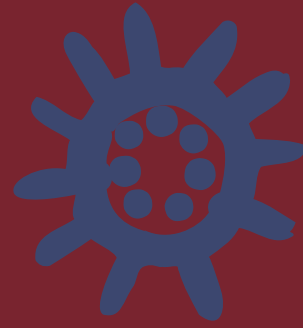
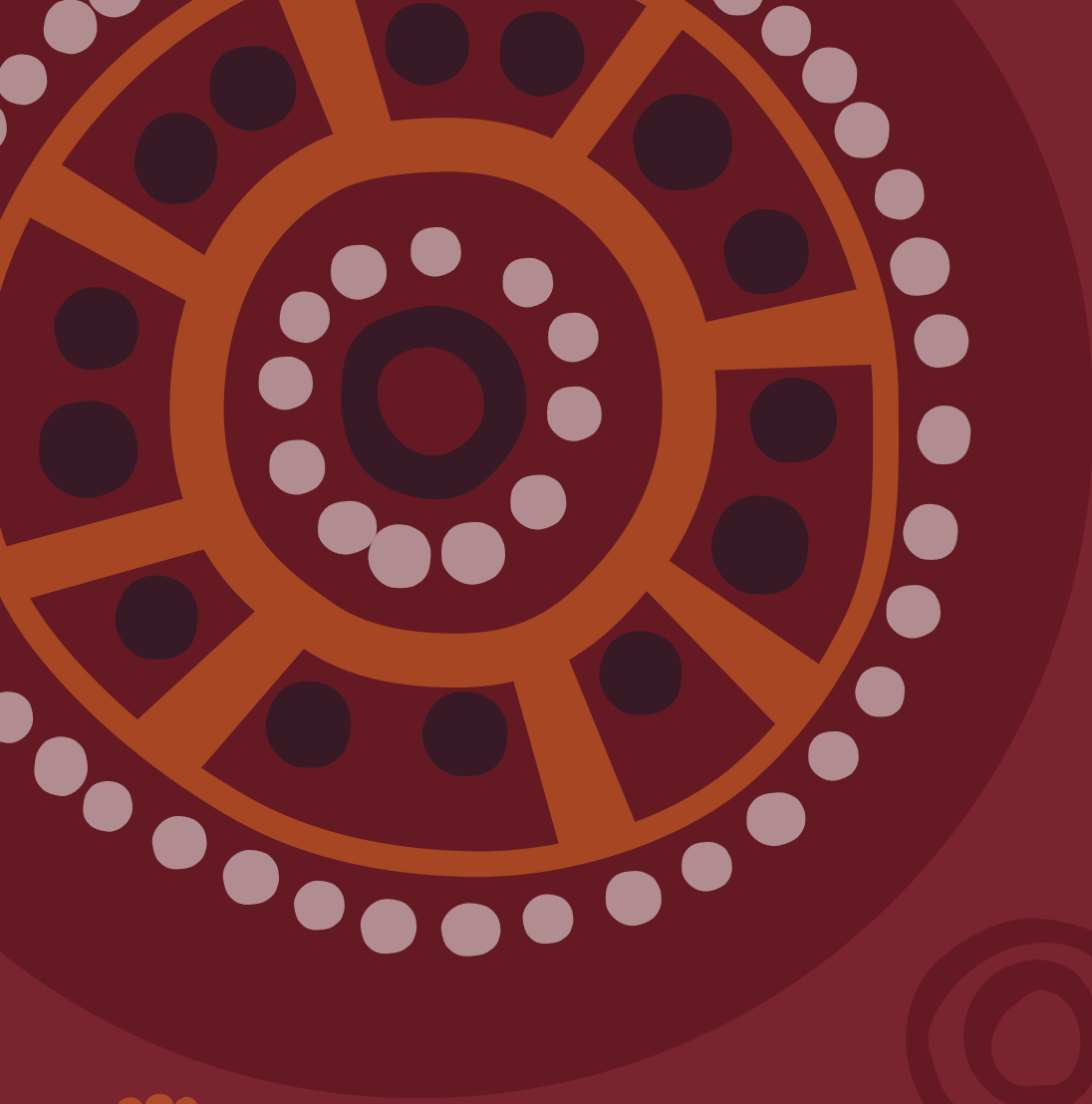
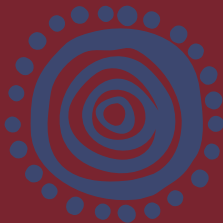




