

# University of Virginia Emergency Medicine Pediatric Resuscitation Medication and Equipment Estimates

## Pediatric Weight Estimates

<u>Age</u>	<u>Weight (Kg)</u>
Newborn	3-5 kg
6 mos	7 kg
1 yr	10 kg
2 yrs	12-13 kg
3 yrs	14-15 kg
4 yrs	16 kg
5 yrs	18-20 kg
6 yrs	21 kg
8 yrs	25-27 kg
10 yrs	30-32 kg
12 yrs	39-40 kg
14-15 yrs	50+ kg

Version 2--W. Woods 6/08

Reference: Taketomo CK, Hodding JH, Kraus DM. Pediatric Dosage Reference. Lexi-Comp, 2007.

## Quick Reference for Mixing Emergency Drips

Drips are to be mixed in the unit **only** in an emergency, otherwise order infusions from the pharmacy.

Drips that are mixed in the unit may only be **hung for 4 hours**-then they must be replaced by drips mixed in the pharmacy.

**EPINEPHRINE** (Use 1:1000 concentration, 30 ml Vial. Vial is BROWN- this is the 1mg/1ml concentration)

<6kg (syringe)- 8mcg/ml- Mix 0.4mg (0.4ml) in 50 ml.

>6kg (IVAC)- 0.8mg/100ml- mix 0.8 mg (0.8ml) in 100 ml.

>40kg (IVAC)- 1mg/250ml (this is under Epinephrine conc. Option on pump) Mix 1mg (1 ml) in 250 ml.

**NITROPRUSSIDE** (50mg/2ml vial)

<6kg (syringe)- 200mcg/ml- Mix 10mg (0.4ml) in 50ml.

>6kg (IVAC)- 20mg/100ml- mix 20mg (0.8ml) in 100ml.

>40kg (IVAC)- 50mg/250ml- mix 50 mg (2ml) in 250 ml.

**VASOPRESSIN** (10 units/0.5ml vial)

<6kg (syringe)- 0.1unit/ml- mix 5units (0.25ml) in 50 ml.

>6kg (IVAC)- 20 units/ml - mix 50 units (2.5ml) in 50 ml.

**Do not mix vasopressin for >40 kg in the unit. We do not have enough vasopressin.**

**DOPAMINE** (200mg/5ml vial)

<6kg (syringe)- 1.6mg/ml- Mix 80mg (2ml) in 50ml.

>6kg (IVAC)- 160mg/100ml. Mix 160mg (4ml) in 100ml bag.

>40kg (IVAC)- 200mg/250ml concentration (**pre-mixed bag**).

**\*\*Be Careful! There are 3 pre-mixed concentrations. 400mg/250ml and 600mg/250ml are for CENTRAL lines only!\*\***

**Remember when mixing to waste equal volume of diluent as you are adding with medication.**

Child Weight (kg)

**3 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.03 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.3 ml 0.03 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.3 mg	1 mg/ml (1:1,000)	0.3 ml	
Atropine	0.02 mg/kg	0.1 mg	0.1 mg/ml 0.4 mg/ml	1 ml 0.25 ml	
Calcium Chloride	20 mg/kg	60 mg	100 mg/ml	0.6 ml	
NaHCO3	1 meq/kg	3 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	6 ml 3 ml	
Vasopressin	0.4 U/kg	1.2 U	20 U/ml	0.06 ml	
Atropine	0.02 mg/kg	0.1 mg	0.1 mg/ml 0.4 mg/ml	1 ml 0.25 ml	Intubation Drugs
Lidocaine	1 mg/kg	3 mg	20 mg/ml	0.15 ml	
Etomidate	0.3 mg/kg	0.9 mg	20 mg/10 ml	0.45 ml	
Fentanyl	2-5 mcg/kg	6-15 mcg	50 mcg/ml	0.12-0.3 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.3 mg 0.03 mg	1 mg/ml 1 mg/ml	0.3 ml 0.03 ml	
Succinylcholine	1-2 mg/kg	3-6 mg	20 mg/ml	0.15-0.3 ml	
Adenosine	0.1-0.2 mg/kg	0.3-0.6 mg	6 mg/2 ml	0.1-0.2 ml	Emergent Medications
Amiodarone	5 mg/kg	15 mg	50 mg/ml	0.3 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.15-0.3 mg	2 mg/ml	0.08-0.15 ml	
Benadryl	1 mg/kg	3 mg	50 mg/ml	0.06 ml	
Calcium Gluconate	60-100 mg/kg	180-300 mg	100 mg/ml	1.8-3 ml	
Dilantin/phenytoin	20 mg/kg	60 mg	50 mg/ml	1.2 ml	
Etomidate	0.3 mg/kg	0.9 mg	20 mg/10 ml	0.45 ml	
Fentanyl	1 mcg/kg	3 mcg	50 mcg/ml	0.06 ml	
Glucose	0.5 to 1.0 g/kg	1.5-3 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	15-30 ml 3-6 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	3 mg 6-12 mg	500 mg/5 ml 500 mg/5 ml	0.03 ml 0.06-0.12 ml	
Lidocaine	1 mg/kg	3 mg	20 mg/ml	0.15 ml	
Magnesium sulfate	25-50 mg/kg	75-150 mg	1 g/2 ml	0.15-0.3 ml	
Morphine	0.1-0.2 mg/kg	0.3-0.6 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	6 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.3 mg	0.4 mg/ml	0.75 ml	
Prednisone	1-2 mg/kg	3-6 mg	15 mg/5 ml (po)	1-2 ml	
Propofol	0.5 mg/kg	1.5 mg	10 mg/ml	0.15 ml	
Succinylcholine	1-2 mg/kg	3-6 mg	20 mg/ml	0.15-0.3 ml	
Vecuronium	0.1 mg/kg	0.3 mg	1 mg/ml	0.3 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.15-0.3 mg	2 mg/2 ml 5 mg/ml	0.15-0.3 ml 0.03-0.06 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	2.5-3.5	Epinephrine	0.1 to 1.0 mcg/kg/min	Infusions
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	3 Fr single / 4 Fr double	Dobutamine	2 to 20 mcg/kg/min	
LMA	1	Isoproterenol	0.5-1.5 mcg/kg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Prostaglandin	0.05 to 0.1 mcg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b> <b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg              1.5-3 J	
		Defibrillation	2-4 J/kg                      6-12 J	

Child Weight (kg)

**4 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.04 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.4 ml 0.04 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.4 mg	1 mg/ml (1:1,000)	0.4 ml	
Atropine	0.02 mg/kg	0.1 mg	0.1 mg/ml 0.4 mg/ml	1 ml 0.25 ml	
Calcium Chloride	20 mg/kg	80 mg	100 mg/ml	0.8 ml	
NaHCO3	1 meq/kg	4 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	8 ml 4 ml	
Vasopressin	0.4 U/kg	1.6 U	20 U/ml	0.08 ml	
Atropine	0.02 mg/kg	0.1 mg	0.1 mg/ml 0.4 mg/ml	1 ml 0.25 ml	Intubation Drugs
Lidocaine	1 mg/kg	4 mg	20 mg/ml	0.2 ml	
Etomidate	0.3 mg/kg	1.2 mg	20 mg/10 ml	0.6 ml	
Fentanyl	2-5 mcg/kg	8-20 mcg	50 mcg/ml	0.16-0.4 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.4 mg 0.04 mg	1 mg/ml 1 mg/ml	0.4 ml 0.04 ml	
Succinylcholine	1-2 mg/kg	4-8 mg	20 mg/ml	0.2-0.4 ml	
Adenosine	0.1-0.2 mg/kg	0.4-0.8 mg	6 mg/2 ml	0.13-0.27 ml	Emergent Medications
Amiodarone	5 mg/kg	20 mg	50 mg/ml	0.4 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.2-0.4 mg	2 mg/ml	0.1-0.2 ml	
Benadryl	1 mg/kg	4 mg	50 mg/ml	0.08 ml	
Calcium Gluconate	60-100 mg/kg	240-400 mg	100 mg/ml	2.4-4 ml	
Dilantin/phenytoin	20 mg/kg	80 mg	50 mg/ml	1.6 ml	
Etomidate	0.3 mg/kg	1.2 mg	20 mg/10 ml	0.6 ml	
Fentanyl	1 mcg/kg	4 mcg	50 mcg/ml	0.08 ml	
Glucose	0.5 to 1.0 g/kg	2-4 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	20-40 ml 4-8 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	4 mg 8-16 mg	500 mg/5 ml 500 mg/5 ml	0.04 ml 0.08-0.16 ml	
Lidocaine	1 mg/kg	4 mg	20 mg/ml	0.2 ml	
Magnesium sulfate	25-50 mg/kg	100-200 mg	1 g/2 ml	0.2-0.4 ml	
Morphine	0.1-0.2 mg/kg	0.4-0.8 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	8 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.4 mg	0.4 mg/ml	1 ml	
Prednisone	1-2 mg/kg	4-8 mg	15 mg/5 ml (po)	1.3-2.7 ml	
Propofol	0.5 mg/kg	2 mg	10 mg/ml	0.2 ml	
Succinylcholine	1-2 mg/kg	4-8 mg	20 mg/ml	0.2-0.4 ml	
Vecuronium	0.1 mg/kg	0.4 mg	1 mg/ml	0.4 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.2-0.4 mg	2 mg/2 ml 5 mg/ml	0.2-0.4 ml 0.04-0.08 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	2.5-3.5	Epinephrine	0.1 to 1.0 mcg/kg/min	Infusions
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	3 Fr single / 4 Fr double	Dobutamine	2 to 20 mcg/kg/min	
LMA	1	Isoproterenol	0.5-1.5 mcg/kg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Prostaglandin	0.05 to 0.1 mcg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
		<b>Dose</b>	<b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	2-4 J
		Defibrillation	2-4 J/kg	8-16 J



