

Region 8 Dose Wheels

Paper window wheels for weight-based drug doses. Pounds on the rim, doses calculated in kilograms.

What is in this file

Pediatric wheel (under 80 lb and under 18 years): two-sided base, one top disc for each side.

Side A: resuscitation drugs. Side B: sedation, pain and other drugs.

Adult wheel (80 lb or more, or 18 years or older): one base with one top disc.

The back of the adult base is a table of the fixed adult doses.

How to build them

1. Print at 100% (actual size, no "fit to page") on heavy cardstock, single-sided.
2. Cut out every disc along its solid outer circle.
3. On each top disc, cut out the red dashed window. It runs in from the edge, so scissors work.
4. Glue Pediatric base A and base B back to back. Glue the Adult base and its dose table back to back.
5. Punch the centre mark on every disc. Stack top disc, base, top disc and join with a brass fastener.
6. Laminate the discs before assembly if they will ride in a rig.

How to read them

Turn the top disc until the patient's weight in pounds appears on the rim above the window.

The first line in the window is the kilogram weight used. Each line below is one drug, named beside the window.

Bold figure = volume to draw up. Small figure above it = the dose.

Pediatric rim: under each weight is the Broselow colour zone and endotracheal tube size for that weight.

Each window covers a band of weights. Doses are calculated at the middle of the band, so for a whole-pound weight they are within about 6% of the exact figure. Maximum and minimum doses are built in.

Concentrations these wheels assume

Ketamine 50 mg/mL. Versed 5 mg/mL. Fentanyl 50 mcg/mL. Epinephrine 1:10,000 0.1 mg/mL.

Epinephrine 1:1,000 1 mg/mL. Atropine 0.1 mg/mL. Lidocaine 20 mg/mL. Narcan 1 mg/mL.

Sodium bicarbonate 1 mEq/mL. Adenosine 3 mg/mL. Amiodarone 50 mg/mL. Glucagon 1 mg/mL.

Benadryl 50 mg/mL. Magnesium 500 mg/mL. Zofran 2 mg/mL. Dextrose 10% 0.1 g/mL. TXA 100 mg/mL.

Nitroglycerin 0.4 mg per spray (assumed). Aspirin 81 mg tablets.

A different vial strength makes every volume on the wheel wrong for that drug.

Unapproved draft. Built from Region VIII SMO version 2025.1 (Edward EMS protocols).

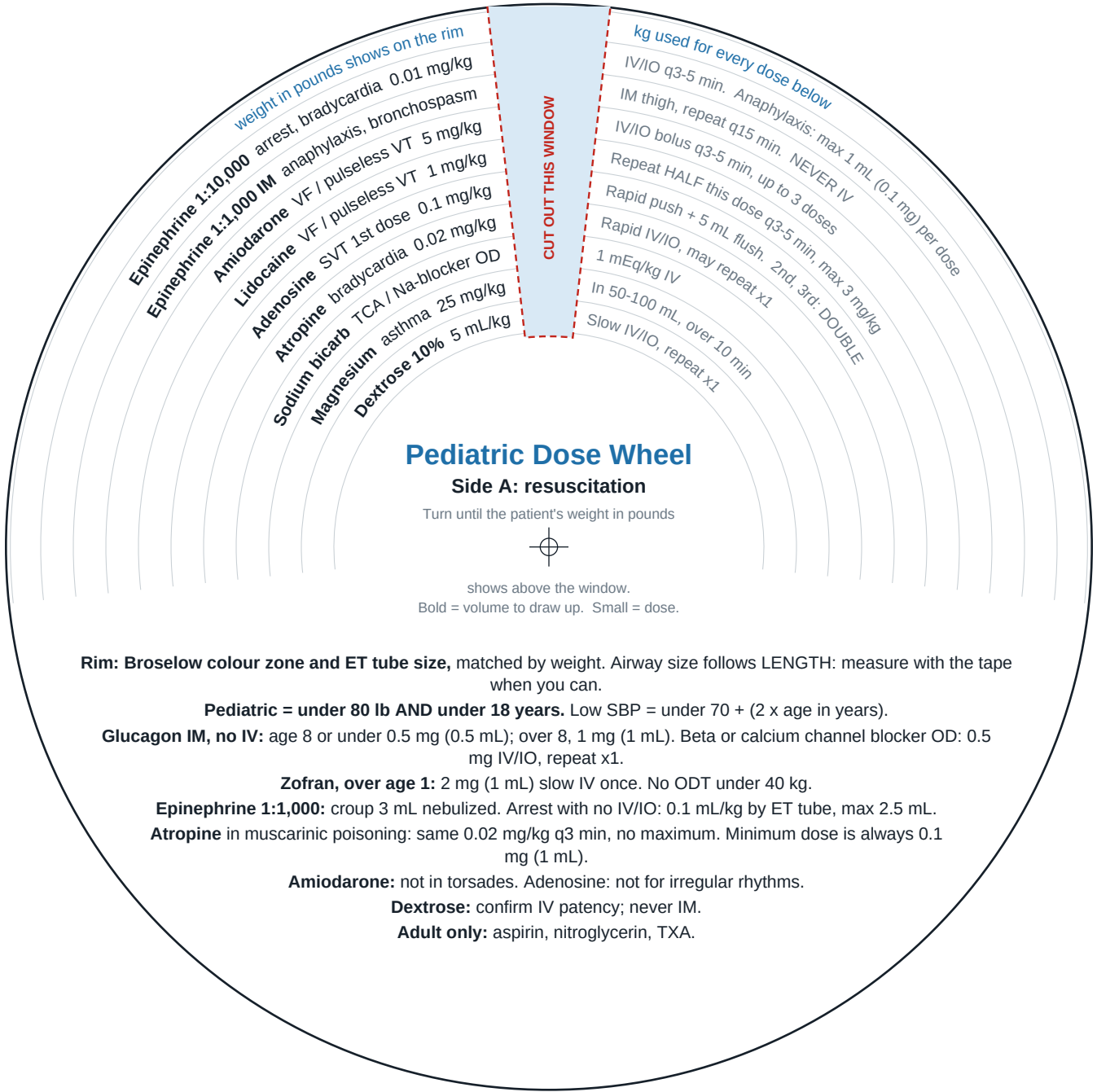
Verify every figure against the current SMOs and get EMS Medical Director review before field use.

