Memorial EMS
Decatur Memorial EMS
Springfield Memorial EMS

Section 24

Pediatric Medication Administration

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Pediatric Medication Administration Procedure

Medication administration is accomplished by specific routes as indicated by the protocols. Pediatric medication routes and procedures are analogous to the adult patient with the exception of the intraosseous (IO).

Special consideration needs to be given to patient age and weight when administering medications.

Resources for medication dosages include:

- Specific treatment protocol
- Medical Control
- Broselow Tape**

**Per Memorial EMS System protocol, do not exceed the adult dose when administering pediatric medications.

Approximate weight based on age:

Age - Weight

- Newborn - 3 kg / 7 lbs
- 2 months - 5 kg / 8 lbs
- 6 months - 7 kg / 15 lbs
- 1 year - 10 kg / 22 lbs
- 5 years - 20 kg / 44 lbs
- 10 years - 30 kg / 66 lbs
- 16 years - Adult values

Pediatric Pain Control Protocol

Pain, and the lack of relief from the pain, is one of the most common complaints among patients. Pediatric pain must not be ignored and must be identified and treated if appropriate. The prehospital provider must use clinical observations and a pain scale to rate the pain of the child.

EMR Care

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*
2. **Oxygen** If respiratory distress is noted, 10-15 LPM via NRM or if unable to tolerate the mask, 6 LPM via nasal cannula.
    a. If no obvious respiratory distress is noted, **apply a pulse ox**. If > 94% and no signs/ symptoms of respiratory distress, no Oxygen is required. If <94% apply nasal cannula at 2-6 LPM or 15 LPM via NRM as needed to raise pulse ox to >94%.
3. Assess level of pain using the Pain Assessment Scale (0-10) or the Wong-Baker Faces Pain Rating Scale.
4. Place patient in a position of comfort.
5. Reassure the patient.
6. Use distraction therapy to help reduce the patient's anxiety (e.g. stuffed animals, discussing favorite foods, toys, etc.)
7. Consider ice or splinting.
8. Reassess level of pain using the approved pain scale.

BLS Care

1. BLS Care includes all of the components of EMR Care.
2. Apply **Waveform Capnography** (if equipped).
3. Initiate Paramedic intercept, if indicated and begin transport.

A-EMT/EMT-I Care

1. A-EMT/EMT-I Care includes all of the components of BLS Care.
2. **Establish IV access**.
3. In cases of extremity pain (long bone fractures) or burns may consider:

Fentanyl	1mcg/kg IV over 2 minutes for pain **(*Max single dose*: 50mcg).**
	If unable to establish IV access may administer Intranasal Fentanyl. (***Max single dose:*** 100mcg Intranasal) (See intranasal dosing sheet of *Pediatric Prehospital Care Manual*).

If additional pain medication is required, consider Paramedic upgrade or contact Medical Control.

Pediatric Pain Control Protocol

Paramedic Care

1. Paramedic Care includes all of the components of A-EMT/EMT-I Care.
2. In cases of extremity pain (deformity, inability to bear weight, inability to flex joints etc.), back pain, burns, abdominal/ flank pain, head pain/inury (with GCS of 15), and discomfort from an IO infusion pain medication may be given without calling Medical Control as long as the patient BP remains age appropriate. Any other situation involving pain medication administration requires Medical Control order prior to giving the medication.
3. Manage the patient's pain by using one of the following medications. Situation can dictate which medication is first and second option or if one or both medications are administered:

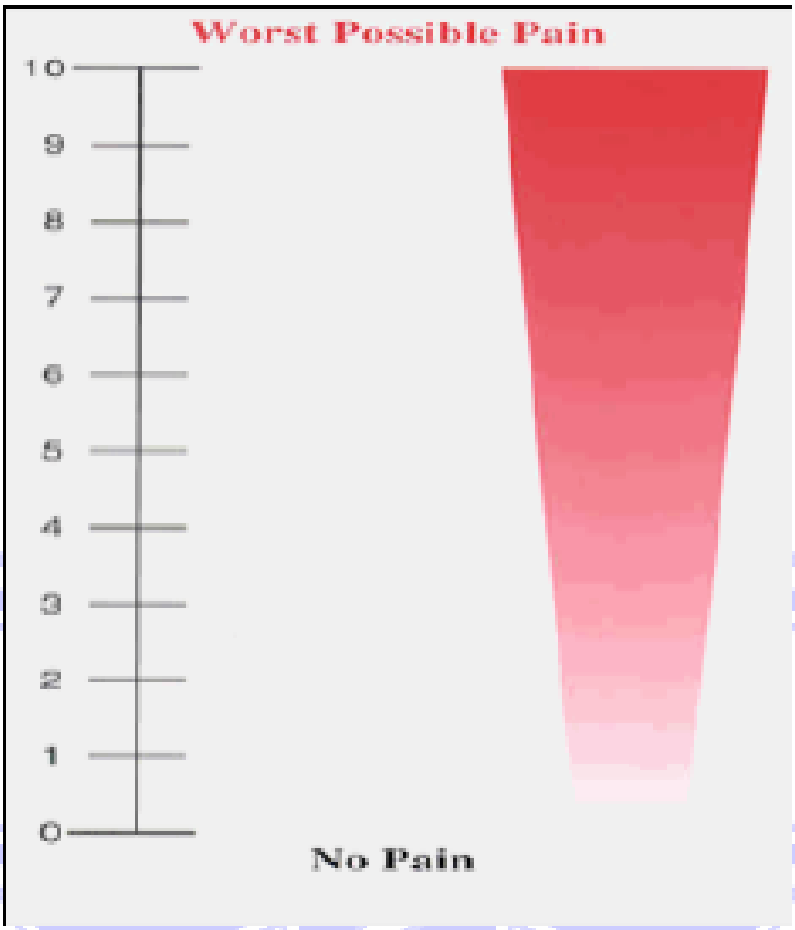
Morphine Sulfate	0.1mg/kg IV/IM **(*Max single dose*: 4 mg)** every 15 minutes (I.V.) and 30 minutes (I.M.) to reduce the patient's anxiety and severity of pain.
Fentanyl	1mcg/kg IV over 2 minutes for pain **(*Max single dose*: 50mcg).** 0.5mcg/kg over 2 minutes may be repeated once in 15 minutes (I.V.).
	If unable to establish IV access may administer Intranasal Fentanyl. (***Max single dose:*** 100mcg Intranasal) See intranasal dosing sheet of *Pediatric Prehospital Care Manual*.

Critical Thinking Elements

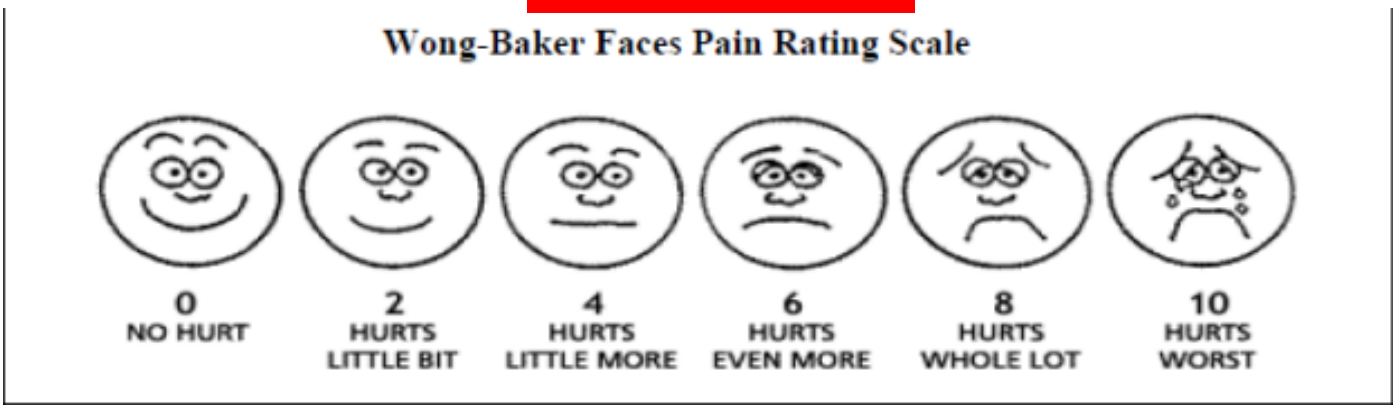
- Closely monitor the patient's airway – have BVM and suction readily available.
- Memorial EMS protocol does not include Zofran for patients under the age of 16
- The left thigh is the preferred site for IM medication administration in the infant patient population