Child Weight (kg)

**6 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.06 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.6 ml 0.06 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.6 mg	1 mg/ml (1:1,000)	0.6 ml	
Atropine	0.02 mg/kg	0.12 mg	0.1 mg/ml 0.4 mg/ml	1.2 ml 0.3 ml	
Calcium Chloride	20 mg/kg	120 mg	100 mg/ml	1.2 ml	
NaHCO3	1 meq/kg	6 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	12 ml 6 ml	
Vasopressin	0.4 U/kg	2.4 U	20 U/ml	0.12 ml	
Atropine	0.02 mg/kg	0.12 mg	0.1 mg/ml 0.4 mg/ml	1.2 ml 0.3 ml	Intubation Drugs
Lidocaine	1 mg/kg	6 mg	20 mg/ml	0.3 ml	
Etomidate	0.3 mg/kg	1.8 mg	20 mg/10 ml	0.9 ml	
Fentanyl	2-5 mcg/kg	12-30 mcg	50 mcg/ml	0.24-0.6 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.6 mg 0.06 mg	1 mg/ml 1 mg/ml	0.6 ml 0.06 ml	
Succinylcholine	1-2 mg/kg	6-12 mg	20 mg/ml	0.3-0.6 ml	
Adenosine	0.1-0.2 mg/kg	0.6-1.2 mg	6 mg/2 ml	0.2-0.4 ml	Emergent Medications
Amiodarone	5 mg/kg	30 mg	50 mg/ml	0.6 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.3-0.6 mg	2 mg/ml	0.15-0.3 ml	
Benadryl	1 mg/kg	6 mg	50 mg/ml	0.12 ml	
Calcium Gluconate	60-100 mg/kg	360-600 mg	100 mg/ml	3.6-6 ml	
Dilantin/phenytoin	20 mg/kg	120 mg	50 mg/ml	2.4 ml	
Etomidate	0.3 mg/kg	1.8 mg	20 mg/10 ml	0.9 ml	
Fentanyl	1 mcg/kg	6 mcg	50 mcg/ml	0.12 ml	
Glucose	0.5 to 1.0 g/kg	3-6 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	30-60 ml 6-12 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	6 mg 12-24 mg	500 mg/5 ml 500 mg/5 ml	0.06 ml 0.12-0.24 ml	
Lidocaine	1 mg/kg	6 mg	20 mg/ml	0.3 ml	
Magnesium sulfate	25-50 mg/kg	150-300 mg	1 g/2 ml	0.3-0.6 ml	
Morphine	0.1-0.2 mg/kg	0.6-1.2 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	12 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.6 mg	0.4 mg/ml	1.5 ml	
Prednisone	1-2 mg/kg	6-12 mg	15 mg/5 ml (po)	2-4 ml	
Propofol	0.5 mg/kg	3 mg	10 mg/ml	0.3 ml	
Succinylcholine	1-2 mg/kg	6-12 mg	20 mg/ml	0.3-0.6 ml	
Vecuronium	0.1 mg/kg	0.6 mg	1 mg/ml	0.6 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.3-0.6 mg	2 mg/2 ml 5 mg/ml	0.3-0.6 ml 0.06-0.12 ml	
<b>Equipment</b>	<b>Size</b>	<b>Infusion</b>	<b>Rate/kg</b>		Infusions
Endotracheal tube	3.5	Epinephrine	0.1 to 1.0 mcg/kg/min		
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	4-5 Fr	Dobutamine	2 to 20 mcg/kg/min		
LMA	1.5	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Prostaglandin	0.05 to 0.1 mcg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
			<b>Dose</b>	<b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	3-6 J	
		Defibrillation	2-4 J/kg	12-24 J	

Child Weight (kg)

**7 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.07 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.7 ml 0.07 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.7 mg	1 mg/ml (1:1,000)	0.7 ml	
Atropine	0.02 mg/kg	0.14 mg	0.1 mg/ml 0.4 mg/ml	1.4 ml 0.35 ml	
Calcium Chloride	20 mg/kg	140 mg	100 mg/ml	1.4 ml	
NaHCO <sub>3</sub>	1 meq/kg	7 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	14 ml 7 ml	
Vasopressin	0.4 U/kg	2.8 U	20 U/ml	0.14 ml	
Atropine	0.02 mg/kg	0.14 mg	0.1 mg/ml 0.4 mg/ml	1.4 ml 0.35 ml	Intubation Drugs
Lidocaine	1 mg/kg	7 mg	20 mg/ml	0.35 ml	
Etomidate	0.3 mg/kg	2.1 mg	20 mg/10 ml	1.1 ml	
Fentanyl	2-5 mcg/kg	14-35 mcg	50 mcg/ml	0.3-0.7 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.7 mg 0.07 mg	1 mg/ml 1 mg/ml	0.7 ml 0.07 ml	
Succinylcholine	1-2 mg/kg	7-14 mg	20 mg/ml	0.35-0.7 ml	
Adenosine	0.1-0.2 mg/kg	0.7-1.4 mg	6 mg/2 ml	0.23-0.47 ml	Emergent Medications
Amiodarone	5 mg/kg	35 mg	50 mg/ml	0.7 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.35-0.7 mg	2 mg/ml	0.18-0.35 ml	
Benadryl	1 mg/kg	7 mg	50 mg/ml	0.14 ml	
Calcium Gluconate	60-100 mg/kg	420-700 mg	100 mg/ml	4.2-7 ml	
Dilantin/phenytoin	20 mg/kg	140 mg	50 mg/ml	2.8 ml	
Etomidate	0.3 mg/kg	2.1 mg	20 mg/10 ml	1.1 ml	
Fentanyl	1 mcg/kg	7 mcg	50 mcg/ml	0.14 ml	
Glucose	0.5 to 1.0 g/kg	3.5-7 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	35-70 ml 7-14 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	7 mg 14-28 mg	500 mg/5 ml 500 mg/5 ml	0.07 ml 0.14-0.28 ml	
Lidocaine	1 mg/kg	7 mg	20 mg/ml	0.35 ml	
Magnesium sulfate	25-50 mg/kg	175-350 mg	1 g/2 ml	0.35-0.7 ml	
Morphine	0.1-0.2 mg/kg	0.7-1.4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	14 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.7 mg	0.4 mg/ml	1.8 ml	
Prednisone	1-2 mg/kg	7-14 mg	15 mg/5 ml (po)	2.3-4.7 ml	
Propofol	0.5 mg/kg	3.5 mg	10 mg/ml	0.35 ml	
Succinylcholine	1-2 mg/kg	7-14 mg	20 mg/ml	0.35-0.7 ml	
Vecuronium	0.1 mg/kg	0.7 mg	1 mg/ml	0.7 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.35-0.7 mg	2 mg/2 ml 5 mg/ml	0.35-0.7 ml 0.07-0.14 ml	
<b>Equipment</b>	<b>Size</b>	<b>Infusion</b>	<b>Rate/kg</b>		Infusions
Endotracheal tube	3.5	Epinephrine	0.1 to 1.0 mcg/kg/min		
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	4-5 Fr	Dobutamine	2 to 20 mcg/kg/min		
LMA	1.5	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
			<b>Dose</b>	<b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	3.5-7 J	
		Defibrillation	2-4 J/kg	14-28 J	

