

MI-MEDIC

MICHIGAN MEDICATION EMERGENCY DOSING AND INTERVENTION CARDS

Based on State of Michigan EMS Protocols
2019 Revisions

Version 3.0

MI-MEDIC Instructions

Determine the appropriate card to be used based on the following order:

1. Select the card that matches the patient's weight when known. (Be sure not to confuse pounds and kilograms)
2. Use approved, length-based pediatric resuscitation tape to determine the correct card where weight is unknown.
3. Use the patient's age to determine the correct card when resuscitation tape is not available, estimating age when unknown.
4. If pediatric patient exceeds length-based tape use Black (Adult) card.

Pediatric Patients (≤ 14 years old)

1. Select the desired medication or intervention.
2. Assure the medication concentration on-hand is the same as specified on the MI-MEDIC.
3. Administer volume of medication listed at the far right of the card, including dilution amount if necessary.

Adult Patients (>14 years old) – Black Cards

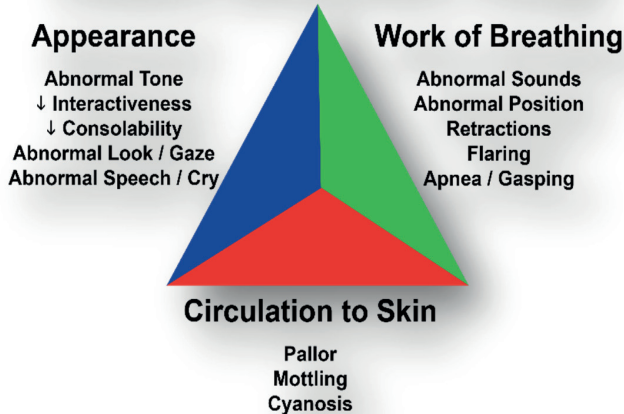
1. Select desired medication or intervention.
 2. Assure the medication concentration on-hand is the same as specified on the MI-MEDIC.
 3. Administer volume of medication listed at the far right of the card, including dilution amount if necessary.
- Some medications should be diluted as described on the card.
 - Confirm medication dose and volume to be delivered with colleague when possible.
 - Contact Medical Control for questions or concerns.

Note: Protocols are dynamic and may change based on current science. EMS personnel must be familiar with the most current set of approved protocols which take precedence over the information included in the MI-MEDIC.

FREE TUTORIALS AND CE'S AVAILABLE ON THE MI-MEDIC AT: AmericanCME.com

Pediatric Quick Guide

Pediatric Assessment Triangle



American Academy of Pediatrics, Pediatric Education for Prehospital Professionals: Third edition, 2014: Jones and Bartlett Learning, Burlington, MA. www.jblearning.com. Reprinted with permission

Pain Scale



Poison Control Hotline: (800)-222-1222
 Child Abuse Hotline: (855)-444-3911
 Human Trafficking Hotline: (888)-373-7888

Pediatric Glasgow Coma Scale

	< 1 Year	> 1 Year	Score
Eye Opening	Spontaneous	Spontaneous	4
	To speech	To verbal command	3
	To pain	To pain	2
	No response	No response	1
Verbal Response	Coos, babbles	Oriented	5
	Cries and is consolable	Disoriented/Confused	4
	Cries to pain	Inappropriate words	3
	Grunts, moans	Incomprehensible sounds	2
	No response	No response	1
Motor Response	Spontaneous	Obeys	6
	Localizes pain	Localizes pain	5
	Withdraws from pain	Withdraws from pain	4
	Flexion (decorticate)	Flexion (decorticate)	3
	Extension (decerebrate)	Extension (decerebrate)	2
	No response	No response	1

Apgar Scale

Sign	0	1	2
Appearance: Color	Blue or Pale	Cyanosis in extremities	Completely pink
Pulse: Heart Rate	Absent	Less than 100 bpm	Greater than 100 bpm
Grimace: Reflex irritability	No Response	Grimace	Cry or active withdrawal
Activity: Muscle Tone	Limp	Some flexion	Active motion
Respiration	Absent	Weak cry: hypoventilation	Good, crying

3-5 kilograms (6-12 pounds) / 0-2 Months (Gray)

