

<b>Document Title:</b>	<b>PREPARING AND ADMINISTERING INTRAVENOUS INFUSIONS OF DRUGS FOR CHILDREN AND YOUNG PEOPLE</b> (For use with the information outlined in the paediatric emergency folder)		
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<b>Related Trust Policies</b> (to be read in conjunction with)	04072 Hand hygiene policy 08038 Aseptic technique and aseptic non-touch technique 09060 Injectable Medicines
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2.0	Andrea Stanley & Claire Fitzgerald		15 <sup>th</sup> February 2013
3.0	Andrea Stanley & Claire Fitzgerald		3 May 2016
4.0	Mary Stebbens & Claire Fitzgerald	Full Review	22 <sup>nd</sup> July 2019

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## **1.0 Purpose**

- 1.1 This guideline aims to provide health care professionals with practical information for the safe preparation and administration of drug infusions which may be given to seriously ill children and young people.

## **2.0 Staff Training**

- 2.1 All medical and nursing staff are to ensure that their knowledge, competencies and skills are up-to-date.
- 2.2 All registered nurses will be trained in the preparation and administration of infusions before undertaking any drug infusion.
- 2.3 Junior medical staff will be trained during their induction process.

## **3.0 IV Drug Preparation and Administration**

- 3.1 The Guide to IV drug preparation and administration is set out in Appendix 1.
- 3.2 In the monographs in Appendix 1 weight refers to the child's weight in kilograms.
- 3.3 The monographs in Appendix 1 have been compiled as an additional resource to the on-line calculator outlined in Appendix 3. For ease of manual calculation there may be some differences between the monographs and the on-line calculator. Please follow either one or the other, do not use both in order to avoid confusion and mistakes.
- 3.4 Conversion of Units is set out in Appendix 2.
- 3.5 On-line drug calculator is set out in Appendix 3.

## **4.0 Infection Prevention**

- 4.1 All staff should follow Trust guidelines on infection prevention ensuring that they effectively 'decontaminate their hands' before and after each procedure.
- 4.2 All staff should ensure that they follow Trust guidelines on infection prevention using Aseptic Non-Touch Technique (ANTT) when carrying out procedures.

## **5.0 Audit and Monitoring**

- 5.1 Non-compliance with the guideline is monitored as part of the datix reporting system. Serious incidents will be reported and monitored through the Children's Urgent and Emergency Group.

5.2 Annual audit of infusions used for critically ill children.

## **6.0 Communication**

6.1 Approved guidelines are published monthly in the Trust's Focus which is sent via email to staff.

6.2 Approved guidelines will be disseminated to appropriate staff via email after ratification of this guideline.

## **7.0 References:**

Paediatric Emergency Guidelines

CATS website [www.cats.nhs.uk](http://www.cats.nhs.uk)

BNFC online accessed June 2019  
Available at: <https://bnfc.nice.org.uk/>

UCLH Injectable Medicines Administration Guide, 2010. 3<sup>rd</sup> ed. London: Wiley-Blackwell.  
Available to loan via the Warner Library

Medusa online accessed via the intranet June 2019



**APPENDIX 1: Guide to IV drug preparation and administration**

• **Adrenaline (Epinephrine)**

Preparation: Adrenaline (Epinephrine) 1 in 1000 (1mg/ml) 1ml or 5ml amps

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Dose Range
All children (usually via <b>central line</b> but may be given peripherally)	0.3 mg / Kg in 50ml	Sodium Chloride 0.9% or Glucose 5% or 10%	Wt x 0.3 = ----- mg / 50ml	<b>For 0.3 mg / Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1ml / hour = 0.1 mcg / kg / min</li> <li>• 5ml / hour = 0.5 mcg / kg / min</li> </ul>	0.1 mcg – 0.5 mcg / Kg / min

Common Y site compatibilities: Dopamine; Dobutamine; Morphine; Midazolam; Noradrenaline (in glucose 5%)

Incompatibilities: Aminophylline; Sodium bicarbonate and other alkaline solutions; Thiopental

- **Aminophylline**

Preparation: Aminophylline 250mg in 10ml amps

Age / weight range	Standard Infusion	Diluent	Rate calculations	Loading dose	Dose Range
All children (Central and peripheral lines)	<b>1mg in 1ml</b> (e.g. 250mg in 250ml or 500mg in 500ml)	Sodium Chloride 0.9% or Glucose 5%	<b>500mg in 500ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1ml / kg / hr = 1mg / kg / hr</li> <li>• 0.5ml / kg / hr = 0.5 mg / kg / hr</li> </ul>	<b>All children</b> 5 mg / kg total dose (maximum 500mg) given over 20 minutes. Omit in those receiving maintenance oral theophylline.	<b>Child 1 month – 11 years</b> 1 mg / kg / hour <b>Child 12 – 18 years</b> 0.5 – 0.7 mg / kg / hour

The loading dose should be given over 20 minutes with ECG monitoring.

