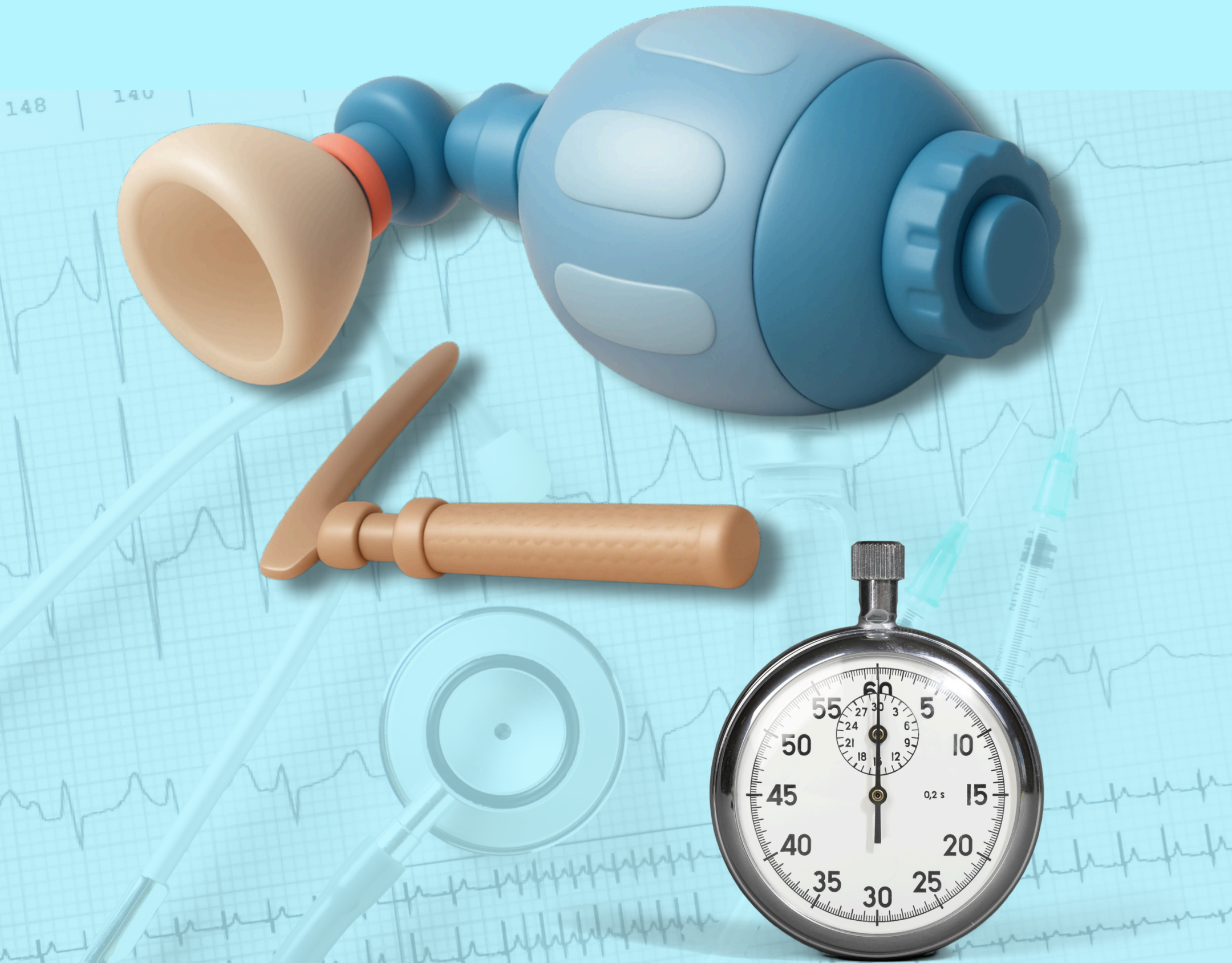


COGNITIVE AID & PHARMACOLOGY REFERENCE



Pediatric & Neonatal Rapid Sequence Intubation

*High-Yield Clinical Quick-Reference based on
The **Harriet Lane Handbook**, 24th Edition.*



Phase 1: Preparation

Equipment sizing &
Baseline parameters



Phase 2: Adjuncts

Pre-treatment to
mitigate physiologic
responses



Phase 3: Induction

Sedation and
amnesia



Phase 4: Paralysis

Neuromuscular
blockade



Follow this exact sequence to minimize patient stress, blunt intracranial responses, and secure the airway safely.

