

**EMERGENCY MEDICATIONS
2 KG**

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.02 mg	0.2 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	40 mg	0.4 mL
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	2 mEq	4 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.2 mg	0.5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 4 Joules Step 2: 8 Joules	N/A
Cardioversion (0.5 Joules/kg)	1 Joule	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.2 mg Step 2: 0.4 mg	Step 1: 0.07 mL Step 2: 0.13 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.04 mg	0.4 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	10 mg	0.2 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	2 mg	0.1 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	100 mg	0.2 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	2 mcg	0.04 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.2 mg	0.2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	0.6 mg	0.3 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months	
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.2 mg	0.2 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	2 mg	0.2 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	2 mg	0.1 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	10 mcg	0.03 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.2 mg	0.2 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.002 mg	Dilute 0.02 mg (0.2 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.002 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	40 mg	0.4 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	200 mg	2 mL (100 mg/mL – central) 4 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	2 mEq	4 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.2 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	1000 mg = 1 gram	10 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	1000 mg = 1 gram	4 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	1000 mg = 1 gram	2 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.2 mg IM: N/A	IV: 0.04 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.2 mg	0.1 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	0.4 mg	IV: 0.4 mL IN: 0.08 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	40 mg	0.62 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	40 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	100 mg	Obtain from RX

EMERGENCY MEDICATIONS
2.5 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.025 mg	0.25 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	50 mg	0.5 mL
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	2.5 mEq	5 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.25 mg	0.63 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 5 Joules Step 2: 10 Joules	N/A
Cardioversion (0.5 Joules/kg)	1 Joule	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.25 mg Step 2: 0.5 mg	Step 1: 0.08 mL Step 2: 0.17 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.05 mg	0.5 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	12.5 mg	0.25 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	2.5 mg	0.13 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	125 mg	0.25 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	2.5 mcg	0.05 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.25 mg	0.25 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	0.75 mg	0.38 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months	
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.25 mg	0.25 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	2.5 mg	0.25 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	2.5 mg	0.13 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	12.5 mcg	0.03 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.25 mg	0.25 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.0025 mg	Dilute 0.025 mg (0.25 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.0025 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	50 mg	0.5 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	250 mg	2.5 mL (100 mg/mL – central) 5 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	2.5 mEq	5 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.25 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	1250 mg = 1.25 gram	12.5 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	1250 mg = 1.25 gram	5 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	1250 mg = 1.25 gram	2.5 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.25 mg IM: N/A	IV: 0.05 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.25 mg	0.13 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	0.5 mg	IV: 0.5 mL IN: 0.1 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	50 mg	0.77 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	50 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	125 mg	Obtain from RX

EMERGENCY MEDICATIONS

3 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.03 mg	0.3 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	60 mg	0.6 mL
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	3 mEq	6 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.3 mg	0.75 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 6 Joules Step 2: 12 Joules	N/A
Cardioversion (0.5 Joules/kg)	2 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.3 mg Step 2: 0.6 mg	Step 1: 0.1 mL Step 2: 0.2 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.06 mg	0.6 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	15 mg	0.3 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	3 mg	0.15 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	150 mg	0.3 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	3 mcg	0.06 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.3 mg	0.3 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	0.9 mg	0.45 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months	
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.3 mg	0.3 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	3 mg	0.3 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	3 mg	0.15 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	15 mcg	0.04 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.3 mg	0.3 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.003 mg	Dilute 0.03 mg (0.3 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.003 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	60 mg	0.6 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	300 mg	3 mL (100 mg/mL – central) 6 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	3 mEq	6 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.3 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	1500 mg = 1.5 gram	15 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	1500 mg = 1.5 gram	6 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	1500 mg = 1.5 gram	3 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.3 mg IM: N/A	IV: 0.06 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.3 mg	0.15 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	0.6 mg	IV: 0.6 mL IN: 0.12 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	60 mg	0.93 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	60 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	150 mg	Obtain from RX

EMERGENCY MEDICATIONS

4 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.04 mg	0.4 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	80 mg	0.8 mL
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	4 mEq	8 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.4 mg	1 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 8 Joules Step 2: 15 Joules	N/A
Cardioversion (0.5 Joules/kg)	2 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.4 mg Step 2: 0.8 mg	Step 1: 0.13 mL Step 2: 0.27 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.08 mg	0.8 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	20 mg	0.4 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	4 mg	0.2 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	200 mg	0.4 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	4 mcg	0.08 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.4 mg	0.4 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	1.2 mg	0.6 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months	
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.4 mg	0.4 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	4 mg	0.4 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	4 mg	0.2 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	20 mcg	0.05 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.4 mg	0.4 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.004 mg	Dilute 0.04 mg (0.4 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.004 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	80 mg	0.8 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	400 mg	4 mL (100 mg/mL – central) 8 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	4 mEq	8 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.4 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	2000 mg = 2 gram	20 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	2000 mg = 2 gram	8 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	2000 mg = 2 gram	4 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.4 mg IM: N/A	IV: 0.08 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.4 mg	0.2 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	0.8 mg	IV: 0.8 mL IN: 0.16 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	80 mg	1.23 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	80 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	200 mg	Obtain from RX