Monitor serum theophylline levels in patients already receiving oral treatment and in those receiving prolonged treatment (>24 hours)

- Common Y site compatibilities: Morphine; Potassium Chloride 40mmol/litre
- Incompatibilities: Midazolam; Salbutamol

- **Dobutamine**

Preparation: Dobutamine 250mg in 20ml amps

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Dose range
For children <15 Kg via <b>central line</b>	15mg/Kg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%	Wt x 15 = ----- mg / 50ml	<b>For 15mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1ml / hour = 5mcg/kg/min</li> <li>• 4ml / hour = 20mcg/kg/min</li> </ul>	5 – 20 mcg / kg / min
For children >15Kg via <b>central line</b>	250mg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%		<b>For a 250mg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.06ml/Kg/hour = 5mcg/Kg/min</li> <li>• 0.24ml/Kg/hr = 20mcg/Kg/min</li> </ul>	5 – 20 mcg / kg / min
All children via <b>peripheral line</b>	3mg/kg in 50ml (maximum 250mg in 50ml)	Glucose 5% or 10% or sodium chloride 0.9%	Wt x 3 = ----- mg / 50ml	<b>For 3mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 5ml/hour = 5mcg/kg/min</li> <li>• 20ml/hour = 20mcg/kg/min</li> </ul>	5 – 20 mcg / kg / min

**Dobutamine should usually be given by central line. If it is essential to give it peripherally discuss with Consultant and use a maximum concentration of 5mg/ml or less (250mg in 50ml). If necessary stronger concentrations can be given via a central line.**

- Common Y site compatibilities: Adrenaline, Noradrenaline, Dopamine, Morphine, Midazolam, Fentanyl, Insulin, Potassium chloride, Vasopressin, Vecuronium
- Incompatibilities: Furosemide, Sodium bicarbonate

- **Dopamine**



Preparation: Dopamine 200mg in 5ml amps

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Dose range
For children $\leq 5$ Kg via <b>central line</b>	15mg/Kg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%	Wt x 15 = ----- mg / 50ml	<b>For 15mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1ml / hr = 5mcg/kg/min</li> <li>• 4ml / hr = 20mcg/kg/min</li> </ul>	5 – 20 mcg / Kg / min
For children $> 5$ Kg via <b>central line</b>	80mg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%		<b>For 80mg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.1875ml/Kg/hour = 5mcg/Kg/min</li> <li>• 0.75ml/Kg/hour = 20mcg/Kg/min</li> </ul>	5 – 20 mcg / Kg / min
$\leq 26$ kg via <b>peripheral line</b>	3mg/Kg in 50ml (maximum 80mg in 50ml)	Glucose 5% or 10% or sodium chloride 0.9%	Wt x 3 = ----- mg / 50ml	<b>For 3mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 5ml/hour = 5mcg/kg/min</li> <li>• 20ml / hour = 20mcg/kg/min</li> </ul>	5 – 20 mcg / Kg / min
$> 26$ kg via <b>peripheral line</b>	80mg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%		<b>For 80mg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.1875ml/kg/hour = 5mcg/kg/min</li> <li>• 0.75ml/kg/hour = 20mcg/kg/min</li> </ul>	5 – 20 mcg / Kg / min

**Dopamine should usually be given by central line. If it is essential to give it peripherally discuss with Consultant and use a maximum concentration of 80mg in 50ml.**

- Common Y site compatibilities: Adrenaline, Noradrenaline, Dopamine, Morphine, Midazolam, Fentanyl, Potassium chloride, Vasopressin, Vecuronium
- Incompatibilities: Sodium bicarbonate, Furosemide

- **Magnesium Sulphate**

**Preparation: Magnesium sulphate 10% (100mg/ml) amps**

Magnesium 10% injection contains 100mg/ml of magnesium

Age / weight range	Dose	Dilution
<50kg	40 mg / kg i.e. 0.4ml / kg of 10% injection (maximum 2G) Give by slow intravenous injection over 20 minutes (maximum rate 10mg/kg/minute).	Use 10% (100mg/ml) injection and give neat via central or peripheral line.
>50kg	2g by slow intravenous injection over 20 minutes	

