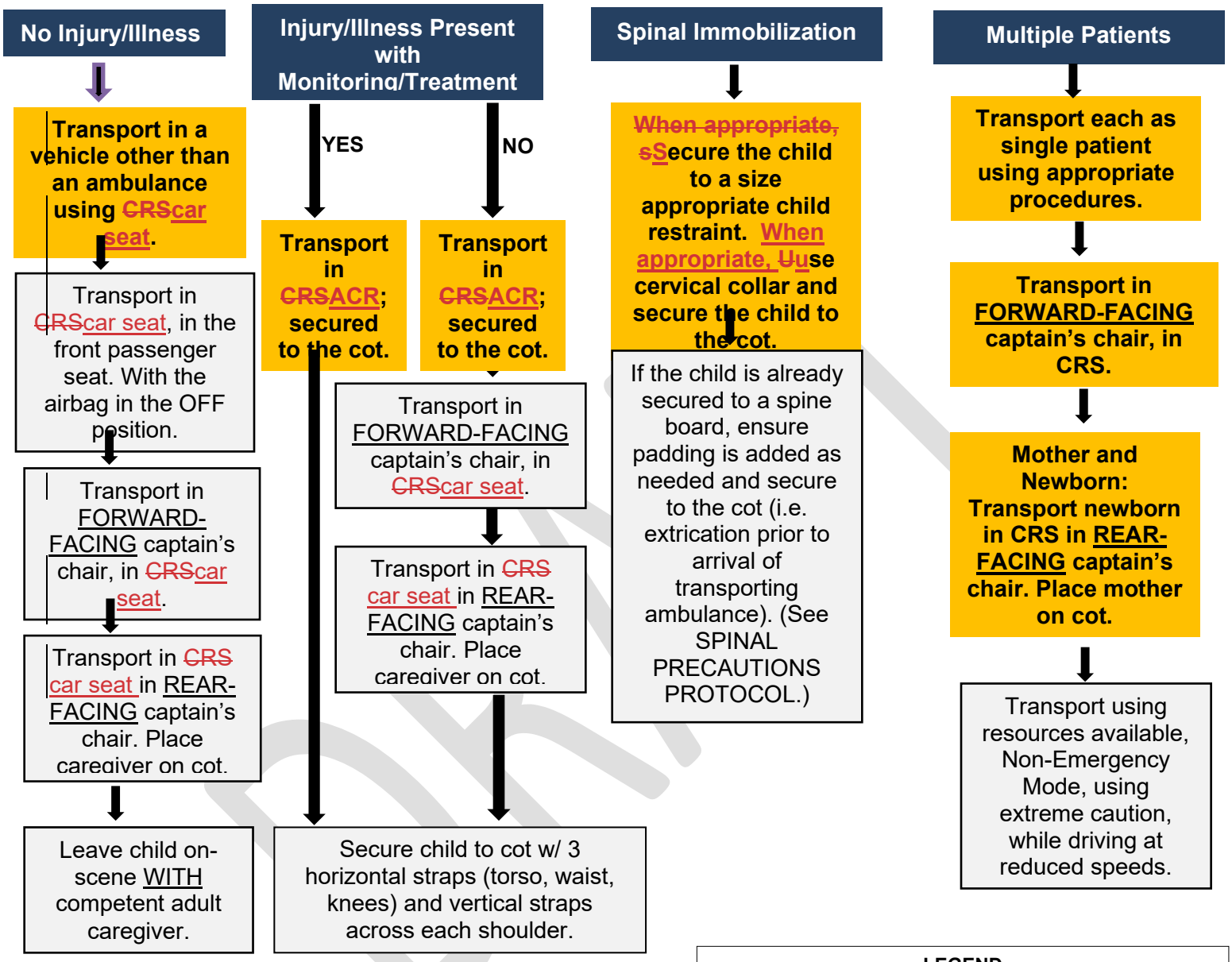
1. Transport of an uninjured/not ill child
   a. **Transport child in a vehicle other than a ground ambulance using a properly-installed, size-appropriate ~~child restraint system~~car seat**.
   b. Transport in a size-appropriate ~~child~~ car seat properly-installed in the front passenger seat of the ambulance with the airbags off and moved to the furthest back position or in another forward-facing seat.
   c. Transport in a size-appropriate ~~child~~ car seat properly-installed on the rear-facing EMS provider's seat.
   d. Consider delaying the transport of the child (ensuring appropriate adult supervision) until additional vehicles are available without compromising other patients on the scene. Consult medical control if necessary.
2. Transport of an ill/injured child not requiring continuous intensive medical monitoring or interventions
   a. **Transport child in a size-appropriate ~~child~~ ambulance child restraint ~~system~~ secured appropriately on the cot.**
   b. Transport child in the EMS provider's seat in a size-appropriate car seat~~restraint system.~~
3. Transport of an ill/injured child whose condition requires continuous intensive monitoring or intervention.
   a. **Transport child in a size-appropriate ~~child restraint system~~ambulance child restraint secured appropriately to the cot.**
   b. With the child's head at the top of the cot, secure the child to the cot with three horizontal straps and one vertical strap across each shoulder. If assessment/intervention requires the removing of restraint strap(s), restraints should be re-secured as quickly as possible.
4. Transport of an ill/injured child who requires spinal motion restriction or lying flat.
   a. **Secure the child ~~to~~ in a size-appropriate ambulance child restraint ~~when appropriate~~, use Cervical Collar when appropriate, and secure child to the cot.**
   b. If the child is already secured to a spine board and it is detrimental to remove the child from the device, ensure padding is added as needed and secure to the cot (i.e.: extrication prior to arrival of transporting ambulance). (See **Spinal Precautions protocol).**

