RBHSC Induction

November 2022

Programme

- Meeting with CS – 0800 at Theatres.
- Pain nurse
- Technicians
- Tour of hospital

Clinical Supervisor

- Sarah Gallagher – 07716 580248
    - Scott Rafferty; Therese McLoughlin; Sean McGuire; Megan Lennox; Sarah McCann
- Peter Fee – 07815 705301
    - Alex Greene; Kevin Rafferty; Lindsay McDowell; Mairead Murnin

Duties

- Normal day

- 0800-1730

- Long day

- 0800-2030

- Night

- 2000-0830

- Primarily responsible for theatres

- Other areas

- PICU

- A&E

- Wards

COVID-19

- At the moment, we have been advised that if the patient is COVID negative & asymptomatic, we can use a surgical face mask and standard PPE otherwise.

- Please continue to keep up to date with relevant developments

- We will be trying as far as possible to provide a good training experience; numbers of cases will be slightly reduced; don’t worry unduly about that.

On Call

- Intermediate trainees: under 5’s
- Higher trainees: under 3’s
  - If in doubt – call

On call

- If you think you will need help in theatre, let us know and we will come in.

- No 7am cases
- 2nd theatre and MRI is consultant to consultant
- Life or limb applies as normal but generally surgeons are good about not breaking this
- Appendicitis is always appropriate to do, especially pre-schoolers.
- On Call Accommodation

- Anaesthetic charts kept in Knox Ward and theatres
- Wards/ED may not have them – bring from theatres – small filing chest of drawers at theatre reception

- First choice pre-med usually buccal midazolam / 2nd choice = dexmedetomidine (see protocol)

- Bleep 2003 carried during day by long day trainee
    - Check if there is a pain nurse on duty – if not LD trainee needs to do pain round during week. Currently pain nurse is only present for part of the week.
    - Always do pain round at weekend
- Theatre coordinator phone
- Vocera

Who to call from ED

- Will admission be medical or surgical? Will they be coming to theatre?
- E.g.
  - inhaled foreign body – theatre consultant
  - Bronchiolitis – ICU consultant
  - GCS < 8 – overdose = PICU
  - GCS < 8 – trauma – theatre +/- PICU
- If unable to get one for whatever reason always consider the other.

PICU

- You will be expected to see PICU referrals
- All experience is good
- Anyone in higher training or Dual ICM will be assigned a week on PICU; if anyone would like more than that, please let us know.

Pre-op visit

- Mandatory
- Cancellation *only* after discussion with consultant
- Written info where possible

Documentation

After any patient contact

- Pre-op
- Pain
- A&E
- PICU

Documentation

- Mandatory: Paracetamol and Fluids should be on kardex/fluid balance as well as anaesthetic chart. Gentamicin chart is in use now – must be filled in by someone! I recommend making a note on the back of the anaesthetic chart to remind the surgeons to do the chart. Other drugs at your discretion.

- Mandatory: Tick ‘Anaesthetic chart’ box and write the date beside it on front of Drug Kardex

Common Errors

- Flush Cannula
- Antibiotic dosing
- IV Paracetamol
- IV Fluids
- Drug Calculations

HSC Belfast Health and Social Care Trust

Prescribing and administration of intravenous paracetamol for term neonates, infants and children