**Preparation: Magnesium sulphate 50% (500mg/ml) amps: Magnesium sulfate 50% must ALWAYS be diluted before use.**

Magnesium 50% injection contains 500mg/ml magnesium

A concentration of up to 10% magnesium sulfate (100mg/mL; 0.4mmol/mL magnesium) is recommended for IV administration in children.<sup>(5)</sup>

**To prepare a 5% solution** (50mg/mL) solution dilute each 1mL of magnesium sulfate 50% with 9mL of diluent.

**To prepare a 10% solution** (100mg/mL) solution dilute each 1mL of magnesium sulfate 50% with 4mL of diluent.

Dilute with sodium chloride 0.9% or glucose 5%. Mix thoroughly, inverting the syringe or bag at least 5 times to avoid 'layering'.

- Can be run through the same line as morphine sulphate

- **Midazolam**

Preparation: Midazolam 10mg in 2ml amps; 5mg in 5ml amps

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Loading dose	Dose range
For children ≤8kg	6mg/Kg in 50ml	Glucose 5% or 10% or sodium chloride 0.9%	Wt x 6 = ----- mg / 50ml	<b>For 6mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.5ml/hr = 1mcg/kg/min</li> <li>• 2.5ml / hr = 5mcg/kg/min</li> </ul>	A slow bolus of 150-200 mcg/kg may be required as a loading dose  0.83ml = 100mcg/kg	1 – 5 mcg / kg / min (equivalent to 60 – 300 mcg / kg / hour).
For children >8kg	50mg in 50ml	Glucose 5% or 10% or Sodium Chloride 0.9%		<b>For 50mg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.06ml/Kg/hr = 1mcg/Kg/min</li> <li>• 0.3 ml/Kg/hr = 5mcg/Kg/min</li> </ul>	A slow bolus of 150-200 mcg / kg may be required as a loading dose  0.1ml/kg = 100mcg/kg	1 – 5 mcg / kg / min (equivalent to 60 – 300 mcg / kg / hour).

- Common Y site compatibilities: Dopamine & Dobutamine (if all in Glucose 5%), Fentanyl, Morphine, Noradrenaline and adrenaline (if all in Glucose 5%)

- **Morphine**

Ampoules available in a variety of strengths e.g. 10mg/ml, 30mg/ml

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Loading dose	Dose range
For all children	1mg/Kg in 50ml	Glucose 5% or 10% or 0.9% Sodium Chloride	Wt x 1 = ----- mg / 50ml	<b>For a 1mg/Kg in 50 ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.5ml / hr = 10mcg/kg/hr</li> <li>• 2ml / hr = 40mcg/kg/hr</li> </ul>	100 mcg / kg	10 – 40 mcg/kg/hr

- Common Y site compatibilities: Adrenaline; Noradrenaline; Dopamine; Dobutamine; Midazolam

- **Noradrenaline**

Preparation: Noradrenaline 1 in 1000 4ml amps (1mg/ml noradrenaline base)

Age / weight range	Standard Infusion	Diluent	Calculate	Rate calculations	Dose range
All children (via <b>central line</b> )	0.3mg/kg in 50ml	<b>Glucose 5% or 10%</b> (Can be made up in 0.9% sodium chloride but watch for discolouration. If this occurs discard syringe)	Wt x 0.3 = ----- mg / 50ml	<b>For a 0.3mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1ml / hour = 0.1 mcg / kg / min</li> <li>• 5ml / hour = 0.5 mcg / kg / min</li> </ul>	0.1mcg/kg/min – 0.5 mcg/kg/min

- Common Y site compatibilities: Adrenaline; Dopamine; Dobutamine; Morphine; Midazolam; Vasopressin

- **Salbutamol** \* (see administration chart for calculated doses appendix 4)