CARDIAC RESUSCITATION

Normal Vitals: HR: 100-180, RR: 30-60, Systolic BP: 60-100 mmHg, BG > 40 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.05 mg	0.5 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	25 mg	0.5 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	5 mg	0.25 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.1 mg	1 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 220)	0.5 mg	0.5 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 220)	1 mg	1 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	10 J	20 J
*Synchronized Cardioversion ² for unstable tachycardia	5 J	10 J
Equipment		
OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 0-1 (straight)		
ET Tube: 2.5 (cuffed) ET Depth: 9-10 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 100 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	5 mcg	0.5 mL (Diluted)
*CONTACT MEDICAL CONTROL		
¹ CPR if HR < 60 after O ₂		
² May adjust to closest available energy setting		

3-5 kilograms (6-12 pounds) / 0-2 Months (Gray)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 100-180, RR: 30-60, Systolic BP: 60-100 mmHg, Blood Glucose > 40 mg/dl.

Special Precautions: Be sure to keep the baby warm.

Development: Flexed position when prone. Inhibited grasp reflex

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4mL Normal Saline = 10 mg/mL (Anaphylaxis only)	5 mg	0.5 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.05 mg	0.05 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL) Diluted with 3mL Normal Saline = 25 mg/mL	12.5 mg	0.5 mL (Diluted)
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	0.5 mg	0.1 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	0.3 mg	0.3 mL (Diluted)
Fever	Acetaminophen PO (160 mg/5 mL)	40 mg	1.25 mL PO
Hypoglycemia (<40 mg/dL)	D12.5% (6.25 g/50 mL) <u>12.5 mL of D50% diluted with 37.5 mL Normal Saline = D12.5%</u> Give slow IV	2.5 g	20 mL (D12.5%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	5 mcg	0.5 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	5 mcg	0.1 mL IN
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	0.5 mg	0.5 mL
	Naloxone IN (2 mg/ 2 mL) Divide dose equally between both nostrils	0.5 mg	0.5 mL IN
Fluid Bolus	Normal Saline 100 mL IV/IO - May repeat x 1 PRN	N/A	100 mL
Equipment	OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 0-1 (straight) ET Tube: 2.5 (cuffed) ET Depth: 9-10 cm <u>No</u> ETI unless unable to ventilate		

3-5 kilograms
6-12 pounds

6-7 kilograms (13-16 pounds) / 3-6 Months (Pink)
CARDIAC RESUSCITATION

Normal Vitals: HR: 100-180, RR: 30-45, Systolic BP: 65-100 mmHg, Blood Glucose > 40 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.1 mg	1 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	35 mg	0.7 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	8 mg	0.4 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.15 mg	1.5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR >220)	0.7 mg	0.7 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 220)	1.4 mg	1.4 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	15 J	30 J
*Synchronized Cardioversion ² for unstable tachycardia	10 J	20 J
Equipment		
OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 1 (straight)		
ET Tube: 3 (cuffed) ET Depth: 10.5 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 130 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	7 mcg	0.7 mL (Diluted)
*CONTACT MEDICAL CONTROL		

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

6-7 kilograms (13-16 pounds) / 3-6 Months (Pink)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 100-180, RR: 30-45, Systolic BP: 65-100 mmHg, Blood Glucose > 40 mg/dl.

Special Precautions: Be sure to keep the baby warm.

Development: Rolls from front to back, back to side. Carries object to mouth.

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	10 mg	1 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.1 mg	0.1 mL IM
	Solu-Medrol IV/IO (125 mg/2mL) Diluted with 3 mL Normal Saline = 25 mg/mL	12.5 mg	0.5 mL (Diluted)
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	1 mg	0.2 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	0.4 mg	0.4 mL (Diluted)
Fever	Acetaminophen PO (160 mg/5 mL)	80 mg	2.5 mL PO
Hypoglycemia (<40 mg/dL)	D25% (12.5 g/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	3.25 g	13 mL (D25%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	7 mcg	0.7 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	7 mcg	0.15 mL IN
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	1 mg	1 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	1 mg	1 mL IN
Fluid Bolus	Normal Saline 130 mL IV/IO - May repeat x 1 PRN	N/A	130 mL
Equipment	OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 1 (straight) ET Tube: 3 (cuffed) ET Depth: 10.5 cm <u>No</u> ETI unless unable to ventilate		