Pediatric Pain Control Protocol

Pain Assessment Scales



0 – 10 Pain Scale



Intranasal Fentanyl Dosing Chart

Fentanyl Dosing for Pediatrics

Intranasal Fentanyl Dosing Chart		
Patient Weight	**Dosage (2mcg/kg)**	**Dead Space Volume**
3-5kg (6-11 Lbs)	10 mcg (0.2 ml)	(+0.1 ml)
6-10kg (13-22 Lbs)	20 mcg (0.4. ml)	(+0.1 ml)
11-15kg (24-33 Lbs)	30 mcg (0.6 ml)	(+0.1 ml)
16-20kg (35-44 Lbs)	40 mcg (0.8 ml)	(+0.1 ml)
21-25kg (46-55 Lbs)	50 mcg (1.0 ml)	(+0.1 ml)
26-30kg (57-66 Lbs)	60 mcg (1.2 ml)	(+0.1 ml)
31-35kg (68-77 Lbs)	70 mcg (1.4 ml)	(+0.1 ml)
36-40kg (79-88 Lbs)	80 mcg (1.6 ml)	(+0.1 ml)
41-45kg (90-99 Lbs)	90 mcg (1.8 ml)	(+0.1 ml)
46-50kg (101-110 Lbs)	100 mcg (2.0 ml)	No Extra
51-55kg (112-121 Lbs)	100 mcg (2.0 ml)	No Extra
56-60kg (123-132 Lbs)	100 mcg (2.0 ml)	No Extra
61-70kg (134-154 Lbs)	100 mcg (2.0 ml)	No Extra
71-80kg (156-176 Lbs)	100 mcg (2.0 ml)	No Extra
81-90kg (178-198 Lbs)	100 mcg (2.0 ml)	No Extra
91-100kg (200-220 Lbs)	100 mcg (2.0 ml)	No Extra

**Max 1 ml per nare

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Intranasal Versed Dosing Chart

(A-EMT/EMT-I/ Paramedic only)

Midazolam (Versed) Dosing for Pediatrics

Intranasal Versed (Midazolam) Dosing Chart					
Patient Age	**Weight**	**5mg/5mL Concentration**		**10mg/2mL Concentration**	
(years)		Dose (mg)	Dose (mL)	Dose (mg)	Dose (mL)
Neonate	3kg (6) Lbs	0.6 mg	0.7 ml	0.6 mg	0.3 mL
< 1 yr.	6kg (13) Lbs	1.2 mg	1.3 ml	1.2 mg	0.4 mL
1	10kg (22) Lbs			2.0 mg	0.5 mL
2	14kg (30) Lbs			2.8 mg	0.7 mL
3	16 kg (35) Lbs			3.2 mg	0.8 mL
4	18kg (40) Lbs			3.6 mg	0.9 mL
5	20kg (44) Lbs			4.0 mg	1.0 mL
6	22kg (48) Lbs			4.4 mg	1.0 mL
7	24kg (53) Lbs			4.8 mg	1.1 mL
8	26kg (57) Lbs			5.2 mg	1.2 mL
9	28kg (62) Lbs			5.6 mg	1.3 mL
10	30kg (66) Lbs			6.0 mg	1.4 mL
11	32kg (70) Lbs			6.4 mg	1.4 mL
12	34kg (75) Lbs			6.8 mg	1.5 mL
Small Teenager	40kg (88) Lbs			8.0 mg	1.8 mL
Full Grown Teen or Adult	>50kg (>110) Lbs			10.0 mg	2.0 mL

For Children: Total weight (kg) x 0.2 mg = total mg dose of Midazolam, maximum dose of 10 mg

*Volume is based on the calculated dose PLUS 0.10 mL dead space in the device.
The total volume is then rounded off to the next highest 0.1 mL. In some children, a higher dose may be needed (0.3 mg/kg)