Patient Controlled Analgesia - Paediatric Full Clinical Guideline - Derby Only

Ref No.:PA PCA 01/Aug 20/v007

Introduction

Patient Controlled Analgesia for acute pain management in children is now well established. PCA is safe and effective in providing post-operative pain relief in children as young as 5 years who are predicted to require more than one dose of opiate analgesia following surgery.

PCA is a technique whereby small doses of an opiate are administered "on demand" by an infusion device – Syramed PCA pump. The child self-titrates, to a satisfactory level of analgesia, which helps to minimise side effects. A bolus appropriate to the child's weight is delivered when the child activates the demand button.

The use of PCA within children's services gives the child a sense of control over their own analgesia, which also has psychological benefits.

Aim and Purpose

The aim of this guideline is to ensure that all children having PCA receive optimum care in a safe and controlled environment. Training of nursing staff is of paramount importance. Each nurse will be assessed according to the approved competency document consisting of:

- Identification of suitable children for PCA
- Understanding the PCA Protocol
- Familiarisation with the PCA machine and its alarm functions
- Understanding the monitoring protocol
- Understanding the implication of professional accountability

Keywords

Morphine
Pethidine
PCA – patient controlled analgesia

Implementing the Guideline:

Morphine is the standard opiate of choice for PCA
Pethidine should only be used for those patients known to have had previous history of problems with morphine or in whom morphine has been ineffective.

Examples of surgical cases suitable for PCA include:

- Cholecystectomy
- Bowel resections

- Splenectomy
- Prolonged orthopaedic / trauma surgery
- Appendicectomy

Examples of medical cases suitable for PCA include:

- Sickle Cell Crisis
- Henoch Schonlein Purpura
- PID

Before starting PCA

- Ensure that the child and parents have been counselled and understand both the technique and the operation of the demand button. Information leaflets are available.

Only the child must operate the button

Pump set-up

- The PCA pump should be set up in the recovery/ward area by the anaesthetist, paediatric acute pain team or PCA trained practitioner in recovery. The pump settings should be checked and the pump should be connected to the patient by an anaesthetist or member of the acute pain team.
- Complete the paper PCA prescription and electronic treatment chart
- Commence the PCA pain chart
- Check PCA settings, 1ml check and document on handover or after set up on the ward.
- The PCA checklist will help to ensure all items are complete

On the Ward

- Repeat checks at each handover.
- Connect the child to a pulse oximeter
- Change the syringe as per guidelines (appendix 8)
- Encourage mobilisation as much as possible - sitting out or walking to the bathroom (pulse oximetry can be suspended while the patient is walking under supervision)

Minimum standard for PCA Observations

Hourly recordings of:

- Pain score
- Sedation score
- Nausea & vomiting score
- Respiratory rate
- O_2saturation
- Pump Volume
- Patient bolus
- Refused bolus
- Total PCA dose (ml)

Discontinuing PCA:

- The need for continuing PCA should be reviewed 12hrly - please use your clinical judgement.
- The child should be able to tolerate oral analgesia.
- Fewer than 2 boluses per hour suggest that PCA can be discontinued. Remove the button and review pain relief required over 4hrs.
- Make sure that there is adequate breakthrough oral analgesia prescribed (in addition to regular simple analgesia)

- Dispose of any remaining morphine/pethidine as per medicines code
- Clean and return the pump to the equipment library

References

Handbook on Injectable Drugs, Trissel L.A

Twycross A, Dowden SJ, Bruce E (eds) (2009) Managing Pain in Children: A clinical guide Pg's 120-122

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Yildz, K. Tercan, E. Dogru, K. Ozkan, U. Boyaci, A. (2003)
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Paediatric Anaesthesia Vol 13: pp 427- 431

