

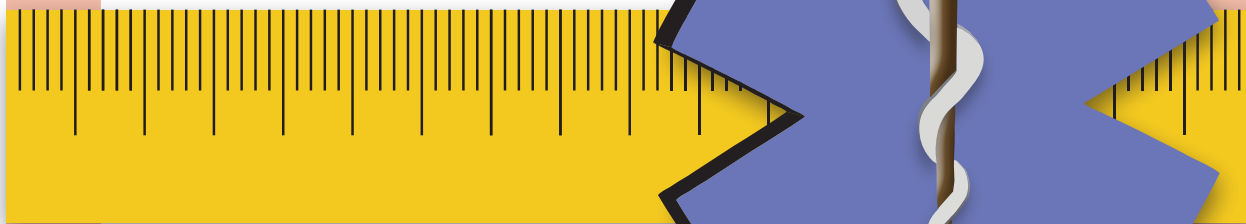
Multnomah County, Clackamas County, Washington County

## **EMERGENCY MEDICAL SERVICES**

# **PEDIATRIC GUIDE**

## Length-Based System

Measure from top of head to bottom of feet (inches)  
If weight available, go directly to appropriate page



**EDITION 9**  
**January 2020**

Special acknowledgement to Dr. Craig Warden, Dr. Mo Daya and Tualatin Valley Fire & Rescue for their original design and concept. Additional thanks to Dr. Jon Jui, the Multnomah County EMS office, American Medical Response and Portland Fire & Rescue for revisions and production.

## APGAR Score

Sign	0	1	2
Appearance:	Blue, Pale	Body Pink, extremities blue	Completely pink
Pulse:	Absent	Slow (less than 100)	Greater than or equal to 100
Grimace:	No response	Grimace	Cough or sneeze
Activity:	Limp	Some flexion	Active motion of extremities
Respirations:	Absent	Slow, irregular	Good, crying

## Abnormal Childbirth

### General:

1. Transport to nearest appropriate hospital.
2. Give receiving hospital earliest possible notification.
3. Contact OLMC for advice.
4. Transport position: if in third trimester, transport on left side (pillow under right hip, or, if on spineboard, tilt right side of board up 6 inches) to keep uterine pressure off inferior vena cava unless delivery is imminent.

### Breech Presentation (buttocks first):

1. If imminent, prepare mother and allow buttocks and trunk to deliver spontaneously, then support the body while the head is delivered.
2. If head not delivered within 3 minutes, suffocation can occur:
  - i. Support the body and have mother try to move/crawl to rotate her pelvis in hopes of encouraging delivery.

### Prolapsed Cord:

1. With gloved hand, gently attempt to push baby up the vagina several inches.
2. Do not attempt to push the cord back.

### Limb Presentation:

1. The presentation of an arm or leg through the vagina is an indication for immediate transport to the hospital.

### Abruptio Placenta:

*(Occurs during third trimester when placenta prematurely separates from uterine wall, leading to intrauterine bleeding.)*

1. The patient experiences lower abdominal pain and the uterus becomes rigid.
2. Shock may develop without significant vaginal bleeding.

### Placenta Previa:

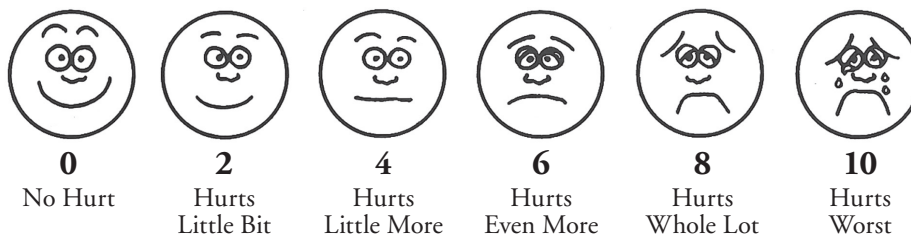
*(Occurs when the placenta covers the cervical opening and can result in vaginal bleeding and prevents delivery of the infant through the vagina.)*

1. The infant needs to be delivered via C-Section.

### Delayed/Stuck Delivery (shoulder dystocia):

1. Attempt having mom crawl or move into the hands/knees position.

## Faces Pain Scale



**Poison Control**  
1-800-222-1222

## PEDIATRIC RSI DOSAGE

Medication:		Etomidate	Succinylcholine	Versed	Vecuronium	Ketamine				
Concentration:	2 mg/mL	20 mg/mL	5 mg/mL	1 mg/mL	50 mg/mL					
<b>Dosage:</b>	<b>0.3 mg/kg</b>	<b>2.0 mg/kg &lt; 6 yrs</b>	<b>0.1 mg/kg</b>	<b>0.1 mg/kg</b>	<b>1 mg/kg</b>					
Notes:	Same dose/kg for all ages	1.5 mg/kg ≥ 6 yrs NOT in hyperkalemia	Max 2.5 mg	Use for long-acting paralysis, hyper K+	Not used if <3 mos old					
Length	LBS	KG	mg	cc	mg	cc	mg	cc		
16-17.5"	4	2	0.6	0.3	4	0.2	0.1	0.2	n/a	n/a
18-19.5"	7	3	0.9	0.5	6	0.3	0.1	0.3	n/a	n/a
20-22.5"	11	5	1.5	0.8	10	0.5	0.1	0.5	5	0.1
23-25.5"	18	8	2.4	1.2	16	0.8	0.2	0.8	8	0.2
26-29.5"	22	10	3.0	1.5	20	1.0	0.2	1.0	10	0.2
30-32.5"	26	12	3.6	1.8	24	1.2	0.2	1.2	12	0.2
33-35.5"	31	14	4.2	2.1	28	1.4	0.3	1.4	14	0.3
36-38.5"	33	15	4.5	2.3	30	1.5	0.3	1.5	15	0.3
39-40.5"	37	17	5.1	2.6	34	1.7	0.3	1.7	17	0.3
41-43.5"	42	19	5.7	3.0	38	2.0	0.4	1.9	19	0.4
44-46.5"	48	22	6.6	3.3	33	1.7	0.4	2.2	22	0.4
47-47.5"	53	24	7.2	3.6	36	1.8	0.5	2.4	24	0.5
48-49.5"	57	26	7.8	4.0	39	2.0	0.5	2.6	26	0.5
50-51.5"	64	29	8.7	4.4	44	2.2	0.5	2.9	29	0.6
52-53.5"	70	32	9.6	4.8	48	2.4	0.5	3.2	32	0.6
54-58"	84	38	11.4	5.7	57	3.0	0.5	3.8	38	0.8