Resuscitation. Cut on the outer circle. Glue back to back with side B.



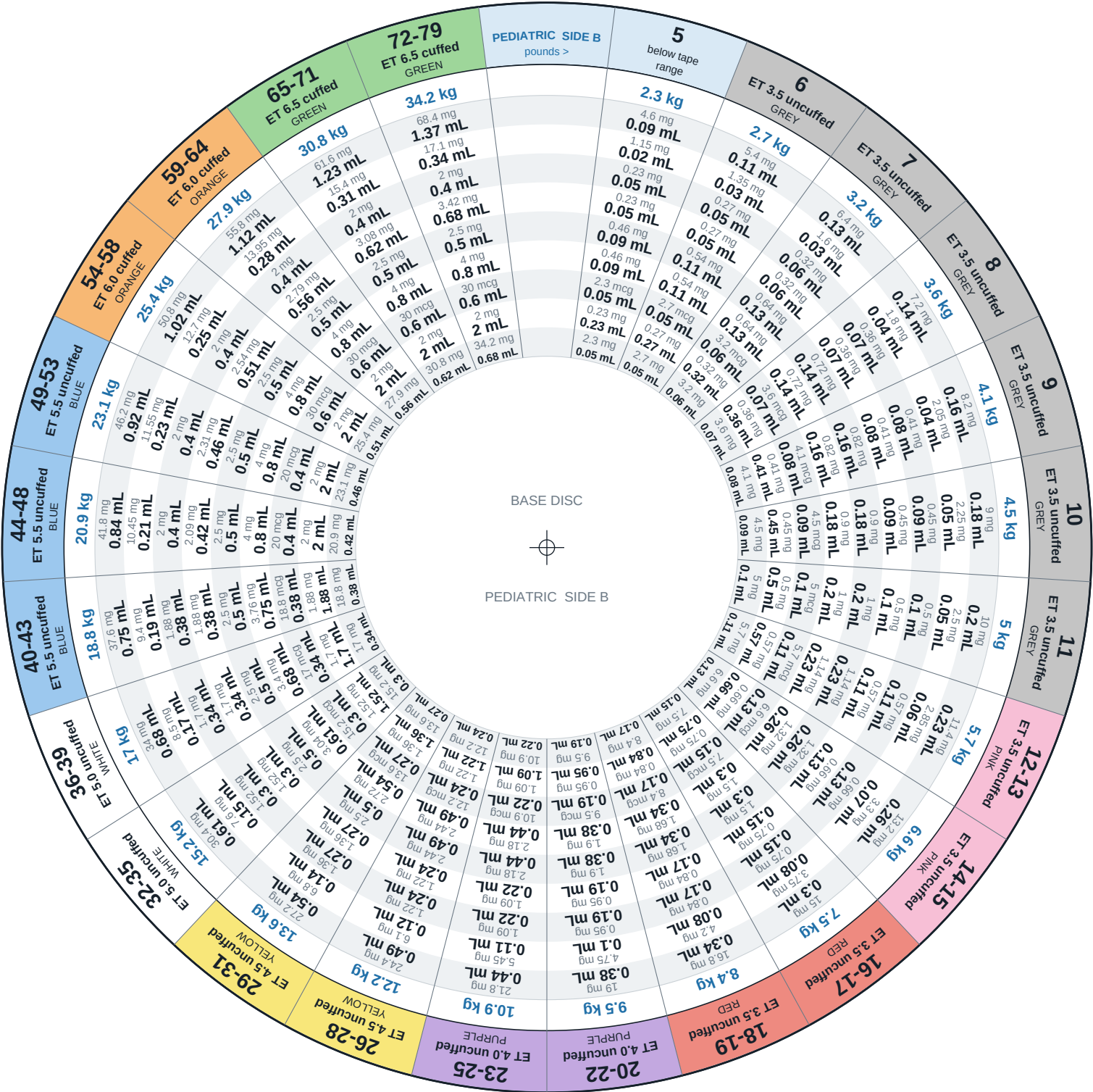
Pediatric wheel: top disc, side A

Cut on the outer circle, then cut out the red dashed window.