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Documentation Controls

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Appendices

Appendix 1	Paediatric PCA pain observation chart and guidelines for the use of the PCA observation chart
Appendix 2	Paediatric morphine PCA prescription
Appendix 3	Paediatric pethidine PCA prescription
Appendix 4	Pump set up guide
Appendix 5	PCA quick guide for patients under 48kgs & over 48kgs
Appendix 6	Morphine/pethidine compatibility information
Appendix 7	Common side effects of morphine and how to manage them
Appendix 8	Provision of Morphine/Pethidine Syringe
Appendix 10	PCA Core Care Plan
Appendix 11	Information for Parents & Children Using Patient Controlled Analgesia (PCAS)
Appendix 12	PCA handover checklist
The following appendices are NOT contained within this guideline, see separate documents on intranet	
Appendix 9	Patient Controlled Analgesia (PCA) Training Package (revised August 13)
Appendix 9	Patient Controlled Analgesia (PCA) Reassessment Pack (revised August 13)

Appendix 1

DIVISION OF INTEGRATED CARE - PAEDIATRICS

PAEDIATRIC PCA PAIN OBSERVATION CHART – RDH Site only

Record Pump Maintenance No. (yellow sticker)

DATE	TIME																							
Pain score																								
Sedation score																								
Nausea & vomiting score																								
Respiratory rate																								
Oxygen saturation																								
Patient bolus																								
Refused bolus																								
Physician bolus*																								
Pump volume																								
Please Record Amount: Primed : mls 1ml Check Complete Other interventions																								
Initial																								

PAIN SCORE	NO PAIN	0
	HURTS A LITTLE	1
	STARTING TO HURT A LOT	2
	HURTS A LOT	3
SEDATION SCORE	FULLY AWAKE	0
	DROWSY EASILY ROUSABLE	1
	DIFFICULT TO ROUSE	2
	ASLEEP	S
NAUSEA & VOMITING SCORE	NO NAUSEA	0
	NAUSEATED	1
	NAUSEA & VOMITING	2

Assess pain after deep breathing, coughing or movement. Score the worst value obtained.
Check pain corresponds to wound pain. If inadequate pain relief check for a full bladder
At all times consider other measures that may help the child's pain/ discomfort; e.g. parental presence, sips of fluid, cuddling, stroking, repositioning, distraction with toys

ADDRESSOGRAPH LABEL

*Physician bolus will appear if the patient demand is interrupted on administration (for example if the syringe is empty or the bolus is paused by staff). The pump will ask if the bolus is to continue as a Physician bolus. If this bolus is completed it will be recorded on the pump as a Physician bolus as well as a patient bolus, as it will have been re-commenced by staff.

GUIDELINES FOR THE USE OF THE PCA OBSERVATION CHART

- **A new observation chart must be used every 24 hours**

- Check PCA prescription with pump settings in theatre recovery/ward setup, on arrival on the ward and at each shift handover
- Monitor Oxygen Saturations continuously (unless the child is mobilising and accompanied)
- Observations to be recorded hourly

Call T1/ Pain Nurse /PAED SHO if: Pain Score 3 for 2hrs
Problem with the pump

TREATING RESPIRATORY DEPRESSION

Observations	Actions
Respiratory rate < 8/min, Sedation Score 2 & Oxygen Saturations <90%	➢ Stop infusion, call for help ➢ ABCDE & administer Oxygen ➢ Call T1 / PAED SHO immediately

PREPARE NALOXONE: **(MEDICAL STAFF ONLY)**

0.4mg/ml dilute to 10mls with 0.9% Sodium Chloride
Final Concentration 40 micrograms/ml
Give 1 microgram/kg every 2-3min until respirations and/or conscious level is satisfactory

REMEMBER NALOXONE REVERSES ANALGESIA AND SEDATION AS WELL AS REVERSING RESPIRATORY DEPRESSION

Appendix 2

PAEDIATRIC MORPHINE PCA PRESCRIPTION

PLEASE COMPLETE ALL SECTIONS

NAME:

ADDRESS:

DOB HOSP. NO.