EMERGENCY MEDICATIONS

5 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.05 mg	0.5 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	100 mg	1 mL
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	5 mEq	10 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.5 mg	1.25 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 10 Joules Step 2: 20 Joules	N/A
Cardioversion (0.5 Joules/kg)	3 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.5 mg Step 2: 1 mg	Step 1: 0.17 mL Step 2: 0.33 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.1 mg	1 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	25 mg	0.5 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	5 mg	0.25 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	250 mg	0.5 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	5 mcg	0.1 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.5 mg	0.5 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	1.5 mg	0.75 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 5 mg IM: 25 mg	IV: 0.5 mL IM: 0.5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.5 mg	0.5 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	5 mg	0.5 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	5 mg	0.25 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	25 mcg	0.06 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.5 mg	0.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.005 mg	Dilute 0.05 mg (0.5 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.005 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	100 mg	1 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	500 mg	5 mL (100 mg/mL – central) 10 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 4.2% ≤ 5 kg (0.5 mEq/mL) *Located in PICU/Peds ED/ED Trauma Pyxis IV 1 mEq/kg, (Max 50 mEq)	5 mEq	10 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.5 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	2500 mg = 2.5 gram	25 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	2500 mg = 2.5 gram	10 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	2500 mg = 2.5 gram	5 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.5 mg IM: 0.5 mg	0.1 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.5 mg	0.25 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	1 mg	IV: 1 mL IN: 0.2 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	100 mg	1.54 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	100 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	250 mg	Obtain from RX

EMERGENCY MEDICATIONS

6 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.06 mg	0.6 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	120 mg	1.2 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	6 mEq	6 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.6 mg	1.5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 10 Joules Step 2: 20 Joules	N/A
Cardioversion (0.5 Joules/kg)	3 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.6 mg Step 2: 1.2 mg	Step 1: 0.2 mL Step 2: 0.4 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.12 mg	1.2 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	30 mg	0.6 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	6 mg	0.3 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	300 mg	0.6 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	6 mcg	0.12 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.6 mg	0.6 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	1.8 mg	0.9 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 6 mg IM: 30 mg	IV: 0.6 mL IM: 0.6 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.6 mg	0.6 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	6 mg	0.6 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	6 mg	0.3 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	30 mcg	0.08 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.6 mg	0.6 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.006 mg	Dilute 0.06 mg (0.6 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.006 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	120 mg	1.2 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	600 mg	6 mL (100 mg/mL – central) 12 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	6 mEq	6 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.6 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	3000 mg = 3 gram	30 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	3000 mg = 3 gram	12 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	3000 mg = 3 gram	6 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.6 mg IM: 0.6 mg	0.12 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.6 mg	0.3 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	1.2 mg	IV: 1.2 mL IN: 0.24 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	120 mg	1.85 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	120 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	300 mg	Obtain from RX

EMERGENCY MEDICATIONS

7 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.07 mg	0.7 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	140 mg	1.4 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	7 mEq	7 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.7 mg	1.75 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 15 Joules Step 2: 30 Joules	N/A
Cardioversion (0.5 Joules/kg)	4 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.7 mg Step 2: 1.4 mg	Step 1: 0.23 mL Step 2: 0.47 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.14 mg	1.4 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	35 mg	0.7 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	7 mg	0.35 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	350 mg	0.7 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	7 mcg	0.14 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.7 mg	0.7 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	2.1 mg	1.05 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 7 mg IM: 35 mg	IV: 0.7 mL IM: 0.7 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.7 mg	0.7 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	7 mg	0.7 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	7 mg	0.35 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	35 mcg	0.09 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.7 mg	0.7 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.007 mg	Dilute 0.07 mg (0.7 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.007 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	140 mg	1.4 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	700 mg	7 mL (100 mg/mL – central) 14 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	7 mEq	7 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.7 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	3500 mg = 3.5 gram	35 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	3500 mg = 3.5 gram	14 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	3500 mg = 3.5 gram	7 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.7 mg IM: 0.7 mg	0.14 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.7 mg	0.35 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	1.4 mg	IV: 1.4 mL IN: 0.28 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	140 mg	2.15 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	140 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	350 mg	Obtain from RX