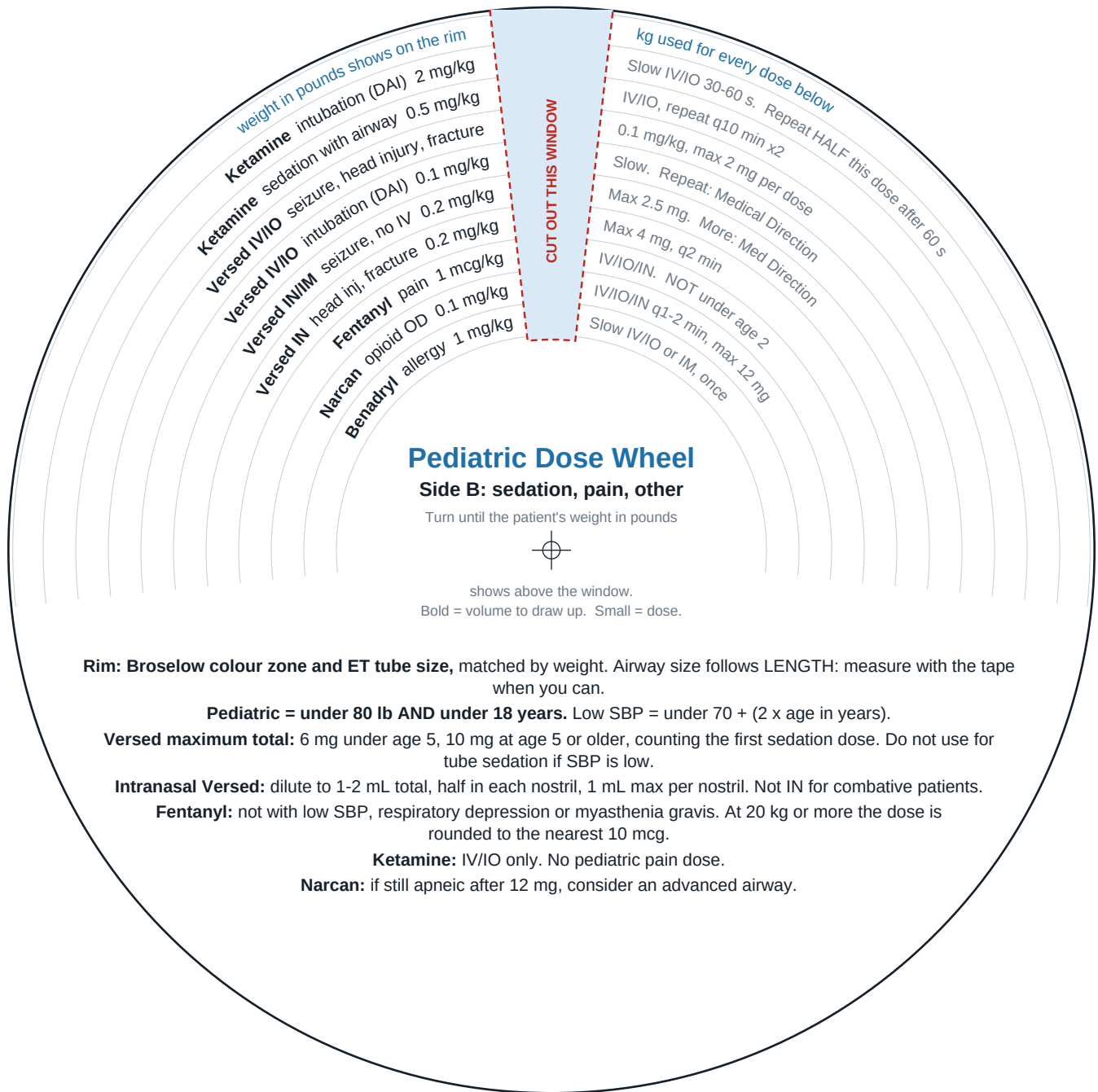
Pediatric wheel: base disc, side B

Sedation, pain and other drugs. Cut on the outer circle. Glue back to back with side A.