6-7 kilograms
13-16 pounds

8-9 kilograms (17-20 pounds) / 7-10 Months (Red)

CARDIAC RESUSCITATION

Normal Vitals: HR: 100-180, RR: 25-35, Systolic BP: 70-110 mmHg, Blood Glucose > 40 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.1 mg	1 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	50 mg	1 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	10 mg	0.5 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.2 mg	2 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 220)	1 mg	1 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 220)	2 mg	2 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	20 J	40 J
*Synchronized Cardioversion ² for unstable tachycardia	10 J	20 J
Equipment		
OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 1 (straight)		
ET Tube: 3 (cuffed) ET Depth: 11 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 170 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	9 mcg	0.9 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

8-9 kilograms (17-20 pounds) / 7-10 Months (Red)

CONDITIONS/MEDICATIONS

Normal Vitals: HR 100-180, RR: 25-35, Systolic BP: 70-110 mmHg, Blood Glucose > 40 mg/dl.

Special Precautions: Infants must be kept warm.

Development: Clear preference for caregiver with stranger anxiety. Sits steady without support.

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	10 mg	1 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.1 mg	0.1 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL) Diluted with 3 mL Normal Saline = 25 mg/mL	17.5 mg	0.7 mL (Diluted)
Seizure	Midazolam IM (5mg/mL) Give first if no IV	1 mg	0.2 mL IM
	Midazolam IV (5mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	0.5 mg	0.5 mL (Diluted)
Fever	Acetaminophen PO (160 mg/5 mL)	120 mg	3.75 mL PO
	Ibuprofen PO (100 mg/5 mL)	80 mg	4 mL PO
Hypoglycemia (<40 mg/dL)	D25% (12.5 G/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	4.25 g	17 mL (D25%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	10 mcg	1 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	10 mcg	0.2 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	1.5 mg	0.15 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	4 mg	0.4 mL (Diluted) IN
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	1 mg	1 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	1 mg	1 mL IN
Fluid Bolus	Normal Saline 170 mL IV/IO - May repeat x 1 PRN	N/A	170 mL
Equipment	OPA: 50 mm NPA: 14 F BVM: Infant Laryngoscope: 1 (straight) ET Tube: 3 (cuffed) ET Depth: 11 cm <u>No</u> ETI unless unable to ventilate		

8-9 kilograms
17-20 pounds

10-11 kilograms (21-25 pounds) /11-18 Months (Purple)

CARDIAC RESUSCITATION

Normal Vitals: HR: 80-160, RR: 20-30, Systolic BP: 72-110 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.1 mg	1 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	50 mg	1 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	10 mg	0.5 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.2 mg	2 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR >180)	1 mg	1 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 180)	2 mg	2 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	20 J	40 J
*Synchronized Cardioversion ² for unstable tachycardia	10 J	20 J
Equipment		
OPA: 60 mm NPA: 18 F BVM: Child Laryngoscope: 1 (straight)		
ET Tube: 3.5 (cuffed) ET Depth: 12 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 200 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

10-11 kilograms (21-25 pounds) /11-18 Months (Purple)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 80-160, RR: 20-30, Systolic BP: 72-110 mmHg, Blood Glucose > 60 mg/dl

Development: (12 mos) Able to cruise and beginning to walk. (15-18 mos) Uses cup well along with some spoon agilitly.