Child Weight (kg)

**8 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.08 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.8 ml 0.08 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.08 mg	1 mg/ml (1:1,000)	0.8 ml	
Atropine	0.02 mg/kg	0.16 mg	0.1 mg/ml 0.4 mg/ml	1.6 ml 0.4 ml	
Calcium Chloride	20 mg/kg	160 mg	100 mg/ml	1.6 ml	
NaHCO3	1 meq/kg	8 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	16 ml 8 ml	
Vasopressin	0.4 U/kg	3.2 U	20 U/ml	0.16 ml	
Atropine	0.02 mg/kg	0.16 mg	0.1 mg/ml 0.4 mg/ml	1.6 ml 0.4 ml	Intubation Drugs
Lidocaine	1 mg/kg	8 mg	20 mg/ml	0.4 ml	
Etomidate	0.3 mg/kg	2.4 mg	20 mg/10 ml	1.2 ml	
Fentanyl	2-5 mcg/kg	16-40 mcg	50 mcg/ml	0.32-0.8 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.8 mg 0.08 mg	1 mg/ml 1 mg/ml	0.8 ml 0.08 ml	
Succinylcholine	1-2 mg/kg	8-16 mg	20 mg/ml	0.4-0.8 ml	
Adenosine	0.1-0.2 mg/kg	0.8-1.6 mg	6 mg/2 ml	0.27-0.53 ml	Emergent Medications
Amiodarone	5 mg/kg	40 mg	50 mg/ml	0.8 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.4-0.8 mg	2 mg/ml	0.2-0.4 ml	
Benadryl	1 mg/kg	8 mg	50 mg/ml	0.16 ml	
Calcium Gluconate	60-100 mg/kg	480-800 mg	100 mg/ml	4.8-8 ml	
Dilantin/phenytoin	20 mg/kg	160 mg	50 mg/ml	3.2 ml	
Etomidate	0.3 mg/kg	2.4 mg	20 mg/10 ml	1.2 ml	
Fentanyl	1 mcg/kg	8 mcg	50 mcg/ml	0.16 ml	
Glucose	0.5 to 1.0 g/kg	4-8 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	40-80 ml 8-16 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	8 mg 16-32 mg	500 mg/5 ml 500 mg/5 ml	0.08 ml 0.16-0.32 ml	
Lidocaine	1 mg/kg	8 mg	20 mg/ml	0.4 ml	
Magnesium sulfate	25-50 mg/kg	200-400 mg	1 g/2 ml	0.4-0.8 ml	
Morphine	0.1-0.2 mg/kg	0.8-1.6 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	16 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.8 mg	0.4 mg/ml	2 ml	
Prednisone	1-2 mg/kg	8-16 mg	15 mg/5 ml (po)	2.7-5.3 ml	
Propofol	0.5 mg/kg	4 mg	10 mg/ml	0.4 ml	
Succinylcholine	1-2 mg/kg	8-16 mg	20 mg/ml	0.4-0.8 ml	
Vecuronium	0.1 mg/kg	0.8 mg	1 mg/ml	0.8 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.4-0.8 mg	2 mg/2 ml 5 mg/ml	0.4-0.8 ml 0.08-0.16 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	3.5	Epinephrine	0.1 to 1.0 mcg/kg/min	Infusions
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	4-5 Fr	Dobutamine	2 to 20 mcg/kg/min	
LMA	1.5	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b> <b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	4-8 J
		Defibrillation	2-4 J/kg	16-32 J

Child Weight (kg)

**9 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.09 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	0.9 ml 0.09 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	0.9 mg	1 mg/ml (1:1,000)	0.9 ml	
Atropine	0.02 mg/kg	0.18 mg	0.1 mg/ml 0.4 mg/ml	1.8 ml 0.45 ml	
Calcium Chloride	20 mg/kg	180 mg	100 mg/ml	1.8 ml	
NaHCO3	1 meq/kg	9 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	18 ml 9 ml	
Vasopressin	0.4 U/kg	3.6 U	20 U/ml	0.18 ml	
Atropine	0.02 mg/kg	0.18 mg	0.1 mg/ml 0.4 mg/ml	1.8 ml 0.45 ml	Intubation Drugs
Lidocaine	1 mg/kg	9 mg	20 mg/ml	0.45 ml	
Etomidate	0.3 mg/kg	2.7 mg	20 mg/10 ml	1.35 ml	
Fentanyl	2-5 mcg/kg	18-45 mcg	50 mcg/ml	0.36-0.9 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	0.9 mg 0.09 mg	1 mg/ml 1 mg/ml	0.9 ml 0.09 ml	
Succinylcholine	1-2 mg/kg	9-18 mg	20 mg/ml	0.45-0.9 ml	
Adenosine	0.1-0.2 mg/kg	0.9-1.8 mg	6 mg/2 ml	0.3-0.6 ml	Emergent Medications
Amiodarone	5 mg/kg	45 mg	50 mg/ml	0.9 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.45-0.9 mg	2 mg/ml	0.23-0.45 ml	
Benadryl	1 mg/kg	9 mg	50 mg/ml	0.18 ml	
Calcium Gluconate	60-100 mg/kg	540-900 mg	100 mg/ml	5.4-9 ml	
Dilantin/phenytoin	20 mg/kg	180 mg	50 mg/ml	3.6 ml	
Etomidate	0.3 mg/kg	2.7 mg	20 mg/10 ml	1.35 ml	
Fentanyl	1 mcg/kg	9 mcg	50 mcg/ml	0.18 ml	
Glucose	0.5 to 1.0 g/kg	4.5-9 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	45-90 ml 9-18 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	9 mg 18-36 mg	500 mg/5 ml 500 mg/5 ml	0.09 ml 0.18-0.36 ml	
Lidocaine	1 mg/kg	9 mg	20 mg/ml	0.45 ml	
Magnesium sulfate	25-50 mg/kg	225-450 mg	1 g/2 ml	0.45-0.9 ml	
Morphine	0.1-0.2 mg/kg	0.9-1.8 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	18 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	0.9 mg	0.4 mg/ml	2.25 ml	
Prednisone	1-2 mg/kg	9-18 mg	15 mg/5 ml (po)	3-6 ml	
Propofol	0.5 mg/kg	4.5 mg	10 mg/ml	0.45 ml	
Succinylcholine	1-2 mg/kg	9-18 mg	20 mg/ml	0.45-0.9 ml	
Vecuronium	0.1 mg/kg	0.9 mg	1 mg/ml	0.9 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.45-0.9 mg	2 mg/2 ml 5 mg/ml	0.45-0.9 ml 0.09-0.18 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	3.5	Epinephrine	0.1 to 1.0 mcg/kg/min	Infusions
Chest tube	10-12 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	4-5 Fr	Dobutamine	2 to 20 mcg/kg/min	
LMA	1.5	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (usual dose 1-5 mcg/kg/min)	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	4.5-9 J
		Defibrillation	2-4 J/kg	18-36 J

Child Weight (kg)