19 kg



19 kg

Intubation – prepare ONE size tube above and below recommended size			
ETT size – microcuff	5 mm	NG tube	10 Fr
Laryngoscope blade	2	ICC tube	16 - 24 Fr
ETT at lips – cm	14 cm	LMA	2
ETT at nose – cm	17 cm	IDC	10 Fr

ANAPHYLAXIS		
IM Adrenaline (Epinephrine) 1:1000 (1 mg/mL)		
Dose	Volume	Autoinjector
200 microg	0.2 mL	150 microg

*Use autoinjector only if adrenaline 1:1000 not available

Resuscitation	Vial concentration	Recommended dose/kg	Preparation		Dose	Final volume to administer	Administration
			Dilution – Sodium Chloride 0.9%	Final concentration			
Adrenaline (Epinephrine) 1:10 000 (1 mg/10 mL)	100 microg/mL	10 microg/kg	Undiluted	100 microg/mL	190 microg	1.9 mL	Push
DC shock – VF/ pulseless VT		4 Joule/kg	Round up energy level to next highest setting on defibrillator		76 Joule		Use paediatric or adult pads
AmiODAROne (150 mg/3 mL)	50 mg/mL	5 mg/kg	<i>Dilute 3 mL (150 mg) to 15 mL in glucose 5%</i>	10 mg/mL	95 mg	9.5 mL	Push over 5 mins
Fluid Bolus		10 mL/kg	Sodium Chloride 0.9%			190 mL	Push
Fluid Bolus		20 mL/kg	Sodium Chloride 0.9%			380 mL	Push
Glucose 10%	100 mg/mL	2 mL/kg	Glucose 10%	100 mg/mL		38 mL	Push
Adenosine (6 mg/2 mL) – 1st dose	3 mg/mL	0.1 mg/kg	Undiluted	3 mg/mL	1.9 mg	0.63 mL	Push via proximal vein or CVL – Follow immediately by a 10 - 20 mL fast flush
Adenosine (6 mg/2 mL) – 2nd dose	3 mg/mL	0.2 mg/kg			3.8 mg	1.3 mL	
Adenosine (6 mg/2 mL) – 3rd dose	3 mg/mL	0.3 mg/kg			5.7 mg	1.9 mL	
Synchronised Cardioversion		1 Joule/kg	Round up energy level to next highest setting on defibrillator		19 Joule		Use paediatric or adult pads
		2 Joule/kg			38 Joule		
Atropine (600 microg/mL)	600 microg/mL	20 microg/kg	Dilute 1 mL (600 microg) to 6 mL	100 microg/mL	380 microg	3.8 mL	Push
Push dose pressors – Doses may be repeated if required							
Adrenaline (Epinephrine) 1:10 000 (1 mg/10 mL)	100 microg/mL	1 microg/kg	Dilute 1 mL (100 microg) to 10 mL	10 microg/mL	19 microg	1.9 mL	Push
Metaraminol (Syringe 5 mg/10 mL)	500 microg/mL	10 microg/kg	Consider Adrenaline (Epinephrine) Push Dose Pressor	Consult	Consult	Consult	Push

Induction agents	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Fentanyl (100 microg/2 mL)	50 microg/mL	2 - 5 microg/kg	Dilute 2 mL (100 microg) to 10 mL	10 microg/mL	38 microg	3.8 mL	Push over 1 - 3 mins
Ketamine (200 mg/2 mL)	100 mg/mL	1 - 2 mg/kg	Dilute 2 mL (200 mg) to 20 mL	10 mg/mL	19 mg	1.9 mL	Push over 60 secs
PropOFol (200 mg/20 mL)	10 mg/mL	2 - 3 mg/kg	Undiluted	10 mg/mL	38 mg	3.8 mL	Push over 30 secs
Midazolam	Various strengths	0.1 - 0.2 mg/kg	Dilute to 1 mg/mL regardless of ampoule strength	1 mg/mL	1.9 mg	1.9 mL	Push over 30 secs