EMERGENCY MEDICATIONS

8 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.08 mg	0.8 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	160 mg	1.6 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	8 mEq	8 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.8 mg	2 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 15 Joules Step 2: 30 Joules	N/A
Cardioversion (0.5 Joules/kg)	4 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.8 mg Step 2: 1.6 mg	Step 1: 0.27 mL Step 2: 0.53 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.16 mg	1.6 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	40 mg	0.8 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	8 mg	0.4 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	400 mg	0.8 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	8 mcg	0.16 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.8 mg	0.8 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	2.4 mg	1.2 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 8 mg IM: 40 mg	IV: 0.8 mL IM: 0.8 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.8 mg	0.8 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	8 mg	0.8 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	8 mg	0.4 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	40 mcg	0.1 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.8 mg	0.8 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.008 mg	Dilute 0.08 mg (0.8 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.008 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	160 mg	1.6 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	800 mg	8 mL (100 mg/mL – central) 16 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	8 mEq	8 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.8 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	4000 mg = 4 gram	40 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	4000 mg = 4 gram	16 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	4000 mg = 4 gram	8 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.8 mg IM: 0.8 mg	0.16 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.8 mg	0.4 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	1.6 mg	IV: 1.6 mL IN: 0.32 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	160 mg	2.46 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	160 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	400 mg	Obtain from RX

EMERGENCY MEDICATIONS

9 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.09 mg	0.9 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	180 mg	1.8 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	9 mEq	9 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.9 mg	2.25 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 20 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	5 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 0.9 mg Step 2: 1.8 mg	Step 1: 0.3 mL Step 2: 0.6 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.18 mg	1.8 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	45 mg	0.9 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	9 mg	0.45 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	450 mg	0.9 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	9 mcg	0.18 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	0.9 mg	0.9 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	2.7 mg	1.35 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 9 mg IM: 45 mg	IV: 0.9 mL IM: 0.9 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	0.9 mg	0.9 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	9 mg	0.9 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	9 mg	0.45 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	45 mcg	0.11 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	0.9 mg	0.9 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.009 mg	Dilute 0.09 mg (0.9 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.009 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	180 mg	1.8 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	900 mg	9 mL (100 mg/mL – central) 18 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	9 mEq	9 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	0.9 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	4500 mg = 4.5 gram	45 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	4500 mg = 4.5 gram	18 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	4500 mg = 4.5 gram	9 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 0.9 mg IM: 0.9 mg	0.18 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	0.9 mg	0.45 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	1.8 mg	IV: 1.8 mL IN: 0.36 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	180 mg	2.77 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	180 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	450 mg	Obtain from RX

EMERGENCY MEDICATIONS

10 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.1 mg	1 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	200 mg	2 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	10 mEq	10 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1 mg	2.5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 20 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	5 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1 mg Step 2: 2 mg	Step 1: 0.33 mL Step 2: 0.67 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.2 mg	2 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	50 mg	1 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	10 mg	0.5 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	500 mg	1 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	10 mcg	0.2 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1 mg	1 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	3 mg	1.5 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 10 mg IM: 50 mg	IV: 1 mL IM: 1 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1 mg	1 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	10 mg	1 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	10 mg	0.5 mL

**For intubation, consider atropine for 0.02 mg/kg IV (No Minimum Dose) for infants < 12 months

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	50 mcg	0.13 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1 mg	1 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.01 mg	Dilute 0.1 mg (1 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.01 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	200 mg	2 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1000 mg = 1 gram	10 mL (100 mg/mL – central) 20 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	10 mEq	10 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1 units	Insulin Syringe in Units

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	5000 mg = 5 gram	50 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	5000 mg = 5 gram	20 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	5000 mg = 5 gram	10 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1 mg IM: 1 mg	0.2 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1 mg	0.5 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	2 mg	IV: 2 mL IN: 0.4 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	200 mg	3.08 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	200 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	500 mg	Obtain from RX

EMERGENCY MEDICATIONS

11 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.11 mg	1.1 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	220 mg	2.2 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	11 mEq	11 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.1 mg	2.75 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 20 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	6 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.1 mg Step 2: 2.2 mg	Step 1: 0.37 mL Step 2: 0.73 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.22 mg	2.2 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	55 mg	1.1 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	11 mg	0.55 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	550 mg	1.1 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	11 mcg	0.22 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.1 mg	1.1 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	3.3 mg	1.65 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 11 mg IM: 55 mg	IV: 1.1 mL IM: 1.1 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.1 mg	1.1 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	11 mg	1.1 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	11 mg	0.55 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	55 mcg	0.14 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.1 mg	1.1 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.011 mg	Dilute 0.11 mg (1.1 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.011 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	220 mg	2.2 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1100 mg = 1.1 grams	11 mL (100 mg/mL – central) 22 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	11 mEq	11 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.1 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	5500 mg = 5.5 gram	55 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	5500 mg = 5.5 gram	22 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	5500 mg = 5.5 gram	11 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.1 mg IM: 1.1 mg	0.22 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.1 mg	0.55 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	2.2 mg	IV: 2.2 mL IN: 0.44 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	220 mg	3.38 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	220 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	550 mg	Obtain from RX