**10 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.1 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	1 ml 0.1 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	1 mg	1 mg/ml (1:1,000)	1 ml	
Atropine	0.02 mg/kg	0.2 mg	0.1 mg/ml 0.4 mg/ml	2 ml 0.5 ml	
Calcium Chloride	20 mg/kg	200 mg	100 mg/ml	2 ml	
NaHCO <sub>3</sub>	1 meq/kg	10 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	20 ml 10 ml	
Vasopressin	0.4 U/kg	4 U	20 U/ml	0.2 ml	
Atropine	0.02 mg/kg	0.2 mg	0.1 mg/ml 0.4 mg/ml	2 ml 0.5 ml	Intubation Drugs
Lidocaine	1 mg/kg	10 mg	20 mg/ml	0.5 ml	
Etomidate	0.3 mg/kg	3 mg	20 mg/10 ml	1.5 ml	
Fentanyl	2-5 mcg/kg	20-50 mcg	50 mcg/ml	0.4-1 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	1 mg 0.1 mg	1 mg/ml 1 mg/ml	1 ml 0.1 ml	
Succinylcholine	1-2 mg/kg	10-20 mg	20 mg/ml	0.5-1 ml	
Adenosine	0.1-0.2 mg/kg	1-2 mg	6 mg/2 ml	0.33-0.66 ml	Emergent Medications
Amiodarone	5 mg/kg	50 mg	50 mg/ml	1 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.5-1 mg	2 mg/ml	0.25-0.5 ml	
Benadryl	1 mg/kg	10 mg	50 mg/ml	0.2 ml	
Calcium Gluconate	60-100 mg/kg	600-1000 mg	100 mg/ml	6-10 ml	
Dilantin/phenytoin	20 mg/kg	200 mg	50 mg/ml	4 ml	
Etomidate	0.3 mg/kg	3 mg	20 mg/10 ml	1.5 ml	
Fentanyl	1 mcg/kg	10 mcg	50 mcg/ml	0.2 ml	
Glucose	0.5 to 1.0 g/kg	5-10 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	50-100 ml 10-20 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	10 mg 20-40 mg	500 mg/5 ml 500 mg/5 ml	0.1 ml 0.2-0.4 ml	
Lidocaine	1 mg/kg	10 mg	20 mg/ml	0.5 ml	
Magnesium sulfate	25-50 mg/kg	250-500 mg	1 g/2 ml	0.5-1 ml	
Morphine	0.1-0.2 mg/kg	1-2 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	20 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	1 mg	0.4 mg/ml	2.5 ml	
Prednisone	1-2 mg/kg	10-20 mg	15 mg/5 ml (po)	3.3-6.7 ml	
Propofol	0.5 mg/kg	5 mg	10 mg/ml	0.5 ml	
Succinylcholine	1-2 mg/kg	10-20 mg	20 mg/ml	0.5-1 ml	
Vecuronium	0.1 mg/kg	1 mg	1 mg/ml	1 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.5-1 mg	2 mg/2 ml 5 mg/ml	0.5-1 ml 0.1-0.2 ml	
<b>Equipment</b>	<b>Size</b>	<b>Infusion</b>	<b>Rate/kg</b>		
Endotracheal tube	4	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)		Infusions
Chest tube	16-20 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	4-5 Fr	Dobutamine	2 to 20 mcg/kg/min		
LMA	2	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (adult 5mcg/min) usual dose 1-5 mcg/kg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
			<b>Dose</b>	<b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	5-10 J	
		Defibrillation	2-4 J/kg	20-40 J	

Child Weight (kg)

**12 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.12 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	1.2 ml 0.12 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	1.2 mg	1 mg/ml (1:1,000)	1.2 ml	
Atropine	0.02 mg/kg	0.24 mg	0.1 mg/ml 0.4 mg/ml	2.4 ml 0.6 ml	
Calcium Chloride	20 mg/kg	240 mg	100 mg/ml	2.4 ml	
NaHCO <sub>3</sub>	1 meq/kg	12 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	24 ml 12 ml	
Vasopressin	0.4 U/kg	4.8 U	20 U/ml	0.24 ml	
Atropine	0.02 mg/kg	0.24 mg	0.1 mg/ml 0.4 mg/ml	2.4 ml 0.6 ml	Intubation Drugs
Lidocaine	1 mg/kg	12 mg	20 mg/ml	0.6 ml	
Etomidate	0.3 mg/kg	3.6 mg	20 mg/10 ml	1.8 ml	
Fentanyl	2-5 mcg/kg	24-60 mcg	50 mcg/ml	0.48-1.2 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	1.2 mg 0.12 mg	1 mg/ml 1 mg/ml	1.2 ml 0.12 ml	
Succinylcholine	1-2 mg/kg	12-24 mg	20 mg/ml	0.6-1.2 ml	
Adenosine	0.1-0.2 mg/kg	1.2-2.4 mg	6 mg/2 ml	0.4-0.8 ml	Emergent Medications
Amiodarone	5 mg/kg	60 mg	50 mg/ml	1.2 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.6-1.2 mg	2 mg/ml	0.3-0.6 ml	
Benadryl	1 mg/kg	12 mg	50 mg/ml	0.24 ml	
Calcium Gluconate	60-100 mg/kg	720-1200 mg	100 mg/ml	7.2-12 ml	
Dilantin/phenytoin	20 mg/kg	240 mg	50 mg/ml	4.8 ml	
Etomidate	0.3 mg/kg	3.6 mg	20 mg/10 ml	1.8 ml	
Fentanyl	1 mcg/kg	12 mcg	50 mcg/ml	0.24 ml	
Glucose	0.5 to 1.0 g/kg	6-12 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	60-120 ml 12-24 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	12 mg 24-48 mg	500 mg/5 ml 500 mg/5 ml	0.12 ml 0.24-0.48 ml	
Lidocaine	1 mg/kg	12 mg	20 mg/ml	0.6 ml	
Magnesium sulfate	25-50 mg/kg	300-600 mg	1 g/2 ml	0.6-1.2 ml	
Morphine	0.1-0.2 mg/kg	1.2-2.4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	24 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	1.2 mg	0.4 mg/ml	3 ml	
Prednisone	1-2 mg/kg	12-24 mg	15 mg/5 ml (po)	4-8 ml	
Propofol	0.5 mg/kg	6 mg	10 mg/ml	0.6 ml	
Succinylcholine	1-2 mg/kg	12-24 mg	20 mg/ml	0.6-1.2 ml	
Vecuronium	0.1 mg/kg	1.2 mg	1 mg/ml	1.2 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.6-1.2 mg	2 mg/2 ml 5 mg/ml	0.6-1.2 ml 0.12-0.24 ml	
Equipment	Size	Infusion	Rate/kg		
Endotracheal tube	4.5	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)		Infusions
Chest tube	20-24 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	5 Fr Triple, 7 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min		
LMA	2	Isoproterenol	0.5-1.5 mcg/kg/min (adult 2-20mcg/min)		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (adult 5mcg/min) usual dose 1-5 mcg/kg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
		Dose	Setting		
		Cardioversion	0.5 to 1.0 J/kg	6-12 J	
		Defibrillation	2-4 J/kg	24-48 J	

Child Weight (kg)

**14 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.14 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	1.4 ml 0.14 ml	Code Drugs
<b>High Dose Epi</b>	<b>0.1 mg/kg (high dose)</b>	<b>1.4 mg</b>	<b>1 mg/ml (1:1,000)</b>	<b>1.4 ml</b>	
Atropine	0.02 mg/kg	0.28 mg	0.1 mg/ml 0.4 mg/ml	2.8 ml 0.7 ml	
Calcium Chloride	20 mg/kg	280 mg	100 mg/ml	2.8 ml	
NaHCO <sub>3</sub>	1 meq/kg	14 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	28 ml 14 ml	
Vasopressin	0.4 U/kg	5.6 U	20 U/ml	0.28 ml	
Atropine	0.02 mg/kg	0.28 mg	0.1 mg/ml 0.4 mg/ml	2.8 ml 0.7 ml	Intubation Drugs
Lidocaine	1 mg/kg	14 mg	20 mg/ml	0.7 ml	
Etomidate	0.3 mg/kg	4.2 mg	20 mg/10 ml	2.1 ml	
Fentanyl	2-5 mcg/kg	28-70 mcg	50 mcg/ml	0.56-1.4 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	1.4 mg 0.14 mg	1 mg/ml 1 mg/ml	1.4 ml 0.14 ml	
Succinylcholine	1-2 mg/kg	14-28 mg	20 mg/ml	0.7-1.4 ml	
Adenosine	0.1-0.2 mg/kg	1.4-2.8 mg	6 mg/2 ml	0.47-0.93 ml	Emergent Medications
Amiodarone	5 mg/kg	70 mg	50 mg/ml	1.4 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.7-1.4 mg	2 mg/ml	0.35-0.7 ml	
Benadryl	1 mg/kg	14 mg	50 mg/ml	0.28 ml	
Calcium Gluconate	60-100 mg/kg	840-1400 mg	100 mg/ml	8.4-14 ml	
Dilantin/phenytoin	20 mg/kg	280 mg	50 mg/ml	5.6 ml	
Etomidate	0.3 mg/kg	4.2 mg	20 mg/10 ml	2.1 ml	
Fentanyl	1 mcg/kg	14 mcg	50 mcg/ml	0.28 ml	
Glucose	0.5 to 1.0 g/kg	7-14 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	70-140 ml 14-28 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	14 mg 28-56 mg	500 mg/5 ml 500 mg/5 ml	0.14 ml 0.28-0.56 ml	
Lidocaine	1 mg/kg	14 mg	20 mg/ml	0.7 ml	
Magnesium sulfate	25-50 mg/kg	350-700 mg	1 g/2 ml	0.7-1.4 ml	
Morphine	0.1-0.2 mg/kg	1.4-2.8 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	28 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	1.4 mg	0.4 mg/ml	3.5 ml	
Prednisone	1-2 mg/kg	14-28 mg	15 mg/5 ml (po)	4.7-9.3 ml	
Propofol	0.5 mg/kg	7 mg	10 mg/ml	0.7 ml	
Succinylcholine	1-2 mg/kg	14-28 mg	20 mg/ml	0.7-1.4 ml	
Vecuronium	0.1 mg/kg	1.4 mg	1 mg/ml	1.4 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.7-1.4 mg	2 mg/2 ml 5 mg/ml	0.7-1.4 ml 0.14-0.28 ml	
Equipment	Size	Infusion	Rate/kg		
Endotracheal tube	4.5	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)		Infusions
Chest tube	20-24 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	5 Fr Triple, 7 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min		
LMA	2	Isoproterenol	2 to 20 mcg/min		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (adult 5mcg/min) usual dose 1-5 mcg/kg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
		Dose	Setting		
		Cardioversion	0.5 to 1.0 J/kg	7-14 J	
		Defibrillation	2-4 J/kg	28-56 J	

