

ORANGE COUNTY EMERGENCY MEDICAL SERVICES

PEDIATRIC MEDICATION VOLUME DOSE BY HEAD-HEEL LENGTH MEASUREMENT

ALS Reference # I-20

		Newborn	3 MO	6 MO	1 YR	2 YR	3-4 YR	5-6 YR	7-8 YR	9-10 YR	11-12 YR
Length in centimeter range for age		47-60 cm	60-65 cm	66-74 cm	75-86 cm	83-95 cm	87-99 cm	100-113 cm	114-132 cm	133-158 cm	159-189 cm
Average kilograms/pounds		3-5kg/7-11lb	6 kg/13lb	8 kg/15lb	11kg/24lb	13 kg/29lb	16kg/35lb	20kg/44lb	26kg/57lb	31kg/68lb	40kg/88lb
Expected Heart Rate		100-160	100-160	100-160	100-170	90-150	80-140	75-120	70-110	60-105	60-100
Expected Respiratory Rate		30-60	30-60	30-60	30-40	24-40	20-30	20	16	16	16
MEDICATION / CONCENTRATION (Boxed Meds by Base Hospital Order only)	DOSE	Newborn to 3 Month	3-6 Month 60-65 cm	7-12 Months 66-75 cm	13-24 Months 76-87 cm	25-35 Months 88-92 cm	3-5 Years 93-100 cm	5+ to 7 years 101-114 cm	7+ to 9 years 115 -133 cm	9+ to 11 years 134-159 cm	11+ to 13 years 160-190 cm
Adenosine IV 3 mg/1mL	0.2 mg/kg	0.2 mL	0.4 mL	0.6 mL	0.7 mL	0.9 mL	1 mL	1.3 mL	1.6 mL	2 mL	2.7 mL
Albuterol 2.5 mg/3mL	via nebulizer at 8L/min flow rate	3.0 mL	3.0 mL	3.0 mL	6.0 mL	6.0 mL	6.0 mL	6.0 mL	6.0 mL	6.0 mL	6.0 mL
Amiodarone IV/IO for VF/ pulseless VT 50 mg/1 mL	5 mg/kg	0.4 mL	0.6 mL	0.8 mL	1.1 mL	1.3 mL	1.6 mL	2.0 mL	2.4 mL	3.0 mL	3.0 mL
Amiodarone IV for VT with pulse 50 mg/1 mL	5 mg/kg over 10 minutes	0.4 mL	0.6 mL	0.8 mL	1.1 mL	1.3 mL	1.6 mL	2.0 mL	2.4 mL	3.0 mL	3.0 mL
Atropine IV/IM 0.1 mg/mL Bradycardia dosing	0.02 mg/kg	-----	1.2 mL	1.6 mL	2.2 mL	2.6 mL	3.2 mL	4.0 mL	5.0 mL	5.0 mL	5.0 mL
Atropine IV/IM 0.1 mg/mL (Organophosphate toxicity dosing)	0.1 mg/kg	4.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL	5.0 mL
Dextrose 10% in H ₂ O solution 0.1 mg/mL	5 mL/kg	20 mL	30 mL	40 mL	50 mL	65 mL	80 mL	100 mL	130 mL	150 mL	200 mL
Diphenhydramine IM/IV/IO 50 mg/mL	1 mg/kg	N/A	0.1 mL	0.2 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL
Epinephrine 1.0 mg/mL IM (1 mg/mL)	0.01 mg/kg	N/A	0.05 mL	0.08 mL	0.1 mL	0.1 mL	0.16 mL	0.2 mL	0.25 mL	0.3 mL	0.3 mL
Epinephrine 0.1 mg/mL IV/IO (1 mg/10 mL)	0.01 mg/kg	0.4 mL	0.5 mL	0.8 mL	1 mL	1.3 mL	1.6 mL	2 mL	2.5 mL	3 mL	4 mL
Fentanyl IN/IV/IM 50 mcg/1 mL	2 mcg/kg	-----	0.15 mL	0.2 mL	0.5 mL	0.5 mL	0.6 mL	0.8 mL	1.0 mL	1.0 mL	1.0 mL