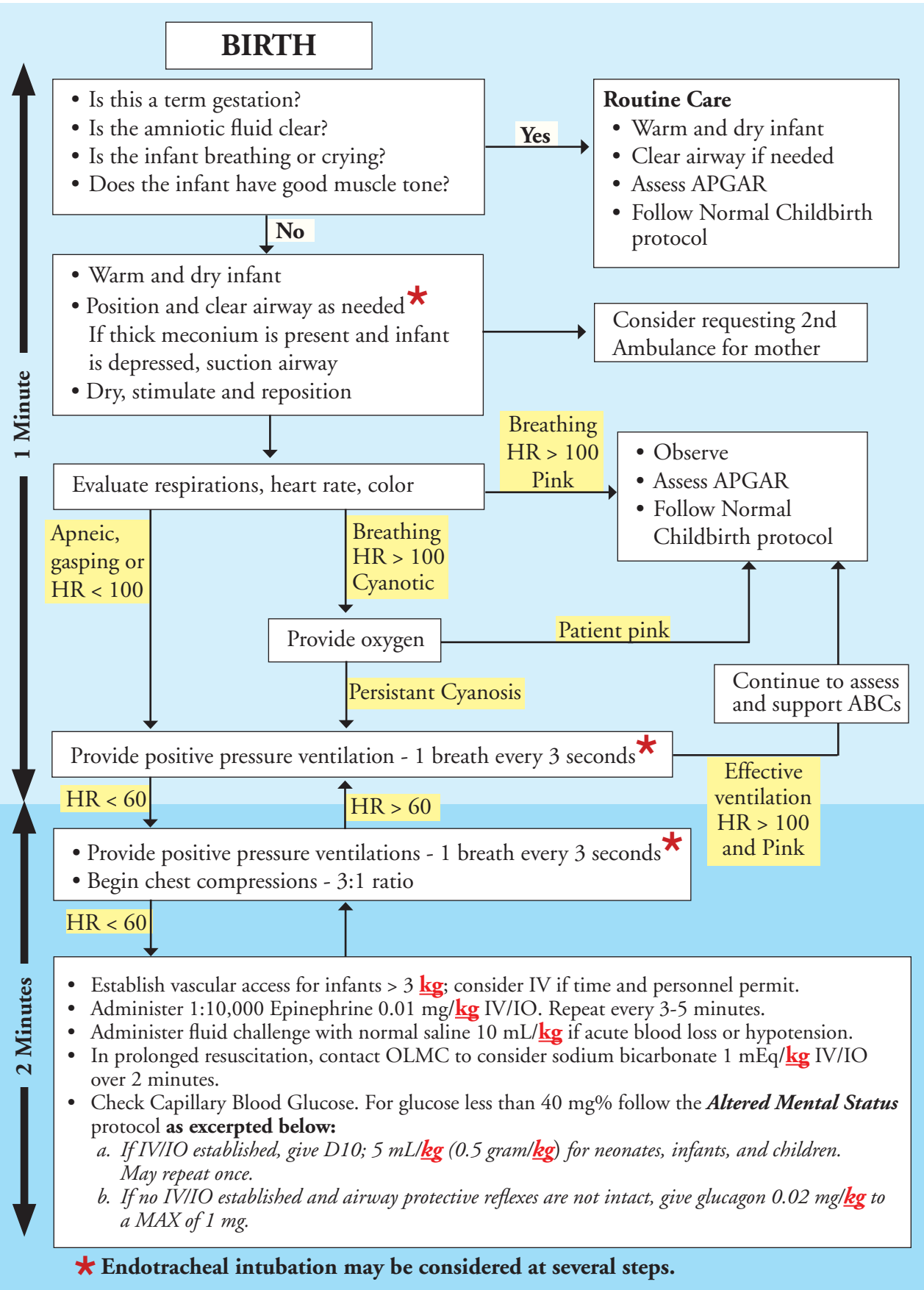
Version-20

Doses have been rounded for ease of administration





3:1




**3–4.9 lbs****1.5–2.4 kgs****16–17.5”**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	140 bpm	40 – 60 min	50 – 60 mmHg	45 – 50 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 2.5 mm	7.5 – 9.0 cm	Straight 0	N/A

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Pink	1.0		N/A	N/A

IO / NG / SUCTION	IO Needle	Suction Catheter
	EZ-IO 25 mm (blue)	6 French

DEFIBRILLATION 	PEDIATRIC PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	8 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	8 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	10 mg	0.2 cc
Amiodarone-2nd Dose or VT w/pulses (IV)	2.5 mg/kg	5 mg	0.1 cc
Atropine	Contraindicated in neonates		
Epinephrine 1:10,000 (IV)	0.01 mg/kg	0.02 mg	0.2 cc
Lidocaine (IV)	1.5 mg/kg	3 mg	0.15 cc
Magnesium Sulfate (IV)	25 mg/kg, 1–2 min	50 mg	0.1 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	0.2 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV)	0.1 mg/kg	0.2 mg	0.07 cc
Adenosine—2nd/3rd Dose (IV)	0.2 mg/kg	0.4 mg	0.13 cc
Calcium Gluconate	0.5 cc/kg	--	1 cc
D10% (1 part D50 to 4 parts NS) (IV, PO)	5 mL/kg	1 grams	10 cc
Dexamethasone (IV, IM, PO)	0.6 mg/kg	1.2 mg	0.12 cc
Diphenhydramine (Benadryl) (IV, IM)	1 mg/kg	2 mg	0.04 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.02 mg	0.02 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.02 mg	0.2 cc
Fentanyl (IV, IN, and IM)	1 mcg/kg	2 mcg	0.04 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV)	10 cc/kg	--	20 cc
Glucagon (IM)	0.02 mg/kg	0.04 mg	0.04 cc
Naloxone (Narcan®)	Contraindicated in neonates		
Ondansetron (Zofran®) (IV, IM)	Contact OLMC (except if in c-spine or chemo) 0.1cc		
Sodium Bicarbonate (IV)	Contact OLMC	--	2 cc
Versed® (IV)	0.1 mg/kg	0.2 mg	0.04 cc
Versed® (IM, IN)	0.3 mg/kg	0.6 mg	0.12 cc

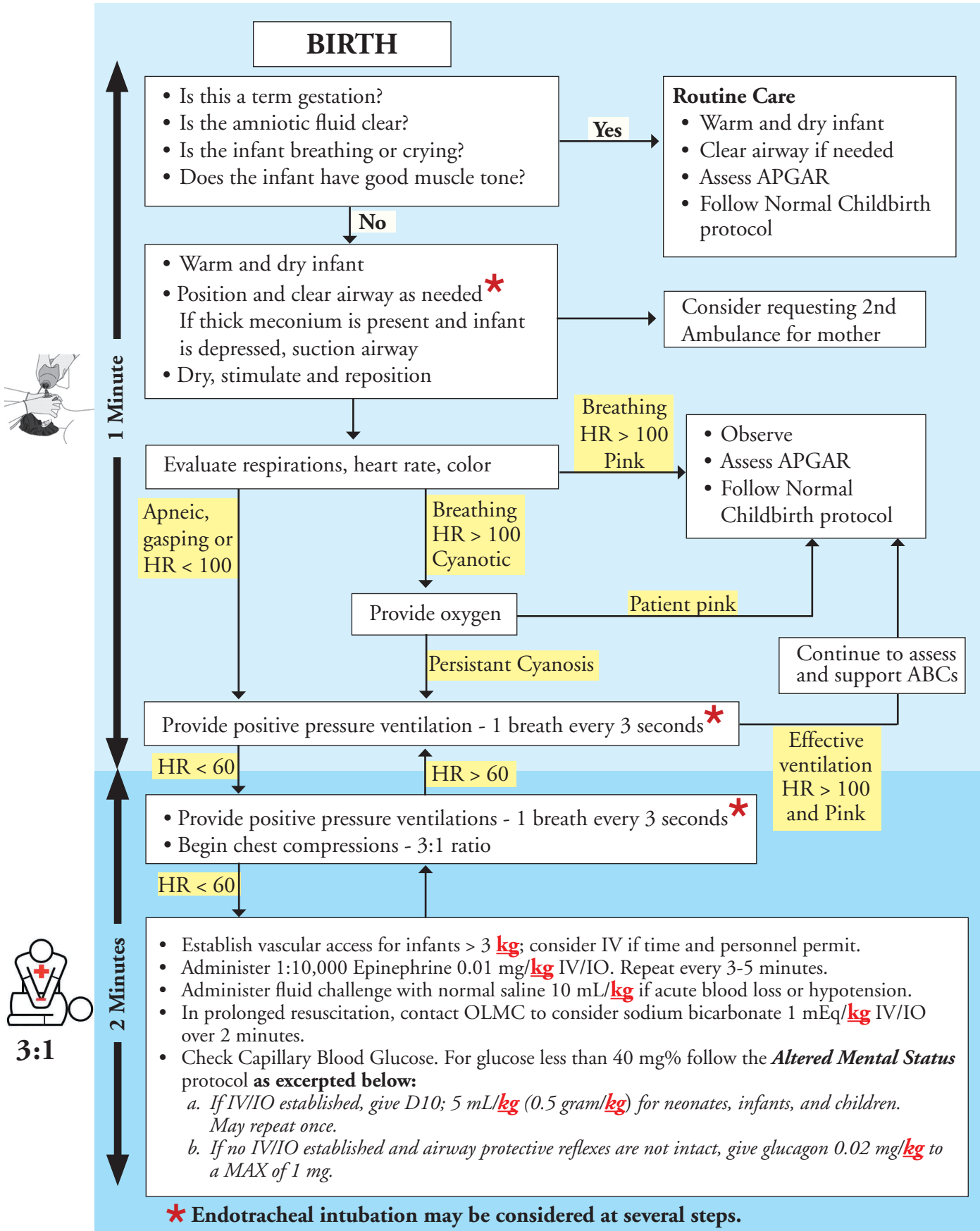
*Doses have been rounded for ease of administration***16-17.5”**