Child Weight (kg)

**15 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.15 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	1.5 ml 0.15 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	1.5 mg	1 mg/ml (1:1,000)	1.5 ml	
Atropine	0.02 mg/kg	0.3 mg	0.1 mg/ml 0.4 mg/ml	3 ml 0.75 ml	
Calcium Chloride	20 mg/kg	300 mg	100 mg/ml	3 ml	
NaHCO3	1 meq/kg	15 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	30 ml 15 ml	
Vasopressin	0.4 U/kg	6 U	20 U/ml	0.3 ml	
Atropine	0.02 mg/kg	0.3 mg	0.1 mg/ml 0.4 mg/ml	3 ml 0.75 ml	Intubation Drugs
Lidocaine	1 mg/kg	15 mg	20 mg/ml	0.75 ml	
Etomidate	0.3 mg/kg	4.5 mg	20 mg/10 ml	2.25 ml	
Fentanyl	2-5 mcg/kg	30-75 mcg	50 mcg/ml	0.6-1.5 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	1.5 mg 0.15 mg	1 mg/ml 1 mg/ml	1.5 ml 0.15 ml	
Succinylcholine	1-2 mg/kg	15-30 mg	20 mg/ml	0.75-1.5 ml	
Adenosine	0.1-0.2 mg/kg	1.5-3 mg	6 mg/2 ml	0.5-1 ml	Emergent Medications
Amiodarone	5 mg/kg	75 mg	50 mg/ml	1.5 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.75-1.5 mg	2 mg/ml	0.38-0.75 ml	
Benadryl	1 mg/kg	15 mg	50 mg/ml	0.3 ml	
Calcium Gluconate	60-100 mg/kg	900-1500 mg	100 mg/ml	9-15 ml	
Dilantin/phenytoin	20 mg/kg	300 mg	50 mg/ml	6 ml	
Etomidate	0.3 mg/kg	4.5 mg	20 mg/10 ml	2.25 ml	
Fentanyl	1 mcg/kg	15 mcg	50 mcg/ml	0.3 ml	
Glucose	0.5 to 1.0 g/kg	7.5-15 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	75-150 ml 15-30 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	15 mg 30-60 mg	500 mg/5 ml 500 mg/5 ml	0.15 ml 0.3-0.6 ml	
Lidocaine	1 mg/kg	15 mg	20 mg/ml	0.75 ml	
Magnesium sulfate	25-50 mg/kg	375-750 mg	1 g/2 ml	0.75-1.5 ml	
Morphine	0.1-0.2 mg/kg	1.5-3 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	30 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	1.5 mg	0.4 mg/ml	3.75 ml	
Prednisone	1-2 mg/kg	15-30 mg	15 mg/5 ml (po)	5-10 ml	
Propofol	0.5 mg/kg	7.5 mg	10 mg/ml	0.75 ml	
Succinylcholine	1-2 mg/kg	15-30 mg	20 mg/ml	0.75-1.5 ml	
Vecuronium	0.1 mg/kg	1.5 mg	1 mg/ml	1.5 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.75-1.5 mg	2 mg/2 ml 5 mg/ml	0.75-1.5 ml 0.15-0.3 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	5	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)	Infusions
Chest tube	20-24 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 7 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	2	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (adult 5mcg/min) usual dose 1-5 mcg/kg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
		<b>Dose</b>	<b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	8-15 J
		Defibrillation	2-4 J/kg	30-60 J



Child Weight (kg)

**18 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.18 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	1.8 ml 0.18 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	1.8 mg	1 mg/ml (1:1,000)	1.8 ml	
Atropine	0.02 mg/kg	0.36 mg	0.1 mg/ml 0.4 mg/ml	3.6 ml 0.9 ml	
Calcium Chloride	20 mg/kg	360 mg	100 mg/ml	3.6 ml	
NaHCO3	1 meq/kg	18 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	36 ml 18 ml	
Vasopressin	0.4 U/kg	7.2 U	20 U/ml	0.36 ml	
Atropine	0.02 mg/kg	0.36 mg	0.1 mg/ml 0.4 mg/ml	3.6 ml 0.9 ml	Intubation Drugs
Lidocaine	1 mg/kg	18 mg	20 mg/ml	0.9 ml	
Etomidate	0.3 mg/kg	5.4 mg	20 mg/10 ml	2.7 ml	
Fentanyl	2-5 mcg/kg	36-90 mcg	50 mcg/ml	0.72-1.8 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	1.8 mg 0.18 mg	1 mg/ml 1 mg/ml	1.8 ml 0.18 ml	
Succinylcholine	1-2 mg/kg	18-36 mg	20 mg/ml	0.9-1.8 ml	
Adenosine	0.1-0.2 mg/kg	1.8-3.6 mg	6 mg/2 ml	0.6-1.2 ml	Emergent Medications
Amiodarone	5 mg/kg	90 mg	50 mg/ml	1.8 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	0.9-1.8 mg	2 mg/ml	0.45-0.9 ml	
Benadryl	1 mg/kg	18 mg	50 mg/ml	0.36 ml	
Calcium Gluconate	60-100 mg/kg	1000-1800 mg	100 mg/ml	10-18 ml	
Dilantin/phenytoin	20 mg/kg	360 mg	50 mg/ml	7.2 ml	
Etomidate	0.3 mg/kg	5.4 mg	20 mg/10 ml	2.7 ml	
Fentanyl	1 mcg/kg	18 mcg	50 mcg/ml	0.36 ml	
Glucose	0.5 to 1.0 g/kg	9-18 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	90-180 ml 18-36 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	18 mg 36-72 mg	500 mg/5 ml 500 mg/5 ml	0.18 ml 0.36-0.72 ml	
Lidocaine	1 mg/kg	18 mg	20 mg/ml	0.9 ml	
Magnesium sulfate	25-50 mg/kg	450-900 mg	1 g/2 ml	0.9-1.8 ml	
Morphine	0.1-0.2 mg/kg	1.8-3.6 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	36 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	1.8 mg	0.4 mg/ml	4.5 ml	
Prednisone	1-2 mg/kg	18-36 mg	15 mg/5 ml (po)	6-12 ml	
Propofol	0.5 mg/kg	9 mg	10 mg/ml	0.9 ml	
Succinylcholine	1-2 mg/kg	18-36 mg	20 mg/ml	0.9-1.8 ml	
Vecuronium	0.1 mg/kg	1.8 mg	1 mg/ml	1.8 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	0.9-1.8 mg	2 mg/2 ml 5 mg/ml	0.9-1.8 ml 0.18-0.36 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	5	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)	Infusions
Chest tube	20-24 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 7 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	2	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start 0.25-0.5 mcg/kg/min (adult 5mcg/min) usual dose 1-5 mcg/kg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b> <b>Setting</b>	
		Cardioversion	0.5 to 1.0 J/kg	9-18 J
		Defibrillation	2-4 J/kg	36-72 J

Child Weight (kg)