WARD: ……

SURGEON: ……

OPERATION: ……..

ANAESTHETIST: ……

WEIGHT……Kg

PCA prescription and syringe preparation:

- **Initial syringe may be prepared by Pharmacy (24hours)**
- **To avoid delays, the anaesthetist may prepare.**
- **Subsequent syringes to be prepared by Pharmacy**

Choose	Patient weight	PCA programme	Morphine to be added to syringe	0.9% Saline volume	Calculate final concentration
	<48kg	Paed under 50kg	1mg/kg	50mls	20mcg/kg/ml ……..
	≥48kg	Paed over 50kg	Use pre-prepared 50mg/50ml syringes from recovery		1mg/ml
Bolus lockout is 5 mins.			Bolus dose is 1mg/ml ≥48kg		20mcg/kg for <48kg
Prescribed By			Name		Date and time

Complete and sign 1st syringe label if made up out of hours

Syringe batch no or anaesthetist	Date and time of set up or syringe change	Check sign 1	Check sign 2

DO NOT GIVE OPIOIDS BY ANY OTHER ROUTE WHILE PCA IS IN PROGRESS

PTO FOR IMPORTANT INFORMATION

Appendix 2

Naloxone

- Prescribe simultaneously with morphine PCA in case of respiratory depression.
- Recommended dose: 5mcg/kg, given in increments of 1mcg/kg until respiratory depression reversed.

Monitoring

- Complete the paediatric PCA pain observation chart, hourly.

Prescribing

- Prescribe the PCA Morphine and Naloxone on Lorenzo
- See PCA folder for details.
- Remember adjuvant analgesia.

ALL PATIENTS BEING NURSED IN PAEDIATRIC AREAS MUST BE ON A PAEDIATRIC PCA PROGRAMME

PCA QUICK GUIDE FOR PATIENTS UNDER 48KGS - USE THE PAED UNDER 50KG PROGRAMME

The first syringe can be made up in theatre by the anaesthetist if there is delay anticipated in obtaining the syringe from pharmacy. All syringes made up by the anaesthetist must be clearly labelled and will expire after 24hrs.

The recovery staff, anaesthetist or acute pain nurse may set up and programme the PCA pump

The PCA must be connected to the child and the 1ml check performed` by the anaesthetist or the paediatric acute pain team. The 1ml check ensures that the pump programming has been done correctly – pressing the button will dispense only 1 ml from the pump if the values input are correct

The programme on the pump and the concentration in the syringe must be the same as on the prescription form.

The maintenance number from the yellow sticker on the pump should be recorded on the pain chart (right top corner)

The pressures must be set at 450mmHg or below

The **CHILD'S WEIGHT MUST** be correctly entered on the pump

The **DOSE CONCENTRATION MUST** be changed as per the patients prescription chart

The child must have an infusion of appropriate IV Fluids running via a Baxter pump at a minimum of 15mls/hr if they don't already have maintenance fluids running

IV fluids must be attached to the dedicated PCA line to prevent siphoning of the morphine. An octopus may be added if required.

The pump volume is checked every hour on the paediatric wards as a safe guard and needs to be checked at handover of the PCA to the ward nurse

Paracetamol & NSAID (if not contraindicated) should always be prescribed regularly (IV/PR if necessary). Please prescribe PRN anti-emetics such as Ondansetron & Buccastem / Stemetil

Naloxone must be prescribed for **ALL** paediatric patients using PCA

Handover to Ward staff

The nurse from the ward will check all of the above and will not be able to receive the PCA if the guidelines have not been adhered to. You must sign the Pain Assessment chart and checklist with the ward nurse when handover is complete and you are both happy that everything is in order. This is an important safeguard to pick up any errors from the outset

Appendix 3 **PAEDIATRIC PETHIDINE PCA PRESCRIPTION**

NAME:

ADDRESS:

DOB HOSP. NO.