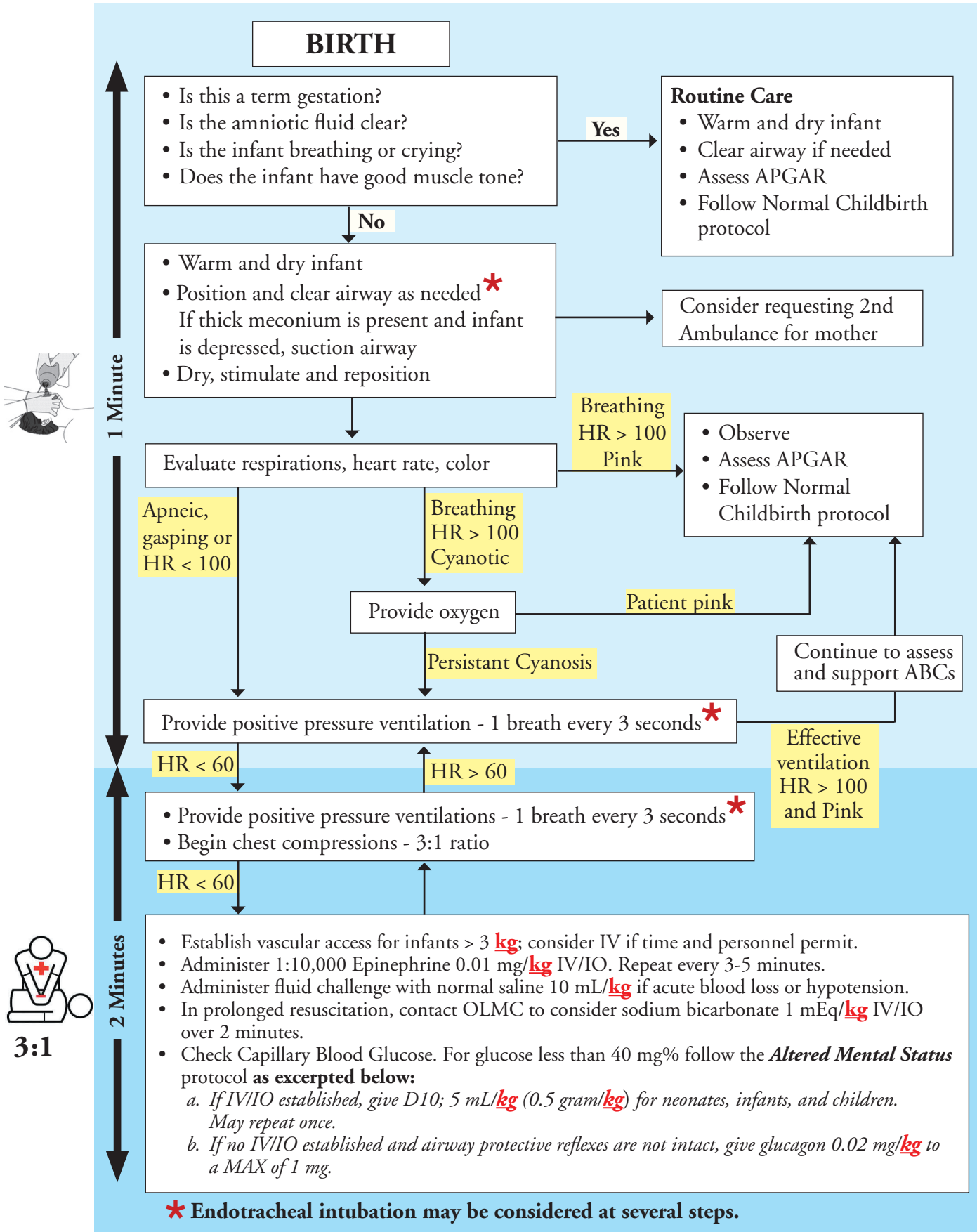
<b>5-7.4 lbs</b>		<b>2.5-3.4 kgs</b>		<b>18-19.5"</b>	
<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>	
	125 – 140 bpm	40 – 60 min	60 – 70 mmHg	50 – 55 mmHg	
<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>	
	Cuffed 2.5 mm	9.0 – 10.5 cm	Straight 0	N/A	
<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>	
Pink	1.0		N/A	N/A	
<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>			
	EZ-IO 25 mm (blue)	6 French			
<b>DEFIBRILLATION</b> ⚡		<b>PEDIATRIC PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>	
Defibrillation		✓	4 J/kg	15 Joules	
Cardioversion—First Shock/Subsequent Shocks		✓	4 J/kg	15 Joules	

♥ – CARDIAC MEDICATIONS – ♥			
	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	15 mg	0.3 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	7.5 mg	0.15 cc
Atropine	Contraindicated in neonates		
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.03 mg	0.3 cc
Lidocaine (IV, IO)	1.5 mg/kg	4.5 mg	0.23 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1-2 min	75 mg	0.15 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	0.3 mcg/min	--

MEDICATIONS			
	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	0.3 mg	0.1 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	0.6 mg	0.2 cc
Calcium Gluconate	0.5 cc/kg	--	1.5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	1.5 grams	15 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	1.8 mg	0.2 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	3 mg	0.06 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.03 mg	0.03 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.032 mg	0.3 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	3 mcg	0.06 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	10 cc/kg	--	30 cc
Glucagon (IM)	0.02 mg/kg	0.06 mg	0.06 cc
Naloxone (Narcan®)	Contraindicated in neonates		
Ondansetron (Zofran®) (IV, IM)	Contact OLMC (except if in c-spine or chemo) 0.15 cc		
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	3 cc
Versed® (IV, IO)	0.1 mg/kg	0.3 mg	0.06 cc
Versed® (IM, IN)	0.3 mg/kg	0.9 mg	0.18 cc

Doses have been rounded for ease of administration








**7.5–14.9 lbs****3.5–6.9 kgs****20–22.5"**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	125 bpm	40 – 60 min	70 mmHg	55 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 3.0 mm	10.5 cm	Straight 0	N/A

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Pink	1.0		N/A	N/A

IO / NG / SUCTION	IO Needle	Suction Catheter
	EZ-IO 25 mm (blue)	8 French

DEFIBRILLATION 	PEDIATRIC PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	20 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	20 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	25 mg	0.5 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	12.5 mg	0.25 cc
Atropine	0.02 mg/kg	0.1 mg	1 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.05 mg	0.5 cc
Lidocaine (IV, IO)	1.5 mg/kg	7.5 mg	0.38 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	125 mg	0.25 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	0.5 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	0.5 mg	0.17 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	1 mg	0.33 cc
Calcium Gluconate	0.5 cc/kg	--	2.5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	2.5 grams	25 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	3 mg	0.3 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	5 mg	0.1 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.05 mg	0.05 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.05 mg	0.5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	5 mcg	0.1 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	10 cc/kg	--	50 cc
Glucagon (IM)	0.02 mg/kg	0.1 mg	0.1 cc
Naloxone (Narcan®)	Contraindicated in neonates		
Ondansetron (Zofran®) (IV, IM)	Contact OLMC (except if in c-spine or chemo)	0.25 cc	
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	5 cc
Versed® (IV, IO)	0.1 mg/kg	0.5 mg	0.1 cc
Versed® (IM, IN)	0.3 mg/kg	1.5 mg	0.3 cc

*Doses have been rounded for ease of administration***20-22.5"**

<b>15-21.9 lbs</b>	<b>7-9.9 kgs</b>	<b>23-25.5"</b>
--------------------	------------------	-----------------

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	120 bpm	24 – 36 min	90 +/- 30 mmHg	65 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 3.0 mm	10.5 cm	Straight 1	N/A

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Blue	1.5		N/A	N/A

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	8 French

<b>DEFIBRILLATION</b>	<b>PEDIATRIC PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	50 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	50 Joules

♥ – CARDIAC MEDICATIONS – ♥			
	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	40 mg	0.8 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	20 mg	0.4 cc
Atropine	0.02 mg/kg	0.16 mg	1.6 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.08 mg	0.8 cc
Lidocaine (IV, IO)	1.5 mg/kg	12 mg	0.6 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	200 mg	0.4 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	0.8 mcg/min	--