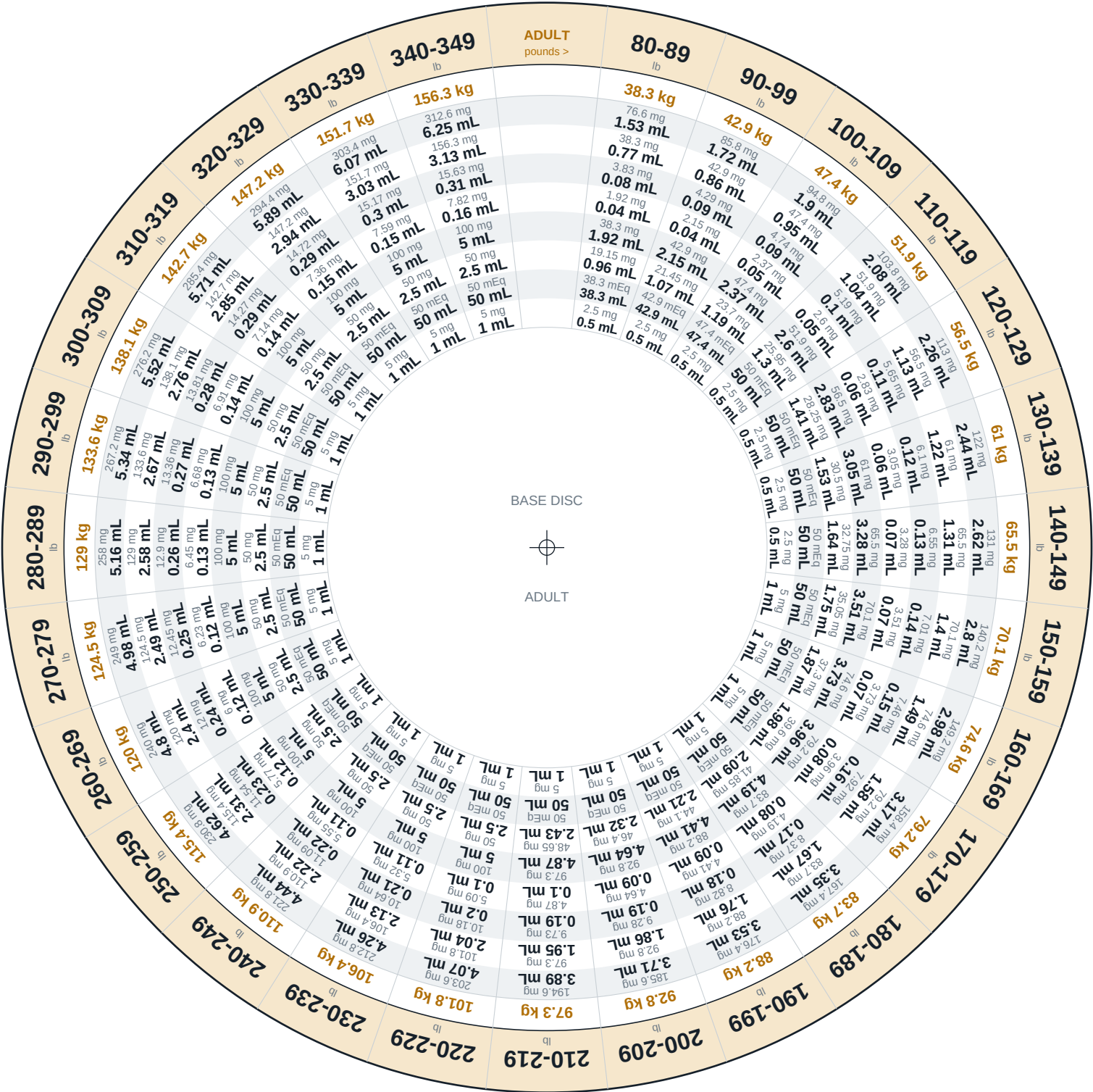
Pediatric wheel: top disc, side B

Cut on the outer circle, then cut out the red dashed window.



Adult wheel: base disc

Weight-based adult doses. Cut on the outer circle. Glue the dose table (next page) to the back.



Adult wheel: back of base

Fixed adult doses. Cut on the circle and glue to the back of the adult base disc.

Adult fixed doses

80 lb or more, or 18 years or older. Weight-based adult doses are on the wheel side.

Drug	Use	Dose	Give
Epinephrine 1:10,000	Cardiac arrest	1 mg	10 mL IV/IO q3-5 min
	Anaphylaxis, SBP under 90	0.1 mg	1 mL slow IV/IO q3 min, max 0.5 mg
	SBP under 90 before DAI; post-ROSC hypotension	100 mcg	1 mL IV/IO
Epinephrine 1:1,000	Anaphylaxis; severe asthma	0.3 mg	0.3 mL IM. Never IV
Amiodarone	VF / pulseless VT	300 mg, then 150 mg	6 mL, then 3 mL IV/IO bolus
	VT with pulse; ROSC	150 mg	3 mL in 100 mL over 10 min
Adenosine	Stable SVT	6 mg, then 12 mg x2	2 mL, then 4 mL rapid IV + 10 mL flush
Atropine	Unstable bradycardia	1 mg	10 mL rapid IV/IO q3-5 min, max 3 mg
	Muscarinic poisoning	2 mg	20 mL rapid IV/IO q3 min, no limit
Magnesium	Torsades; eclampsia	2 g	4 mL IV/IO over 2 min, repeat x1
	Severe asthma/COPD; pre-eclampsia	2 g	4 mL in 50-100 mL over 10 min
Sodium bicarb	Arrest (renal, hyperK, TCA, after 4th epi); crush	50 mEq	50 mL IV/IO