EMERGENCY MEDICATIONS

12 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.12 mg	1.2 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	240 mg	2.4 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	12 mEq	12 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.2 mg	3 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 20 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	6 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.2 mg Step 2: 2.4 mg	Step 1: 0.4 mL Step 2: 0.8 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.24 mg	2.4 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	60 mg	1.2 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	12 mg	0.6 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	600 mg	1.2 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	12 mcg	0.24 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.2 mg	1.2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	3.6 mg	1.8 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 12 mg IM: 60 mg	IV: 1.2 mL IM: 1.2 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.2 mg	1.2 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	12 mg	1.2 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	12 mg	0.6 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) 5 mcg/kg	60 mcg	0.15 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.2 mg	1.2 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.012 mg	Dilute 0.12 mg (1.2 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.012 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	240 mg	2.4 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1200 mg = 1.2 grams	12 mL (100 mg/mL – central) 24 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	12 mEq	12 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.2 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	6000 mg = 6 gram	60 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	6000 mg = 6 gram	24 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	6000 mg = 6 gram	12 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.2 mg IM: 1.2 mg	0.24 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.2 mg	0.6 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	2.4 mg	IV: 2.4 mL IN: 0.48 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	240 mg	3.69 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	240 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	600 mg	Obtain from RX

EMERGENCY MEDICATIONS

13 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.13 mg	1.3 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	260 mg	2.6 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	13 mEq	13 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.3 mg	3.25 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	7 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.3 mg Step 2: 2.6 mg	Step 1: 0.43 mL Step 2: 0.87 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.26 mg	2.6 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	65 mg	1.3 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	13 mg	0.65 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	650 mg	1.3 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	13 mcg	0.26 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.3 mg	1.3 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	3.9 mg	1.95 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 13 mg IM: 65 mg	IV: 1.3 mL IM: 1.3 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.3 mg	1.3 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	13 mg	1.3 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	13 mg	0.65 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	65 mcg	0.16 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.3 mg	1.3 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.013 mg	Dilute 0.13 mg (1.3 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.013 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	260 mg	2.6 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1300 mg = 1.3 grams	13 mL (100 mg/mL – central) 26 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	13 mEq	13 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.3 units	Obtain from RX

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	6500 mg = 6.5 gram	65 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	6500 mg = 6.5 gram	26 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	6500 mg = 6.5 gram	13 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.3 mg IM: 1.3 mg	0.26 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.3 mg	0.65 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	2.6 mg	IV: 2.6 mL IN: 0.52 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	260 mg	4 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	260 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	650 mg	Obtain from RX

EMERGENCY MEDICATIONS

14 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.14 mg	1.4 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	280 mg	2.8 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	14 mEq	14 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.4 mg	3.5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 50 Joules	N/A
Cardioversion (0.5 Joules/kg)	7 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.4 mg Step 2: 2.8 mg	Step 1: 0.47 mL Step 2: 0.93 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.28 mg	2.8 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	70 mg	1.4 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	14 mg	0.7 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	700 mg	1.4 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	14 mcg	0.28 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.4 mg	1.4 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	4.2 mg	2.1 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 14 mg IM: 70 mg	IV: 1.4 mL IM: 1.4 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.4 mg	1.4 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	14 mg	1.4 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	14 mg	0.7 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	70 mcg	0.18 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.4 mg	1.4 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.014 mg	Dilute 0.14 mg (1.4 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.014 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	280 mg	2.8 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1400 mg = 1.4 grams	14 mL (100 mg/mL – central) 28 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	14 mEq	14 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.4 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	7000 mg = 7 gram	70 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	7000 mg = 7 gram	28 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	7000 mg = 7 gram	14 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.4 mg IM: 1.4 mg	0.28 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.4 mg	0.7 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	2.8 mg	IV: 2.8 mL IN: 0.56 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	280 mg	4.31 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	280 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	700 mg	Obtain from RX

EMERGENCY MEDICATIONS

15 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.15 mg	1.5 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	300 mg	3 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	15 mEq	15 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.5 mg	3.75 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	8 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.5 mg Step 2: 3 mg	Step 1: 0.5 mL Step 2: 1 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.3 mg	3 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	75 mg	1.5 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	15 mg	0.75 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	750 mg	1.5 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	15 mcg	0.3 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.5 mg	1.5 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	4.5 mg	2.25 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 15 mg IM: 75 mg	IV: 1.5 mL IM: 1.5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.5 mg	1.5 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	15 mg	1.5 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	15 mg	0.75 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	75 mcg	0.19 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.5 mg	1.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.015 mg	Dilute 0.15 mg (1.5 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.015 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	300 mg	3 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1500 mg = 1.5 grams	15 mL (100 mg/mL – central) 30 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	15 mEq	15 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.5 units	Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	7500 mg = 7.5 gram	75 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	7500 mg = 7.5 gram	30 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	7500 mg = 7.5 gram	15 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.5 mg IM: 1.5 mg	0.3 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.5 mg	0.75 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	3 mg	IV: 3 mL IN: 0.6 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	300 mg	4.62 mL (round)
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	300 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	750 mg	Obtain from RX