MEDICATIONS			
	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	0.8 mg	0.27 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	1.6 mg	0.53 cc
Calcium Gluconate	0.5 cc/kg	--	4 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	4 grams	40 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	4.8 mg	0.48 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	8 mg	0.16 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.08 mg	0.08 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.08 mg	0.8 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	8 mcg	0.16 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	160 cc
Glucagon (IM)	0.02 mg/kg	0.16 mg	0.16 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	0.8 mg	0.8 cc
Ondansetron (Zofran®) (IV, IM)	Contact OLMC (except if in c-spine or chemo) 0.4 cc		
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	8 cc
Versed® (IV, IO)	0.1 mg/kg	0.8 mg	0.16 cc
Versed® (IM, IN)	0.3 mg/kg	2.4 mg	0.48 cc

*Doses have been rounded for ease of administration*

**22–24.9 lbs****10–11.4 kgs****26–29.5”**

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	120 bpm	22 – 30 min	95 +/- 30 mmHg	70 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 3.0 – 3.5 mm	12.0 cm	Straight 1	N/A

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Blue	1.5		N/A	N/A

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	8-10 French

<b>DEFIBRILLATION</b> ⚡	<b>PEDIATRIC PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	50 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	50 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Amiodarone (VF/Pulseless VT)	5 mg/kg	50 mg	1 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	25 mg	0.5 cc
Atropine	0.02 mg/kg	0.2 mg	2 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.1 mg	1 cc
Lidocaine (IV, IO)	1.5 mg/kg	15 mg	0.75 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	250 mg	0.5 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1 mcg/min	--

**MEDICATIONS**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1 mg	0.33 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	2 mg	0.67 cc
Calcium Gluconate	0.5 cc/kg	--	5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	5 grams	50 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	6 mg	0.6 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	10 mg	0.2 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.1 mg	0.1 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	10 mcg	0.2 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	200 cc
Glucagon (IM)	0.02 mg/kg	0.2 mg	0.2 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1 mg	1 cc
Ondansetron (Zofran®) (IV, IM)	Contact OLMC (except if in c-spine or chemo)		0.5 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	10 cc
Versed® (IV, IO)	0.1 mg/kg	1 mg	0.2 cc
Versed® (IM, IN)	0.3 mg/kg	3 mg	0.6 cc

*Doses have been rounded for ease of administration***26-29.5”**

25–28.9 lbs

11.5–13.4 kgs


30–32.5"

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	120 bpm	22–30 min	95 +/- 30 mmHg	70 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 3.0 – 3.5 mm	12.0 cm	Straight 1	N/A

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Blue	1.5		n/a	n/a

IO / NG / SUCTION	IO Needle	Suction Catheter
	EZ-IO 25 mm (blue)	8-10 French

DEFIBRILLATION 	PEDIATRIC PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	50 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	50 Joules

## ♥ – CARDIAC MEDICATIONS – ♥

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	60 mg	1.2 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	30 mg	0.6 cc
Atropine	0.02 mg/kg	0.24 mg	2.4 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.12 mg	1.2 cc
Lidocaine (IV, IO)	1.5 mg/kg	18 mg	0.9 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	300 mg	0.6 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1.2 mcg/min	--

## MEDICATIONS

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1.2 mg	0.4 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	2.4 mg	0.8 cc
Calcium Gluconate	0.5 cc/kg	--	6 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	6 grams	60 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	7.2 mg	0.72 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	12 mg	0.24 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.12 mg	0.12 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	12 mcg	0.24 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	240 cc
Glucagon (IM)	0.02 mg/kg	0.24 mg	0.24 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1.2 mg	1.2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	1.2 mg	0.6 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	12 cc
Versed® (IV, IO)	0.1 mg/kg	1.2 mg	0.24 cc
Versed® (IM, IN)	0.3 mg/kg	3.6 mg	0.72 cc

Doses have been rounded for ease of administration

**29–32.9 lbs****13.5–14.9 kgs****33–35.5"**

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	110 – 120 bpm	22 – 28 min	100 +/- 30 mmHg	75 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 3.5 – 4.0 mm	12.0 – 13.5 cm	Straight 2	Peds 4.0 only

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Gray	2.0	used for ≥ 35"	Green 2	25 – 35 mL

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	10 French

<b>DEFIBRILLATION</b> ⚡	<b>PEDIATRIC PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	70 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	70 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Amiodarone (VF/Pulseless VT)	5 mg/kg	70 mg	1.4 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	35 mg	0.7 cc
Atropine	0.02 mg/kg	0.28 mg	2.8 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.14 mg	1.4 cc
Lidocaine (IV, IO)	1.5 mg/kg	21 mg	1.1 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	350 mg	0.7 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1.4 mcg/min	--

**MEDICATIONS**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1.4 mg	0.47 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	2.8 mg	0.93 cc
Calcium Gluconate	0.5 cc/kg	--	7 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	7 grams	70 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	8.4 mg	0.84 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	14 mg	0.28 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.14 mg	0.14 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	14 mcg	0.28 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	280 cc
Glucagon (IM)	0.02 mg/kg	0.28 mg	0.28 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1.4 mg	1.4 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	1.4 mg	0.7 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	14 cc
Versed® (IV, IO)	0.1 mg/kg	1.4 mg	0.28 cc
Versed® (IM, IN)	0.3 mg/kg	4.2 mg	0.84 cc

*Doses have been rounded for ease of administration***33-35.5"**

**33–35.9 lbs****15–16.4 kgs****36–38.5"**

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	110 bpm	20 – 26 min	100 +/- 25 mmHg	75 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 3.5 – 4.0 mm	13.5 cm	Straight 2	Peds 4.0 ET only

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Gray	2.0		Green 2	25 – 35 mL

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	10 French

<b>DEFIBRILLATION</b> ⚡	<b>ADULT PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	70 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	70 Joules

### ♥ – CARDIAC MEDICATIONS – ♥

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	75 mg	1.5 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	37.5 mg	0.75 cc
Atropine	0.02 mg/kg	0.3 mg	3 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.15 mg	1.5 cc
Lidocaine (IV, IO)	1.5 mg/kg	22.5 mg	1.1 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	375 mg	0.75 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1.5 mcg/min	--

### MEDICATIONS

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1.5 mg	0.5 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	3 mg	1 cc
Calcium Gluconate	0.5 cc/kg	--	7.5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	7.5 grams	75 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	9 mg	0.9 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	15 mg	0.3 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.15 mg	0.15 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	15 mcg	0.3 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	300 cc
Glucagon (IM)	0.02 mg/kg	0.3 mg	0.3 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1.5 mg	1.5 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	1.5 mg	0.75 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	15 cc
Versed® (IV, IO)	0.1 mg/kg	1.5 mg	0.3 cc
Versed® (IM, IN)	0.3 mg/kg	4.5 mg	0.9 cc

*Doses have been rounded for ease of administration*

**36 - 38.5"**

**36–39.9 lbs****16.5–18.4 kgs****39–40.5”**

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	110 – 110 bpm	20 – 26 min	100 +/- 15 mmHg	75 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 3.5 – 4.0 mm	13.5 – 15.0 cm	Straight 2	Peds 4.0 ET only

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Gray	2.0		Green 2	25 – 35 mL

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	10 French

<b>DEFIBRILLATION</b> ⚡	<b>ADULT PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	70 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	70 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Amiodarone (VF/Pulseless VT)	5 mg/kg	85 mg	1.7 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	42.5 mg	0.85 cc
Atropine	0.02 mg/kg	0.34 mg	3.4 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.17 mg	1.7 cc
Lidocaine (IV, IO)	1.5 mg/kg	25.5 mg	1.3 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	425 mg	0.85 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1.7 mcg/kg/min	--

**MEDICATIONS**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1.7 mg	0.57 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	3.4 mg	1.13 cc
Calcium Gluconate	0.5 cc/kg	--	8.5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	8.5 grams	85 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	17 mg	0.34 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.17 mg	0.17 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	17 mcg	0.34 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	340 cc
Glucagon (IM)	0.02 mg/kg	0.34 mg	0.34 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1.7 mg	1.7 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	1.7 mg	0.85 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	17 cc
Versed® (IV, IO)	0.1 mg/kg	1.7 mg	0.34 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration***39-40.5”**