Versed	Intubation (DAI)	5 mg	1 mL slow IV/IO; repeat 2 mg (0.4 mL) x1
	Seizure, behavioral, tube sedation	2 mg	0.4 mL IV/IO q2 min, max 10 mg
Ketamine	Tube sedation; intra-arrest wakefulness	50 mg	1 mL slow IV/IO
	Seizure after Versed 6 mg IV / 5 mg IM	100 mg	2 mL IV/IO
Fentanyl	Pain, SBP 90 or higher	50 mcg	1 mL IV/IO/IN; repeat 50 mcg
Narcan	Opioid OD, inadequate breathing	1 mg IV / 2 mg IN	1 mL IV/IO or 2 mL IN q1-2 min; max 6 mg IV, 12 mg IN
	Opioid OD, apneic	2 mg	2 mL IV/IO/IN q1-2 min, max 12 mg
Glucagon	Hypoglycemia, no IV	1 mg	1 mL IM once
	Beta / calcium channel blocker OD	1 mg	1 mL slow IV, repeat x1
Dextrose 10%	Glucose under 60	up to 25 g	up to 250 mL IV/IO, titrate
Benadryl	Allergic reaction, anaphylaxis	50 mg	1 mL slow IV/IO or IM, once
Zofran	Nausea, vomiting	4 mg	2 mL slow IV or 1 ODT, once
Aspirin	Chest pain, suspected ACS	324 mg	4 tablets, chewed
Nitroglycerin	Chest pain or pulm. edema, SBP over 140	0.4 mg	1 spray SL; no ED drugs in 48 h
TXA	Trauma bleed, SBP under 90, under 3 h	2 g	20 mL in 100 mL over 10 min
	Post-partum hemorrhage, SBP under 90	1 g	10 mL in 100 mL over 10 min

TXA: never more than 3 hours after injury. Aspirin, nitroglycerin and TXA are adult only.

Adult wheel: top disc

Cut on the outer circle, then cut out the red dashed window.