Paralytic agents	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Rocuronium (50 mg/5 mL)	10 mg/mL	1.2 mg/kg	Undiluted	10 mg/mL	22.8 mg	2.3 mL	Push
Suxamethonium (100 mg/2 mL)	50 mg/mL	2 mg/kg	Dilute 2 mL (100 mg) to 10 mL	10 mg/mL	38 mg	3.8 mL	Push
Vecuronium (10 mg)	10 mg	0.1 mg/kg	<i>Reconstitute vial with 10 mL WFI</i>	1 mg/mL	1.9 mg	1.9 mL	Push

19kg

Reversal agents	Vial concentration	Recommended dose/kg	Preparation		Dose	Final volume to administer	Administration
			Dilution – Sodium Chloride 0.9%	Final concentration			
Sugammadex (200 mg/2 mL) Rocuronium reversal	100 mg/mL	16 mg/kg	Undiluted	100 mg/mL	304 mg	3 mL	Push
Flumazenil (500 microg/5 mL) Benzodiazepine reversal	100 microg/mL	5 microg/kg	Undiluted	100 microg/mL	95 microg	0.95 mL	Push – Every 60 secs Max single dose 200 microg Max total dose 2000 microg
Naloxone (400 microg/mL) Opioid reversal	400 microg/mL	10 microg/kg	Undiluted	400 microg/mL	190 microg	0.48 mL	Push – Every 2 - 3 mins May be given IM

Respiratory	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Nebulised Adrenaline (Epinephrine) 1:1000	1 mg/mL		Undiluted	1 mg/mL	5 mg	5 mL	Via nebuliser
Dexamethasone (4 mg/mL)	4 mg/mL	0.3 mg/kg	Undiluted	4 mg/mL	5.7 mg	1.4 mL	IV or IM
Magnesium Sulfate (10 mmol/5 mL)	2 mmol/mL	0.2 mmol/kg	Dilute 5 mL (10 mmol) to 50 mL	0.2 mmol/mL	3.8 mmol	19 mL	Infuse over 20 mins
Hydrocortisone (100 mg + 2 mL diluent)	50 mg/ mL	4 mg/kg	<i>Reconstitute vial with 2 mL WFI</i>	50 mg/mL	76 mg	1.5 mL	Push over 30 secs or IM
Methylprednisolone (40 mg/mL) sodium succinate	40 mg/mL	1 mg/kg	Dilute 1 mL (40 mg) to 4 mL	10 mg/mL	19 mg	1.9 mL	Push over 5 mins Sodium succinate ONLY
Salbutamol (5 mg/5 mL)	1000 microg/mL	15 microg/kg	Dilute 5 mL (5000 microg) to 100 mL	50 microg/mL	285 microg	5.7 mL	Load – Infuse over 10 mins
AmiNOPHYLLine (250 mg/10 mL)	25 mg/mL	5 mg/kg	Dilute 10 mL (250 mg) to 50 mL	5 mg/mL	95 mg	19 mL	Load – Infuse over 30 mins

Neurology/seizures	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Midazolam – IV	Various strengths	0.15 mg/kg	Dilute to 1 mg/mL regardless of ampoule strength	1 mg/mL	2.9 mg	2.9 mL	Push
Midazolam – IM	5 mg/mL	0.2 mg/kg	Undiluted	5 mg/mL	3.8 mg	0.76 mL	IM
Midazolam – Buccal/Nasal	5 mg/mL	0.3 mg/kg	Undiluted	5 mg/mL	5.7 mg	1.1 mL	Drip dose into alternate nostrils or inside cheek
Phenytoin (100 mg/2 mL) (250 mg/5 mL)	50 mg/mL	20 mg/kg	Dilute 10 mL (500 mg) to 50 mL	10 mg/mL	380 mg	38 mL	Infuse over 20 mins *use 0.22 micron filter*
Phenobarbital (200 mg/mL)	200 mg/mL	20 mg/kg	Dilute 2 mL (400 mg) to 20 mL	20 mg/mL	380 mg	19 mL	Infuse over 20 mins
Levetiracetam (500 mg/5 mL)	100 mg/mL	60 mg/kg	Dilute 15 mL (1500 mg) to 30 mL	50 mg/mL	1140 mg	23 mL	Push over 5 mins
Sodium Valproate (400 mg/4 mL)	100 mg/mL	40 mg/kg	Dilute 8 mL (800 mg) to 20 mL	40 mg/mL	760 mg	19 mL	Infuse over 3 - 5 mins
Mannitol 20%	0.2 g/mL	0.5 g (2.5 mL)/kg	Pre-mixed bag	0.2 g/mL	9.5 g	48 mL	Infuse over 10 mins *use 5 micron filter*
Sodium Chloride 3% – Hypertonic *For raised ICP or hyponatremic seizures*	0.5 mmol/mL	3 mL/kg	Pre-mixed bag	0.5 mmol/mL	57 mL	57 mL	Infuse over 10 mins via central/large vein