**40–43.9 lbs****18.5–19.9 kgs****41–43.5”**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	100 bpm	20 – 26 min	100 +/- 15 mmHg	75 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 4.0 – 4.5 mm	15.0 – 16.5 cm	Straight 2	Peds

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Gray	2.0		Green 2	30 – 40 mL

IO / NG / SUCTION	IO Needle	Suction Catheter
	EZ-IO 25 mm (blue)	10 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	100 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	100 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	95 mg	2 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	47.5 mg	0.95 cc
Atropine	0.02 mg/kg	0.38 mg	3.8 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.19 mg	2 cc
Lidocaine (IV, IO)	1.5 mg/kg	28.5 mg	1.4 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	475 mg	1 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	1.9 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	1.9 mg	0.63 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	3.8 mg	1.27 cc
Calcium Gluconate	0.5 cc/kg	--	9.5 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	9.5 grams	95 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	19 mg	0.38 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.19 mg	0.2 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	19 mcg	0.38 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	380 cc
Glucagon (IM)	0.02 mg/kg	0.38 mg	0.38 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	0.1 mg/kg	1.9 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	1.9 mg	1 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	19 cc
Versed® (IV, IO)	0.1 mg/kg	1.9 mg	0.38 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration***41 -43.5”**



**44–49.9 lbs****20–22.9 kgs****44–46.5”**

<b>VITAL SIGNS:</b>	<b>Heart Rate</b>	<b>Respirations</b>	<b>SBP</b>	<b>MAP</b>
	100 bpm	20 – 24 min	100 +/- 15 mmHg	75 mmHg

<b>INTUBATION</b>	<b>ET Size</b>	<b>ET Depth</b>	<b>Laryngoscope Blade</b>	<b>Bougie</b>
	Cuffed 4.5 – 5.0 mm	16.5 cm	Straight 2	Peds

<b>I-GEL AIRWAY</b>		<b>KING AIRWAY</b>	<b>Color/Size</b>	<b>Inflation Volume</b>
Gray	2.0		Orange 2.5	30 – 40 mL

<b>IO / NG / SUCTION</b>	<b>IO Needle</b>	<b>NG Tube</b>	<b>Suction Catheter</b>
	EZ-IO 25 mm (blue)	12 French	10 French

<b>DEFIBRILLATION</b> ⚡	<b>ADULT PADS</b>	<b>JOULES</b>	<b>SHOCK AT</b>
Defibrillation	✓	4 J/kg	100 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	100 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Amiodarone (VF/Pulseless VT)	5 mg/kg	110 mg	2.2 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	55 mg	1.1 cc
Atropine	0.02 mg/kg	0.44 mg	4.4 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.22 mg	2.2 cc
Lidocaine (IV, IO)	1.5 mg/kg	33 mg	1.65 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	550 mg	1.1 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	2.2 mcg/min	--

**MEDICATIONS**

	<b>DOSAGE</b>	<b>Patient Dose</b>	<b>Volume</b>
Adenosine—First Dose (IV, IO)	0.1 mg/kg	2.2 mg	0.73 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	4.4 mg	1.47 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	11 grams	110 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	22 mg	0.44 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.22 mg	0.22 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Epinephrine for croup 1:1,000 nebulized	5 mg	--	5 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	22 mcg	0.44 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	440 cc
Glucagon (IM)	0.02 mg/kg	0.44 mg	0.44 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	2.2 mg	1.1 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	22 cc
Versed® (IV, IO)	0.1 mg/kg	2.2 mg	0.44 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration***44-46.5”**


**50–54.9 lbs****23–24.9 kgs****47–47.5”**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	90 – 100 bpm	20 – 24 min	105 +/- 15 mmHg	80 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 4.5 – 5.0 mm	16.5 – 18.0 cm	Straight 2	Peds

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Gray	2.0		Orange 2.5	30 – 40 mL

IO / NG / SUCTION	IO Needle	NG Tube	Suction Catheter
	EZ-IO 25 mm (blue)	12 French	10 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	100 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	100 Joules

### ♥ – CARDIAC MEDICATIONS – ♥

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	120 mg	2.4 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	60 mg	1.2 cc
Atropine	0.02 mg/kg	0.48 mg	4.8 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.24 mg	2.4 cc
Lidocaine (IV, IO)	1.5 mg/kg	36 mg	1.8 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	600 mg	1.2 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	2.4 mcg/min	--

### MEDICATIONS

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	2.4 mg	0.8 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	4.8 mg	1.6 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	12 grams	120 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	24 mg	0.48 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.24 mg	0.24 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	24 mcg	0.48 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	480 cc
Glucagon (IM)	0.02 mg/kg	0.48 mg	0.48 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	2.4 mg	1.2 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	24 cc
Versed® (IV, IO)	0.1 mg/kg	2.4 mg	0.48 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration*

**47 - 47.5”**


**55–60.9 lbs****25–27.9 kgs****48–49.5"**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	90 bpm	18 – 22 min	105 +/- 15 mmHg	80 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 5.0 – 5.5 mm	18.0 cm	Straight 2 –3	Peds

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
White	2.5		Yellow 3	40 – 55 mL

IO / NG / SUCTION	IO Needle	NG Tube	Suction Catheter
	EZ-IO 25 mm (blue)	18 French	10 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	125 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	125 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	130 mg	2.6 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	65 mg	1.3 cc
Atropine	0.02 mg/kg	0.5 mg	5 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.26 mg	2.6 cc
Lidocaine (IV, IO)	1.5 mg/kg	39 mg	1.95 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	650 mg	1.3 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	2.6 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	2.6 mg	0.87 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	5.2 mg	1.73 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	13 grams	130 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	26 mg	0.52 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.26 mg	0.26 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	26 mcg	0.52 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	520 cc
Glucagon (IM)	0.02 mg/kg	0.52 mg	0.52 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	2.6 mg	1.3 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	26 cc
Versed® (IV, IO)	2.5 mg	2.5 mg	0.5 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration***48-49.5"**


**61–65.9 lbs****28–29.9 kgs****50–51.5”**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	90 bpm	18 – 22 min	110 +/- 15 mmHg	85 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 5.0 – 5.5 mm	18.0 cm	Straight 2 – 3	Peds

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
White	2.5		Yellow 3	40 – 55 mL

IO / NG / SUCTION	IO Needle	NG Tube	Suction Catheter
	EZ-IO 25 mm (blue)	18 French	10 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	125 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	125 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	145 mg	3 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	72.5 mg	1.45 cc
Atropine	0.02 mg/kg	0.5 mg	5 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.29 mg	3 cc
Lidocaine (IV, IO)	1.5 mg/kg	43.5 mg	2.18 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	725 mg	1.45 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	2.9 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	2.9 mg	0.97 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	5.8 mg	1.93 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	14.5 grams	145 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	29 mg	0.58 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.29 mg	0.3 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	29 mcg	0.58 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	580 cc
Glucagon (IM)	0.02 mg/kg	0.58 mg	0.58 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	2.9 mg	1.45 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	29 cc
Versed® (IV, IO)	2.5 mg	2.5 mg	0.5 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration***50-51.5”**


**66–76.9 lbs****30–34.9 kgs****52–53.5"**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	90 bpm	18 – 22 min	110 +/- 20 mmHg	85 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 5.5 – 6.0 mm	18.0 cm	Straight 2 – 3	Adult 6.0 ETT

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
White	2.5		Yellow 3	40 – 55 mL

IO / NG / SUCTION	IO Needle	NG Tube	Suction Catheter
	EZ-IO 25 mm (blue)	14 French	10 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	150 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	150 Joules

**♥ – CARDIAC MEDICATIONS – ♥**

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	160 mg	3.2 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	80 mg	1.6 cc
Atropine	0.02 mg/kg	0.5 mg	5 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.32 mg	3.2 cc
Lidocaine (IV, IO)	1.5 mg/kg	48 mg	2.4 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	800 mg	1.6 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	3.2 mcg/min	--

**MEDICATIONS**

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	3.2 mg	1.07 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	6.4 mg	2.13 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	16 grams	160 cc
Dexamethasone (IV, IO, IM, PO)	0.6 mg/kg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	32 mg	0.64 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.3 mg	0.3 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	32 mcg	0.64 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	640 cc
Glucagon (IM)	0.02 mg/kg	0.64 mg	0.64 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	3.2 mg	1.6 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	32 cc
Versed® (IV, IO)	2.5 mg	2.5 mg	0.5 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