Blunting Reflexes



If indicated, give BEFORE induction and NMB.

Sedation & Amnesia



Administer rapidly to achieve unconsciousness.

Neuromuscular Blockade



Administer immediately following sedative.

Equipment	Premie (1-3 kg)	Newborn (2-4 kg)	1 yr (10 kg)	4-6 yr (20-25 kg)	>16 yr (>50 kg)
Blade 	MIL 0	MIL 0	MIL 1, MAC 2	MIL 2, MAC 2	MIL 2, MAC 3
ETT Size	2.5-3.0	3.0-3.5	4.0	5.5-6.0	7.0-8.0
LMA Size	1	1	2	2.5	4

Click on the "i" for more information!

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Chest drainage

Exchange Transfusion
Single catheter push-pull technique

Intraosseous access

Tracheal Intubation

Umbilical catheterization
Umbilical catheterization

Procedures

Insertion depth and diameter of tracheal tube according to gestational age

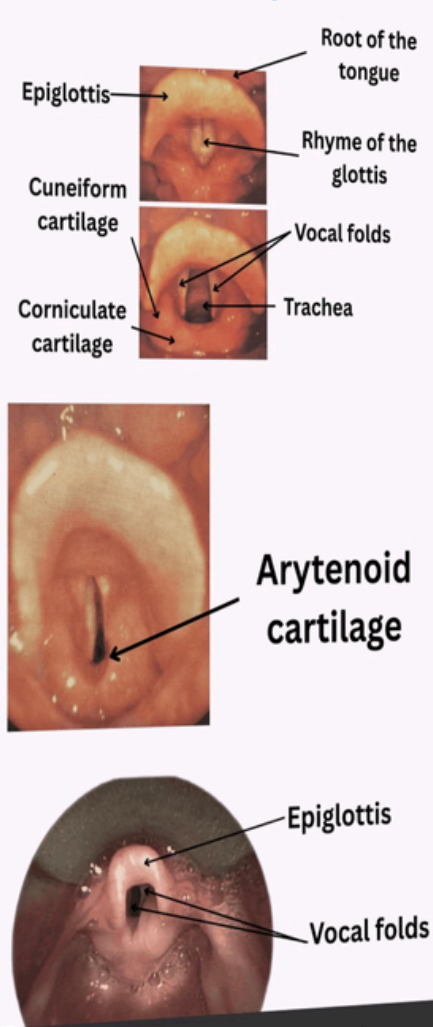
Lumbar puncture
Lumbar puncture

PICC
Prevention and management of

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Tracheal Intubation

Anatomy



Additional Information

Laryngoscope blade size

Age	Type	Number
Premature <1000g	Miller	00
Premature 1000-2000 g	Miller	00 or 0
Premature 2000-3000 g	Miller	0 or 1
Neonate	Miller	0 or 1
1 – 6 months	Miller	0
6 – 12 months	Miller	1
1 – 2 years	Miller	1 - 2
3 – 4 years	Miller or Macintosh	2
5 – 6 years	Miller or Macintosh	2

Phase 1: RSI Adjuncts (Pre-Medication)

Atropine



Benefit: Prevents bradycardia associated with laryngoscope insertion; decreases oral secretions.



Indication: Bradycardia in any patient; infants <1 year; children 1-5 yrs receiving succinylcholine.



Dosing: Varies by weight baseline.
0.02 mg/kg IV/IO/IM (max. 0.5 mg)



Side Effects: Tachycardia.



Medicines

Lethal dose (10mg)

Atropine

Intermittent IV - 1mg/mL Solution

Dose	0.04mg
Interval	10-15min
Dilution	
Remove from vial	1mL
Dilute the dose in mL with NS or D5W	19mL
Final concentration after dilution	0.05mg/mL
Dose after dilution	0.8mL
Infusion rate	1min
Maximum dose	
Maximum cumulative dose	0.08mg
Maximum cumulative dose	1.6mL

Atropine

With dilution

Endotracheal

IM

Intermittent IV

subcutaneous

0.1mg/mL Solution

0.3mg/1mL Solution

0.4mg/0.5mL Solution

0.4mg/mL Solution

0.5mg/5mL. Solution

0.6mg/mL Solution

0.8mg/mL Solution

1mg/5mL Solution

1mg/mL Solution

1mg/10mL Solution

3mg/10mL Solution

Weight (kg)

2

Desired dose (mg/kg/dose)

0.02

Phase 1: RSI Adjuncts (Pre-Medication)

Lidocaine



Benefit: Blunts rise in ICP associated with laryngoscopy.



