

RHCYP PAEDIATRIC ROUGH GUIDE: Anaesthesia and Resuscitation

This document is intended as an aide memoire to some typical equipment sizes and drug doses. Users are expected to have the knowledge required to interpret and apply the information in practice including knowing when to consult other reference sources.

Age	Typical Weights Kg	Cuffed ETT Bore mm	Length ORAL cm	NASAL cm	Basal fluid ml/kg/hr	Ventilation Settings	Laryngeal Mask	Max size Suction catheter
Prem	2	2.5	8	9.5	3			5
Newborn	3	3	9	11	3	Rate 30/min		6
2/12	4.5	3	10	11.5	4		1 rarely used	7
6/12	7	3	11	12.5	4	Rate 25/min	1.5	7
1year	10	3.5	12	14	4	Rate 20/min	1.5	8
18/12	12	3.5	13	15	3		2	8
2	13	4	14	16	3		2	8
4	17	4.5	15	17	3		2	10
6	21	5	16	19	3	Rate 16/min	2	10
8	25	6	17	20	2.5	V _T 6-10mls/kg	2.5	12
10	31	7	18	21	2.5	Paw 15-25	2.5	12
12	40	7	20	23	2	cm H ₂ O	3	14

ANAESTHETIC DRUGS

Thiopentone	4-6mg/kg
Propofol	2-5mg/kg
Ketamine	1-2mg/kg
Ketamine analgesia	200-500mcg/kg
Fentanyl	0.5-3mcg/kg
Clonidine	1-4 mcg/kg
Morphine	40-100mcg/kg
Dexmedetomidine	0.5-2mcg/kg
Suxamethonium	1-2mg/kg
Rocuronium	0.5-1mg/kg
Atracurium	500mcg/kg

REVERSAL AGENTS

Neostigmine	40-50mcg/kg
Neo/Glyco	2.5mg/500mcg in 10mls - give 1ml per 5kg bodyweight
Naloxone	1-4mcg/kg
Flumazenil	10mcg/kg
Sugammadex	4-16 mg/kg

PREMEDS/ORAL SEDATION

Midazolam	500mcg/kg oral (max 20mg) 200-300mcg/kg buccal/intranasal (max 10mg)
Clonidine	1-4mcg/kg oral/buccal/intranasal
Ketamine	3-10mg/kg oral 5-7mg/kg IM
Dexmedetomidine	2-4mcg/kg intranasal

ANTIEMETICS

Dexamethasone	150mcg/kg
Droperidol	20-50mcg/kg
Ondansetron	100mcg/kg
Cyclizine	1mg/kg up to 25mg (1-12 years) or 50mg (>12years)

LOCAL ANAESTHETICS

Levobupivacaine	2.5mg/kg/6°
Lignocaine	3mg/kg
+Adrenaline	7mg/kg
Caudal 0.25% Levo	0.5-1ml/kg
Spinal 0.5% Bupivacaine	0.1ml/kg
Epidural 0.1% Levo	0.2-0.4ml/kg/hr

RESUSCITATION DRUGS

Adrenaline	10mcg/kg (0.1ml/kg of 1:10,000)
Atropine	20mcg/kg
Glycopyrrolate	10mcg/kg
Amiodarone (VF)	5mg/kg
Adenosine (SVT)	100-300mcg/kg
Ca Gluconate 10%	0.5ml/kg
Ca Chloride 10%	0.2ml/kg
Na Bicarb 8.4%	1ml/kg or 0.5(0.3xBaseXSxkg)
MgSO4	50mg/kg (0.2mmol/kg) (dilute to 100mg/ml with 5% dextrose)
Glucose 10%	2-5ml/kg
Mannitol 10%	2.5-5ml/kg
NaCl 2.7%	3ml/kg
Tranexamic Acid	15mg/kg

DC Defibrillation 4j/kg

DC Cardioversion 1-2j/kg synchronised

FLUIDS

Shock and Trauma 10+10ml/kg NaCl
RCC top up transfusion 4ml/kg for 1g rise in Hb

Burns Resus 1st 24 hours COBIS:
2ml/kg/%burn CSL over first 8°
then 0.1ml/kg/%burn/hr 5% Albumin following 16° *in addition to maintenance*

Fluids in DKA see ICP

Maintenance	4ml/kg/hr 1 st 10kg 2ml/kg/hr 10-20kg 1ml/kg/hr each kg over 20kg
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SEIZURES

Levetiracetam	40mg/kg
Diazepam	300-400mcg/kg
Lorazepam	100mcg/kg
Midazolam	300mcg/kg

OTHER

Aminophylline	5mg/kg
Chlorphenamine	100-250mcg/kg
Hydrocortisone	4mg/kg
Furosemide	0.5-1mg/kg