Preparation: Salbutamol 5mg in 5ml amps; 500mcg in 1ml amps

Age / weight range	Standard Infusion	Diluent	Rate calculations	Loading dose	Dose range
All children via <b>peripheral line or central line</b>	25mg in 50ml	Glucose 5% or 0.9% sodium chloride	<b>For a 25mg in 50ml standard infusion</b> (500mcg/ml solution) 0.12ml / Kg / hour = 1 mcg / Kg / minute	<b>1 month – 1 year:</b> 5 mcg / kg total dose given over 5 minutes. <b>2-17 years:</b> 15 mcg / kg total dose given over 5 minutes.	1 – 2 mcg / kg / minute = 60 – 120 mcg / kg / hr <b>Doses above 2 mcg / kg / min should only be used on recommendation of a consultant paediatrician after liaison with the CATS team</b>
All children via <b>central line only</b>	1mg/ml	Infusion may be given undiluted	<b>For a 1mg in 1ml standard infusion</b> 0.06ml / Kg / hour = 1 mcg / Kg / minute	<b>Max dose = 250mcg</b> Dilute to 50mcg/ml solution before administration	

- Common Y site compatibilities: Potassium
- Incompatibilities: Aminophylline

• **Vecuronium**

Preparation: Vecuronium 10mg amps (reconstitute to 10mg in 5ml with water for injection provided)

Age / weight range	Standard Infusion	Dilution	Calculate	Rate calculations	Loading / bolus dose	Dose range
For children ≤15kg	3mg/Kg in 50ml	Reconstitute each 10mg vial with 5ml water for injections	Wt x 3 = ----- mg / 50ml	<b>For 3mg/Kg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 1.0ml/hr = 1mcg/kg/min</li> <li>• 5.0ml/hr = 5mcg/kg/min</li> </ul>	100 – 200 mcg/Kg	1 – 4 mcg / kg / min (equivalent to 60 – 240 mcg / kg / hour).
For children >15kg	50mg in 50ml	Reconstitute each 10mg vial with 5ml water for injections		<b>For 50mg in 50ml standard infusion</b> <ul style="list-style-type: none"> <li>• 0.06ml/Kg/hr = 1mcg/Kg/min</li> <li>• 0.3 ml/Kg/hr = 5mcg/Kg/min</li> </ul>	100 – 200 mcg/Kg	1 – 4 mcg / kg / min (equivalent to 60 – 240 mcg / kg / hour).

- Common Y site compatibilities: Adrenaline; Noradrenaline (in glucose only); Dopamine; Dobutamine; Morphine; Midazolam; Fentanyl (in glucose only)
- Incompatibilities: Furosemide

- **3% Hypertonic Saline (or commercially ready made 2.7% saline when available)**

**Indication for use:** Treatment of cerebral oedema and raised intracranial pressure (e.g. head injury, DKA)

Age / weight range	Preparation of solution for IV administration if ready made solution not available	Dose range	Rate calculations
All children (preferably via <b>central line</b> but may be given peripherally)	<ul style="list-style-type: none"> <li>• Remove 36ml from 500ml bag of 0.9% normal saline</li> <li>• Add 36ml 30% saline to 500ml bag of 0.9% normal saline</li> <li>• = <b>500ml bag of 3% Hypertonic Saline</b></li> </ul>	<ul style="list-style-type: none"> <li>• 3 - 5ml / kg</li> </ul> <p>*Take the prescribed volume out of the bag and administer to the patient separately</p>	<ul style="list-style-type: none"> <li>• Administer over 10 – 20 minutes</li> </ul>



## Appendix 2: Conversion of Units

Units commonly used are: microgram, milligram, gram & kilogram

There are:

- 1000 micrograms in 1 milligram
- 1000 milligrams in 1gram
- 1000 grams in 1kilogram

However, there are others which may be used:

Name	Abbreviation	Equivalent
1 kilogram	kg	1000g
1 gram	g	1000mg
1 milligram	mg	1000mcg, $\mu$ g
1 microgram	mcg, $\mu$ g	1000ng, $\eta$ g
1 nanogram	ng, $\eta$ g	1000pg
1 picogram	pg	1/1000ng

Good Practice Guidelines:

- Micrograms should always be written in full (may see mcg or  $\mu$ g)
- Nanograms should always be written in full (may see ng or  $\eta$ g)
- Decimal places should be avoided i.e. 0.5g should be written as 500mg.

To convert from smaller units to larger ones, we need to divide by 1000,  
Or to convert from a larger unit to a smaller unit, we need to multiply by 1000

### **Appendix 3: Online electronic drug calculator and prescription chart**

Online drug calculators can be used to assist in calculating doses of medicines needed in an emergency situation.