**20 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.2 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	2 ml 0.2 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	2 mg	1 mg/ml (1:1,000)	2 ml	
Atropine	0.02 mg/kg	0.4 mg	0.1 mg/ml 0.4 mg/ml	4 ml 1 ml	
Calcium Chloride	20 mg/kg	400 mg	100 mg/ml	4 ml	
NaHCO <sub>3</sub>	1 meq/kg	20 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	40 ml 20 ml	
Vasopressin	0.4 U/kg	8 U	20 U/ml	0.4 ml	
Atropine	0.02 mg/kg	0.4 mg	0.1 mg/ml 0.4 mg/ml	4 ml 1 ml	Intubation Drugs
Lidocaine	1 mg/kg	20 mg	20 mg/ml	1 ml	
Etomidate	0.3 mg/kg	6 mg	20 mg/10 ml	3 ml	
Fentanyl	2-5 mcg/kg	40-100 mcg	50 mcg/ml	0.8-2 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	2 mg 0.2 mg	1 mg/ml 1 mg/ml	2 ml 0.2 ml	
Succinylcholine	1-2 mg/kg	20-40 mg	20 mg/ml	1-2 ml	
Adenosine	0.1-0.2 mg/kg	2-4 mg	6 mg/2 ml	0.67-1.33 ml	Emergent Medications
Amiodarone	5 mg/kg	100 mg	50 mg/ml	2 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	1-2 mg	2 mg/ml	0.5-1 ml	
Benadryl	1 mg/kg	20 mg	50 mg/ml	0.4 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	400 mg	50 mg/ml	8 ml	
Etomidate	0.3 mg/kg	6 mg	20 mg/10 ml	3 ml	
Fentanyl	1 mcg/kg	20 mcg	50 mcg/ml	0.4 ml	
Glucose	0.5 to 1.0 g/kg	10-20 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	100-200 ml 20-40 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	20 mg 40-80 mg	500 mg/5 ml 500 mg/5 ml	0.2 ml 0.4-0.8 ml	
Lidocaine	1 mg/kg	20 mg	20 mg/ml	1 ml	
Magnesium sulfate	25-50 mg/kg	500-1000 mg	1 g/2 ml	1-2 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	40 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	20-40 mg	15 mg/5 ml (po)	7-13 ml	
Propofol	0.5 mg/kg	10 mg	10 mg/ml	1 ml	
Succinylcholine	1-2 mg/kg	20-40 mg	20 mg/ml	1-2 ml	
Vecuronium	0.1 mg/kg	2 mg	1 mg/ml	2 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	1-2 mg	2 mg/2 ml 5 mg/ml	1-2 ml 0.2-0.4 ml	
Equipment	Size	Infusion	Rate/kg		
Endotracheal tube	5.5	Epinephrine	0.1 to 1.0 mcg/kg/min (adult 2-10mcg/min)		Infusions
Chest tube	24-32 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min		
LMA	2	Isoproterenol	2 to 20 mcg/min		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
		Dose	Setting		
		Cardioversion	0.5 to 1.0 J/kg	10-20 J	
		Defibrillation	2-4 J/kg	40-80 J	

Child Weight (kg)

**25 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.25 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	2.5 ml 0.25 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	2.5 mg	1 mg/ml (1:1,000)	2.5 ml	
Atropine	0.02 mg/kg	0.5 mg	0.1 mg/ml 0.4 mg/ml	5 ml 1.25 ml	
Calcium Chloride	20 mg/kg	500 mg	100 mg/ml	5 ml	
NaHCO3	1 meq/kg	25 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	50 ml 25 ml	
Vasopressin	0.4 U/kg	10 U	20 U/ml	0.5 ml	
Atropine	0.02 mg/kg	0.5 mg	0.1 mg/ml 0.4 mg/ml	5 ml 1.25 ml	Intubation Drugs
Lidocaine	1 mg/kg	25 mg	20 mg/ml	1.25 ml	
Etomidate	0.3 mg/kg	7.5 mg	20 mg/10 ml	3.75 ml	
Fentanyl	2-5 mcg/kg	50-125 mcg	50 mcg/ml	1-2.5 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	2.5 mg 0.25 mg	1 mg/ml 1 mg/ml	2.5 ml 0.25 ml	
Succinylcholine	1-2 mg/kg	25-50 mg	20 mg/ml	1.25-2.5 ml	
Adenosine	0.1-0.2 mg/kg	2.5-5 mg	6 mg/2 ml	0.83-1.67 ml	Emergent Medications
Amiodarone	5 mg/kg	125 mg	50 mg/ml	2.5 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	1.25-2 mg	2 mg/ml	0.63-1 ml	
Benadryl	1 mg/kg	25 mg	50 mg/ml	0.5 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	500 mg	50 mg/ml	10 ml	
Etomidate	0.3 mg/kg	7.5 mg	20 mg/10 ml	3.75 ml	
Fentanyl	1 mcg/kg	25 mcg	50 mcg/ml	0.5 ml	
Glucose	0.5 to 1.0 g/kg	12.5-25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	125-250 ml 25-50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	25 mg 50-100 mg	500 mg/5 ml 500 mg/5 ml	0.25 ml 0.5-1 ml	
Lidocaine	1 mg/kg	25 mg	20 mg/ml	1.25 ml	
Magnesium sulfate	25-50 mg/kg	625-1250 mg	1 g/2 ml	1.25-2.5 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	50 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	25-50 mg	15 mg/5 ml (po)	8.3-16.6 ml	
Propofol	0.5 mg/kg	12.5 mg	10 mg/ml	1.25 ml	
Succinylcholine	1-2 mg/kg	25-50 mg	20 mg/ml	1.25-2.5 ml	
Vecuronium	0.1 mg/kg	2.5 mg	1 mg/ml	2.5 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	1.25-2 mg	2 mg/2 ml 5 mg/ml	1.25-2 ml 0.25-0.4 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	6	Epinephrine	2 to 10 mcg/min	Infusions
Chest tube	28-32 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	2.5	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	12.5-25 J
		Defibrillation	2-4 J/kg	50-100 J

Child Weight (kg)

**30 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.3 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	3 ml 0.3 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3 mg	1 mg/ml (1:1,000)	3 ml	
Atropine	0.02 mg/kg	0.6 mg	0.1 mg/ml 0.4 mg/ml	6 ml 1.5 ml	
Calcium Chloride	20 mg/kg	600 mg	100 mg/ml	6 ml	
NaHCO <sub>3</sub>	1 meq/kg	30 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	60 ml 30 ml	
Vasopressin	0.4 U/kg	12 U	20 U/ml	0.6 ml	
Atropine	0.02 mg/kg	0.6 mg	0.1 mg/ml 0.4 mg/ml	6 ml 1.5 ml	Intubation Drugs
Lidocaine	1 mg/kg	30 mg	20 mg/ml	1.5 ml	
Etomidate	0.3 mg/kg	9 mg	20 mg/10 ml	4.5 ml	
Fentanyl	2-5 mcg/kg	60-150 mcg	50 mcg/ml	1.2-3 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	3 mg 0.3 mg	1 mg/ml 1 mg/ml	3 ml 0.3 ml	
Succinylcholine	1-2 mg/kg	30-60 mg	20 mg/ml	1.5-3 ml	
Adenosine	0.1-0.2 mg/kg	3-6 mg	6 mg/2 ml	1-2 ml	Emergent Medications
Amiodarone	5 mg/kg	150 mg	50 mg/ml	3 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	1.5-2 mg	2 mg/ml	0.75-1 ml	
Benadryl	1 mg/kg	25-30 mg	50 mg/ml	0.5-0.6 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	600 mg	50 mg/ml	12 ml	
Etomidate	0.3 mg/kg	9 mg	20 mg/10 ml	4.5 ml	
Fentanyl	1 mcg/kg	25-30 mcg	50 mcg/ml	0.5-0.6 ml	
Glucose	0.5 to 1.0 g/kg	15-25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	150-250 ml 30-50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	30 mg 60-120 mg	500 mg/5 ml 500 mg/5 ml	0.3 ml 0.6-1.2 ml	
Lidocaine	1 mg/kg	30 mg	20 mg/ml	1.5 ml	
Magnesium sulfate	25-50 mg/kg	750-1500 mg	1 g/2 ml	1.5-3 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	60 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	30-60 mg	15 mg/5 ml (po)	10-20 ml	
Propofol	0.5 mg/kg	15 mg	10 mg/ml	1.5 ml	
Succinylcholine	1-2 mg/kg	30-60 mg	20 mg/ml	1.5-3 ml	
Vecuronium	0.1 mg/kg	3 mg	1 mg/ml	3 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	1.5-2 mg	2 mg/2 ml 5 mg/ml	1.5-2 ml 0.3-0.4 ml	
Equipment	Size	Infusion	Rate/kg		
Endotracheal tube	6	Epinephrine	2 to 10 mcg/min		Infusions
Chest tube	28-32 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min		
LMA	3	Isoproterenol	2 to 20 mcg/min		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.3-2 mU/kg/min		
		Dose	Setting		
		Cardioversion	0.5 to 1.0 J/kg	15-30 J	
		Defibrillation	2-4 J/kg	60-120 J	

Child Weight (kg)