19kg

Electrolytes	Vial concentration	Recommended dose/kg	Preparation		Dose	Final volume to administer	Administration
			Dilution – Sodium Chloride 0.9%	Final concentration			
Hypokalaemia (↓ Potassium) Potassium Chloride 10 mmol in 0.29% Sodium Chloride (100 mL)	0.1 mmol/mL	0.3 mmol/kg	Pre-mixed bag	0.1 mmol/mL	5.7 mmol	57 mL	Infuse over 1 hour
Hyperkalaemia (↑ Potassium) Calcium gluconate (2.2 mmol/10 mL)	0.22 mmol/mL	0.11 mmol/kg	Undiluted	0.22 mmol/mL	2.09 mmol	9.5 mL	Large vein push over 3 - 5 mins DO NOT give with sodium bicarbonate
Salbutamol Nebules	2.5 mg/2.5 mL	Age based	Dilute to 4 mL	–	2.5 mg	–	Inhale via nebuliser
Furosemide (20 mg/2 mL)	10 mg/mL	1 mg/kg	Dilute 2 mL (20 mg) to 20 mL	1 mg/mL	19 mg	19 mL	Push over 5 mins
Glucose 10% (with insulin below)	See Infusion guide for doses and administration directions. In a rare event of cardiac arrest due to hyperkalaemia, Glucose 10% and Insulin may be given more quickly see below						
Insulin – Actrapid (300 units/3 mL)							
Hyperkalaemia (Cardiac arrest) Glucose 10%		5 mL/ kg	Use a Glucose 10% bag undiluted	10%	95 mL	95 mL	ARREST dose only. Push over 3 - 5 mins followed by insulin dose
Insulin - Actrapid (300 units/3 mL)	100 units/mL	0.1 units/ kg	Dilute 0.1 mL (10 units) to 10 mL	1 unit/mL	1.9 units	1.9 mL	ARREST dose only. Push over 3 - 5 mins. High risk of hypoglycaemia. Monitor BSL closely
Sodium Bicarbonate 8.4%	1 mmol/mL	1 mmol/kg	Undiluted	1 mmol/mL	19 mmol	19 mL	Large vein push over 5 mins DO NOT mix with other drugs
Resonium A	–	0.25 g/kg	Mix 1 scoop (15 g) with 60 mL water	0.25 g/mL	4.75 g	19 mL	Oral, nasogastric or rectal
Hypocalcaemia – Critical (↓ calcium) Calcium gluconate (2.2 mmol/10 mL)	0.22 mmol/mL	0.11 mmol/kg	Undiluted	0.22 mmol/mL	2.09 mmol	9.5 mL	Large vein push over 3 - 5 mins DO NOT give with sodium bicarbonate
Hypomagnesaemia or Arrhythmia Magnesium Sulfate (10 mmol/5 mL)	2 mmol/mL	0.2 mmol/kg	Dilute 5 mL (10 mmol) to 50 mL	0.2 mmol/mL	3.8 mmol	19 mL	Pulse absent – Push over 3 - 5 mins Pulse present – Infuse over 20 mins

Trauma	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Blood – Initial		10 mL/kg			190 mL	190 mL	As clinically indicated
Tranexamic Acid – 1000 mg/10 mL	100 mg/mL	15 mg/kg	Dilute 10 mL (1000 mg) to 100 mL	10 mg/mL	285 mg	29 mL	Infuse over 10 mins

For ongoing bleeding refer to local Massive Haemorrhage Protocol for blood and product replacement