<u>Condition</u>	<u>Medication - (confirm concentration is as specified)</u>	<u>Dose</u>	<u>Volume</u>
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	10 mg	1 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) or 1 EpiPen Jr. IM (Severe symptoms only)	0.1 mg	0.1 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL) Diluted with 3 mL Normal Saline = 25 mg/mL	20 mg	0.8 mL (Diluted)
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	1 mg	0.2 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	0.5 mg	0.5 mL (Diluted)
Fever/Pain	Acetaminophen PO (160 mg/5 mL)	120 mg	3.75 mL PO
	Ibuprofen PO (100 mg/5 mL)	100 mg	5 mL PO
Hypoglycemia (<60 mg/dL)	D25% (12.5 g/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	5.0 g	20 mL (D25%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	10 mcg	1 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	10 mcg	0.2 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	2 mg	0.2 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	5 mg	0.5 mL (Diluted) IN
	Morphine IV/IM/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	1 mg	1 mL (Diluted)
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	1 mg	1 mL
	Naloxone IN (2 mg/ 2mL) Divide dose equally between both nostrils	1 mg	1 mL IN
Fluid Bolus	Normal Saline 200 mL IV/IO - May repeat x 1 PRN	N/A	200 mL
Equipment	OPA: 60 mm NPA: 18 F BVM: Child Laryngoscope: 1 (straight) ET Tube: 3.5 (cuffed) ET Depth: 12 cm <u>No</u> ETI unless unable to ventilate		

**10-11 kilograms
21-25 pounds**

12-14 kilograms (26-31 pounds) /19-35 Months (Yellow)

CARDIAC RESUSCITATION

Normal Vitals: HR: 80-130, RR: 20-30, Systolic BP: 74-110 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.15 mg	1.5 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	75 mg	1.5 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	14 mg	0.7 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.25 mg	2.5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 180)	1.5 mg	1.5 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/mL. For SVT (HR > 180)	3 mg	3 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	25 J	50 J
*Synchronized Cardioversion ² for unstable tachycardia	15 J	30 J
Equipment		
OPA: 60 mm NPA: 20 F BVM: Child Laryngoscope: 2 (straight/curved)		
ET Tube: 4 (cuffed) ET Depth: 13 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 250 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

*CONTACT MEDICAL CONTROL

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

12-14 kilograms (26-31 pounds) /19-35 Months (Yellow)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 80-130, RR: 20-30, Systolic BP: 74-110 mmHg, Blood Glucose > 60 mg/dl

Development: Able to manipulate small objects, turn door knobs and unscrew lids.

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4mL Normal Saline = 10 mg/mL (Anaphylaxis only)	15 mg	1.5 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.15 mg	0.15 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL) Diluted with 3 mL Normal Saline = 25 mg/mL	25 mg	1 mL (Diluted)
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	1.3 mg	0.25 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	0.7 mg	0.7 mL (Diluted)
Fever/Pain	Acetaminophen PO (160 mg/5 mL)	160 mg	5 mL PO
	Ibuprofen (100 mg/5 mL)	140 mg	7 mL PO
Hypoglycemia (<60 mg/dL)	D25% (12.5 g/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	6.25 g	25 mL (D25%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	12 mcg	1.2 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	12 mcg	0.25 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	3 mg	0.3 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	6 mg	0.6 mL (Diluted) IN
	Morphine IV/IM/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	1.2 mg	1.2 mL (Diluted)
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	1.5 mg	1.5 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	1.5 mg	1.5 mL IN
Fluid Bolus	Normal Saline 250 mL IV/IO - May repeat x 1 PRN	N/A	250 mL
Equipment	OPA: 60 mm NPA: 20 F BVM: Child Laryngoscope: 2 (straight/curved) ET Tube: 4 (cuffed) ET Depth: 13 cm <u>No</u> ETI unless unable to ventilate		

**12-14 kilograms
26-31 pounds**

15-18 kilograms (32-40 pounds) / 3-4 Years (White)

CARDIAC RESUSCITATION

Normal Vitals: HR: 80-120, RR: 20-30, Systolic BP: 76-110 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.2 mg	2 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	100 mg	2 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	20 mg	1 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.35 mg	3.5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Dilute with 4 mL Normal Saline to produce 1 mg/1 mL. For SVT (HR >180)	2 mg	2 mL (Diluted)
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Dilute with 4 mL Normal Saline to produce 1 mg/1 mL. For SVT (HR >180)	4 mg	4 mL (Diluted)
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	40 J	80 J
*Synchronized Cardioversion ² for unstable tachycardia	20 J	40 J
Equipment		
OPA: 60 mm NPA: 22 F BVM: Child Laryngoscope: 2 (straight/curved)		
ET Tube: 4.5 (cuffed) ET Depth: 15 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 300 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

15-18 kilograms (32-40 pounds) / 3-4 Years (White)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 80-120, RR: 20-30, Systolic BP: 76-110 mmHg, Blood Glucose > 60 mg/dl

Development: Speaks in sentences of 5 to 6 words. Draws circles and squares.