- CATS paediatric retrieval service: [www.cats.nhs.uk](http://www.cats.nhs.uk)

## Appendix 4: Salbutamol calculation dosing chart

Mid Essex Hospitals NHS Trust						
GUIDELINE FOR ADMINISTRATION OF IV SALBUTAMOL IN CHILDREN						
DRUG SALBUTAMOL CONTINUOUS INFUSION VIA PERIPHERAL LINE (ALL CHILDREN)						
DOSE (MG / KG)	1 - 5 MICROGRAMS / KG / MINUTE = 60 - 300 MICROGRAMS / KG / HOUR (DOSES ABOVE 2 MICROGRAMS / KG / MINUTE SHOULD ONLY BE USED ON RECOMMENDATION OF A CONSULTANT PEDIATRICIAN AFTER LIAISON WITH THE CATS TEAM )					
DILUTION	ADD 10 ML (5MG/5ML) SALBUTAMOL TO 40ML OF 0.9 % SODIUM CHLORIDE OR 5% GLUCOSE = 200 MICROGRAMS / ML SOLUTION					
METHOD OF ADMINISTRATION	CONTINUOUS INFUSION					
	RATE (MLS / HOUR)					
W EIGHT (KG)	1 mcg/kg/min = 60 mcg/kg/hr	2 mcg/kg/min = 120 mcg/kg/hr	3 mcg/kg/min = 180 mcg/kg/hr	4 mcg/kg/min = 240 mcg/kg/hr	5 mcg/kg/min = 300 mcg/kg/hr	
5	1.5 ML / HR	3.0 ML / HR	4.5 ML / HR	6.0 ML / HR	7.5 ML / HR	
6	1.8 ML / HR	3.6 ML / HR	5.4 ML / HR	7.2 ML / HR	9.0 ML / HR	
7	2.1 ML / HR	4.2 ML / HR	6.3 ML / HR	8.4 ML / HR	10.5 ML / HR	
8	2.4 ML / HR	4.8 ML / HR	7.2 ML / HR	9.6 ML / HR	12.0 ML / HR	
9	2.7 ML / HR	5.4 ML / HR	8.1 ML / HR	10.8 ML / HR	13.5 ML / HR	
10	3.0 ML / HR	6.0 ML / HR	9.0 ML / HR	12.0 ML / HR	15.0 ML / HR	
11	3.3 ML / HR	6.6 ML / HR	9.9 ML / HR	13.2 ML / HR	16.5 ML / HR	
12	3.6 ML / HR	7.2 ML / HR	10.8 ML / HR	14.4 ML / HR	18.0 ML / HR	
13	3.9 ML / HR	7.8 ML / HR	11.7 ML / HR	15.6 ML / HR	19.5 ML / HR	
14	4.2 ML / HR	8.4 ML / HR	12.6 ML / HR	16.8 ML / HR	21.0 ML / HR	
15	4.5 ML / HR	9.0 ML / HR	13.5 ML / HR	18.0 ML / HR	22.5 ML / HR	
16	4.8 ML / HR	9.6 ML / HR	14.4 ML / HR	19.2 ML / HR	24.0 ML / HR	
17	5.1 ML / HR	10.2 ML / HR	15.3 ML / HR	20.4 ML / HR	25.5 ML / HR	
18	5.4 ML / HR	10.8 ML / HR	16.2 ML / HR	21.6 ML / HR	27.0 ML / HR	
19	5.7 ML / HR	11.4 ML / HR	17.1 ML / HR	22.8 ML / HR	28.5 ML / HR	
20	6.0 ML / HR	12.0 ML / HR	18.0 ML / HR	24.0 ML / HR	30.0 ML / HR	
21	6.3 ML / HR	12.6 ML / HR	18.9 ML / HR	25.2 ML / HR	31.5 ML / HR	
22	6.6 ML / HR	13.2 ML / HR	19.8 ML / HR	26.4 ML / HR	33.0 ML / HR	
23	6.9 ML / HR	13.8 ML / HR	20.7 ML / HR	27.6 ML / HR	34.5 ML / HR	
24	7.2 ML / HR	14.4 ML / HR	21.6 ML / HR	28.8 ML / HR	36.0 ML / HR	
25	7.5 ML / HR	15.0 ML / HR	22.5 ML / HR	30.0 ML / HR	37.5 ML / HR	
26	7.8 ML / HR	15.6 ML / HR	23.4 ML / HR	31.2 ML / HR	39.0 ML / HR	
27	8.1 ML / HR	16.2 ML / HR	24.3 ML / HR	32.4 ML / HR	40.5 ML / HR	
28	8.4 ML / HR	16.8 ML / HR	25.2 ML / HR	33.6 ML / HR	42.0 ML / HR	
29	8.7 ML / HR	17.4 ML / HR	26.1 ML / HR	34.8 ML / HR	43.5 ML / HR	
30	9.0 ML / HR	18.0 ML / HR	27.0 ML / HR	36.0 ML / HR	45.0 ML / HR	
31	9.3 ML / HR	18.6 ML / HR	27.9 ML / HR	37.2 ML / HR	46.5 ML / HR	
32	9.6 ML / HR	19.2 ML / HR	28.8 ML / HR	38.4 ML / HR	48.0 ML / HR	
33	9.9 ML / HR	19.8 ML / HR	29.7 ML / HR	39.6 ML / HR	49.5 ML / HR	
34	10.2 ML / HR	20.4 ML / HR	30.6 ML / HR	40.8 ML / HR	51.0 ML / HR	
35	10.5 ML / HR	21.0 ML / HR	31.5 ML / HR	42.0 ML / HR	52.5 ML / HR	
36	10.8 ML / HR	21.6 ML / HR	32.4 ML / HR	43.2 ML / HR	54.0 ML / HR	
37	11.1 ML / HR	22.2 ML / HR	33.3 ML / HR	44.4 ML / HR	55.5 ML / HR	
38	11.4 ML / HR	22.8 ML / HR	34.2 ML / HR	45.6 ML / HR	57.0 ML / HR	
39	11.7 ML / HR	23.4 ML / HR	35.1 ML / HR	46.8 ML / HR	58.5 ML / HR	
40	12.0 ML / HR	24.0 ML / HR	36.0 ML / HR	48.0 ML / HR	60.0 ML / HR	
41	12.3 ML / HR	24.6 ML / HR	36.9 ML / HR	49.2 ML / HR	61.5 ML / HR	
42	12.6 ML / HR	25.2 ML / HR	37.8 ML / HR	50.4 ML / HR	63.0 ML / HR	
43	12.9 ML / HR	25.8 ML / HR	38.7 ML / HR	51.6 ML / HR	64.5 ML / HR	
44	13.2 ML / HR	26.4 ML / HR	39.6 ML / HR	52.8 ML / HR	66.0 ML / HR	
45	13.5 ML / HR	27.0 ML / HR	40.5 ML / HR	54.0 ML / HR	67.5 ML / HR	
46	13.8 ML / HR	27.6 ML / HR	41.4 ML / HR	55.2 ML / HR	69.0 ML / HR	
47	14.1 ML / HR	28.2 ML / HR	42.3 ML / HR	56.4 ML / HR	70.5 ML / HR	
48	14.4 ML / HR	28.8 ML / HR	43.2 ML / HR	57.6 ML / HR	72.0 ML / HR	
49	14.7 ML / HR	29.4 ML / HR	44.1 ML / HR	58.8 ML / HR	73.5 ML / HR	
50	15.0 ML / HR	30.0 ML / HR	45.0 ML / HR	60.0 ML / HR	75.0 ML / HR	