Doses have been rounded for ease of administration


**77–88 lbs****35–40 kgs****54–58"**

VITAL SIGNS:	Heart Rate	Respirations	SBP	MAP
	85 bpm	16 – 22 min	110 +/- 20 mmHg	85 mmHg

INTUBATION	ET Size	ET Depth	Laryngoscope Blade	Bougie
	Cuffed 6.0 – 6.5 mm	19.5 cm	Straight 3	Adult

I-GEL AIRWAY		KING AIRWAY	Color/Size	Inflation Volume
Yellow	3.0		Yellow 3	40 – 55 mL

IO / NG / SUCTION	IO Needle	NG Tube	Suction Catheter
	EZ-IO 25 mm (blue)	18 French	12 French

DEFIBRILLATION 	ADULT PADS	JOULES	SHOCK AT
Defibrillation	✓	4 J/kg	175 Joules
Cardioversion—First Shock/Subsequent Shocks	✓	4 J/kg	175 Joules

### ♥ – CARDIAC MEDICATIONS – ♥

	DOSAGE	Patient Dose	Volume
Amiodarone (VF/Pulseless VT)	5 mg/kg	190 mg	3.8 cc
Amiodarone-2nd Dose or VT w/pulses (IV, IO)	2.5 mg/kg	95 mg	2 cc
Atropine	0.02 mg/kg	0.5 mg	5 cc
Epinephrine 1:10,000 (IV, IO)	0.01 mg/kg	0.38 mg	3.8 cc
Lidocaine (IV, IO)	1.5 mg/kg	57 mg	2.85 cc
Magnesium Sulfate (IV, IO)	25 mg/kg, 1–2 min	950 mg	2 cc
Norepinephrine drip (MUST use IV pump)	0.1 mcg/kg/min	3.8 mcg/min	--

### MEDICATIONS

	DOSAGE	Patient Dose	Volume
Adenosine—First Dose (IV, IO)	0.1 mg/kg	3.8 mg	1.27 cc
Adenosine—2nd/3rd Dose (IV, IO)	0.2 mg/kg	7.6 mg	2.53 cc
Calcium Gluconate	10 cc	--	10 cc
D10% (1 part D50 to 4 parts NS) (IV, IO, PO)	5 mL/kg	19 grams	190 cc
Dexamethasone (IV, IO, IM, PO)	10 mg	10 mg	1 cc
Diphenhydramine (Benadryl) (IV, IO, IM)	1 mg/kg	38 mg	0.76 cc
Epinephrine 1:1,000 (Anaphylaxis—IM)	0.01 mg/kg	0.3 mg	0.3 cc
Epinephrine 1:10,000 (Anaphylaxis—IV q 3-5 min. Total MAX 0.5 mg)	0.01 mg/kg	0.1 mg	1 cc
Fentanyl (IV, IO, IN, and IM)	1 mcg/kg	38 mcg	0.76 cc
<i>Fentanyl intervals: IV, IO, or IN: repeat q 3-5 min. IM: repeat q 15 min. MAX total for all routes 4 micrograms/kg.</i>			
Fluid Challenge (IV, IO)	20 cc/kg	--	760 cc
Glucagon (IM)	0.02 mg/kg	0.76 mg	0.76 cc
Naloxone (Narcan®) (IV, IO, IM, IN)	2 mg	2 mg	2 cc
Ondansetron (Zofran®) (IV, IM) or PO: one 4 mg tab	0.1 mg/kg slowly	3.8 mg	2 cc
Sodium Bicarbonate (IV, IO)	Contact OLMC	--	38 cc
Versed® (IV, IO)	2.5 mg	2.5 mg	0.5 cc
Versed® (IM, IN)	5 mg	5 mg	1 cc

*Doses have been rounded for ease of administration*

## Hydroxocobalamin (Cyanokit)

Cyanide poisoning or smoke inhalation with suspected cyanide poisoning due to the presence of coma, persistent hypotension or cardiorespiratory arrest.

### Follow Mixing Instructions on Box

#### Soluset

1. **Draw** up correct dose into appropriate sized syringe by using chart.
2. **Put** medication into Soluset drip chamber and add Normal Saline to **equal** 100 ml.
3. **Infuse** solution wide open.

- OR -

#### Slow IV push over 5 minutes

1. **Draw** up correct dose into appropriate sized syringe by using chart.
2. **Administer** medication via slow IV push over 5 minutes.

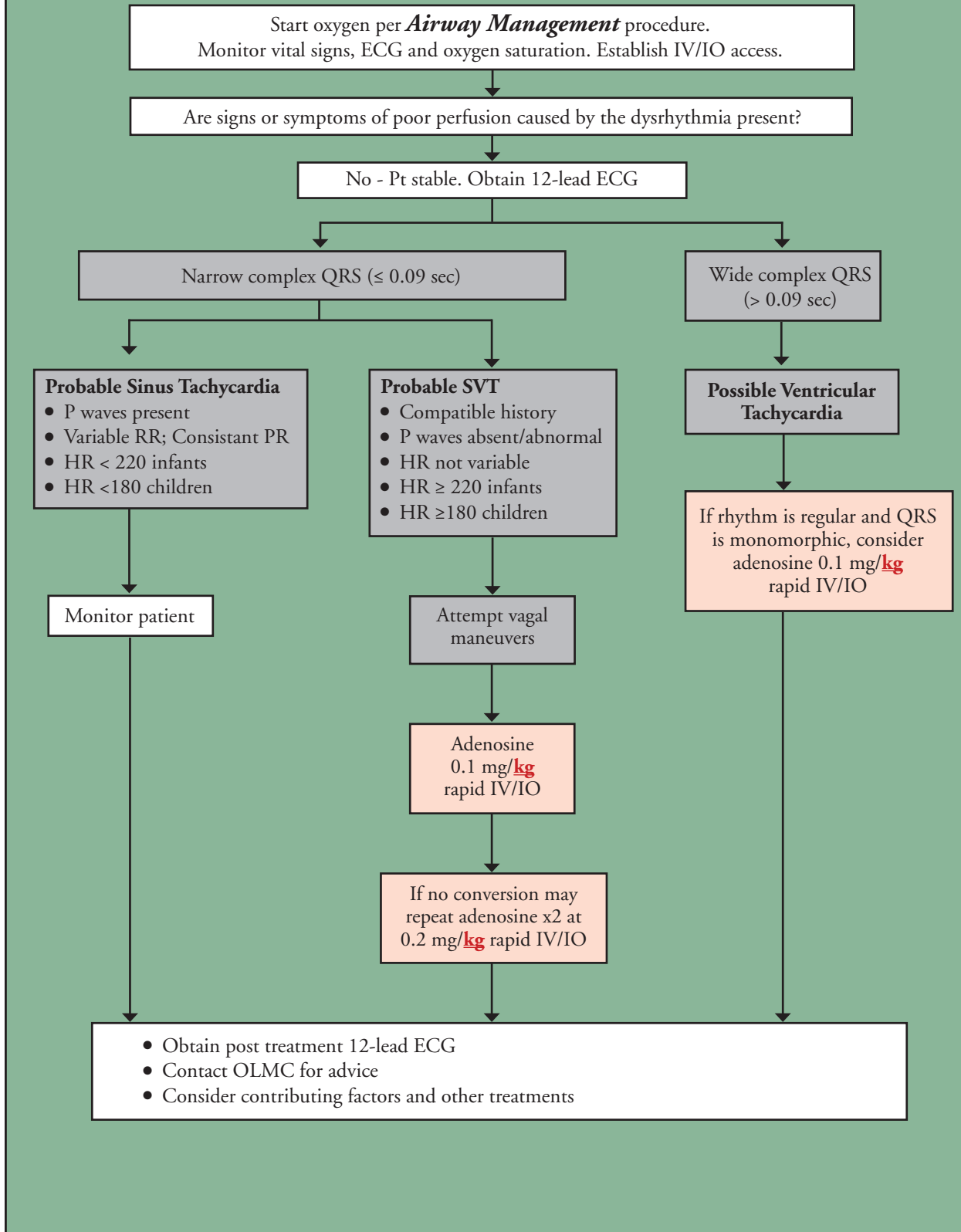
IV Infusion Dosing				
<b>Concentration:</b>		25 mg/mL		
<b>Dosage:</b>		70 mg/kg		
max dose 2500 mg		max 100 mL		
Length	LBS	KG	mg	mL
16-17.5"	4	2	140	5.6
18-19.5"	7	3	210	8.4
20-22.5"	11	5	350	14
23-25.5"	18	8	560	22.4
26-29.5"	22	10	700	28
30-32.5"	26	12	840	33.6
33-35.5"	31	14	980	39.2
36-38.5"	33	15	1050	42
39-40.5"	37	17	1190	47.6
41-43.5"	42	19	1330	53.2
44-46.5"	48	22	1540	61.6
47-47.5"	53	24	1680	67.2
48-49.5"	57	26	1820	72.8
50-51.5"	64	29	2030	81.2
52-53.5"	70	32	2240	89.6
54-58"	84	38	2500	100

#### Side Effects/ Special Notes:

- A. The most frequently occurring side effects are chromaturia (red-colored urine) and erythema (skin redness) which occur in nearly all patients.
- B. Obtain SpCO, if available, before administration of Cyanokit since the latter will interfere with the carboxyhemoglobin monitor.

