



Rapid Sequence Intubation

Induction Agents

Drug	Dose	Weight							Onset Duration
		40 kg	50 kg	60 kg	70 kg	80 kg	90 kg	100 kg	
Etomidate (2 mg/mL)	0.3 mg/kg IV push	12 mg (6 mL)	15 mg (7.5 mL)	18 mg (9 mL)	21 mg (10.5 mL)	24 mg (12 mL)	27 mg (13.5 mL)	30 mg (15 mL)	15 – 45 sec 3 – 12 min
Midazolam	0.2 – 0.3 mg/kg IV push	8 – 12 mg	10 – 15 mg	12 – 18 mg	14 – 21 mg	16 – 24 mg	18 – 27 mg	20 – 30 mg	30 – 60 sec 15 – 30 min
Ketamine (50 mg/mL)	1 – 2 mg/kg IV push	40 – 80 mg (0.8 – 1.6 mL)	50 – 100 mg (1 – 2 mL)	60 – 120 mg (1.2 – 2.4 mL)	70 – 140 mg (1.4 – 2.8 mL)	80 – 160 mg (1.6 – 3.2 mL)	90 – 180 mg (1.8 – 3.6 mL)	100 – 200 mg (2 – 4 mL)	30 – 60 sec 5 – 10 min
Propofol (10 mg/mL)	1.5 – 3 mg/kg IV push	60 – 120 mg (6 – 12 mL)	75 – 150 mg (7.5 – 15 mL)	90 – 180 mg (9 – 18 mL)	105 – 210 mg (10.5 – 21 mL)	120 – 240 mg (12 – 24 mL)	135 – 270 mg (13.5 – 27 mL)	150 – 300 mg (15 – 30 mL)	15 – 45 sec 5 – 10 min

Paralytic Agents

Drug	Dose	Weight							Onset Duration
		40 kg	50 kg	60 kg	70 kg	80 kg	90 kg	100 kg	
Succinylcholine * (20 mg/mL)	1.5 mg/kg IV push	60 mg (3 mL)	75 mg (3.75 mL)	90 mg (4.5 mL)	105 mg (5.25 mL)	120 mg (6 mL)	135 mg (6.75 mL)	150 mg (7.5 mL)	45 – 60 sec 6 – 10 min
Rocuronium (10 mg/mL)	1 mg/kg (IBW) IV push	40 mg (4 mL)	50 mg (5 mL)	60 mg (6 mL)	70 mg (7 mL)	80 mg (8 mL)	90 mg (9 mL)	100 mg (10 mL)	45 – 60 sec 45 min
Vecuronium ** (1 mg/mL) (mixing instructions below)	0.01 mg/kg IV push	0.4 mg (0.4 mL)	0.5 mg (0.5 mL)	0.6 mg (0.6 mL)	0.7 mg (0.7 mL)	0.8 mg (0.8 mL)	0.9 mg (0.9 mL)	1 mg (1 mL)	75 – 90 sec 45 – 65 min
	0.15 mg/kg IV push	6 mg (6 mL)	7.5 mg (7.5 mL)	9 mg (9 mL)	10.5 mg (10.5 mL)	12 mg (12 mL)	13.5 mg (13.5 mL)	15 mg (15 mL)	

* Succinylcholine contraindications: personal or familial history of malignant hyperthermia; skeletal muscle myopathies; use after the acute phase of injury following major burns, multiple trauma, extensive denervation of skeletal muscle, or upper motor neuron injury; significant hyperkalemia.

** Vecuronium give 0.01 mg/kg 3 minutes prior to intubating dose of 0.15 mg/kg.

Vecuronium – mix one (1) vial with 10 mL of sterile water for injection. This results in a 1 mg/mL concentration.



Pain and Sedation

Continuous Drip Dosing

Drug	Bolus Dose	Initial Rate	Titration Rate	Max Rate	Titration Goal
FentaNYL	25 – 100 mcg	50 mcg/hour	25 mcg/hour Q30 minutes	300 mcg/hour (absolute max 700 mcg/hour)	Per RASS assessment goal
Ketamine	10 mg (administered by provider only)	10 mg/hour	5 mg/hour Q2 hours	40 mg/hour	Per RASS assessment goal
Midazolam	1 – 4 mg	2 mg/hour	1 mg/hour Q30 minutes	8 mg/hour	Per RASS assessment goal
Propofol	NONE	5 mcg/kg/minute	5 mcg/kg/minute Q5 minutes	50 mcg/kg/minute (absolute max 100 mcg/kg/minute)	Per RASS assessment goal
Dexmedetomidine	1 mcg/kg	0.2 – 0.7 mcg/kg/hour	0.1 mcg/kg/hour Q2 hours	1.4 mcg/kg/hour	Per RASS assessment goal