Indication: Head trauma.



Dosing: Varies by weight baseline.
1 mg/kg IV/IO (max. 100 mg)



Side Effects: Hypotension risk; shock.

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Medicines	
Lidocaine	
Intermittent IV - 5mg/mL - 0.5%	
Dose	2mg
Interval	10/10min
Dose	0.4mL
Dilution	
Dilute the dose in mL with D5W, D10W, NS	1.6mL
Final concentration after dilution	1mg/mL
Total volume to be administered	2mL
Infusion rate	5min
Maximum dose	
Maximum daily dose	10mg

Note: initial bolus dose: intravenous dose of 0.5 to 1 mg/kg

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Medicines

Lidocaine

Intermittent IV

5mg/mL - 0.5% 10mg/mL - 1% 20mg/mL - 2%

No vasoconstrictor Neurological patients

Weight (kg) 2

Desired dose (mg/kg) 1

Suggested Loading dose: 0.5 to 1 mg/kg/day.

Lidocaine

Intermittent IV - 5mg/mL - 0.5%

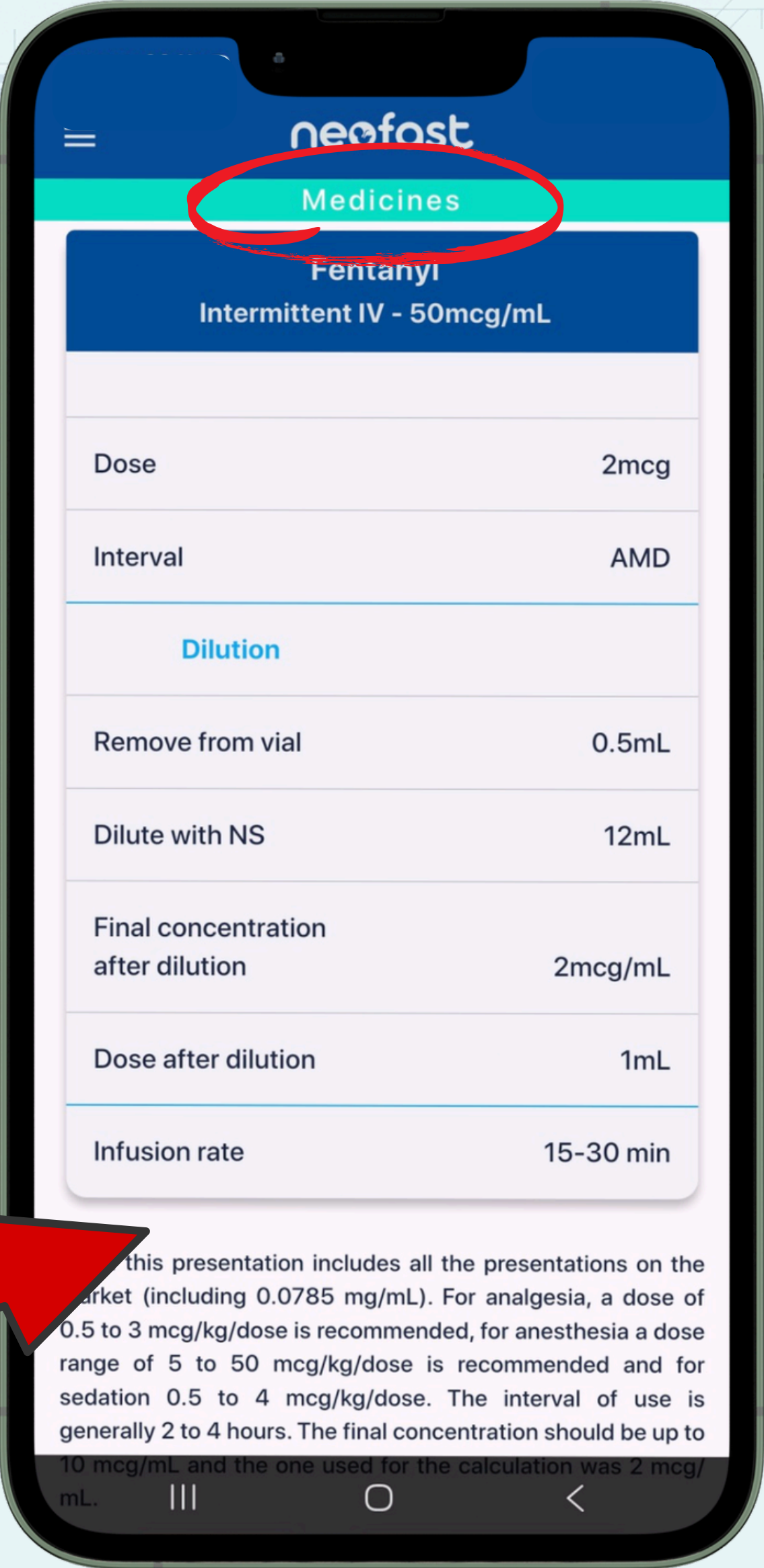
Dose

Phase 2: Induction Agents (Hemodynamic Profiles)

