



**Pediatric Medication
Administration**

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:

<u>Age</u>	<u>Weight</u>
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
15 years	Adult values

MEMORIAL EMS SYSTEM
PEDIATRIC PREHOSPITAL CARE MANUAL

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.

First Responder Care

First Responder Care should focus on the reduction of the patient's anxiety due to the pain.

1. Render initial care in accordance with the *Routine Pediatric Care Protocol*
2. Assess level of pain using the Pain Assessment Scale (0-10) or the Wong-Baker Faces Pain Rating Scale.
3. Place patient in a position of comfort.
4. Reassure the patient.
5. Use distraction therapy to help reduce the patient's anxiety (e.g. stuffed animals, discussing favorite foods, toys, etc.)
6. Consider **ice or splinting**.
7. Reassess level of pain using the approved pain scale.

BLS Care

BLS Care should focus on the reduction of the patient's anxiety due to the pain.

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

ILS Care

ILS Care should focus on the reduction of the patient's anxiety due to the pain.

1. ILS Care includes all of the components of *BLS Care*.
2. Establish **IV access**.

Pediatric Pain Control Protocol

ALS Care

ALS Care should focus on the pharmaceutical management of pain.

1. ALS Care includes all of the components of *ILS Care*.
2. In cases of **extremity pain (deformity, inability to bear weight, inability to flex joints etc.), back pain, burns, abdominal/ flank pain, 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 medication are both given or only one medication given:

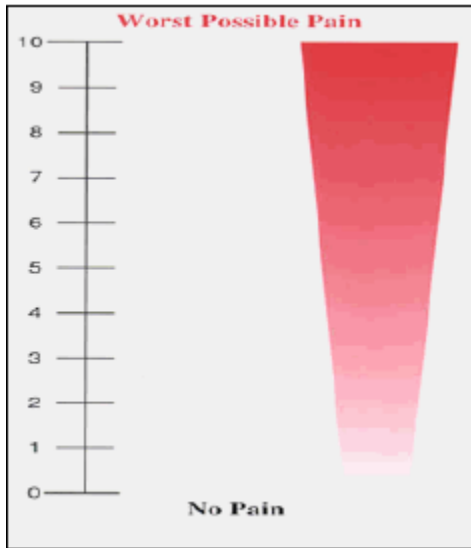
Morphine Sulfate	0.1mg/kg IV/IM (Max single dose: 4 mg) every 15 minutes (I.V.) and 30 minutes (I.M.) to reduce the patient's anxiety and severity of pain.
Fentanyl	1mcg/kg IV over 2 minutes for pain (Max single dose: 50mcg). Fentanyl 1mcg/kg may be repeated every 15 minutes (I.V.). If unable to establish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

Critical Thinking Elements

- **Closely monitor the patient's airway – have BVM and suction readily available.**
- Memorial EMS 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 Numeric Pain Scale

Wong-Baker Faces Pain Rating Scale



MEMORIAL EMS SYSTEM
 PEDIATRIC PREHOSPITAL CARE MANUAL

Pediatric Pain Control Protocol

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

MEMORIAL EMS SYSTEM
PEDIATRIC PREHOSPITAL CARE MANUAL

Pediatric Pain Control Protocol
(ILS/ ALS only)

Midazolam (Versed) Dosing for Pediatrics

Intranasal Versed (Midazolam) Dosing Chart

Patient Age (years)	Weight	5mg/5mL Concentration		10mg/2mL Concentration	
		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)