Preparation

Drug	Concentration	Preparation Instructions
FentaNYL	1000 mcg/100 mL (10 mcg/mL)	<ol style="list-style-type: none">1. Pull four (4) fentanyl 250 mg/5 mL ampules and one (1) sodium chloride 0.9% 100 mL bag from the Pyxis.2. Remove and discard 20 mL from the 100 mL bag.3. Use a filter needle to draw up 20 mL from the fentanyl 250 mg/5 mL ampule.4. Remove filter needle from syringe - DO NOT USE the filter needle to inject into the bag.5. Attach a regular needle and inject 20 mL of fentanyl into the bag.6. Shake the bag to mix. <p>NOTE: If vials are available, may use instead of ampule; no need for filter needle with vials.</p>
Ketamine	500 mg/500 mL (1 mg/mL)	<ol style="list-style-type: none">1. Pull one (1) ketamine 500 mg/10 mL vial and one (1) sodium chloride 0.9% 500 mL bag from the Pyxis.2. Remove and discard 10 mL from the 500 mL bag.3. Use a regular needle to draw up 10 mL from the ketamine 500 mg/10 mL vial.4. Inject 10 mL of ketamine into the bag.5. Shake the bag to mix.
Midazolam	25 mg/100 mL (0.25 mg/mL)	<ol style="list-style-type: none">1. Pull one (1) midazolam 25 mg/5 mL vial and one (1) sodium chloride 0.9% 100 mL bag from the Pyxis.2. Remove and discard 5 mL from the 100 mL bag.3. Use a regular needle to draw up 5 mL from the midazolam 25 mg/5 mL vial.4. Inject 5 mL of midazolam into the bag.5. Shake the bag to mix.
Propofol	1000 mg/100 mL (10 mg/mL)	Pull the premixed bottle from the Pyxis.
Dexmedetomidine	400 mcg/100 mL (4 mcg/mL)	Pull the premixed bottle from the Pyxis.

This guideline is designed for the general use of most patients but may need to be adapted to meet the special needs of a specific patient as determined by the medical practitioner.

Approved by Clinical Guideline Committee 2/9/24.

If comments or questions, please contact InpatientPharmacists@ykhc.org.



Paralytic Agents

Continuous Drip Dosing

Drug	Bolus Dose	Initial Rate	Titration Rate	Max Rate	Titration Goal
Vecuronium	10 mg	0.8 mcg/kg/minute	0.25 mcg/kg/minute Q1 hour	2.5 mcg/kg/minute	Train of Four = 2/4

Preparation

Drug	Concentration	Preparation Instructions
Vecuronium	10 mg/50 mL (0.2 mg/mL)	<ol style="list-style-type: none">1. Pull one (1) vecuronium 10 mg vial, one (1) 10 mL sterile water for injection, and one (1) sodium chloride 0.9% 50 mL bag from the Pyxis.2. Remove and discard 10 mL from the 50 mL bag.3. Reconstitute one (1) vecuronium vial using 10 mL sterile water for injection (final concentration is 1 mg/1mL).4. Use a regular needle to draw up 10 mL of vecuronium 1 mg/1mL reconstituted vial.5. Inject 10 mL of vecuronium into the bag.6. Shake the bag to mix.

High Alert Medication

Not recommended for routine use. Use only with explicit recommendation and guidance of ANMC Intensive Care provider.

When possible, patients should be trialed on bolus dose paralytics prior to initiation of paralytic infusion to facilitate ventilator compliance.

Ensure adequate pain control and sedation prior to and during administration of neuromuscular blockade to achieve deep sedation.



Vasopressors

Continuous Drip Dosing

Drug	Bolus Dose	Initial Rate	Titration Rate	Max Rate	Titration Goal
DOBUTamine	NONE	2 mcg/kg/minute	1 mcg/kg/minute Q5 minutes	20 mcg/kg/minute (absolute max 40 mcg/kg/minute)	MAP \geq 65 or per provider order
DOPamine	NONE	5 mcg/kg/minute	2 mcg/kg/minute Q5 minutes	20 mcg/kg/minute	MAP \geq 65 or per provider order
EPINEPHrine	NONE	2 mcg/minute	1 mcg/minute Q5 minutes	10 mcg/minute	MAP \geq 65 or per provider order
Norepinephrine	NONE	5 mcg/minute	5 mcg/minute Q5 minutes	40 mcg/minute (absolute max 100 mcg/minute)	MAP \geq 65 or per provider order
Vasopressin	NONE	1.8 units/hour	NONE	1.8 units/hour	N/A