EMERGENCY MEDICATIONS

16 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.16 mg	1.6 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	320 mg	3.2 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	16 mEq	16 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.6 mg	4 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	8 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.6 mg Step 2: 3.2 mg	Step 1: 0.53 mL Step 2: 1.07 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.32 mg	3.2 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	80 mg	1.6 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	16 mg	0.8 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	800 mg	1.6 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	16 mcg	0.32 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.6 mg	1.6 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	4.8 mg	2.4 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 16 mg IM: 80 mg	IV: 1.6 mL IM: 1.6 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.6 mg	1.6 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	16 mg	1.6 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	16 mg	0.8 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	80 mcg	0.2 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.6 mg	1.6 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.016 mg	Dilute 0.16 mg (1.6 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.016 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	320 mg	3.2 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1600 mg = 1.6 grams	16 mL (100 mg/mL – central) 32 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	16 mEq	16 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.6 units	*Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	8000 mg = 8 gram	80 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	8000 mg = 8 gram	32 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	8000 mg = 8 gram	16 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.6 mg IM: 1.6 mg	0.32 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.6 mg	0.8 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	3.2 mg	IV: 3.2 mL IN: 0.64 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	320 mg	4.92 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	320 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	800 mg	Obtain from RX

EMERGENCY MEDICATIONS

17 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.17 mg	1.7 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	340 mg	3.4 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	17 mEq	17 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.7 mg	4.25 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	9 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.7 mg Step 2: 3.4 mg	Step 1: 0.57 mL Step 2: 1.13 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.34 mg	3.4 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	85 mg	1.7 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	17 mg	0.85 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	850 mg	1.7 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	17 mcg	0.34 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.7 mg	1.7 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	5.1 mg	2.55 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 17 mg IM: 85 mg	IV: 1.7 mL IM: 1.7 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.7 mg	1.7 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	17 mg	1.7 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	17 mg	0.85 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) 5 mcg/kg	85 mcg	0.21 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.7 mg	1.7 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.017 mg	Dilute 0.17 mg (1.7 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.017 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	340 mg	3.4 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1700 mg = 1.7 grams	17 mL (100 mg/mL – central) 34 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	17 mEq	17 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.7 units	*Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	8500 mg = 8.5 gram	85 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	8500 mg = 8.5 gram	34 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	8500 mg = 8.5 gram	17 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.7 mg IM: 1.7 mg	0.34 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.7 mg	0.85 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	3.4 mg	IV: 3.4 mL IN: 0.68 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	340 mg	5.23 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	340 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	850 mg	Obtain from RX

EMERGENCY MEDICATIONS

18 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.18 mg	1.8 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	360 mg	3.6 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	18 mEq	18 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.8 mg	4.5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	9 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.8 mg Step 2: 3.6 mg	Step 1: 0.6 mL Step 2: 1.2 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.36 mg	3.6 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	90 mg	1.8 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	18 mg	0.9 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	900 mg	1.8 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	18 mcg	0.36 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.8 mg	1.8 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	5.4 mg	2.7 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 18 mg IM: 90 mg	IV: 1.8 mL IM: 1.8 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.8 mg	1.8 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	18 mg	1.8 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	18 mg	0.9 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	90 mcg	0.23 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.8 mg	1.8 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.018 mg	Dilute 0.18 mg (1.8 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.018 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	360 mg	3.6 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1800 mg = 1.8 grams	18 mL (100 mg/mL – central) 36 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	18 mEq	18 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.8 units	*Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	9000 mg = 9 gram	90 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	9000 mg = 9 gram	36 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	9000 mg = 9 gram	18 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.8 mg IM: 1.8 mg	0.36 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.8 mg	0.9 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	3.6 mg	IV: 3.6 mL IN: 0.72 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	360 mg	5.54 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	360 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	900 mg	Obtain from RX

EMERGENCY MEDICATIONS

19 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.19 mg	1.9 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	380 mg	3.8 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	19 mEq	19 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.9 mg	4.75 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 30 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	10 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 1.9 mg Step 2: 3.8 mg	Step 1: 0.63 mL Step 2: 1.27 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.38 mg	3.8 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	95 mg	1.9 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	19 mg	0.95 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	950 mg	1.9 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	19 mcg	0.36 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	1.9 mg	1.8 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	5.7 mg	2.7 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 19 mg IM: 95 mg	IV: 1.9 mL IM: 1.9 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	1.9 mg	1.9 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	19 mg	1.9 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	19 mg	0.95 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	95 mcg	0.24 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	1.9 mg	1.9 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.019 mg	Dilute 0.19 mg (1.9 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.019 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	380 mg	3.8 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	1900 mg = 1.9 grams	19 mL (100 mg/mL – central) 38 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	19 mEq	19 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	1.9 units	*Obtain from RX