INCOMPATIBILITIES: POTASSIUM AND AMINOPHYLLINE

ALTERNATIVE PREPARATION: IF YOU NEED > 50ML, PREPARE 250ML OF STANDARD 200 MICROGRAMS/ML SOLUTION. WITHDRAW 50ML FROM A 250ML BAG OF SODIUM CHLORIDE OR 5% GLUCOSE AND ADD 50ML OF 5MG/5ML SALBUTAMOL TO THE BAG

### Appendix 5: Preliminary Equality Analysis

This assessment relates to: 09065 Preparing IV Infusions for Children

A change in a service to patients		A change to an existing policy	X	A change to the way staff work	
A new policy		Something else (please give details)			
Questions		Answers			
1. What are you proposing to change?		Full Review			
2. Why are you making this change? (What will the change achieve?)		3 year review			
3. Who benefits from this change and how?		Patients & Clinicians			
4. Is anyone likely to suffer any negative impact as a result of this change? If no, please record reasons here and sign and date this assessment. If yes, please complete a full EIA.		No			
5. a) Will you be undertaking any consultation as part of this change? b) If so, with whom?		Yes  Refer to pages 1 & 2 consultation			

Preliminary analysis completed by:

Name	Mary Stebbens Claire Fitzgerald	Job Title	Clinical Facilitator for Children’s Acute Care; Pharmacist	Date	June 2019
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