WARD: ……

SURGEON: ……

OPERATION: ……..

ANAESTHETIST: ……

WEIGHT……Kg

PCA prescription and syringe preparation:

- **Initial syringe may be prepared by Pharmacy (24hours)**
- **To avoid delays, the anaesthetist may prepare.**
- **Subsequent syringes to be prepared by Pharmacy**

Choose	Patient weight	PCA programme	Pethidine to be added to syringe	0.9% Saline volume	Calculate final concentration
	<48kg	Paed under 50kg	10mg/kg	50mls	200mcg/kg/ml ……
	≥48kg	Paed over 50kg	500mg	50mls	1mg/ml
Bolus lockout is 5 mins.		Bolus dose is 10mg/ml if over 48kg			200mcg/kg for <48kg
Prescribed By			Name		Date and time

Complete and sign 1st syringe label if made up out of hours

Syringe batch no. or anaesthetist	Date and time of set up or syringe change	Check sign 1	Check sign 2

DO NOT GIVE OPIOIDS BY ANY OTHER ROUTE WHILE PCA IS IN PROGRESS

PTO FOR IMPORTANT INFORMATION

Appendix 3

Naloxone

- Prescribe simultaneously with Pethidine PCA in case of respiratory depression.
- Recommended dose: 5mcg/kg, given in increments of 1mcg/kg until respiratory depression reversed.

Monitoring

- Complete the paediatric PCA pain observation chart, hourly.

Prescribing

- Prescribe the PCA Pethidine and Naloxone on Lorenzo
- See PCA folder for details.
- Remember adjuvant analgesia.

ALL PATIENTS BEING NURSED IN PAEDIATRIC AREAS MUST BE ON A PAEDIATRIC PCA PROGRAMME

PCA QUICK GUIDE FOR PATIENTS UNDER 48KGS - USE THE PAED UNDER 50KG PROGRAMME

The first syringe can be made up in theatre by the anaesthetist if there is delay anticipated in obtaining the syringe from pharmacy. All syringes made up by the anaesthetist must be clearly labelled and will expire after 24hrs.

The recovery staff, anaesthetist or acute pain nurse may set up and programme the PCA pump

The PCA must be connected to the child and the 1ml check performed` by the anaesthetist or the paediatric acute pain team. The 1ml check ensures that the pump programming has been done correctly – pressing the button will dispense only 1 ml from the pump if the values input are correct

The programme on the pump and the concentration in the syringe must be the same as on the prescription form.

The maintenance number from the yellow sticker on the pump should be recorded on the pain chart (right top corner)

The pressures must be set at 450mmHg or below

The **CHILD'S WEIGHT MUST** be correctly entered on the pump

The **DOSE CONCENTRATION MUST** be changed as per the patients prescription chart

The child must have an infusion of appropriate IV Fluids running via a Baxter pump at a minimum of 15mls/hr if they don't already have maintenance fluids running

IV fluids must be attached to the dedicated PCA line to prevent siphoning of the morphine. An octopus may be added if required.

The pump volume is checked every hour on the paediatric wards as a safe guard and needs to be checked at handover of the PCA to the ward nurse

Paracetamol & NSAID (if not contraindicated) should always be prescribed regularly (IV/PR if necessary). Please prescribe PRN anti-emetics such as Ondansetron & Buccastem / Stemetil

Naloxone must be prescribed for **ALL** paediatric patients using PCA

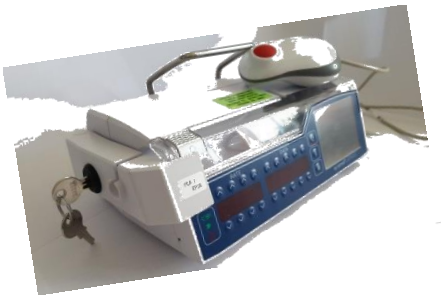
Handover to Ward staff

The nurse from the ward will check all of the above and will not be able to receive the PCA if the guidelines have not been adhered to. You must sign the Pain Assessment chart and checklist with the ward nurse when handover is complete and you are both happy that everything is in order. This is an important safeguard to pick up any errors from the outset