Prescribe				Prepare	Administer	
Age/Weight	Recommended Dose*	Weight	Dose	Preparation to be used	Volume of 10mg/mL Paracetamol infusion	
	mg/kg	kg	mg		mL	!
Pre-Term Neonate	Use BNFC Dosing			100mg/10mL		Draw up exact volume into syringe for administration
Term neonate & Infant under 10 kg	7.5 mg/kg Every 6 Hours *Max. 30mg/kg/24 Hrs.	3	22.5		2.3	
		4	30		3	
		5	37.5		3.8	
		6	45		4.5	
		7	52.5		5.3	
		8	60		6	
		9	67.5		6.8	
Child body weight 10-50 kg	15 mg/kg Every 4-6 Hours Max.60mg/kg/24 Hrs.	10	150	500 mg/50 mL	15	Draw up the exact volume required from a 500mg/50ml vial into a syringe prior to administration
		11	165		16.5	
		12	180		18	
		13	195		19.5	
		14	210		21	
		15	225		22.5	
		16	240		24	
		17	255		25.5	
		18	270		27	
		19	285		28.5	
		20	300		30	
		21	315		31.5	
		22	330		33	
		23	345		34.5	
		24	360		36	
		25	375		37.5	
		26	390		39	
		27	405		40.5	
		28	420		42	
		29	435		43.5	
		30	450		45	
		31	465		46.5	
		32	480		48	
		33	495		49.5	
		34	510	1g/100 mL	51	Withdraw excess infusion solution from 1g/100ml vial and discard prior to administration
		35	525		52.5	
		36	540		54	
		37	555		55.5	
		38	570		57	
		39	585		58.5	
		40	600		60	
		41	615		61.5	
		42	630		63	
		43	645		64.5	
		44	660		66	
		45	675		67.5	
		46	690		69	
		47	705		70.5	
		48	720		72	
		49	735		73.5	
		50	750		75	
Child >50 kg	1g Every 4-6 Hours Max. 4g/24 Hrs.	Over 50 kg	1000 (1g)		Administer whole 1000mg(1g)/100ml vial	

*Dosing for overweight patients should be based on the ideal body weight for the child
*Dosing differs from that in BNFc

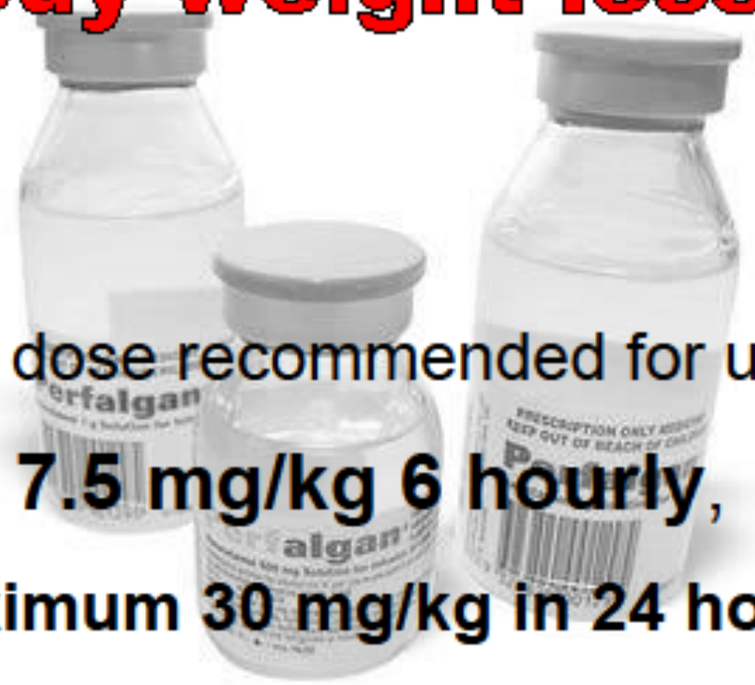
REMEMBER - All IV Paracetamol products contain 10mg Paracetamol per 1ml

The information contained in this document should be used as a guide only and does not replace the need for clinical judgement

- # IV PARACETAMOL
- IV paracetamol is a particularly high risk drug
- Whilst being certain to prescribe and administer the correct dose you should also ensure that the child has not already received a dose which would prevent them from receiving another.
- You should check all potential prescription paperwork (ward kardex, knox ward kardex, ED flimsy, referring hospital flimsy) before prescribing or administering.
- If there is any confusion regarding paracetamol dosing please feel free to chat to any of the consultants.