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.25 mg	1.25 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	20 mg	2 mL (Diluted)
	Epinephrine 1:1000 IM (1 mg/mL) or 1 EpiPen Jr. IM (Severe symptoms only)	0.15 mg	0.15 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL)	~31 mg	0.5 mL
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	1.5 mg	0.3 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	1 mg	1 mL (Diluted)
Fever/Pain	Acetaminophen PO (160 mg/5 mL)	240 mg	7.5 mL PO
	Ibuprofen PO (100 mg/5 mL)	150 mg	7.5 mL PO
Hypoglycemia (<60 mg/dL)	D25% (12.5 g/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	8 g	32 mL (D25%)
	Glucagon IM (1 mg/mL)	0.5 mg	0.5 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	15 mcg	1.5 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	15 mcg	0.3 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	3 mg	0.3 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	7.5 mg	0.75 mL (Diluted) IN
	Morphine IV/IM/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	1.5 mg	1.5 mL (Diluted)
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	2 mg	2 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	2 mg	2 mL IN
Fluid Bolus	Normal Saline 300 mL IV/IO - May repeat x 1 PRN	N/A	300 mL
Equipment	OPA: 60 mm NPA: 22 F BVM: Child Laryngoscope: 2 (straight/curved) ET Tube: 4.5 (cuffed) ET Depth: 15 cm <i>No ETI unless unable to ventilate</i>		

**15-18 kilograms
32-40 pounds**

19-23 kilograms (41-51 pounds) / 5-6 Years (Blue)
CARDIAC RESUSCITATION

Normal Vitals: HR: 70-110, RR: 18-24, Systolic BP: 80-110 mmHg, Blood Glucose >60 mg/dl

Resuscitation Medication - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.2 mg	2 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	100 mg	2 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	20 mg	1 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.4 mg	4 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	2.5 mg	0.8 mL
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	5 mg	1.6 mL
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	40 J	80 J
*Synchronized Cardioversion ² for unstable tachycardia	20 J	40 J
Equipment		
OPA: 70 mm NPA: 24 F BVM: Child Laryngoscope: 2 (straight/curved)		
ET Tube: 5 (cuffed) ET Depth: 16 cm <u>No</u> ETI unless unable to ventilate		
Fluid Bolus		
Normal Saline 400 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

19-23 kilograms (41-51 pounds) / 5-6 Years (Blue)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 70-110, RR: 18-24, Systolic BP 80-110 mmHg, Blood Glucose > 60 mg/dl *: Look alike/sound alike drug

Development: Able to tell a brief story with a complete sentence. Able to balance on one foot for a short period of time.

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.5 mg	2.5 mL
	Diphenhydramine IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	25 mg	2.5 mL (Diluted)
	Diphenhydramine IM (50 mg/mL) (Anaphylaxis only)	25 mg	0.5 mL IM
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.15 mg	0.15 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL)	~44 mg	0.7 mL
Seizure	Midazolam IM (5 mg/mL) Give first if no IV	2 mg	0.4 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	1 mg	1 mL (Diluted)
Fever/Pain	Acetaminophen PO (160 mg/5 mL)	240 mg	7.5 mL PO
	Ibuprofen PO (100 mg/5 mL)	200 mg	10 mL PO
Hypoglycemia (<60 mg/dL)	D25% (12.5 g/50 mL) 25 mL of D50% diluted with 25 mL of Normal Saline = D25% Give Slow IV	10 g	40 mL (D25%)
	Glucagon IM (1 mg/mL)	1 mg	1 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	20 mcg	2 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	20 mcg	0.4 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	4 mg	0.4 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	10 mg	1 mL (Diluted) IN
	*Ketorolac IV/IM (15 mg/1 mL)	15 mg	1 mL IV/IM
	Morphine IV/IM/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	2 mg	2 mL (Diluted)
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	2 mg	2 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	2 mg	2 mL IN
Fluid Bolus	Normal Saline 400 mL IV/IO - May repeat x 1 PRN	N/A	400 mL
Equipment	OPA: 70 mm NPA: 24 F BVM: Child Laryngoscope: 2 (straight/curved) ET Tube: 5 (cuffed) ET Depth: 16 cm <u>No ETI unless unable to ventilate</u>		