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	9500 mg = 9.5 gram	95 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	9500 mg = 9.5 gram	38 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	9500 mg = 9.5 gram	19 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 1.9 mg IM: 1.9 mg	0.38 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	1.9 mg	0.95 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	3.8 mg	IV: 3.8 mL IN: 0.76 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	380 mg	5.85 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	380 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	950 mg	Obtain from RX

EMERGENCY MEDICATIONS

20 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.2 mg	2 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	400 mg	4 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	20 mEq	20 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 50 Joules Step 2: 75 Joules	N/A
Cardioversion (0.5 Joules/kg)	10 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 2 mg Step 2: 4 mg	Step 1: 0.67 mL Step 2: 1.33 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.4 mg	4 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	100 mg	2 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	20 mg	1 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	1000 mg = 1 gram	2 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	20 mcg	0.4 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	6 mg	3 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 20 mg IM: 100 mg	IV: 2 mL IM: 2 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	2 mg	2 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	20 mg	2 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	20 mg	1 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	100 mcg	0.25 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2 mg	2 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.02 mg	Dilute 0.2 mg (2 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.02 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	400 mg	4 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	20 mEq	20 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	2 units	*Insulin Syringe in units 0.02 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	10 gram	100 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	10 gram	40 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	10 gram	20 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 2 mg IM: 2 mg	0.4 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	2 mg	1 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	4 mg	IV: 4 mL IN: 0.8 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	400 mg	6.15 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	400 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	1000 mg = 1 gram	Obtain from RX

EMERGENCY MEDICATIONS

25 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.25 mg	2.5 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	500 mg	5 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	25 mEq	25 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 50 Joules Step 2: 100 Joules	N/A
Cardioversion (0.5 Joules/kg)	15 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 2.5 mg Step 2: 5 mg	Step 1: 0.83 mL Step 2: 1.67 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.5 mg	5 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	125 mg	2.5 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	25 mg	1.25 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	1250 mg = 1.25 grams	2.5 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	25 mcg	0.5 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	7.5 mg	3.75 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 25 mg IM: 125 mg	IV: 2.5 mL IM: 2.5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	2.5 mg	2.5 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	25 mg	2.5 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	25 mg	1.25 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	125 mcg	0.31 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.025 mg	Dilute 0.25 mg (2.5 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.025 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	500 mg	5 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	25 mEq	25 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	2.5 units	*Insulin Syringe in units 0.025 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	12.5 gram	125 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	12.5 gram	50 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	12.5 gram	25 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 2.5 mg IM: 2.5 mg	0.5 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	2.5 mg	1.25 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	5 mg	IV: 5 mL IN: 1 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	500 mg	7.69 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	500 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	1250 mg = 1.25 gram	Obtain from RX

EMERGENCY MEDICATIONS

30 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.3 mg	3 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	600 mg	6 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	30 mEq	30 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 75 Joules Step 2: 120 Joules	N/A
Cardioversion (0.5 Joules/kg)	15 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 3 mg Step 2: 6 mg	Step 1: 1 mL Step 2: 2 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.6 mg	6 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	150 mg	3 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	30 mg	1.5 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	1500 mg = 1.5 grams	3 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	30 mcg	0.6 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	9 mg	4.5 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 30 mg IM: 150 mg	IV: 3 mL IM: 3 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	3 mg	3 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	30 mg	3 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	30 mg	1.5 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	150 mcg	0.38 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.03 mg	Dilute 0.3 mg (3 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.03 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	600 mg	6 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	30 mEq	30 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	3 units	*Insulin Syringe in units 0.03 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	15 gram	150 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	15 gram	60 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	15 gram	30 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 3 mg IM: 3 mg	0.6 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	3 mg	1.5 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	6 mg	IV: 6 mL IN: 1.2 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	600 mg	9.23 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	600 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	1500 mg = 1.5 gram	Obtain from RX

EMERGENCY MEDICATIONS

35 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.35 mg	3.5 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	700 mg	7 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	35 mEq	35 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 75 Joules Step 2: 150 Joules	N/A
Cardioversion (0.5 Joules/kg)	20 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 3.5 mg Step 2: 7 mg	Step 1: 1.17 mL Step 2: 2.33 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.7 mg	7 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	175 mg	3.5 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	35 mg	1.75 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	1750 mg = 1.75 grams	3.5 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	35 mcg	0.7 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	10.5 mg	5.25 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 35 mg IM: 175 mg	IV: 3.5 mL IM: 3.5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	3.5 mg	3.5 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	35 mg	3.5 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	35 mg	1.75 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	175 mcg	0.44 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.035 mg	Dilute 0.35 mg (3.5 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.035 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	700 mg	7 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	35 mEq	35 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	3.5 units	*Insulin Syringe in units 0.035 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	17.5 gram	175 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	17.5 gram	70 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	17.5 gram	35 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 3.5 mg IM: 3.5 mg	0.7 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	3.5 mg	1.75 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	7 mg	IV: 7 mL IN: 1.4 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	700 mg	10.77 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	700 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	1750 mg = 1.75 gram	Obtain from RX