Belfast Health and Social Care Trust

Intravenous Paracetamol
Term neonate and
Children body-weight less than 10kg



Please note the dose recommended for use in BHSCT is

7.5 mg/kg 6 hourly,

Maximum 30 mg/kg in 24 hours

Do not use the dose recommended in BNFc 2014-15

All IV Paracetamol products contain **10mg Paracetamol per 1 mL**

Belfast Health and Social Care Trust

Prescribing of Enteral Paracetamol for Inpatient Term Neonates & Children in the Royal Belfast Hospital for Sick Children

Paracetamol dosing regimens are to be prescribed based on body-weight

This guidance differs from age-banded regimens in the BNF for Children

Special considerations

Children who are underweight, overweight or obese

Calculation by body-weight in the overweight child may result in higher doses being administered than necessary. In such cases, the dose should be calculated from an ideal weight for height.

- If **underweight**: dose on actual weight
- If **overweight** or **obese**: dose on ideal weight for height

Risks of toxicity

Consider dose reduction if risk(s) of toxicity e.g. those with risk factors for hepatotoxicity; chronic dehydration; chronic malnutrition; co-administration of enzyme-inducing antiepileptic medications (Consult BNFc).

Enteral Paracetamol Dosing Regimen

Indications	15 mg/kg every 4 - 6 hours Patients weighing 50kg or greater: 1g every 4 - 6 hours (Maximum four doses in 24 hours)
Pain Post-operative pain Pyrexia with discomfort	

Weight (Kg)	Dose (mg)	Weight (Kg)	Dose (mg)
3	45	27	405
4	60	28	420
5	75	29	435
6	90	30	450
7	105	31	465
8	120	32	480
9	135	33	495
10	150	34	510
11	165	35	525
12	180	36	540
13	195	37	555
14	210	38	570
15	225	39	585
16	240	40	600
17	255	41	615
18	270	42	630
19	285	43	645
20	300	44	660
21	315	45	675
22	330	46	690
23	345	47	705
24	360	48	720
25	375	49	735
26	390		

Patients weighing 50 kg or greater: 1g every 4 - 6 hours (Maximum four doses in 24 hours)

Paediatric Pharmacy Team, RBHSC, October 2019

Keep a copy on your smartphone – Please scan the QR code

- ENTERAL PARACETAMOL dosing chart

Regular injectable medication

Check allergies/medicine sensitivities and patient identity

Codes for recording omitted doses

① = Nil by mouth
② = Patient refused
③ = Patient not available
④ = Route not available
⑤ = Vomiting
⑥ = Drug not available
⑦ = Other (Record on pg.2)
⑧ = Prescriber enters for each dose to be withheld. Document reasons in medical notes

Review delayed or omitted doses at each medicine round

Use addressograph - otherwise write in capitals

Surname: _____

First names: _____

Ward: _____ Hospital no: _____

H+C No. _____

DOB: _____ Check identity

Year: | Day and month: →

An aide to prescribing and administering IV paracetamol safely

Weight 7.7 kg

- [x] Check: Is paracetamol prescribed anywhere else on **this or another** kardex?
- [ ] **Preterm** infants < 37 weeks corrected — 7.5mg/kg **every eight hours** maximum TID
- [x] Term infants < 10kg — 7.5mg/kg **every six hours** maximum QID
- [ ] Children > 10kg — 15mg/kg **every six hours** maximum QID

Prescribed dose	Preparation	Syringe required
<20mg	100mg/10ml	☐ 2ml
21-50mg	100mg/10ml	☐ 5ml
51-100mg	100mg/10ml	☑ 10ml
101-200mg	500mg/50ml	☐ 20ml
201-500mg	500mg/50ml	☐ 50ml
500mg -1g	1000mg/100ml	☐ volumetric pump

Medicine PARACETAMOL

Dose 58mg | Route IV | Frequency 4-6Hrly

Special instructions/Indication

Medicines Reconciliation (circle): Pre-admission dose | Increased dose | Decreased dose | New