**Do not administer sodium thiosulfate in the same IV line.**

## Cardiac Dysrhythmias - Pediatric Tachycardia (Stable)





## Cardiac Dysrhythmias - Pediatric Tachycardia (Unstable)

Start oxygen per *Airway Management* procedure.  
Monitor vital signs, ECG and oxygen saturation. Establish IV/IO access.

Are signs or symptoms of poor perfusion caused by the dysrhythmia present?

Yes - Pt unstable

- Immediate synchronized cardioversion 4 joules/**kg**. If no response, repeat synchronized cardioversion at 4 joules/**kg**.
  - If patient is conscious, administer Etomidate (0.15 mg/**kg**) IVP or midazolam 2.5-5.0 mg IV/IO/IN for sedation. May repeat midazolam to maximum of 5.0 mg. Do not delay cardioversion for sedation.
- If patient is in a wide complex irregular tachycardia use defibrillation (unsynchronized)**

Did the patient convert?

No

Amiodarone  
5 mg/**kg** IV/IO  
Slow push

Cardioversion 4 joules/**kg** x2 if needed  
**If patient is in a wide complex irregular tachycardia use defibrillation (unsynchronized)**

If still no conversion

Initiate rapid transport

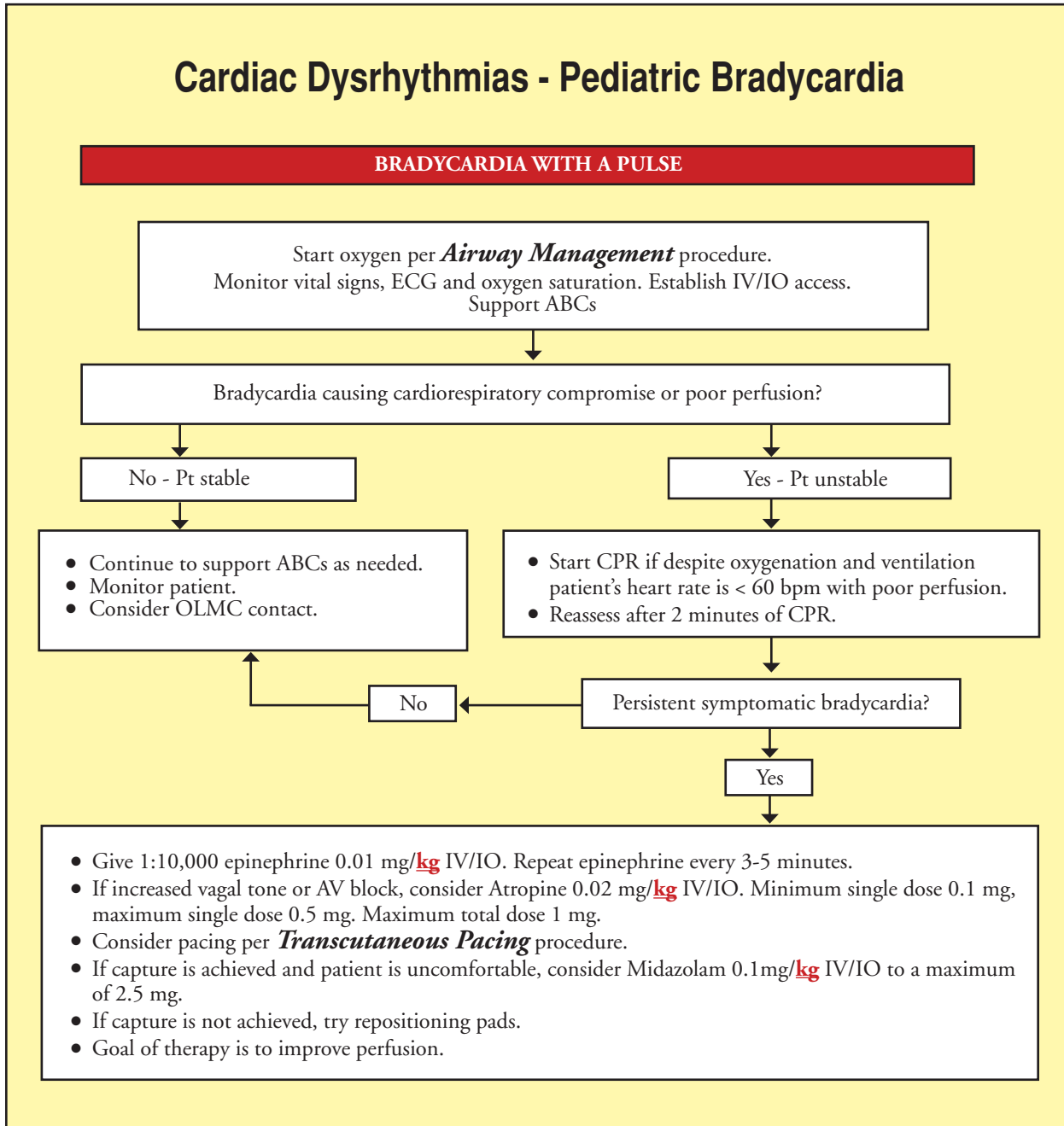
Contact OLMC

If patient converts

- Obtain post treatment 12-lead ECG
- Contact OLMC for advice regarding post-conversion antidysrhythmics
- Consider contributing factors and other treatments

Yes

## Cardiac Dysrhythmias - Pediatric Bradycardia



### Specific Precautions:

A. Most pediatric bradycardia is due to hypoxia. Oxygenate and ventilate aggressively.

## Abbreviated Flow Charts

### Pediatric Tachycardia

#### UNSTABLE

1. Synchronized Cardioversion 4 J/**kg**
2. Amiodarone 5 mg/**kg** IV/IO
3. Cardioversion 4 J/**kg**

#### STABLE

##### Wide Regular

1. Consider Adenosine

##### Narrow Regular

1. Vagal Maneuvers
2. Adenosine - 3 total doses

### Pediatric Bradycardia

#### UNSTABLE

1. CPR if HR < 60
2. Epinephrine
3. Atropine
4. Transcutaneous Pacing



### Neonatal Resuscitation

1. Warm & Dry Patient
2. Position & Suction Airway -  
Intubate if needed
3. Stimulate & reposition patient
4. Oxygenate
5. CPR if HR < 60, BVM if HR < 100
6. Epinephrine every 3-5 minutes
7. Fluid Challenge 10 mL/**kg**
8. CBG

#### DISCLAIMERS:

*Doses have been rounded for ease of administration.*

*All electrical therapy has been rounded for efficacy of action within the parameters of the electrical therapy devices.*

CPR Ratio	
 <b>NRP</b> 3:1 ratio	<b>Pediatric</b>  15:2 ratio

**Arrest**

- ### Cardiac Arrest Algorithm
- #### Ventricular Fibrillation & Pulseless V-Tach
1. Epinephrine
  2. Amiodarone
  3. Epinephrine
  4. Amiodarone
  5. Epinephrine
  6. Lidocaine
  7. Epinephrine
  8. Lidocaine
  9. Epinephrine
  10. Magnesium Sulfate
  11. Sodium Bicarbonate, **only** if needed

