

PATIENT and NURSE CONTROLLED ANALGESIA INFUSION OXYNORM



PATIENT CONTROLLED ANALGESIA			
PCA STANDARD INFUSION	Children aged ≥ 7 , Weight >5kg and < 50kg		Children ≥ 50kg
Opioid Dilution	1mg/kg Oxycodone made up to a total of 50 ml in Sodium Chloride 0.9% or 5% Glucose		50mg Oxycodone made up to a total of 50ml in Sodium Chloride 0.9% or 5% Glucose
Concentration	20 microgram/kg/ml		1mg/ml
Loading Dose	50 or 100microgram/kg (2.5 or 5ml) Administered over 5mins with Respiratory and SaO2 monitoring.		50 or 100microgram/kg (max 5mg) (2.5 or 5ml) Administered over 5mins with Respiratory and SaO2 monitoring.
Background Infusion	0.2, 0.5, 1ml/hr 4, 10, or 20 microgram/kg		0, 0.2, 0.5 or 1ml/hr (0 , 0.2, 0.5 or 1mg/hr)
Bolus Dose**	10 or 20 microgram/kg 0.5 or 1ml		1 or 2ml (1mg or 2mg)
PCA Bolus time	2 or 5 minutes		2 or 5minutes
Lockout time	5 or 10 minutes		5 or 10 minutes
Maximum 4 hourly Dose	400 microgram/kg (20ml)		20mgs (20ml)
NURSE CONTROLLED ANALGESIA			
NCA STANDARD INFUSION	Neonates & Infants <5Kg *Oxycodone is not recommended for use in neonates* Consultant order only	Children Weight more than 5kg and less than 50kg	Children weight>50kg
Opioid Dilution	0.5mg/kg Oxycodone made up to total of 50 ml in glucose 5% or Sodium chloride 0.9%	1mg/kg Oxycodone made up to total 50 ml in Sodium chloride 0.9% or Glucose 5 %	50mg oxycodone made up to total 50ml in Sodium chloride 0.9% or Glucose 5 %
Concentration	10 microgram/kg/ml	20 microgram/kg/ml	1mg/ml
Loading Dose	20-50microgram/kg (2 to 5ml) Max dose 100microgram/kg	50 or 100microgram/kg (2.5 or 5ml) Administered over 5mins with Respiratory & SaO2 monitoring.	50 or 100microgram/kg (max 5mg) (2.5 or 5ml) Administered over 5mins with Respiratory & SaO2 monitoring.
Background Infusion	0, 0.5 or 1ml/hr (0 , 5 or 10 microgram/kg/hr)	0, 0.2, 0.5, 1ml/hr (4, 10, or 20 microgram/kg)	0, 0.5 or 1ml/hr (0 , 0.5 or 1mg/hr)
Bolus Dose**	0.5 to 1ml (5 to 10microgram/kg)	0.5 to 1ml (10 or 20 microgram/kg)	1 or 2ml (1 or 2mg)
NCA Bolus time	2 or 5 minutes	2 or 5minutes	2 or 5minutes
Lockout time	20 or 30 minutes	15 or 20 minutes	15 or 20 minutes
Maximum 4 hour dose	200 microgram/kg (20ml)	400 microgram/kg (20ml)	20mg (20ml)

- This guide is intended for use in children who are opioid naïve. Children who have been on oral opioids e.g. MST, Oxycontin, fentanyl patch; or children with conditions associated with severe pain, (sickle cell disease, cancer, severe burn) may have higher opioid requirements.
- ** if a child requires ≥ 3 boli/hour for 2 consecutive hours, increase background infusion or contact pain service
- Paracetamol, NSAID and Clonidine can be given along with IV opioids if there are no contraindications.
- An Anti-emetic should be prescribed for patients receiving opioid infusions.
- An Antihistamine can be given to treat opioid induced Itch.
- If pain is not controlled. Seek support from CNS Acute Pain, bleep 8300 or Anaesthetist on call, bleep 8528.

PATIENT and NURSE CONTROLLED ANALGESIA INFUSION OXYNORM



General Instructions

- No supplementary opiates unless ordered by the Anaesthetist, palliative care or Pain service
- Line for IV opiates should be exclusive or an anti-reflux valve (protect-a-line 2) must be used
- Maintain IV access during pain management.
- Treatment of:
- **Inadequate analgesia** Call Pain service on bleep 8300 or 8528 out of hours
- **Nausea and Vomiting** Antiemetic's, Ondansetron as prescribed
- **Itching** Anti-histamine or low dose naloxone
- **Over Sedation** ≥ 3 See sedation scale
- **Respiratory depression** Stimulate child, give oxygen, stop infusion, call medical team /anaesthetist.
Give naloxone 2 microgram/kg IV prn. Repeat every 1-2 minutes (max 5 doses)
- **Resuscitation:** (minimal respirations, sedation score ≥ 4 , cardiorespiratory arrest):
Naloxone: 10 microgram/kg IV PRN. Repeat every 1-2minutes (maximum 200microgram or 5 doses) **N .B. Naloxone has a relatively short half-life respiratory rate may drop again even though infusion has been stopped.**
- **Urinary retention** Naloxone low dose > 1month: 1microgram/kg stat (max daily dose 200microgram).
If this fails insert urinary catheter

Sedation

Sedation score > 3 (University of Michigan Sedation Scale BJA, 2002; 88(2): 241-5

Sedation score > 3 (University of Michigan Sedation Scale BJA, 2002; 88(2): 241-5

- **0** = Awake and alert
- **1** = Minimally sedated ("drowsy" may appear tired/sleepy, responds to verbal conversation and/or sounds)
- **2** = Moderately Sedated (sleepy, moves spontaneously, easily aroused to stimulation or verbal command)
- **3**= Deep sedation (deeply asleep, arousable only with deep or significant physical stimulation).
 - **Stop infusion until level returns to 2.**
- **4** =Unrousable to stimulation. **Stop infusion, stimulate patient, administer oxygen, Call 2222**
- **S**= patient sleeping

Analgesic Interventions

0:	No Pain	
1-3:	Mild Pain	NCA: Give bolus 10 minutes before activity. PCA: encourage bolus 10 minutes before activity
4-6:	Moderate Pain	NCA: Give Bolus. PCA: encourage bolus
7-10:	Severe Pain	NCA or PCA: Pain uncontrolled with 3 boli/hr & adjunctive analgesia. Contact Pain Service

Nausea and Vomiting

- 0: No vomit
- 1: Nausea
- 2: Vomit
- 3: Vomit more than 3 in last hour

ITCH

- 0: No Itch
- 1: slight
- 2: Moderate
- 3: Severe

Sample prescription

child weight 35kg

PCA Oxynorm 35mgs made up to total of 50mls in Glucose 5%

1ml=700microgram (20microgram/kg/ml) $35 \times 1000 \div 50 = 700$

PCA: 1ml (20microgram/kg)

Lockout 6 to 12 minutes

Continuous infusion: zero to 1ml/hr. Start at: 0.2ml/hr (4microgram/kg/hr)

Maximum 4 hourly dose: 400microgram/kg 20mls