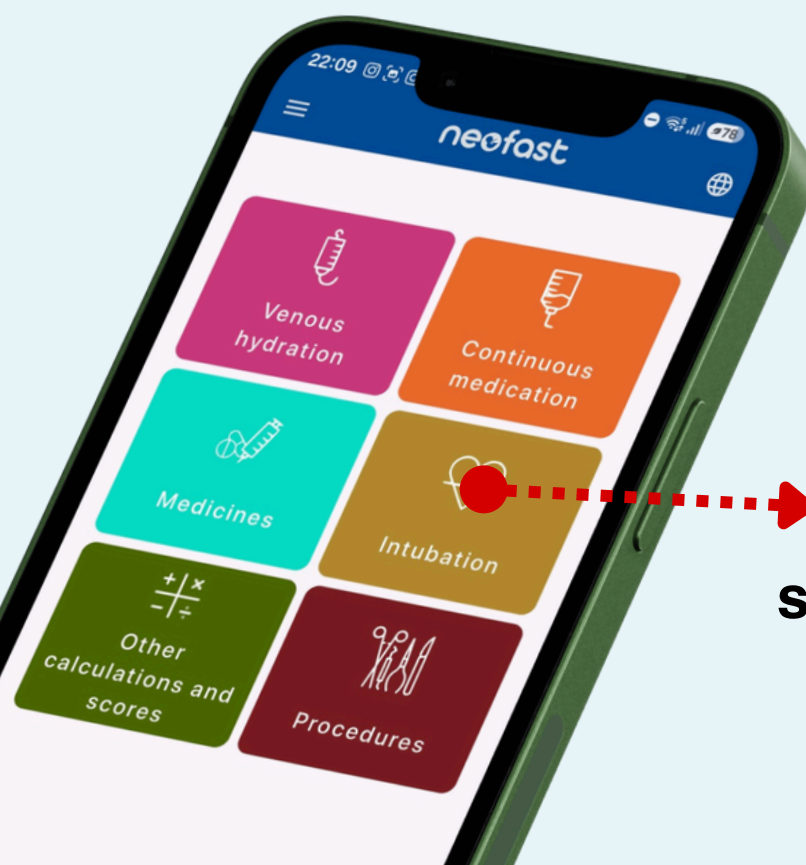
Fentanyl

Analgesic / Sedative

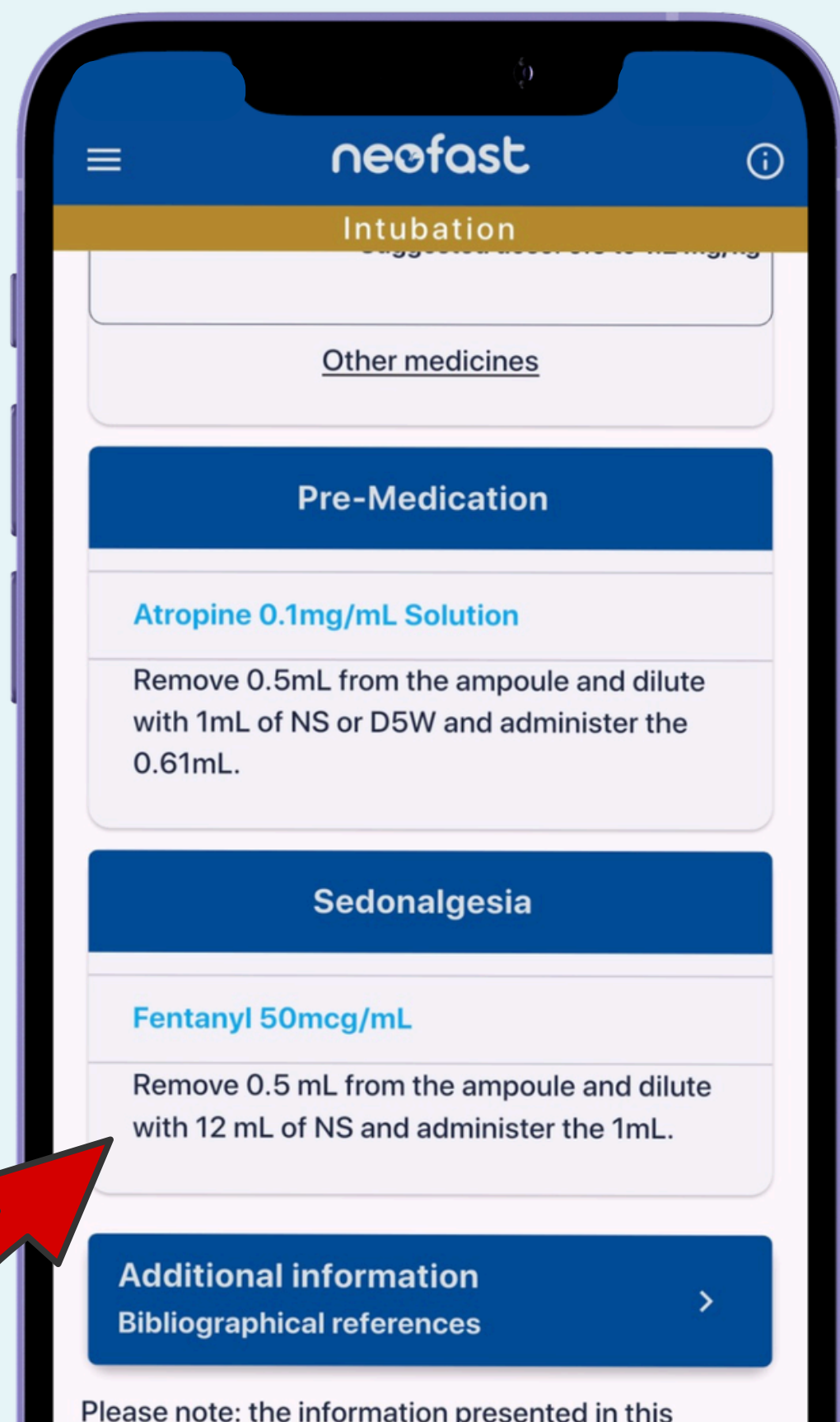
- Benefit:** Minimal cardiovascular effect.
- Indication:** Shock.
- Dosing:** 1-5 mcg/kg slow IV/IM.
- Side Effects:** Respiratory depression, chest wall rigidity with rapid push.



this presentation includes all the presentations on the market (including 0.0785 mg/mL). For analgesia, a dose of 0.5 to 3 mcg/kg/dose is recommended, for anesthesia a dose range of 5 to 50 mcg/kg/dose is recommended and for sedation 0.5 to 4 mcg/kg/dose. The interval of use is generally 2 to 4 hours. The final concentration should be up to 10 mcg/mL and the one used for the calculation was 2 mcg/mL.



Two ways to do: More practical: select "intubation" on the input screen and select the medications for the procedure; Or go to "medicines" and take one medications at a time.



Please note: the information presented in this

Phase 2: Induction Agents (Short-Acting Profile)

Midazolam Short-Acting Benzodiazepine



Benefit: Rapid and predictable onset of action, short recovery time, causes amnesia.



Dosing: 0.1-0.2 mg/kg IV.



Side Effects: Results in mild depression of hypoxic ventilatory drive.