**35 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.35 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	3.5 ml 0.35 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3-3.5 mg	1 mg/ml (1:1,000)	3-3.5 ml	
Atropine	0.02 mg/kg	0.7 mg	0.1 mg/ml 0.4 mg/ml	7 ml 1.75 ml	
Calcium Chloride	20 mg/kg	700 mg	100 mg/ml	7 ml	
NaHCO3	1 meq/kg	35 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	70 ml 35 ml	
Vasopressin	0.4 U/kg	14 U	20 U/ml	0.7 ml	
Atropine	0.02 mg/kg	0.7 mg	0.1 mg/ml 0.4 mg/ml	7 ml 1.75 ml	Intubation Drugs
Lidocaine	1 mg/kg	35 mg	20 mg/ml	1.75 ml	
Etomidate	0.3 mg/kg	10.5 mg	20 mg/10 ml	5.25 ml	
Fentanyl	2-5 mcg/kg	70-175 mcg	50 mcg/ml	1.4-3.5 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	3.5 mg 0.35 mg	1 mg/ml 1 mg/ml	3.5 ml 0.35 ml	
Succinylcholine	1-2 mg/kg	35-70 mg	20 mg/ml	1.75-3.5 ml	
Adenosine	0.1-0.2 mg/kg	3.5-7 mg	6 mg/2 ml	1.17-2.33 ml	Emergent Medications
Amiodarone	5 mg/kg	150-175 mg	50 mg/ml	3-3.5 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	1.75-2 mg	2 mg/ml	0.88-1 ml	
Benadryl	1 mg/kg	25-35 mg	50 mg/ml	0.5-0.7 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	700 mg	50 mg/ml	14 ml	
Etomidate	0.3 mg/kg	10.5 mg	20 mg/10 ml	5.25 ml	
Fentanyl	1 mcg/kg	25-35 mcg	50 mcg/ml	0.5-0.7 ml	
Glucose	0.5 to 1.0 g/kg	17.5-25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	175-250 ml 35-50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	35 mg 70-140 mg	500 mg/5 ml 500 mg/5 ml	0.35 ml 0.7-1.4 ml	
Lidocaine	1 mg/kg	35 mg	20 mg/ml	1.75 ml	
Magnesium sulfate	25-50 mg/kg	875-1750 mg	1 g/2 ml	1.75-3.5 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	70 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	35-60 mg	15 mg/5 ml (po)	11.7-20 ml	
Propofol	0.5 mg/kg	17.5 mg	10 mg/ml	1.75 ml	
Succinylcholine	1-2 mg/kg	35-70 mg	20 mg/ml	1.75-3.5 ml	
Vecuronium	0.1 mg/kg	3.5 mg	1 mg/ml	3.5 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	1.75-2 mg	2 mg/2 ml 5 mg/ml	1.75-2 ml 0.35-0.4 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	6.5	Epinephrine	2 to 10 mcg/min	Infusions
Chest tube	32-40 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	3	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	17.5-35 J
		Defibrillation	2-4 J/kg	70-140 J

Child Weight (kg)

**40 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.4-1 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	4-10 ml 0.4-1 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3 then 4 mg	1 mg/ml (1:1,000)	3 then 4 ml	
Atropine	0.02 mg/kg	0.8 mg	0.1 mg/ml 0.4 mg/ml	8 ml 2 ml	
Calcium Chloride	20 mg/kg	800 mg	100 mg/ml	8 ml	
NaHCO3	1 meq/kg	40 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	80 ml 40 ml	
Vasopressin	0.4 U/kg	16 U	20 U/ml	0.8 ml	
Atropine	0.02 mg/kg	0.8 mg	0.1 mg/ml 0.4 mg/ml	8 ml 2 ml	Intubation Drugs
Lidocaine	1 mg/kg	40 mg	20 mg/ml	2 ml	
Etomidate	0.3 mg/kg	12 mg	20 mg/10 ml	6 ml	
Fentanyl	2-5 mcg/kg	80-200 mcg	50 mcg/ml	1.6-4 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	4 mg 0.4 mg	1 mg/ml 1 mg/ml	4 ml 0.4 ml	
Succinylcholine	1-2 mg/kg	40-80 mg	20 mg/ml	2-4 ml	
Adenosine	0.1-0.2 mg/kg	4-8 mg	6 mg/2 ml	1.33-2.66 ml	Emergent Medications
Amiodarone	5 mg/kg	150-200 mg	50 mg/ml	3-4 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	2 mg	2 mg/ml	1 ml	
Benadryl	1 mg/kg	25-40	50 mg/ml	0.5-0.8 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	800 mg	50 mg/ml	16 ml	
Etomidate	0.3 mg/kg	12 mg	20 mg/10 ml	6 ml	
Fentanyl	1 mcg/kg	25-40 mcg	50 mcg/ml	0.5-0.8 ml	
Glucose	0.5 to 1.0 g/kg	20-25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	200-250 ml 40-50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	40 mg 80-160 mg	500 mg/5 ml 500 mg/5 ml	0.4 ml 0.8-1.6 ml	
Lidocaine	1 mg/kg	40 mg	20 mg/ml	2 ml	
Magnesium sulfate	25-50 mg/kg	1-2 g	1 g/2 ml	2-4 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	80 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	40-60 mg	15 mg/5 ml (po)	13.3-20 ml	
Propofol	0.5 mg/kg	20 mg	10 mg/ml	2 ml	
Succinylcholine	1-2 mg/kg	40-80 mg	20 mg/ml	2-4 ml	
Vecuronium	0.1 mg/kg	4 mg	1 mg/ml	4 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	2 mg	2 mg/2 ml 5 mg/ml	2 ml 0.4 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	6.5	Epinephrine	2 to 10 mcg/min	Infusions
Chest tube	32-40 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	3	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	20-40 J
		Defibrillation	2-4 J/kg	80-160 J

Child Weight (kg)

**45 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.45-1 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	4.5-10 ml 0.45-1 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3 then 5 mg	1 mg/ml (1:1,000)	3 then 5 ml	
Atropine	0.02 mg/kg	0.9 mg	0.1 mg/ml 0.4 mg/ml	9 ml 2.25 ml	
Calcium Chloride	20 mg/kg	900 mg	100 mg/ml	9 ml	
NaHCO3	1 meq/kg	45 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	90 ml 45 ml	
Vasopressin	0.4 U/kg	18 U	20 U/ml	0.9 ml	
Atropine	0.02 mg/kg	0.9 mg	0.1 mg/ml 0.4 mg/ml	9 ml 2.25 ml	Intubation Drugs
Lidocaine	1 mg/kg	45 mg	20 mg/ml	2.25 ml	
Etomidate	0.3 mg/kg	13.5 mg	20 mg/10 ml	6.75 ml	
Fentanyl	2-5 mcg/kg	90-225 mcg	50 mcg/ml	1.8-4.5 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	4.5 mg 0.45 mg	1 mg/ml 1 mg/ml	4.5 ml 0.45 ml	
Succinylcholine	1-2 mg/kg	45-90 mg	20 mg/ml	2.25-4.5 ml	
Adenosine	0.1-0.2 mg/kg	4.5-9 mg	6 mg/2 ml	1.5-3 ml	Emergent Medications
Amiodarone	5 mg/kg	150-225 mg	50 mg/ml	3-4.5 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	2 mg	2 mg/ml	1 ml	
Benadryl	1 mg/kg	25-45 mg	50 mg/ml	0.5-0.9 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	900 mg	50 mg/ml	18 ml	
Etomidate	0.3 mg/kg	13.5 mg	20 mg/10 ml	6.75 ml	
Fentanyl	1 mcg/kg	25-45 mcg	50 mcg/ml	0.5-0.9 ml	
Glucose	0.5 to 1.0 g/kg	22.5-25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	225-250 ml 45-50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	45 mg 90-180 mg	500 mg/5 ml 500 mg/5 ml	0.45 ml 0.9-1.8 ml	
Lidocaine	1 mg/kg	45 mg	20 mg/ml	2.25 ml	
Magnesium sulfate	25-50 mg/kg	1-2 g	1 g/2 ml	2-4 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	90 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	45-60 mg	15 mg/5 ml (po)	15-20 ml	
Propofol	0.5 mg/kg	22.5 mg	10 mg/ml	2.25 ml	
Succinylcholine	1-2 mg/kg	45-90 mg	20 mg/ml	2.25-4.5 ml	
Vecuronium	0.1 mg/kg	4.5 mg	1 mg/ml	4.5 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	2 mg	2 mg/2 ml 5 mg/ml	2 ml 0.4 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	6.5	Epinephrine	2 to 10 mcg/min	Infusions
Chest tube	32-40 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	3	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.3-2 mU/kg/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	22.5-45 J
		Defibrillation	2-4 J/kg	90-180 J