Appendix 4

Setting and programming the Syramed PCA Pump

Paed <50kg Morphine



1. Unlock and move locking arm to the side, then open the front panel and barrel clamp.
2. Place the full syringe with line attached into the syringe canal, close barrel clamp and front panel.
3. Press and hold the blue icon on the Touchscreen as prompted, until the screen changes.
4. Confirm ‘Plastipak 50ml’ using the
5. Press and hold the key to prime the line, then press
6. Using the Touchscreen select the “Childrens” folder, then select the programme Paed <50kg Morphine
7. Enter the “Set-up” Password using the DATA window Chevrons, then confirm.
8. Enter concentration amount in **mcg/ml** using the DATA window chevrons as per the patient’s prescription/weight (20mcg/kg/ml), then confirm ***i.e.:*** *if the Child is 25 kg, the concentration should be 500mcg/ml* – **the pump WILL NOT do this for you** - if incorrect the wrong dose **will** be given.
9. Enter the weight used to calculate the above and confirm
10. Confirm the Patient Bolus dose of 20mc/kg
11. Confirm 0:05h (5min) Lockout Time
12. Check the screen and press
13. http://flo/EasySiteWeb/GatewayLink.aspx?alId=486377

Appendix 5

ALL PATIENTS BEING NURSED IN PAEDIATRIC AREAS MUST BE ON A PAED PCA PROGRAMME

PCA QUICK GUIDE FOR PATIENTS UNDER 48KGS

Use the PAED under 50kg Programme

The first syringe can be made up in theatre by the anaesthetist if there is delay anticipated in obtaining the syringe from pharmacy. All syringes made up by the anaesthetist must be clearly labelled and will expire after 24hrs.

The recovery staff or the anaesthetist may set up and programme the PCA pump

The PCA must be connected to the child and the 1ml check performed` by the anaesthetist or the paediatric acute pain team.

The programme on the pump and the concentration in the syringe must be the same as on the prescription form.

The maintenance number from the yellow sticker on the pump should be recorded on the pain chart (right top corner)

The pressures must be set at 450mmHg or below

The **CHILD'S WEIGHT MUST** be correctly entered on the pump

The **DOSE CONCENTRATION MUST** be changed as per the patients prescription chart

The child must have an infusion of the appropriate IV Fluids running via a Baxter pump at a minimum of 15mls/hr if they don't already have maintenance fluids running

IV fluids must be attached to the dedicated PCA line to prevent siphoning of the morphine. An octopus may be added if required.

The pump volume and boluses are checked every hour on the paediatric wards as a safe guard and needs to be checked at handover of the PCA to the ward nurse

Paracetamol & NSAID (if not contraindicated) should always be prescribed regularly (IV/PR if necessary). Please prescribe PRN anti-emetics such as Ondansetron & Buccastem / Stemetil

Naloxone must be prescribed for **ALL** paediatric patients using PCA

Handover to Ward staff

The nurse from the ward will check all of the above and will not be able to receive the PCA if the guidelines have not been adhered to. You must sign the Pain Assessment chart and checklist with the ward nurse when handover is complete and you are both happy that everything is in order. This is an important safeguard to pick up any errors from the outset

Appendix 5 (CONT)

ALL PATIENTS BEING NURSED IN PAEDIATRIC AREAS MUST BE ON A PAED PCA PROGRAMME

PCA QUICK GUIDE FOR PATIENTS OVER 48KGS

Use the PAED over 50kg programme and standard 50mg/50ml morphine syringes. Pethidine syringes need requesting from pharmacy

The recovery staff or the anaesthetist may set up and programme the PCA pump

The PCA must be connected to the child by the anaesthetist or acute pain team.