Onset: 1-3 mins (IV)

Onset: 5-10 mins (IM/IN)

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Medicines

Midazolam

IV bolus or IM

Nasal or SL

Oral

1mg/mL Solution

5mg/mL Solution

Weight (kg)

2

Desired dose (mg/kg)

0.1

Suggested dose: 0.05 to 0.15 mg/kg

Midazolam

IV bolus or IM - 1mg/mL Solution

Dose

0.2mg

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Medicines

Midazolam

IV bolus or IM - 1mg/mL Solution

Dose

0.2mg

Interval

2 - 4h

Dose

0.2mL

Dilution

Dilute the dose in mL with NS , D5W

0.2mL

Final concentration after dilution

0.5mg/mL

Dose after dilution

0.2mL

Infusion rate

10 min

Phase 3: Neuromuscular Blockade (Depolarizing)



CONTRAINDICATIONS



- Neuromuscular disease / Myopathies



- Spinal cord injury



- Crush injury



- Burns



- Renal insufficiency

Succinylcholine

Depolarizing Agent



Benefit: Rapid, profound paralysis (Onset 30-60 sec).



Dosing:

- ≤ 2 years: 2 mg/kg IV
- > 2 years: 1 mg/kg IV

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Intubation

Muscle blockers

Succinylcholine

100mg Powder

500mg Powder

10mg/mL Solution

20mg/mL Solution

40mg/mL Solution

50mg/mL Solution

100mg/mL Solution

Succinylcholine 100mg Powder

Succinylcholine 100mg Powder

Suggested dose: 1 to 2 mg/kg

Other medicines

Rocuronio



Vecuronium



Pancuronium



Succinylcholine



Benefit: Minimal cardiovascular effect; rapid onset at RSI doses.

Indication: Caution in patients with a difficult airway.

Side Effects: Prolonged paralysis if airway fails and reversal is unavailable.

Reversal: Fully reversible with Sugammadex.



PRECISE RSI DOSING:

1.2 mg/kg IV/IM/IO



Intubation

Rocuronio



Rocuronio 10mg/mL Solution

Suggested dose: 0.5 to 1.2 mg/kg

Vecuronium

4mg Powder

5mg Powder

10mg Powder

20mg Powder



Vecuronium 4mg Powder

Suggested dose: 0.03 to 0.15 mg/kg

Other medicines

Rocuronio



Vecuronium



Pancuronium



Succinylcholine



Phase 3: Neuromuscular Blockade (Non-Depolarizing Alternative)

Vecuronium

Non-depolarizing Agent



Benefit: Minimal cardiovascular effect, reversible with sugammadex.



Indication: Caution in patients with difficult airway.



Dosing: 0.1 mg/kg IV.

Comparison Callout



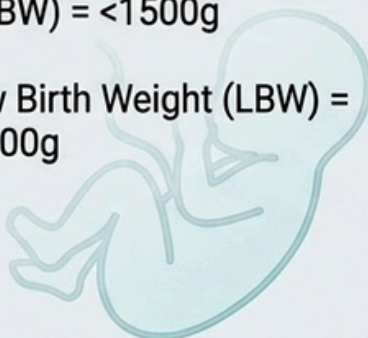
⚠ Limitations vs. Rocuronium:

- Longer time to paralysis than rocuronium.
- Prolonged duration in hepatic failure.

Neonatal Context: Special Considerations

Weight Baselines

- Extremely Low Birth Weight (ELBW) = <1000g
- Very Low Birth Weight (VLBW) = <1500g
- Low Birth Weight (LBW) = <2500g



Resuscitation Energy



Dextrose administration during active resuscitation:

- Newborn: 5-10 mL/kg D10W
- Monitor carefully for rebound hypoglycemia.

ETT Meds (NAVEL)

- N** - Naloxone
- A** - Atropine
- V** - Vasopressin
- E** - Epinephrine
- L** - Lidocaine

Dilute medications to 5 mL with NS, follow with positive-pressure ventilation.

Master Synthesis: RSI Pharmacologic Cheat Sheet

Phase 	Medication	Dose 	Primary Benefit 	Key Caution 
Adjunct	Atropine	Varies	Prevents bradycardia	Tachycardia
Adjunct	Lidocaine	1 mg/kg	Blunts ICP rise	Hypotension
Induction	Fentanyl	1-5 mcg/kg	Minimal CV effect	Chest wall rigidity
Induction	Ketamine	1-2 mg/kg	Bronchodilation	Increases HR
Induction	Midazolam	0.1-0.2 mg/kg	Amnesia / Rapid onset	Depresses vent drive
Paralytic	Succinylcholine	1-2 mg/kg	Rapid onset (30s)	Hyperkalemia / Myopathy
Paralytic	Rocuronium	1.2 mg/kg	Reversible w/ Sugammadex	Difficult airway risk
Paralytic	Vecuronium	0.1 mg/kg	Minimal CV effect	Prolonged in hepatic failure



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