Preparation

Drug	Concentration	Preparation Instructions
DOBUTamine	250 mg/250 mL (1 mg/mL)	Pull the premixed bag from the Pyxis.
DOPamine	400 mg/250 mL (1.6 mg/mL)	Pull the premixed bag from the Pyxis.
EPINEPHrine	8 mg/500 mL (16 mcg/mL)	1. Pull one (1) epinephrine 30 mg/30 mL vial and one (1) sodium chloride 0.9% 500 mL bag from the Pyxis. 2. Remove and discard 8 mL from the 500 mL bag. 3. Use a regular needle to draw up 8 mL from the epinephrine 30 mg/30 mL vial. 4. Inject 8 mL of epinephrine into the bag. 5. Shake the bag to mix.
Norepinephrine	8 mg/250 mL (32 mcg/mL)	If available, pull the premixed bag from the Pyxis. If premixed bag unavailable, mix as follows: 1. Pull two (2) norepinephrine 4 mg/4 mL vials and one (1) dextrose 5% in water 250 mL bag from the Pyxis. 2. Remove and discard 8 mL from the 250 mL bag. 3. Use a regular needle to draw up 8 mL from the two norepinephrine 4 mg/4 mL vials. 4. Inject 8 mL of norepinephrine into the bag. 5. Shake the bag to mix.
Vasopressin	40 units/40 mL (1 unit/mL)	1. Pull two (2) vasopressin 20 units/mL vials and one (1) sodium chloride 0.9% 50 mL bag from the Pyxis. 2. Remove and discard 12 mL from the 50 mL bag. 3. Use a regular needle to draw up 2 mL from the two vasopressin 20 units/mL vials. 4. Inject 2 mL of vasopressin into the bag. 5. Shake the bag to mix.

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Anti-hypertensives

Continuous Drip Dosing

Drug	Bolus Dose	Initial Rate	Titration Rate	Max Rate	Titration Goal
Esmolol	NONE	50 mcg/kg/minute (Consider initial loading dose of 250 – 500 mcg/kg prior to drip.)	50 mcg/kg/minute Q5 minutes	200 mcg/kg/minute	Blood pressure goal
Labetalol	NONE	2 mg/minute (Consider initial loading dose of 5 – 20 mg prior to drip.)	1 mg/minute Q15 minutes	10 mg/minute Max cumulative dose 300 mg	Blood pressure goal
NiCARDipine	NONE	5 mg/hour	2.5 mg/hour Q5 – 15 minutes	15 mg/hour	Blood pressure goal
Nitroglycerin	NONE	5 mcg/minute	5 mcg/minute Q5 minutes	50 mcg/minute (absolute max 400 mcg/minute)	Blood pressure goal
Nitroprusside	NONE	0.3 mcg/kg/minute	0.5 mcg/kg/minute Q3 – 5 minutes	3 mcg/kg/minute (absolute max 10 mcg/kg/minute x10 minutes)	Blood pressure goal

Preparation

Drug	Concentration	Preparation Instructions
Esmolol	2500 mg/250 mL (10 mg/mL)	This is not available in any Pyxis machines. Send message via Tiger Connect to "Inpatient Pharmacy On Call" to make.
Labetalol	250 mg/250 mL (1 mg/mL)	1. Pull three (3) labetalol 100 mg/20 mL vials and one (1) sodium chloride 0.9% 250 mL bag from the Pyxis. 2. Remove and discard 50 mL from the 250 mL bag. 3. Use a regular needle to draw up 50 mL from the three labetalol 100 mg/20 mL vials. 4. Inject 50 mL of labetalol into the bag. 5. Shake the bag to mix.
NiCARDipine	25 mg/250 mL (0.1 mg/mL)	1. Pull one (1) nicardipine 25 mg/10 mL vial and one (1) sodium chloride 0.9% 250 mL bag from the Pyxis. 2. Remove and discard 10 mL from the 250 mL bag. 3. Use a regular needle to draw up 10 mL from the one nicardipine 25 mg/10 mL vial. 4. Inject 10 mL of nicardipine into the bag. 5. Shake the bag to mix.
Nitroglycerin	50 mg/250 mL (0.2 mg/mL)	Pull the premixed bottle from the Pyxis. This is also available in the code cart.
Nitroprusside	50 mg/250 mL (0.2 mg/mL)	1. Pull one (1) nitroprusside 50 mg/2 mL vial and one (1) dextrose 5% in water 250 mL bag from the Pyxis. 2. Remove and discard 2 mL from the 250 mL bag. 3. Use a regular needle to draw up 2 mL from the one nitroprusside 50 mg/2 mL vial. 4. Inject 2 mL of nitroprusside into the bag. 5. Shake the bag to mix.

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