- ### Reversible Causes
- Hypovolemia
  - Hypoxia
  - Hydrogen ion (acidosis)
  - Hypoglycemia
  - Hyper-/ hypokalemia
  - Hypothermia
  - Tension pneumothorax
  - Tamponade (cardiac)
  - Toxins
  - Thrombosis, coronary (ACS)
  - Thrombosis, pulmonary (embolism)

<b>Asystole</b> Epinephrine every 3-5 minutes	<b>PEA</b> Epinephrine every 3-5 minutes
--	---

Glasgow Coma Score		
<b>Motor</b> 6 – Obeys Command 5 – Localizes Pain 4 – Withdrawal 3 – Flexion to Pain 2 – Extension to Pain 1 – None	<b>&lt; 1 Year</b> Normal Spontaneous Movement Localizes Pain Withdrawal Abnormal Flexion Extension None	
<b>Verbal</b> 5 – Oriented 4 – Confused 3 – Inappropriate Words 2 – Incomprehensible Sounds 1 – None	<b>2-5 Years</b> Appropriate Words Inappropriate Words Cries/Screams Grunts None	<b>&lt; 2 Year</b> Smiles/Cries Appropriately Cries Inappropriate Crying Grunts None
<b>Eyes</b> 4 – Spontaneously 3 – To Speech 2 – To Pain 1 – None	<b>&lt; 1 Year</b> Spontaneously To Shout To Pain None	

# Respiratory Distress: Pediatric Patients

(Summary of Protocol 10.160)

## Upper Airway

Diagnosis	Treatment
1. Foreign Body Airway Obstruction	Remove FBAO
2. Croup	Dexamethasone
3. Stridor	Nebulized epinephrine
4. Anaphylaxis	See Anaphylaxis protocol
5. Epiglottitis and Laryngeal Edema	Supportive care

## Lower Airway (also see guide below)

Diagnosis	Treatment
1. Asthma	DuoNeb → Epinephrine → Dexamethasone
2. Acute Bronchiolitis	Nasal suctioning → albuterol → epinephrine

Resp

### BRUE (Brief Resolved Unexplained Event)

1. An episode characterized by some combination of apnea, change in color or muscle tone, and choking or gagging. Transport via ALS to an ED capable of treating critically ill infants.

### Severe respiratory distress (see Infant Respiratory Distress Assessment Guide below)

1. Treat same as Mild-Moderate respiratory distress.
2. Prepare for BVM and intubation for apnea, EtCO<sub>2</sub> > 55, or inability to maintain SpO<sub>2</sub> > 85 %.

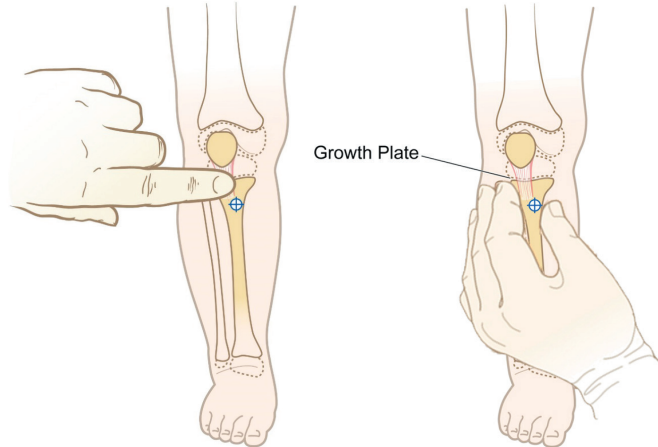
INFANT RESPIRATORY DISTRESS ASSESSMENT GUIDE			
	MILD	MODERATE	SEVERE
<b>Respiratory Rate</b> ≤ 2 months 2-12 months 1-2 years	≤ 60 ≤ 50 ≤ 40	61-69 51-59 41-44	≥ 70 ≥ 60 ≥ 45
<b>Retractions</b>	Subcostal or intercostal	2 of: subcostal, intercostal, substernal retractions, OR nasal flaring	3 of: subcostal, intercostal, substernal, suprasternal, supraclavicular retractions, OR nasal flaring OR head bobbing
<b>Dyspnea</b>	1 of: difficulty feeding, decreased vocalization, or agitation	2 of: difficulty feeding, decreased vocalization, or agitation	Stops feeding, no vocalization OR drowsy and confused
<b>Auscultation</b>	End-expiratory wheeze only	Expiratory wheeze only	Inspiratory and expiratory wheezing OR diminished breath sounds OR both

# Pediatric Intraosseous Locations

---

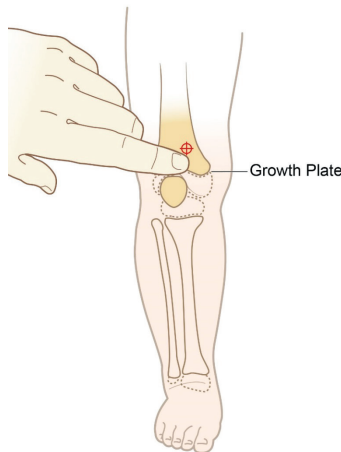
## Pediatric Proximal Tibia

One finger width distal from patella; one finger width medial



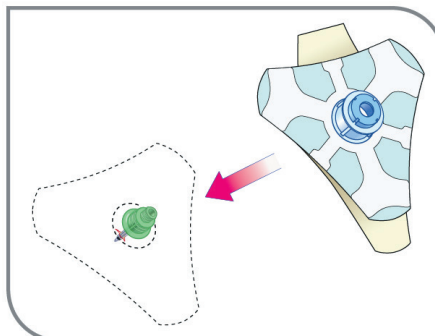
## Pediatric Distal Femur

One finger width proximal from patella; one finger width medial



## EZ-IO Stabilizer

Place over needle hub; pull the tabs to expose adhesive; apply to the skin; attach primed extension set



## **Pediatric Guide Dosage Calculated Using these Concentrations:**

Adenosine, 3 mg/mL	Glucagon, 1 mg/mL
Amiodarone, 50 mg/mL	Hydroxocobalamin, 25 mg/mL
Atropine, 0.1 mg/ mL	Ketamine, 50 mg/mL
Calcium Gluconate, 10% (0.465 mg/mL)	Lidocaine 2%, 20 mg/mL
Dexamethasone, 10 mg/mL	Magnesium Sulfate 50%, 500 mg/mL
Dextrose 50%, 0.5 g/mL	Midazolam, 5 mg/mL
Dextrose 10%, 0.1 g/mL	Naloxone, 1 mg/mL
Diphenhydramine, 50 mg/mL	Norepinephrine, 4 mg/1,000 mL
Epinephrine, 1:1,000, 1 mg/mL	Ondansetron, 2 mg/mL
Epinephrine, 1:10,000, 0.1 mg/mL	Sodium Bicarb, 1 mEq/1 mL
Etomidate, 2 mg/mL	Succinylcholine, 20 mg/mL
Fentanyl, 50 mcg/mL	Vecuronium, 1 mg/mL

## Pediatric Acetaminophen and Ibuprofen Dosages

Medication:		Ibuprofen			Acetaminophen	
Concentration:		100 mg/5 mL			160 mg/5 mL	
Dosage:		10 mg/kg			15 mg/kg	
Notes: Length/Weight		Max dose 600 mg PO only			Max dose 1000 mg PO only	
Length	LBS	KG	mg	cc	mg	cc
16-17.5"	4	2	20	1.0	30	0.9
18-19.5"	7	3	30	1.5	45	1.4
20-22.5"	11	5	50	2.5	75	2.3
23-25.5"	18	8	80	4.0	120	3.7
26-29.5"	22	10	100	5.0	150	4.7
30-32.5"	26	12	120	6.0	180	5.6
33-35.5"	31	14	140	7.0	210	6.6
36-38.5"	33	15	150	7.5	225	7.0
39-40.5"	37	17	170	8.5	255	8.0
41-43.5"	42	19	190	9.5	285	9.0
44-46.5"	48	22	220	11.0	330	10.3
47-47.5"	53	24	240	12.0	360	11.3
48-49.5"	57	26	260	13.0	390	12.2
50-51.5"	64	29	290	14.5	435	13.6
52-53.5"	70	32	320	16.0	480	15.0
54-58"	84	38	380	19.0	570	17.8

Doses have been rounded for ease of administration