19kg

Analgesia	Vial concentration	Recommended dose/kg	Preparation		Dose	Final volume to administer	Administration
			Dilution – Sodium Chloride 0.9%	Final concentration			
Fentanyl – Nasal (100 microg/2 mL) Use Mucosal Atomiser Device (MAD)	50 microg/mL	1.5 microg /kg	Undiluted	50 microg/mL	28.5 microg	0.57 mL	Add 0.1 mL to initial dose to accommodate (MAD) dead space. May repeat after 5 - 10 mins
Fentanyl – IV (100 microg/2 mL)	50 microg/mL	0.5 - 1 microg/kg	Dilute 2 mL (100 microg) to 10 mL	10 microg/mL	9.5 microg	0.95 mL	Dose may be repeated after 5 mins if required
Morphine – IV (10 mg/mL)	10 mg/mL	0.05 - 0.1 mg/kg	Dilute 1 mL (10 mg) to 10 mL	1 mg/mL	0.95 mg	0.95 mL	Dose may be repeated after 5 mins if required

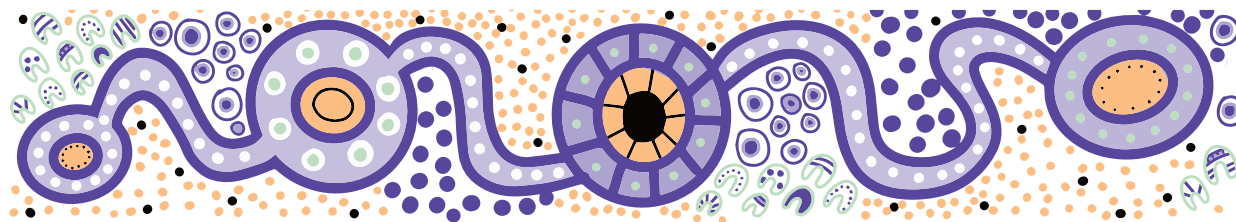
Analgesia if intraosseous IO drug or fluid administration causes pain	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
Lidocaine 1% IO	10 mg/mL (1%)	0.5 mg/kg	Undiluted	10 mg/mL	9.5 mg	0.95 mL	Instill dose - Follow with 1 mL slow push of Sodium Chloride 0.9% over 1 - 2 mins. Allow to dwell for 1 min. Rapid flush with 5 mL. Half original dose can be repeated as above

Antiarrhythmics - only in consultation with a Paediatric Cardiologist	Vial concentration	Recommended dose/kg	Dilution – Sodium Chloride 0.9%	Final concentration	Dose	Final volume	Administration
AmiODAROne (Load) 150 mg/3 mL	See Infusion guide for doses and administration directions						
Esmolol 100 mg/10 mL	10 mg/mL	0.25 - 0.5 mg/kg	Undiluted	10 mg/mL	4.8 mg	0.48 mL	LOAD – Push over 1 - 2 mins. Continuous infusion may be considered after loading dose
Verapamil 5 mg/2 mL	2.5 mg/mL	0.1 mg/kg	Dilute 2 mL (5 mg) up to 10 mL	0.5 mg/mL	1.9 mg	3.8 mL	Infuse over 5 - 10 mins