19-23 kilograms
41-51 pounds

24-29 kilograms (52-64 pounds) / 7-9 Years (Orange)

CARDIAC RESUSCITATION

Normal Vitals: 70-110, RR: 18-22, Systolic BP: 80-110 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medications - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.3 mg	3 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	125 mg	2.5 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	30 mg	1.5 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.5 mg	5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	3 mg	1 mL
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	6 mg	2 mL
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	50 J	100 J
*Synchronized Cardioversion ² for unstable tachycardia	25 J	50 J
Equipment		
OPA: 80 mm NPA: 26 F BVM: Child Laryngoscope: 2-3 (straight/curved)		
ET Tube: 5.5 (cuffed) ET Depth: 18 cm <u>No</u> ETI unless unable to ventilate		
Fluid Bolus		
Normal Saline 500 mL IV/IO - May repeat x 1		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

24-29 kilograms (52-64 pounds) / 7-9 Years (Orange)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 70-110, RR: 18-22, Systolic BP: 80-110 mmHg, Blood Glucose > 60 mg/dl * : Look alike/sound alike drug

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.5 mg	2.5 mL
	Diphenhydramine IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	30 mg	3 mL (Diluted)
	Diphenhydramine IM (50 mg/mL) (Anaphylaxis only)	30 mg	0.6 mL IM
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen Jr. IM (Severe symptoms only)	0.15 mg	0.15 mL IM
Seizure	Solu-Medrol IV/IO (125 mg/2 mL)	50 mg	0.8 mL
	Midazolam IM (5 mg/mL) Give first if no IV	2.5 mg	0.5 mL IM
Fever/Pain	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	1.4 mg	1.4 mL (Diluted)
	Acetaminophen PO (160 mg/5 mL)	320 mg	10 mL PO
Hypoglycemia (<60 mg/dL)	Ibuprofen PO (100 mg/5 mL)	250 mg	12.5 mL PO
	D50% (25 g/50 mL) Give Slow IV	12.5 g	25 mL (D50%)
Pain Control	Glucagon IM (1 mg/mL)	1 mg	1 mL IM
	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	25 mcg	2.5 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	25 mcg	0.5 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	5 mg	0.5 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	12.5 mg	1.25 (Diluted) IN
	*Ketorolac IV/IM (15 mg/1 mL)	15 mg	1 mL IV/IM
	Morphine IV/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	3 mg	3 mL (Diluted)
Narcotic OD	Morphine IM (10 mg/mL)	3 mg	0.3 mL IM
	Naloxone IV/IM (2 mg/2 mL)	2 mg	2 mL
Fluid Bolus	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	2 mg	2 mL IN
	Normal Saline 500 mL IV/IO - May repeat x 1 PRN	N/A	500 mL
Equipment	OPA: 80 mm NPA: 26 F BVM: Child Laryngoscope: 2-3 (straight/curved) ET Tube: 5.5 (cuffed) ET Depth: 18 cm <u>No</u> ETI unless unable to ventilate		

24-29 kilograms
52-64 pounds

30-36 kilograms (65-79 pounds) / 10-14 Years (Green)

CARDIAC RESUSCITATION

Normal Vitals: HR: 70-110, RR: 16-20, Systolic BP: 90-120 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medications - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia ¹	0.3 mg	3 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	150 mg	3 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	30 mg	1.5 mL
Atropine (1 mg/10 mL) IV/IO for bradycardia unresponsive to Epinephrine ¹	0.5 mg	5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	4 mg	1.3 mL
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 180)	8 mg	2.6 mL
Electrical Therapy	Initial²	Repeat²
Defibrillation (pediatric pads preferred) Adult pads may be used anterior/posterior.	65 J	130 J
*Synchronized Cardioversion ² for unstable tachycardia	30 J	60 J
Equipment		
OPA: 80 mm NPA: 30 F BVM: Adult Laryngoscope: 2-3 (straight/curved)		
ET Tube: 6 (cuffed) ET Depth: 19.5 cm <i>No ETI unless unable to ventilate</i>		
Fluid Bolus		
Normal Saline 700 mL IV/IO - May repeat x 1 PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10 mcg	1 mL (Diluted)

