

## Standards for Common Continuous Intravenous Infusions used in PICU Birmingham Women and Children's Hospitals

For further information refer to the full monograph found on the intranet in the 'Injectable Medicines Guide' or contact PICU pharmacists for further advice

DRUG	PICU Strength	Usual Dosing Range	Diluents	Route	Pump Mode	Expiry in hours	Other Information	Extravasation Risk
ACETYLCYSTEINE	150mg/kg in 50ml	6.25mg/kg/hour = 150mg/kg/day	G5W,G10W,NS,½ NS	≥ 50mg/ml Central < 50mg/ml Peripheral	Dosing Units only	48	2ml/hr = 6.25mg/kg/hr = 150mg/kg/day	MODERATE
ADRENALINE	0.3mg/kg in 50ml (max 8mg in 50ml)	0.01-0.5microgram/kg/min	G5W,G10W,NS,½ NS	Central	Dosing Units only	48	1ml/hr = 0.1microgram/kg/min	HIGH
ADRENALINE <i>emergency peripheral</i>	1mg in 50ml	0.01-0.5microgram/kg/min	G5W,G10W,NS,½ NS	Peripheral until Central access available	Dosing Units only	48	1ml/kg/hr = 0.3microgram/kg/min	HIGH
AMIODARONE	300mg in 50ml	5-15microgram/kg/min	G5W only	Central ( <i>see Monograph for emergency peripheral use</i> )	Dosing Units only	24	0.1ml/kg/hr = 10microgram/kg/min	HIGH
CALCIUM CHLORIDE	25mmol in 50ml	0.1-1mmol/hour	G5W,G10W,NS,½ NS	Central distal lumen	<b>Drug Library</b>	48	1ml/hr = 0.5mmol/hr	HIGH
CALCIUM GLUCONATE	11.25mmol in 50ml	0.1-1mmol/hour	Neat 10% (0.225 mmol calcium/ml)	Central	Dosing Units only	24	1ml/hr = 0.2mmol/hr	HIGH
CLONIDINE	750microgram in 50ml	0.2-2microgram/kg/hour	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	24	0.1ml/kg/hr = 1.5microgram/kg/hr	LOW
DEXMEDETOMIDINE	200microgram in 50ml	0.2-1.4microgram/kg/hour	G5W, NS	Central preferred ( <i>Peripheral only if central unavailable</i> )	Dosing Units only	24	0.25ml/kg/hr = 1microgram/kg/hr	MODERATE
DINOPROSTONE	50microgram in 50ml	5-100nanogram/kg/min	G5W,G10W,NS,½ NS	Central preferred ( <i>Peripheral only if central unavailable</i> )	<b>Drug Library</b>	24	0.3ml/kg/hr = 5nanogram/kg/min	MODERATE
DOBUTAMINE	30mg/kg in 50ml (max 625mg in 50ml)	5-20microgram/kg/min	G5W,G10W,NS,½ NS	≥ 5mg/ml Central only ( <i>emergency peripheral &lt; 5mg/ml</i> )	Dosing Units only	48	1ml/hr = 10microgram/kg/min	MODERATE
DOPAMINE	30mg/kg in 50ml	5-20microgram/kg/min	G5W,G10W,NS,½ NS	≥ 3.2mg/ml Central only ( <i>emergency peripheral &lt; 3.2mg/ml</i> )	Dosing Units only	48	1ml/hr = 10microgram/kg/min	HIGH
FENTANYL <i>under 10kg</i>	500microgram in 50ml	0.5-5microgram/kg/hour	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	48	0.5ml/kg/hr = 5microgram/kg/hr	LOW
FENTANYL <i>10kg or over</i>	2.5mg in 50ml	0.5-5microgram/kg/hour	Neat	Central or Peripheral	Dosing Units only	48	0.1ml/kg/hr = 5microgram/mg/hr	LOW
FUROSEMIDE <i>under 2kg</i>	100mg in 50ml	0.1-1mg/kg//hour	NS,½NS	Central preferred ( <i>Peripheral only if central unavailable</i> )	Dosing Units only	48	0.1ml/kg/hr = 0.2mg/kg/hr	MODERATE
FUROSEMIDE <i>2kg or over</i>	250mg in <b>25ml</b>	0.1-1mg/kg/hour (max 20mg/hour)	Neat	Central preferred ( <i>Peripheral only if central unavailable</i> )	<b>Drug Library</b>	48	0.1ml/kg/hr = 1mg/kg/hr	MODERATE
HEPARIN <i>under 10kg</i>	5,000 units in 50ml	see anticoagulation guide	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	48	0.1ml/kg/hr = 10units/kg/hr	LOW
HEPARIN <i>10kg or over</i>	25,000 units in 50ml	see anticoagulation guide	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	48	0.02ml/kg/hr = 10units/kg/hr	LOW
INSULIN <i>under 5 kg</i>	10 units in 50ml	0.05-0.2units/kg/hour	NS,½ NS	Central or Peripheral	Dosing Units only	24	1ml/kg/hr = 0.2units/kg/hr	LOW
INSULIN <i>5kg or over</i>	50 units in 50ml	0.05-0.2units/kg/hour	NS,½ NS	Central or Peripheral	Dosing Units only	24	0.1ml/kg/hr = 0.1units/kg/hr	LOW