EMERGENCY MEDICATIONS

40 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.4 mg	4 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	800 mg	8 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	40 mEq	40 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 75 Joules Step 2: 150 Joules	N/A
Cardioversion (0.5 Joules/kg)	20 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 4 mg Step 2: 8 mg	Step 1: 1.33 mL Step 2: 2.66 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.8 mg	8 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	200 mg	4 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	40 mg	2 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	2000 mg = 2 grams	4 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	40 mcg	0.8 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	12 mg	6 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 40 mg IM: 200 mg	IV: 4 mL IM: 4 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	4 mg	4 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	40 mg	4 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	40 mg	2 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	200 mcg	0.5 mL

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.04 mg	Dilute 0.4 mg (4 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.04 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	800 mg	8 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	40 mEq	40 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	4 units	*Insulin Syringe in units 0.04 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	20 gram	200 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	20 gram	80 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	20 gram	40 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 4 mg IM: 4 mg	0.8 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	4 mg	2 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	8 mg	IV: 8 mL IN: 1.6 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	800 mg	12.31 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	800 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	2000 mg = 2 gram	Obtain from RX

EMERGENCY MEDICATIONS

45 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	0.45 mg	4.5 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	900 mg	9 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	45 mEq	45 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 100 Joules Step 2: 200 Joules	N/A
Cardioversion (0.5 Joules/kg)	20 Joules	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: 4.5 mg Step 2: 9 mg	Step 1: 1.5 mL Step 2: 3 mL
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	0.9 mg	9 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	225 mg	4.5 mL
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	45 mg	2.25 mL
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	2000 mg = 2 grams	4 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	45 mcg	0.9 mL
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	13.5 mg	6.75 mL
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: 45 mg IM: 225 mg	IV: 4.5 mL IM: 4.5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	4.5 mg	4.5 mL
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	45 mg	4.5 mL
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	45 mg	2.25 mL

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	225 mcg	0.56 mL (round)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	0.045 mg	Dilute 0.45 mg (4.5 mL) of epinephrine to final volume 10 mL with normal saline FINAL DOSE 0.045 mg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	900 mg	9 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 mL (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	45 mEq	45 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg	4.5 units	*Insulin Syringe in units 0.045 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	22.5 gram	225 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	22.5 gram	90 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	22.5 gram	45 mL

Status Epilepticus (These are loading doses)**

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: 4.5 mg IM: 4.5 mg	0.9 mL
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	4 mg	2 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	9 mg	IV: 9 mL IN: 1.8 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	900 mg	13.85 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	900 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	2000 mg = 2 gram	Obtain from RX

EMERGENCY MEDICATIONS

≥ 50 KG

****CARDIOPULMONARY ARREST****

DRUG	DOSE	VOLUME
Epinephrine (0.1 mg/mL) IV 0.01 mg/kg	≥0.5 mg Adult 1 mg	≥5 mL Adult 10 mL
Calcium Chloride 10% (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	1000 mg = 1 gram	10 mL
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	50 mEq	50 mL
Naloxone (0.4 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	5 mL
Defibrillation Step 1: 2 Joules/kg (Max 150J) Step 2: 4 Joules/kg (Max 200J)	Step 1: 2 J/kg (max 150J) Step 2: 4 J/kg (max 200J)	N/A
Cardioversion (0.5 Joules/kg)	0.5 J/kg	N/A

****ARRHYTHMIAS****

DRUG	DOSE	VOLUME
Adenosine (3 mg/mL) Step 1: Dose 0.1 mg/kg (Max 6 mg) Step 2: Dose 0.2 mg/kg (Max 12 mg)	Step 1: ≥ 5 mg (max 6 mg) Step 2: ≥ 10 mg (max 12 mg)	Step 1: ≥1.5 mL (max 2 ml) Step 2: ≥3 mL (max 4 ml)
Atropine (0.1 mg/mL) IV 0.02 mg/kg (Max 1 mg)	1 mg	10 mL
Amiodarone (50 mg/mL) IV 5 mg/kg, (Max 300 mg)	≥250 mg (max 300 mg)	≥5 mL (max 6 ml)
Lidocaine 2% (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	≥50 mg (max 100 mg)	≥2.5 mL (max 5 ml)
Magnesium (500 mg/mL) IV 50 mg/kg (Max 2 grams)	2000 mg = 2 grams	4 mL