APPROVED

Review Dates: 5/16, 11/16, 4/17, 11/17, 8/18
 Begin Implementation: 10/01/2018
 Final Implementation: 4/01/2019

ORANGE COUNTY EMERGENCY MEDICAL SERVICES

PEDIATRIC MEDICATION VOLUME DOSE BY HEAD-HEEL LENGTH MEASUREMENT

ALS Reference # I-20

MEDICATION / CONCENTRATION (Boxed Meds by Base Hospital Order only)	DOSE	Newborn to 3 Month	3-6 Month 60-65 cm	7-12 Months 66-75 cm	13-24 Months 76-87 cm	25-35 Months 88-92 cm	3-5 Years 93-100 cm	5+ to 7 years 101-114 cm	7+ to 9 years 115 -133 cm	9+ to 11 years 134-159 cm	11+ to 13 years 160-190 cm
Glucagon IM 1 mg/mL	0.5 mg	----	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL	0.5 mL
Hydroxocobalamin 5,000 mg/250 mL	70 mg/kg	14 mL	21 mL	28 mL	38.5 mL	45.5 mL	56 mL	70 mL	91 mL	108.5 mL	140 mL
Lidocaine 2% local pain control for IO 100 mg/5 mL	0.5 mg/kg	0.1 mL	0.1 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL	1 mL
Midazolam for Seizure IN/IM 5 mg/mL	0.1 mg/kg	----	CONTACT BASE	CONTACT BASE	0.2 mL	0.25 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL
Midazolam for sedation IN/IM 5 mg/mL (example: cardioversion)	0.1 mg/kg	----	----	----	0.2 mL	0.25 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL
Morphine IV 4 mg/1 mL carpject	0.1 mg/kg	----	0.15 mL	0.2 mL	0.3 mL	0.3 mL	0.4 mL	0.5 mL	0.6 mL	0.8 mL	1 mL
Morphine IV 10 mg/10 mL carpject	0.1 mg/kg	----	0.5 mL	0.8 mL	1.1 mL	1.2 mL	1.5 mL	2.0 mL	2.5 mL	3.1 mL	4.0 mL
Morphine IM 10 mg/1mL vial	0.1 mg/kg	----	----	0.1 mL	0.1 mL	0.13 mL	0.15 mL	0.2 mL	0.25 mL	0.3 mL	0.4 mL
Naloxone IV/IM/IN 0.8 mg/2 mL	0.1 mg/kg max 0.8 mg	0.8 mL	0.8 mL	1.0 mL	2 mL	2 mL	2 mL	2 mL	2 mL	2 mL	2 mL
Naloxone IV/IM/IN 1 mg/1mL	0.1 mg/kg max 1 mg	0.4 mL	0.5 mL	0.7 mL	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL	1 mL
Naloxone IN Preload nasal spray 4 mg/0.1mL	4 mg IN	CONTACT BASE	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray	Single nasal spray
Normal Saline IV/IO 0.9% NaCl	20 mL/kg up to 250 mL per bolus	80 mL	120 mL	140 mL	220 mL	250 mL	250 mL	250 mL	250 mL	250 mL	250 mL
Normal Saline nebulized 0.9% NaCl	via nebulizer at 8L/min flow rate	----	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL	3 mL
Ondansetron (Zofran®) ODT	4 mg ODT	----	----	----	----	----	4 mg (age 4 or over)	4 mg	4 mg	4 mg	4 mg
Sodium Bicarbonate IV/IO 50 mEq/50 mL	1 mEq/kg	4 mL 1:1 dilution	6 mL 1:1 dilution	8 mL 1:1 dilution	11 mL	13 mL	16 mL	20 mL	25 mL	31 mL	40 mL

Note # 1: Defibrillation – use manufacturer recommended energy settings (for biphasic devices, delivered energy is calculated internally by device)

Note # 2: Do Not exceed maximum adult dose when administering medications to a pediatric patient

APPROVED

Review Dates: 5/16, 11/16, 4/17, 11/17, 8/18
Begin Implementation: 10/01/2018
Final Implementation: 4/01/2019