Child Weight (kg)

**50 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.5-1 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	5-10 ml 0.5-1 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3 then 5 mg	1 mg/ml (1:1,000)	3 then 5 ml	
Atropine	0.02 mg/kg	1 mg	0.1 mg/ml 0.4 mg/ml	10 ml 2.5 ml	
Calcium Chloride	20 mg/kg	1 g	100 mg/ml	10 ml	
NaHCO3	1 meq/kg	50 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	100 ml 50 ml	
Vasopressin	0.4 U/kg	20 U	20 U/ml	1 ml	
Atropine	0.02 mg/kg	1 mg	0.1 mg/ml 0.4 mg/ml	10 ml 2.5 ml	Intubation Drugs
Lidocaine	1 mg/kg	50 mg	20 mg/ml	2.5 ml	
Etomidate	0.3 mg/kg	15 mg	20 mg/10 ml	7.5 ml	
Fentanyl	2-5 mcg/kg	100-250 mcg	50 mcg/ml	2-5 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	5 mg 0.5 mg	1 mg/ml 1 mg/ml	5 ml 0.5 ml	
Succinylcholine	1-2 mg/kg	50-100 mg	20 mg/ml	2.5-5 ml	
Adenosine	0.1-0.2 mg/kg	5-10 mg	6 mg/2 ml	1.7-3.3 ml	Emergent Medications
Amiodarone	5 mg/kg	150-250 mg	50 mg/ml	3-5 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	2 mg	2 mg/ml	1 ml	
Benadryl	1 mg/kg	25-50 mg	50 mg/ml	0.5-1 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	1 g	50 mg/ml	20 ml	
Etomidate	0.3 mg/kg	15 mg	20 mg/10 ml	7.5 ml	
Fentanyl	1 mcg/kg	25-50 mcg	50 mcg/ml	0.5-1 ml	
Glucose	0.5 to 1.0 g/kg	25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	250 ml 50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	50 mg 100-200 mg	500 mg/5 ml 500 mg/5 ml	0.5 ml 1-2 ml	
Lidocaine	1 mg/kg	50 mg	20 mg/ml	2.5 ml	
Magnesium sulfate	25-50 mg/kg	1-2 g	1 g/2 ml	2-4 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m2 (stress dose)	100 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	50-60 mg	15 mg/5 ml (po)	16.7-20 ml	
Propofol	0.5 mg/kg	25 mg	10 mg/ml	2.5 ml	
Succinylcholine	1-2 mg/kg	50-100 mg	20 mg/ml	2.5-5 ml	
Vecuronium	0.1 mg/kg	5 mg	1 mg/ml	5 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	2 mg	2 mg/2 ml 5 mg/ml	2 ml 0.4 ml	

Equipment	Size	Infusion	Rate/kg	
Endotracheal tube	6.5	Epinephrine	2 to 10 mcg/min	Infusions
Chest tube	32-40 Fr	Dopamine	2 to 20 mcg/kg/min	
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min	
LMA	3	Isoproterenol	2 to 20 mcg/min	
		Nipride	start at 0.3 to 0.5 mcg/kg/min	
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min	
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)	
		Phenylephrine	0.1 to 0.5 mcg/kg/min	
		Propofol	0.1-0.2 mg/kg/min	
		Vasopressin	0.01 to 0.1 U/min	
			<b>Dose</b>	<b>Setting</b>
		Cardioversion	0.5 to 1.0 J/kg	25-50 J
		Defibrillation	2-4 J/kg	100-200 J

Child Weight (kg)

**60 kg**

Drug	Dose/kg	Child dose (mg)	Concentration	Child dose (ml)	
Epinephrine	0.01 mg/kg IV/IO	0.6-1 mg	0.1 mg/ml (1:10,000) or 1 mg/ml (1:1,000)	6-10 ml 0.6-1 ml	Code Drugs
High Dose Epi	0.1 mg/kg (high dose)	3 then 5 mg	1 mg/ml (1:1,000)	3 then 5 ml	
Atropine	0.02 mg/kg	1 mg	0.1 mg/ml 0.4 mg/ml	10 ml 2.5 ml	
Calcium Chloride	20 mg/kg	1 g	100 mg/ml	10 ml	
NaHCO <sub>3</sub>	1 meq/kg	50 meq	0.5 mEq/ml (4.2%) 1 mEq/ml(8.4%)	100 ml 50 ml	
Vasopressin	0.4 U/kg	24 U	20 U/ml	1.2 ml	
Atropine	0.02 mg/kg	1 mg	0.1 mg/ml 0.4 mg/ml	12 ml 2.5 ml	Intubation Drugs
Lidocaine	1 mg/kg	60 mg	20 mg/ml	3 ml	
Etomidate	0.3 mg/kg	18 mg	20 mg/10 ml	9 ml	
Fentanyl	2-5 mcg/kg	120-300 mcg	50 mcg/ml	2.4-6 ml	
Vecuronium	0.1 mg/kg 0.01 mg/kg (depolarizing dose)	6 mg 0.6 mg	1 mg/ml 1 mg/ml	6 ml 0.6 ml	
Succinylcholine	1-2 mg/kg	60-10 mg	20 mg/ml	3-5 ml	
Adenosine	0.1-0.2 mg/kg	6-12 mq	6 mg/2 ml	2-4 ml	Emergent Medications
Amiodarone	5 mg/kg	150-300 mg	50 mg/ml	3-6 ml	
Ativan/lorazepam	0.05-0.1 mg/kg IV double for PR	2 mg	2 mg/ml	1 ml	
Benadryl	1 mg/kg	25-50 mg	50 mg/ml	0.5-1 ml	
Calcium Gluconate	60-100 mg/kg	1-2 g	100 mg/ml	10-20 ml	
Dilantin/phenytoin	20 mg/kg	1 g	50 mg/ml	20 ml	
Etomidate	0.3 mg/kg	18 mg	20 mg/10 ml	9 ml	
Fentanyl	1 mcg/kg	25-50 mcg	50 mcg/ml	0.5-1 ml	
Glucose	0.5 to 1.0 g/kg	25 g	D10 = 0.1 g/ml D50 = 0.5 g/ml	250 ml 50 ml	
Ketamine	1 mg/kg IV 2-4 mg/kg IM	60 mg 120-240 mg	500 mg/5 ml 500 mg/5 ml	0.6 ml 1.2-2.4 ml	
Lidocaine	1 mg/kg	60 mg	20 mg/ml	3 ml	
Magnesium sulfate	25-50 mg/kg	1-2 g	1 g/2 ml	2-4 ml	
Morphine	0.1-0.2 mg/kg	2-4 mg			
Methylprednisolone	2 mg/kg (allergic reaction) 37.5 mg/m <sup>2</sup> (stress dose)	120 mg	powder 125 mg/vial		
Naloxone	0.1 mg/kg	2 mg	0.4 mg/ml	5 ml	
Prednisone	1-2 mg/kg	60 mg	15 mg/5 ml (po)	20 ml	
Propofol	0.5 mg/kg	30 mg	10 mg/ml	3 ml	
Succinylcholine	1-2 mg/kg	60-100 mg	20 mg/ml	3-5 ml	
Vecuronium	0.1 mg/kg	6 mg	1 mg/ml	6 ml	
Versed/midazolam	0.05-0.1 mg/kg IV double for PR, double again for nasal	2 mg	2 mg/2 ml 5 mg/ml	2 ml 0.4 ml	
Equipment	Size	Infusion	Rate/kg		
Endotracheal tube	6.5	Epinephrine	2 to 10 mcg/min		Infusions
Chest tube	32-40 Fr	Dopamine	2 to 20 mcg/kg/min		
Central line	5 Fr Triple, 9 Fr Resuscitation	Dobutamine	2 to 20 mcg/kg/min		
LMA	3	Isoproterenol	2 to 20 mcg/min		
		Nipride	start at 0.3 to 0.5 mcg/kg/min		
		Nitroglycerin	start at 5 mcg/min, increase every 3 minutes by 5 mcg/min		
		Norepinephrine	0.05 to 0.1 mcg/kg/min (adult 4mcg/min)		
		Phenylephrine	0.1 to 0.5 mcg/kg/min		
		Propofol	0.1-0.2 mg/kg/min		
		Vasopressin	0.01 to 0.1 U/min		
		Dose	Setting		
		Cardioversion	0.5 to 1.0 J/kg	30-60 J	
		Defibrillation	2-4 J/kg	120-240 J	