****INTUBATION****

DRUG	DOSE	VOLUME
Fentanyl (50 mcg/mL) IV 1 mcg/kg, (Max 100 mcg)	≥50 mcg (max 100 mcg)	≥1 mL (max 2 ml)
Midazolam (1 mg/mL) IV 0.1 mg/kg, (Max 2 mg)	2 mg	2 mL
Etomidate (2 mg/mL) IV 0.3 mg/kg, (Max 40 mg)	≥15 mg (max 40 mg)	7.5 mL (max 20 ml)
Ketamine (10 mg/mL) (IM 50 mg/mL obtain from RX) IV Dose 1 mg/kg IM Dose 5 mg/kg	N/A for < 3 months IV: ≥50 mg IM: ≥250 mg	IV: ≥5 mL IM: ≥5 mL
Vecuronium (1 mg/mL) IV 0.1 mg/kg, (Max 10 mg)	≥5 mg (max 10 mg)	≥5 mL (max 10 ml)
Rocuronium (10 mg/mL) IV 1 mg/kg, (Max 100 mg)	≥50 mg (max 100 mg)	≥5 mL (max 10 ml)
Succinylcholine (20 mg/mL) IV 1 mg/kg, (Max 100 mg)	≥50 mg (max 100 mg)	≥2.5 mL (max 5 ml)

Respiratory Depression

DRUG	DOSE	VOLUME
Naloxone (Narcan) (1/20 th code dose) *To be titrated to desired effect (0.4 mg/mL) IV 5 mcg/kg	≥250 mcg	≥0.63 mL (round to 2 decimal)

Epinephrine (Endotracheal tube for cardiac arrest/hypotension dose)

DRUG	DOSE	VOLUME
Epinephrine ENDOTRACHEAL TUBE for cardiac arrest (1 MG/ML – NOTE CONCENTRATION) ETT: 0.1 mg/kg (0.1 mL/kg) MAX 2.5 mg (2.5 mL)	2.5 mg	2.5 mL
Epinephrine Spritzer (1/10th code dose) for Hypotension IV 0.001 mg/kg *USE 0.1 mg/mL CONC to make spritzer ****NOT for Cardiopulmonary Arrest****	≥0.05 mg (max 0.1 mg)	Dilute 0.01 mg/kg (ex 5 ml for 50 kg) of epinephrine to final volume 10 mL with sterile water FINAL DOSE 0.001 mg/kg = 1 mL

Hyperkalemia

DRUG	DOSE	VOLUME
Calcium Chloride (100 mg/mL) IV 20 mg/kg, (Max 1 gram)	1000 mg	10 mL (Central Line Preferred)
Calcium Gluconate (obtain from RX) IV 100 mg/kg, (Max 2 grams)	2000 mg = 2 grams	20 mL (100 mg/mL – central) 40 ml (50 mg/mL - peripheral) Obtain from RX
Sodium Bicarbonate 8.4% (1 mEq/mL) IV 1 mEq/kg, (Max 50 mEq)	50 mEq	50 mL
Insulin, regular (obtain from RX if outside PICU) (give with dextrose – see below) (100 unit/mL unless dilution from RX) IV 0.1 unit/kg (Max 10 units)	≥5 units	*Insulin Syringe in units ≥0.05 mL

**Consider furosemide, albuterol, Kayexalate (sodium polystyrene sulfonate)

Hypoglycemia

Access	DRUG	DOSE	VOLUME
Peripheral	Dextrose 10% (100 mg/mL) IV 0.5 g/kg, Premade Concentration	25 gram	250 mL
Central	Dextrose 25% (250 mg/mL) IV 0.5 g/kg, (Max 25 grams = 100 mL)	25 gram	100 mL *Dilute Dextrose 50% with sterile water volume 1:1
	Dextrose 50% (500 mg/mL) IV 0.5 g/kg, (Max 25 grams = 50 mL)	25 gram	50 mL

Status Epilepticus (**These are loading doses)

DRUG	DOSE	VOLUME
Diazepam (Valium) (5 mg/mL) IV/IM 0.1 mg/kg (Max 10 mg)	IV: ≥5 mg (max 10 mg) IM: ≥5 mg (max 10 mg)	≥1 mL (max 2 ml)
Lorazepam (Ativan) (2 mg/mL) IV: 0.1 mg/kg (Max 4 mg)	4 mg	2 mL
Midazolam (Versed) IV (1 mg/mL); 0.2 mg/kg (Max 10 mg) Intranasal (5 mg/mL) 0.2 mg/kg *Use Atomizer*	10 mg	IV: 10 mL IN: 2 mL Split dose between nares
Phenobarbital (65 mg/mL) IV 20 mg/kg (Max 1000 mg)	1000 mg = 1 gram	15.38 mL
Fosphenytoin IV 20 mg/kg (Max 1500 mg PE)	1000 mg = 1 gram Max 1500 mg	Obtain from RX
Levetiracetam (Keppra) IV 50 mg/kg (Max 2500 mg)	2500 mg = 2.5 gram	Obtain from RX