The programme on the pump and the concentration in the syringe must be the same as on the prescription chart.

The maintenance number from the yellow sticker on the pump should be recorded on the pain chart (right top corner)

The pressures must be set at 450mmHg or below

The child must have an infusion of the appropriate IV Fluids running via a Baxter pump at a minimum of 15mls/hr if they don't already have maintenance fluids running

IV fluids must be attached to the dedicated PCA line to prevent siphoning of the morphine. An octopus may be added if required.

The pump volume and boluses are checked every hour on the paediatric wards as a safe guard and needs to be checked at handover of the PCA to the ward nurse

Paracetamol & NSAID (if not contraindicated) should always prescribed regularly (IV/PR if necessary). Please prescribe PRN anti-emetics such as Ondansetron & Buccastem / Stemetil

Naloxone must be prescribed for **ALL** paediatric patients using PCA

Handover to Ward staff

The nurse from the ward will check all of the above and will not be able to receive the PCA if the guidelines have not been adhered to. You must sign the Pain Assessment chart and checklist with the ward nurse when handover is complete and you are both happy that everything is in order. This is an important safeguard to pick up any errors from the outset

Appendix 6

Morphine/Pethidine Compatibility Information

Drug	Morphine	Pethidine
Crystalloids • Sodium chloride 0.9% • Glucose 5% • Glucose 10% • Sodium chloride 0.18%, glucose 4% • Sodium chloride 0.45%, glucose 5% • Potassium infusions	Yes to all	Yes to all
Antibiotics • Benzylpenicillin • Cefuroxime • Metronidazole • Flucloxacillin	 Yes Yes Yes No	 Yes Yes Yes No
Antiemetics • Cyclizine • Ondansetron	 Yes Yes	 No Yes

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Appendix 7

Common side effects of opiates and how to manage them

When assessing the child for adequate pain relief, assessment should also be carried out for adverse effects.
The Derbyshire Pain Chart requires documentation of "scores" for nausea and drowsiness.
The table below suggests possible management strategies for these and other side effects of morphine:

Side effect	Management options
Nausea and/or vomiting	Anti-emetics according to PONV protocol i.e. • Ondansetron 0.1mg/kg IV (max 4mg) • Cyclizine 0.75mg/kg IV (max 50mg) Nurses are able to administer both of these drugs IV
Respiratory depression	• Call T1 according to PCA policy • Naloxone IV should be given by a Dr according to PCA policy Note that naloxone will also reverse the analgesic effect of morphine as well as respiratory depression
Itching (due to morphine-induced release of histamine)	• Chlorpheniramine (Piriton) may be given PO or IV (IV should only be necessary if oral not yet tolerated) • Doses should be prescribed using Medicines for Children
Urinary Retention	Call Paed SHO to assess Encourage oral fluids if tolerated Consider Catheterisation

Appendix 8

Provision of Morphine/Pethidine Syringe

Provision of Morphine/Pethidine Syringe

- Pharmacy to prepare all syringes - it is a 24 hour service
- The anaesthetist in theatre may prepare the first syringe if pharmacy is unavailable or it is likely to result in a delay. This ensures that the syringe is available in Recovery when required, avoids the need for the PCA prescription form to be removed from Theatre (for pharmacy use)
- The standard 50mg/50ml morphine syringes must be ordered from main pharmacy in the CD book and entered in the Ward CD register on receipt.

"Life" of Morphine/Pethidine Syringe

- Syringes prepared by the pharmacy and ready-made syringes may be used for up to 72 hours, provided the expiry date on the label has not been reached.
- Syringes prepared by anaesthetists may only be used for up to 24 hours.
- 2 qualified nurses may discard partially used syringes on the Ward. This must be recorded in the Ward CD register on a different basis to the morphine syringes e.g. separate pages for "wasted morphine".

Giving Sets

- As for other standards giving sets, the anti-syphon giving set used for PCA may be used for up to 72 hours. A 96 hour filter should not be attached to the giving set. The sets can be obtained form pharmacy.