Sign A Prescriber Prof. no. 12345

Print A.Prescriber Bleep

Medicine

Start date | Stop date | Signature | Supply | Pharmacist

06⁰⁰ 10⁰⁰ 12⁰⁰ 14⁰⁰ 18⁰⁰ 22⁰⁰ 24

Start date 06⁰⁰

Recovery

- Complete handover
- IV flushed and documented
- Ensure all paperwork correct
- Ensure recovery staff happy with patient and post-op plan
- Think about opioids – protocol for fractures and for appendicectomy

Pain

- Two pain nurses so cover is reasonable
- Daily pain round, incl weekends - Long day trainee to conduct round if no pain nurse – check in recovery in the morning if pain nurse is on duty
- If in doubt – PCA/NCA - Prescribe early
- Reg IV Paracetamol, PRN Ondansetron & Naloxone (max 200 micrograms) MUST be prescribed
- Listen to Andree; Catriona and the recovery nurses
- If consultant that looked after the child is present seek them out first, otherwise ask any of us

- Dedicated colour coded giving sets for PCA; epidural and LA infusions – don’t mix and match

Prescribing

- Errors have a bigger impact than in adults
- Paracetamol dosing
- Opiate dosing
- Complete fluid balance chart in full
- If post-op fluids appropriate – prescribe them – 2/3 maintenance.
- Black Ink

Teamwork

- Listen to experienced nurses
- Esp recovery nurses
- Lots of junior nurses too
- Good practice to do a focused chat with anaesthetic nurse about emergency plan

Teaching

- 0800 Tuesday and Friday
- Peer led, 15 min talk including time for discussion
- Fellow to organise roster
- MUST be presented with time for discussion and out of room by 0825, therefore prompt start ESSENTIAL
- Get the most out of your subspecialties, let us know early if you have any particular needs but feel free to negotiate among yourselves

Audit/QI Projects/Progress

- Need to hit the ground running, esp post Fellowship trainees.

- Those doing exams probably have other priorities but remember not to lose track of your clinical experience,

  - you will find your first time in Paeds much more stressful if you take off lots of days at the start and don't get the daytime experience that you need. Whilst you'll get there in the end, you'll find you gain confidence quicker if you get some good experience early in the rotation.

  - If you struggle, you're not the first, but please come and talk to us so we can help you get on track

- We want you to get the most out of this rotation
- You will need to be proactive in achieving this
- If you aren't getting the specialties/variety/case mix/ consultant mix/volume you feel you need to keep improving let us know
- Within reason we can move you around so you get the experience you need
- You can also swap lists with your colleagues (but out of courtesy discuss with the supervising consultant)

Theatre IV access requests

- A perennial issue
- We're trying to make it better
- Line booking form
  - 'Long' lines for all sick appendicies/joint wash outs – anyone that you anticipate will be on IV therapy for more than a couple of days
  - Communicate with surgeon
  - We DO NOT accept referrals direct from other centres. ALL referrals should be redirected to medical/surgical consultant on call for consideration, admission & booking (if deemed appropriate)
  - There is NOT a dedicated lines service. We provide assistance and all lines should be discussed at consultant level on BOTH sides.

Protocols

- Various protocols exist in the department, of which these are the major ones at present which are specific to RBHSC, so please use them:
    - Epidural; PCA/NCA; LA infusion
    - Dexmedetomidine premed
    - VTE prophylaxis
    - Diabetic management
    - Steroid management
    - Fracture pain pathway
    - Appendicectomy pathway inc. IV access requirements.

https://paedsinduction.com

- Shona Chan has kindly created a webpage / app which is partly a calculator and partly a store for our protocols; so please use this and feedback on it too!

- More details to follow, including using the password protected area.