19kg

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19kg

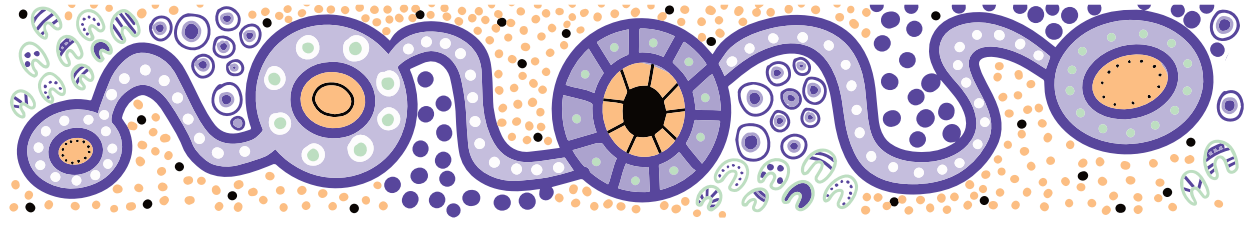
Antimicrobials	Vial concentration	Recommended dose/kg	Preparation		Dose	Dose in mL	Administration - 1st dose
			Dilution – Sodium Chloride 0.9%	Final concentration			
Aciclovir (250 mg/10 mL) (500 mg/20 mL)	25 mg/mL	20 mg/kg	Dilute 20 mL (500 mg) to a final volume of 100 mL	5 mg/mL	380 mg	76 mL	Infuse over 60 mins
Amoxicillin (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 20 mL	50 mg/mL	950 mg	19 mL	Infuse over 30 mins. Doses of 100 mg/kg may be required for meningitis
AMPicillin (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 50 mL	20 mg/mL	950 mg	48 mL	Infuse over 30 mins. Doses of 100 mg/kg may be required for meningitis
Benzylpenicillin (1.2 g)	1200 mg	60 mg/kg	Reconstitute 1.2 g vial with 6 mL WFI - Withdraw entire volume and further dilute to a final volume of 20 mL	60 mg/mL	1140 mg	19 mL	Infuse over 30 mins
cefaZOLin (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 10 mL	100 mg/mL	950 mg	9.5 mL	PUSH over 3 - 5 mins
cefOTAXIME (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 10 mL	100 mg/mL	950 mg	9.5 mL	PUSH over 3 - 5 mins
cefOTAXIME Intramuscular (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 2.6 mL WFI	330 mg/mL	950 mg	2.9 mL	IM: Max 1.5 mL per IM injection site
ceftAZIDIME (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 10 mL	100 mg/mL	950 mg	9.5 mL	PUSH over 3 - 5 mins
cefTRIAXONE (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 25 mL	40 mg/mL	950 mg	24 mL	PUSH over 5 mins
cefTRIAXONE Intramuscular (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 2.3 mL Lidocaine 1%	350 mg/mL	950 mg	2.7 mL	IM: Max 1.5 mL per IM injection site

19kg

Antimicrobials	Vial concentration	Recommended dose/kg	Preparation		Dose	Dose in mL	Administration - 1st dose
			Dilution – Sodium Chloride 0.9%	Final concentration			
Ciprofloxacin (200 mg/100 mL)	2 mg/mL	10 mg/kg	Undiluted	2 mg/mL	190 mg	95 mL	Infuse over 60 mins
Clindamycin (600 mg/4 mL)	150 mg/mL	10 mg/kg	Dilute 4 mL (600 mg) to a final volume of 60 mL	10 mg/mL	190 mg	19 mL	Infuse over 30 mins
Flucloxacillin (1 g)	1000 mg	50 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 20 mL	50 mg/mL	950 mg	19 mL	PUSH over 3 - 5 mins (phlebitis risk) OR Infuse over 30 mins
Gentamicin (80 mg/2 mL)	40 mg/mL	7.5 mg/kg	Dilute 4 mL (160 mg) to a final volume of 16 mL	10 mg/mL	142.5 mg	14.3 mL	Infuse over 30 mins
linCOMYCIN (600 mg/2 mL)	300 mg/mL	15 mg/kg	Dilute 2 mL (600 mg) to a final volume of 60 mL	10 mg/mL	285 mg	29 mL	Infuse over 60 mins
Meropenem (1 g)	1000 mg	40 mg/kg	Reconstitute 1 g vial with 5 mL WFI - Withdraw entire volume and further dilute to a final volume of 20 mL	50 mg/mL	760 mg	15.2 mL	PUSH over 5 mins
Metronidazole (500 mg/100 mL)	5 mg/mL	7.5 mg/kg	Undiluted	5 mg/mL	142.5 mg	29 mL	Infuse over 20 mins
Piperacillin/Tazobactam (4000 mg - 500 mg)	4000 mg Piperacillin + 500 mg Tazobactam	100 mg/kg	Reconstitute 4 g vial with 20 mL WFI - Withdraw entire volume and further dilute to a final volume of 50 mL	80 mg/mL	1900 mg	24 mL	Infuse over 30 mins. Dose based on Piperacillin component
Vancomycin (500 mg)	500 mg	15 mg/kg	Reconstitute 500 mg vial with 3 mL WFI - Withdraw entire volume and further dilute to a final volume of 100 mL	5 mg/mL	285 mg	57 mL	Infuse over 60 - 120 mins