Appendix 10

PCA Core Care Plan

ACTUAL/POTENTIAL PROBLEM	ACTION	NURSE DATE/TIME SIGNATURE
…… is having Patient Controlled analgesia.	At each handover, check the PCA prescription, all pump settings and sign on the PCA observation chart and evaluation sheet. Ensure that …….. is aware of how and when to safely use the pump. Parents have been told that only ……. Can press the button Continuously monitor oxygen saturations. Record pulse and respirations hourly if ……. shows signs of respiratory depression act accordingly within PCA guidelines Assess and chart PCA totals and pump volumes hourly. Patient Bolus Refused bolus Physician bolus Assess and record pain score hourly. Administer regular oral/PR/iv analgesia as prescribed and record effect. Refer …….to T1/SHO/Pain nurse specialist if analgesia is not effective as per guidelines. Record any non-pharmacological interventions to relieve pain	

Appendix 11

INFORMATION FOR PARENTS & CHILDREN UNDERGOING PATIENT CONTROLLED ANALGESIA (PCAS)

PCAS has been recommended to help control your child's pain and discomfort. A separate sheet for children has been written and will be given to your child to read. PCAS is short for Patient Controlled Analgesia System. This means that, under close supervision, your child will be able to administer their own pain killers without having to have an injection in their arm or having to wait. Many children's hospitals are now using this system after operations and for some medical conditions.

A dilute solution of morphine; the pain killing drug, is placed in a syringe and locked into the machine; the machine is connected to your child's "drip" (intravenous infusion). When your child presses the button your child is able to administer a small controlled dose of the drug instantly, thus obtaining swift pain relief. On return from Theatre your child will have been connected to the PCAS machine in the Recovery Department; if the pump has been set up on the ward it will be available immediately. As soon as your child is able, they will be encouraged to press the PCAS button if they are experiencing any pain. The Nurse looking after your child will be assessing their pain by asking them: "does it hurt a bit; quite a bit; hurts a lot?" This will enable them to establish whether your child requires extra pain killers.

IMPORTANT INFORMATION:

1. After your child has pressed the button the machine "switches off" (lockout) for a period of time, this is to ensure that your child does not receive too much morphine over a short period of time

2. No-one is able to tamper with or alter any of the settings unless they have a key to unlock the machine.

3. Your child will be very closely monitored by the Ward staff and by the Hospital's Acute Pain Service whilst they are using the PCAS.

4. If the PCAS does not help your child's pain then alternative medication will be used to control their pain as quickly as possible.

5. ONLY THE CHILD SHOULD PRESS THE BUTTON. An important safety aspect of PCA relies on your child being awake enough to press their button. The reason for stressing this point is that morphine can make your child very drowsy and if other people are pushing the button for them, for example when they are asleep, it may slow down their breathing and potentially overdose the child. If he/she has 'lost it' in the bed you can help them find it but only your child must press the button. This should be explained to brothers and sisters who may visit.

PCAS is a safe and efficient way of controlling acute pain and the ward nurses are proficient in its use with children, please ask any questions or concerns that you may have at any time during your child's use of PCAS

Appendix 12

Paediatric PCA Handover/Set up Checklist

	Anaesthetist Setup Signature	Ward/recovery Setup	Handover Signature
PAED programme used			
Child's weight entered correctly if <48kg			
Opiate Concentration correct if wt <48kg			
Check syringe label and record volume remaining in syringe after setup			
Pressures 450mmHg or below			
2 port extension used with PCA line			
1 ml check performed			
Naloxone prescribed			
PCA prescribed on prescription form and Lorenzo/paper prescription chart			
Anti-emetics prescribed regularly and PRN			
Regular paracetamol (PO/IV) +/- NSAID's as appropriate			
IV fluids via Baxter pump			
Pump maintenance number on pain chart			