***CONTACT MEDICAL CONTROL**

¹CPR if HR < 60 after O₂

²May adjust to closest available energy setting

30-36 kilograms (65-79 pounds) / 10-14 Years (Green)

CONDITIONS/MEDICATIONS

Normal Vitals: HR: 70-110, RR: 16-20, Systolic BP: 90-120 mmHg, Blood Glucose > 60 mg/dl * : Look alike/sound alike drug

Condition	Medication - (confirm concentration is as specified)	Dose	Volume
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.5 mg	2.5 mL
	Diphenhydramine IV/IO (50 mg/mL) Diluted with 4 mL Normal Saline = 10 mg/mL (Anaphylaxis only)	35 mg	3.5 mL (Diluted)
	Diphenhydramine IM (50 mg/mL) (Anaphylaxis only)	35 mg	0.7 mL IM
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen adult IM (Severe symptoms only)	0.3 mg	0.3 mL IM
Seizure	Solu-Medrol IV/IO (125 mg/2 mL)	62.5mg	1 mL
	Midazolam IM (5 mg/mL) Give first if no IV	3 mg	0.6 mL IM
Fever/Pain	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	2 mg	2 mL (Diluted)
	Acetaminophen PO (160 mg/5 mL)	400 mg	12.5 mL PO
Hypoglycemia (<60 mg/dL)	Ibuprofen PO (100 mg/5 mL)	350 mg	17 mL PO
	D50% (25 g/50 mL) Give Slow IV	15 g	30 mL (D50%)
Pain Control	Glucagon IM (1 mg/mL)	1 mg	1 mL IM
	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	30 mcg	3 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	30 mcg	0.6 mL IN
	Ketamine IV/IO (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	7 mg	0.7 mL (Diluted) IV/IO
	Ketamine IN (100 mg/1 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mg/1 mL	17.5 mg	1.75 mL (Diluted)
	*Ketorolac IV/IM (15 mg/1 mL)	15 mg	1 mL IV/IM
	Morphine IV/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	3.5 mg	3.5 mL (Diluted)
Narcotic OD	Morphine IM (10 mg/mL)	3.5 mg	0.35 mL IM
	Naloxone IV/IM (2 mg/2 mL)	2 mg	2 mL
Fluid Bolus	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	2 mg	2 mL IN
	Normal Saline 700 mL IV/IO - May repeat x 1 PRN	N/A	700 mL
Equipment	OPA: 80 mm NPA: 30 F BVM: Adult Laryngoscope: 2-3 (straight/curved) ET Tube: 6 (cuffed) ET Depth: 19.5 cm <u>No</u> ETI unless unable to ventilate		

30-36 kilograms
65-79 pounds

Adult >14 Years (Black)
CARDIAC RESUSCITATION

Normal Vitals: HR: 60-100, RR: 12-20, Systolic BP: 100-140 mmHg, Blood Glucose > 60 mg/dl