Key: G5W= glucose 5%, G10W= glucose 10%, NS= sodium chloride 0.9%, ½ NS= sodium chloride 0.45%, PFS= prefilled syringe, WFI=water for injection

**Whenever possible keep to these standard infusion concentrations, drug errors are much more likely to occur when using non-standard concentrations**

*If a non-standard concentration must be used, ensure this is clearly prescribed and labelled*

## Standards for Common Continuous Intravenous Infusions used in PICU Birmingham Women and Children's Hospitals

For further information refer to the full monograph found on the intranet in the 'Injectable Medicines Guide' or contact PICU pharmacists for further advice

DRUG	PICU Strength	Usual Dosing Range	Diluents	Route	Pump Mode	Expiry in hours	Other Information	Extravasation Risk
KETAMINE	500mg in 50ml	<b>sedation:</b> 5-40microgram/kg/min <b>analgesia:</b> 1-6microgram/kg/hour	G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	Dosing Units only	24	0.03ml/kg/hr = 5microgram/kg/min	MODERATE
LABETALOL	250mg in 50ml	0.5-3mg/kg/hour	Neat	Central preferred <i>(Peripheral only if central unavailable)</i>	<b>Drug Library</b>	24	0.1ml/kg/hr = 0.5mg/kg/hr	MODERATE
MIDAZOLAM	50mg in 50ml	0.5-5microgram/kg/min	Neat	Central preferred <i>(Peripheral only if central unavailable)</i>	<b>Drug Library</b>	48	0.06ml/kg/hr = 1microgram/kg/min	MODERATE
MILRINONE	10mg in 50ml	0.3-0.75microgram/kg/min	PFS, G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	Dosing Units only	48	0.09ml/kg/hr = 0.3microgram/kg/min	MODERATE
MORPHINE	1mg/kg in 50ml	10 - 60microgram/kg/hour	G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	Dosing Units only	48	1ml/hr = 20microgram/kg/hr	MODERATE
NICARDIPINE	50mg in 50ml	0.5-5microgram/kg/min	Neat	Central	Dosing Units only	24	0.06ml/kg/hr = 1microgram/kg/min	HIGH
NORADRENALINE	0.3mg/kg in 50ml (max 8mg in 50ml)	0.01-0.5microgram/kg/min	G5W,G10W,NS,½ NS	Central	Dosing Units only	48	1ml/hr = 0.1microgram/kg/min	HIGH
OCTREOTIDE	1mg in 50ml	1-5microgram/kg/hour	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	24	0.05ml/kg/hour = 1 microgram/kg/hour	LOW
POTASSIUM CHLORIDE <i>Prescription valid for 24hrs only</i>	1mmol in 1ml	0.4mmol/kg/hour	NS,½ NS	Central	Dosing Units only	4	0.4ml/kg/hr = 0.4mmol/kg/hr	HIGH
ROCURONIUM <i>under 2kg</i>	50mg in 25ml	0.25-1mg/kg/hour	G5W,G10W,NS,½ NS	Central or Peripheral	Dosing Units only	24	0.5ml/kg/hr = 1mg/kg/hr	LOW
ROCURONIUM <i>2kg or over</i>	2-5kg: 100mg in 10ml > 5kg: 200mg in 20ml	0.25-1mg/kg/hour	Neat	Central or Peripheral	Dosing Units only	24	0.1ml/kg/hr = 1mg/kg/hr	LOW
SALBUTAMOL	10mg in 50ml 20mg in 100ml	0.5-5microgram/kg/min <i>↑ side effects &gt; 2microgram/kg/min</i>	G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	<b>Drug Library</b>	24	0.3ml/kg/hr = 1microgram/kg/min	MODERATE
SODIUM NITROPRUSSIDE <i>under 10kg</i>	10mg in 50ml	0.5-5microgram/kg/min	G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	Dosing Units only	24	0.3ml/kg/hr = 1microgram/kg/min	MODERATE
SODIUM NITROPRUSSIDE <i>10kg or over</i>	50mg in 50ml	0.5-5microgram/kg/min	G5W,G10W,NS,½ NS	Central preferred <i>(Peripheral only if central unavailable)</i>	Dosing Units only	24	0.06ml/kg/hr = 1microgram/kg/min	MODERATE
THIOPENTAL	1000mg in <b>40ml</b>	2-8mg/kg/hour	WFI only	Central	<b>Drug Library</b>	24	0.08ml/kg/hr = 2mg/kg/hr	HIGH
VASOPRESSIN (Argipressin) <i>under 5kg</i>	10units in 50ml	0.2-2 <b>milliunits</b> /kg/min	G5W,G10W,NS,½ NS	Central	Mls per Hour	24	0.3ml/kg/hr = <b>1milliunit</b> /kg/min	HIGH
VASOPRESSIN (Argipressin) <i>5kg or over</i>	20units in 50ml	0.2-2 <b>milliunits</b> /kg/min	G5W,G10W,NS,½ NS	Central	Mls per Hour	24	0.15ml/kg/hr = <b>1milliunit</b> /kg/min	HIGH

Key: G5W= glucose 5%, G10W= glucose 10%, NS= sodium chloride 0.9%, ½ NS= sodium chloride 0.45%, PFS= pre-filled syringe, WFI=water for injection

**Whenever possible keep to these standard infusion concentrations, drug errors are much more likely to occur when using non-standard concentrations**  
*If a non-standard concentration must be used, ensure this is clearly prescribed and labelled*