Paperwork

- Get all assessments done
    - I am not totally sure what these are changing to!!
    - Intermediate: ACEX; CbD; DOPS
        - Higher: ACEX; CbD
- Do a Paeds specific PDP – for CUT
- Keep a paeds specific logbook – for CUT
- There will be feedback – College have emphasised it’s importance

Core outcomes

- Intermediate

Learning outcomes:

- Build on the knowledge and skills gained during Basic Level training
- Develop in-depth knowledge and understanding of the anaesthetic needs of children and neonates
- Understand the potential hazards associated with paediatric anaesthesia and have obtained practical skills in the management of such events

Core clinical learning outcome:

- Deliver safe perioperative anaesthetic care to ASA 1 and 2 children aged 5 years and over for minor elective and emergency surgery (e.g. inguinal hernia repair, orchidopexy, circumcision, superficial plastic surgery, grommets, manipulation of fractures, appendicectomy) with distant supervision

- Higher

Learning outcomes:

- Capture the maturation process by building on the knowledge, understanding and skills gained during intermediate training
- Become more independent in managing paediatric anaesthesia as demonstrated by requiring less consultant guidance and supervision
- Be competent at managing complications that arise in paediatric anaesthesia without immediate consultant support

Core clinical learning outcomes:

- Be able to resuscitate and stabilise a sick baby or child prior to transfer to a specialist centre
- Provide perioperative anaesthetic care for common surgical conditions, both elective and emergency, for children aged 3 years and older with distant supervision

Stage 2

13.9.18 Paediatric anaesthesia: key capabilities U to W

U	Provides safe general anaesthesia for ASA 1-3 children undergoing non-complex elective and emergency surgery aged 1- 5 years with direct supervision, and 5 years and above with distant supervision
V	Explains the principles of anaesthetic care for children of all ages with complex medical problems and/or requiring complex surgical procedures
W	Explains the principles of the general anaesthetic care of neonates

13.9.18.1 *Examples of Evidence*

- SLEs throughout stage of training in paediatric anaesthesia including out of hours work and experience in pre-operative assessment clinics.

Personal activities and reflections:

- simulation or other courses: paediatric anaesthesia.

13.9.18.2 *Suggested supervision level*

for ASA 1-3 children aged 1-5:

- 2a - supervisor in theatre suite, available to guide aspects of activity through monitoring at regular intervals

for children 5 years and above:

- 2b - supervisor within hospital for queries, able to provide prompt direction/assistance.

13.9.18.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

Stage 3

14.9.12 Paediatric anaesthesia: key capability N

N	Provides safe anaesthetic care for common non-complex elective and emergency surgical procedures in children aged one year and over

14.9.12.1 *Examples of evidence*

- SLEs from experience in paediatric surgery.

Personal activities and reflections:

- courses and e-Learning: scientific meeting paediatric anaesthesia.

Stage 3 (cont.)

14.9.12.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.12.3 *Cross links with other domains and capabilities*

- Perioperative Medicine and Health Promotion

14.9.13 Paediatric anaesthesia: key capability O

O	Provides emergency anaesthetic care for paediatric patients pending inter-hospital transfer to a tertiary unit

14.9.13.1 *Examples of evidence*

- SLEs.

Personal activities and reflections:

- courses and e-Learning: paediatric resuscitation.

14.9.13.2 *Suggested supervision level*

- 3 - supervisor on call from home for queries able to provide directions via phone or non-immediate attendance.

14.9.13.3 *Cross links with other domains and capabilities*

- Team Working
- Resuscitation and Transfer
- Intensive Care

Higher/ICU Trainees

- Higher trainees and ICU dual CCT trainees will be allocated a week of PICU

Sickness / Absence

- We all get sick from time to time
- Communication is key
- Must inform NIMDTA
    - DDiT-sickness@hscni.net

Swaps, AL & SL requests

- We are on a separate site and in a different Directorate to A Block. We also have no CLW Rota, and have our own Secretary (Anne Brown).

- Let us know / book any leave requests as early as possible, we will always do our best to be as reasonable as we can. (Minimum staffing is 2)

- ALL proposed changes to the rota must be emailed to Nichola, Anne and us in advance.

- anne.brown@belfasttrust.hscni.net

Finally…

- Enjoy your rotation.
- Keep in touch