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Drug	Vial concentration	Recommended dose/kg range	Preparation		Final rate range	Administration/ route
			Glucose 5% or Sodium Chloride 0.9%	Final concentration		
Inotropes						
Adrenaline (Epinephrine)	1:1000; 1 mg/mL	0.05 to 1 microg/kg/min	Dilute 1 mL (1 mg) to 50 mL	20 microg/mL	2.9 to 57 mL/hr	IV
Dobutamine	250 mg/20 mL	2 to 20 microg/kg/min	Dilute 6 mL (75 mg) to 50 mL	1.5 mg/mL	1.5 to 15.2 mL/hr	IV
Noradrenaline (Norepinephrine)	4 mg/4 mL	0.05 to 1 microg/kg/min	Dilute 1 mL (1 mg) to 50 mL	20 microg/mL	2.9 to 57 mL/hr	IV
Antiarrhythmics - only in consultation with a Paediatric Cardiologist						
AmiODAROne <u>LOAD</u>	50 mg/mL	25 microg/kg/min (for 4 hrs)	Dilute 2 mL (100 mg) to 50 mL in Glucose 5%	2 mg/mL	Dose 114 mg (57 mL) infuse at 14.3 mL/hr	IV
AmiODAROne [after loading dose]	50 mg/mL	5 to 15 microg/kg/min	Dilute 2 mL (100 mg) to 50 mL in Glucose 5%	2 mg/mL	2.9 to 8.6 mL/hr	IV
Esmolol	100 mg/10 mL	50 to 200 microg/kg/min	Undiluted – draw up 50 mL (500 mg)	10 mg/mL	5.7 to 22.8 mL/hr	IV
Sedation						
Fentanyl	100 microg/2 mL	1 to 8 microg/kg/hr	Dilute 10 mL (500 microg) to 50 mL	10 microg/mL	1.9 to 15 mL/hr	IV
Ketamine	200 mg/2 mL	5 to 20 microg/kg/min	Dilute 2 mL (200 mg) to 50 mL	4 mg/mL	1.4 to 5.7 mL/hr	IV
Midazolam	Various strengths	30 to 120 microg/kg/hr	Dilute 10 mg to 50 mL	0.2 mg/mL	2.9 to 11.4 mL/hr	IV
Morphine	Various strengths	5 to 80 microg/kg/hr	Dilute 5 mg to 50 mL	0.1 mg/mL	1 to 15.2 mL/hr	IV
PropOFol	200 mg/20 mL	0.3 to 4 mg/kg/hr	Undiluted – draw up 50 mL (500 mg)	10 mg/mL	0.6 to 7.6 mL/hr	IV
Diabetic Ketoacidosis						
Insulin (neutral) ACTRAPID	300 units/3 mL	0.05 to 0.1 units/kg/hr	Dilute 0.5 mL (50 units) to 50 mL with Sodium Chloride 0.9%	1 unit/mL	1 to 1.9 mL/hr	IV
Asthma						
Aminophylline [after loading dose]	250 mg/10 mL	1 mg/kg/hr	Dilute 10 mL (250 mg) to 50 mL	5 mg/mL	3.8 mL/hr	IV
Salbutamol	5 mg/5 mL	0.5 to 1 microg/kg/min	Undiluted – draw up 50 mL (50 mg)	1 mg/mL	0.6 to 1.2 mL/hr	IV
Paralytic Agents – only on discussion with Paediatric Intensivist						
Vecuronium	10 mg vial	1 to 3 microg/kg/min	Dilute 25 mL (50 mg) to 50 mL	1 mg/mL	1.1 to 3.4 mL/hr	IV
Electrolytes						
Hyperkalaemia Glucose 10%	–	5 mL/kg/hr	Use a glucose 10% bag – Undiluted Administer with Actrapid infusion	10%	95 mL/hr	IV. Run insulin and glucose infusions (concurrently) until K+ within range monitor BSLs
AND ACTRAPID (Insulin neutral)	300 units/3 mL	0.1 units/kg/hr	Dilute 0.5 mL (50 units) to 50 mL with Sodium Chloride 0.9% Administer with Glucose infusion	1 unit/mL	1.9 mL/hr	