Resuscitation Medications - (confirm concentration is as specified)	Dose	Volume
Epinephrine 1:10,000 (1 mg/10 mL prefilled syringe) IV/IO Q 3-5 min for arrest/bradycardia	1 mg	10 mL
Amiodarone (150 mg/3 mL) IV/IO for shock resistant V-Fib	300 mg	6 mL
*Lidocaine (100 mg/5 mL) IV/IO for wide-complex tachycardia	100 mg	5 mL
*Amiodarone (150 mg/3 mL) IV for stable wide-complex tachy. Add to 100 mL Normal Saline, run over 10 minutes	150 mg	3 mL in 100 mL NSS
Atropine (1 mg/10 mL) IV/IO for bradycardia, every 3-5 min to a max of 3 mg	0.5 mg	5 mL
*Adenosine (6 mg/2 mL) IV/IO 1st Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 150)	6 mg	2 mL
*Adenosine (6 mg/2 mL) IV/IO 2nd Dose. Follow with 10 mL Normal Saline flush. For SVT (HR > 150)	12 mg	4 mL
Electrical Therapy	Initial¹	Repeat¹
V-Fib or Pulseless V-Tach: Defibrillation	120-200 J	≥ 120-200 J
Unstable, wide <u>irregular</u> tachycardia. Heart rate > 150 bpm: Defibrillation	120-200 J	≥ 120-200 J
Unstable, wide <u>regular</u> tachycardia. Heart rate > 150 bpm: Synchronized Cardioversion	100 J	≥ 100 J²
Unstable, narrow <u>regular</u> tachycardia. Heart rate > 150 bpm: Synchronized Cardioversion	50-100 J	≥ 50-100 J²
Unstable, narrow <u>irregular</u> tachycardia. Heart rate > 150 bpm: Synchronized Cardioversion	120-200 J	≥ 120-200 J²
Fluid Bolus		
Normal Saline 1000 mL IV/IO - May repeat PRN		
Shock after IVFs-Epinephrine IV/IO (1 mg/10 mL) Dilute 1 mL with 9 mL Normal Saline = 10 mcg/1 mL	10-20 mcg	1 - 2 mL (Diluted) IV/IO

***CONTACT MEDICAL CONTROL**

¹Based on biphasic, use manufacturer's recommended energy

²If no response to first shock, increase energy in a stepwise manner by 20-50 J

Adult >14 Years (Black)
CONDITIONS/MEDICATIONS

Normal Vitals: HR: 60-100, RR: 12-20, Systolic BP: 100-140 mmHg, Blood Glucose > 60 mg/dl

<u>Condition</u>	<u>Medication - (confirm concentration is as specified)</u>	<u>Dose</u>	<u>Volume</u>
Bronchospasm Anaphylaxis	Albuterol Nebulized (2.5 mg/3 mL)	2.5 mg	3 mL
	Ipratropium Bromide Nebulized (0.5 mg/2.5 mL if wheezing)	0.5 mg	2.5 mL
	Diphenhydramine IM/IV/IO (50 mg/mL) (Anaphylaxis only)	50 mg	1 mL
	Epinephrine 1:1000 IM (1 mg/mL) <u>or</u> 1 EpiPen adult. IM (Severe symptoms only)	0.3 mg	0.3 mL IM
	Solu-Medrol IV/IO (125 mg/2 mL)	125 mg	2 mL
Seizure (Sedation)	Midazolam IM (5 mg/mL) Give first if no IV	10 mg	2 mL IM
	Midazolam IV (5 mg/mL) Diluted with 4 mL Normal Saline = 1 mg/mL	5 mg	5 mL (Diluted)
Hypoglycemia (<60 mg/dL)	D50% (25 g/50 mL) Give Slow IV	25 g	50 mL (D50%)
	Glucagon IM (1 mg/mL)	1 mg	1 mL IM
Pain Control	Fentanyl IV (100 mcg/2 mL) Diluted with 8 mL Normal Saline = 10 mcg/mL	100 mcg	10 mL (Diluted)
	Fentanyl IN (100 mcg/2 mL) Divide dose equally between both nostrils	100 mcg	2 mL IN
	Morphine IV/IO (10 mg/mL) Diluted with 9 mL Normal Saline = 1 mg/mL	2-5 mg	2-5 mL (Diluted)
	Morphine IM (10 mg/mL)	2-5 mg	0.2-0.5 mL IM
	Ketamine IV/IO/IM/IN (500 mg/5 mL)	0.5 mg/kg	0.25 mL - 0.5 mL
Sedation	Ketamine IV/IO (500 mg/5 mL)	1 mg/kg	0.5 mL - 1 mL
	Ketamine IM (500 mg/5 mL)	5 mg/kg	2.5 mL - 5 mL IM
Narcotic OD	Naloxone IV/IM (2 mg/2 mL)	2 mg	2 mL
	Naloxone IN (2 mg/2 mL) Divide dose equally between both nostrils	2 mg	2 mL IN
Fluid Bolus	Normal Saline 1000 mL IV/IO - May repeat x 1 PRN	N/A	1000 mL



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If you have questions or comments about MI-MEDIC contact: MI-MEDIC@med.wmich.edu



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