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

5. Transport of a child or children requiring transport as part of a multiple patient transport (newborn with mother, multiple children, etc.)
    a. ~~If possible, f~~**For multiple patients, transport each as a single patient according to the guidance provided for situations 1 through 4. Use additional units to accomplish safe transport, remembering that non-patient children should be transported in non-EMS vehicles, if possible.**
    b. For mother and newborn, a newborn is always a patient, and:
        i. where the mother does not have complications arising from delivery, transport the newborn in an ambulance child restraint on the stretcher and the mother in the rear-facing EMS provider seat.
        ~~i.~~ii. ~~For mother and newborn,~~ where the mother has complications resulting from delivery and is in need of positioning on the cot, transport the newborn in an approved size-appropriate car seat~~restraint system~~ in the rear-facing EMS provider seat with a belt-path that prevents both lateral and forward movement under continuous monitoring, ~~leaving~~ securing the mother to the cot ~~for the mother~~.
    ~~b. Consider the use of additional units to accomplish safe transport, remembering that non-patient children should be transported in non-EMS vehicles, if possible.~~
    c. When ~~available resources~~catastrophic situations prevent meeting the criteria for situations 1 through 4 for ~~all any child~~ pediatric patient~~s~~, transport using space available in a non-emergency mode, exercising extreme caution and driving at a reduced speed.
    d. **Except in catastrophic circumstances,** ~~**Note:** Even with childbirth in the field, it is NEVER~~ it is ~~not~~ appropriate to transport a child held in the parent/guardian/caregiver's arms or on a parent/guardian/caregiver's lap.

Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf

[BE(C2]



TRANSPORTATION OF A CHILD IN ANY OF THE FOLLOWING WAYS IS NOT ALLOWED UNDER NORMAL CIRCUMSTANCES:

1) **Unrestrained**
2) **On someone's lap**
3) **Only using horizontal stretcher straps when the child does not fit according to the manufacturers recommendations**
4) **On the bench seat or any seat perpendicular to the forward motion of the vehicle, even if the child is in a child safety seat**

LEGEND
= Ideal Transport Method
= Acceptable Alternative Transport Method if Ideal is not achievable

CRS: Appropriately Sized Child Restraint Device (car seat, ACR, Pedi-Mate, Safe Guard, integrated captain's chair, etc.)

MUST REFER TO MANUFACTURER'S INSTRUCTIONS.

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Protocol Source/References: National Highway Traffic Safety Administration. (2012). Working group best-practice recommendations for the safe transportation of children in emergency ground ambulances. https://www.nasemso.org/Committees/STC/documents/NHTSA-Safe-Transportation-of-Children-in-Ambulances-2012.pdf