ANTIBIOTICS: Surgical Prophylaxis*

(maximum doses) *see also cBNF

Amoxicillin	25mg/kg
Co-amoxiclav	30mg/kg (1.2g)
BenzylPenicillin	25mg/kg (1.2g)
Cefotaxime	50mg/kg (1g) (25mg/kg in < 28days)
Ceftriaxone	50mg/kg (avoid in < 28 days)
Cefuroxime	50mg/kg (1.5g)
Clarithromycin	7.5mg/kg
Clindamycin	5mg/kg
Flucloxacillin	25mg/kg
Gentamicin	2.5mg/kg (5mg/kg < 28 days)
Metronidazole	7.5mg/kg (500mg)
Vancomycin	15mg/kg (10mg/kg if 1-6 months)

ANTIBIOTICS: Treatment

Meropenem	20mg/kg 8°
Piperacillin/taz	90mg/kg 6°
Teicoplanin	10mg/kg

INFUSIONS: ANAESTHETIC AND SEDATION

PR5 = Propofol 1% + 5mcg/ml remifentanyl
Midazolam
50mg in 50ml @100-200 mcg/kg/hr
Clonidine
300-1200mcg in 50ml @0.1-2mcg/kg/hr

INFUSIONS: CARDIAC

Adrenaline and Noradrenaline:
0.3mg/kg in 50ml NaCl or dextrose
@1ml/hr = 0.1mcg/kg/min
Usual range 0.01-1mcg/kg/min
Vasopressin
<16kg 0.6units/kg in 50ml NaCl or dex
1ml/hr = 0.0002units/kg/min
>16kg 0.3units/kg in 50ml NaCl or dex
1ml/hr = 0.0001units/kg/min
Usual range 0.0001-0.001units/kg/min
Milrinone 10mg in 25ml NaCl or dex
50-75mcg/kg bolus over 1 hour then
0.5-0.75mcg/kg/min
Dopamine and Dobutamine:
3mg/kg in 50ml NaCl or dextrose
@1ml/hr = 1mcg/kg/min
Usual range 5-20mcg/kg/min

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ORAL ANALGESICS

Paracetamol	< 32 weeks CGA	10-15mg/kg 8°	Max 30mg/kg/24°
	32-52 weeks CGA	15mg/kg 6°	Max 60mg/kg/24°
	> 3 months	15mg/kg 4-6°	Max 75mg/kg/24°
Ibuprofen	< 44 weeks CGA	Not recommended	
	1-3 months	5mg/kg 6-8°	Max 20mg/kg/24°
	3 months – 12 years	5-10mg/kg 6-8°	Max 30mg/kg/24°
Diclofenac	> 6 months	1mg/kg 8°	Max 3mg/kg/24°

IV PARACETAMOL

Paracetamol	32 - 40weeks CGA	7.5mg/kg 8°	Max 22.5mg/kg/24°
	Infant/Child < 10kg	10mg/kg 4-6°	Max 30mg/kg/24°
	10 - 65kg	15mg/kg 4-6°	Max 60mg/kg/24°
	> 65kg	1g 4-6°	Max 4g/24°

ORAL OPIOIDS

Morphine (Oral Morphine Solution/Sevredol)	0 -1 month	50mcg/kg 4°	
	1 – 3 months	50-100mcg/kg 4°	
	3 – 12 months	100-200mcg/kg 4°	
	Over 1 year	200-300mcg/kg 2-4°	Max 10mg
Tramadol	Over 40kg	50-100mg 4-6°	Max 400mg/24°

IV OPIOIDS

Morphine bolus: (1mg/ml morphine in NaCl)		
Term – 3 months	50mcg/kg	
> 3 months	100mcg/kg	
Morphine Infusion: (1mg/kg in 50mls NaCl or 5% dextrose up to max 1mg/ml)		
< 1 month	4mcg/kg/hr	
1 -3 months	10mcg/kg/hr	
> 3 months	10 – 40mcg/kg/hr	
Morphine Nurse Controlled Analgesia (NCA) (1mg/kg in 50mls NaCl or 5% dextrose up to max 1mg/ml)		
Bolus 20mcg/kg (=1ml)	Lockout 20 minutes	No background/as per pain team advice
Morphine Patient Controlled Analgesia (PCA): 1mg/kg in 50mls NaCl or 5% dextrose up to max 1mg/ml		
Bolus 20mcg/kg (=1ml)	Lockout 5 minutes	Background 4mcg/kg/hr (=0.2ml/hr)

OTHER

Clonidine	0.5 – 4mcg/kg 8°	
Diamorphine (intranasal)	0.1mg/kg	Over 1 year only
Fentanyl (intranasal)	1.5mcg/kg	