

PCA Policy – Administration of Morphine, Fentanyl or Oxycodone via an Intravenous (IV) Patient Controlled Analgesia (PCA) System in Adults Policy

		POLICY	
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Approving Body	Anaesthetic Clinical Governance Group		
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For publication to external SFH website	Positive confirmation received from the approving body that the content does not risk the safety of patients or the public:		
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	X		
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Sponsor (Position)	Service Director for Anaesthetics, Critical Care and Pain Management		
Author (Position & Name)	Clare Burton – Pain Management Nurse Consultant & HOS for Acute Pain		
Lead Division/ Directorate	Surgery, Anaesthetics and Critical Care		
Lead Specialty/ Service/ Department	Anaesthetics Service Line/ Pain Management		
Position of Person able to provide Further Guidance/Information	Pain Management Nurse Consultant – HOS for Acute Pain		

Associated Trust Documents/ Information	Date Associated Documents/ Information was reviewed
1. Acute Pain Prescription Chart	August 2018
Other Associated Documents	
1. Cadd Solis Quick Guide	User Guide – Hyperlinked to Pain Management Intranet Site
2. CADD Solis Operator's Manual	User Guide – Hyperlinked to Pain Management Intranet Site
Template control	June 2020

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1.0 INTRODUCTION

IV PCA is an effective analgesia maintenance regimen for post-operative pain management and/or the management of pain caused by traumatic injury or acute flare of disease. PCA allows the patient to have more control over their opioid analgesia and often avoids peaks and troughs in peak plasma concentration which can occur with bolused IM or SC administration.

IV PCA has been found to save on nursing time and empowers patients to self- manage pain: this in turn can lead to greater patient satisfaction. Caring for patients with IV PCA requires specialist knowledge and training of the bolus only infusion pumps and awareness of potential side effects and/ or complications.

In the interest of patient safety, IV PCA should not be used concomitantly with PCEA unless in a critical care environment or in specialist circumstances only under the strict direction of the Pain Team.

“The complexities associated with prescribing, preparing and administering injectable medicines mean that there are greater potential risks for patients than for other routes of administration. Weak operating systems increase the potential risk of harm, and a safe system of work is needed to minimise these risks”(NPSA, 2008).

2.0 POLICY STATEMENT

This policy aims to establish standards of safe practice for adult patients using an IV opioid PCA and identifies which members of staff can prescribe an IV opioid PCA and use the associated equipment. In addition the policy specifies the level of training the practitioner must complete: its place is to ensure the highest standard of care delivery to patients. Failure to comply with this policy may be regarded as misconduct and dealt with in accordance with the Trust's disciplinary procedures and potentially the practitioner's regulatory body.

All registered healthcare professionals as defined in this policy can check IV opioids in accordance with their professional registration, but they are prevented from administering this medication unless they have received the Trust's IV medicines administration training relevant to their area of practice (RD04/RD04.4/RD05).

2.1 This clinical policy applies to:

2.1.1 Staff group(s):

- Appropriately trained registered nurses (RN)
- Appropriately trained registered midwives (RM)
- HCPC registered operating department practitioners (ODP)
- Anaesthetists

2.1.2 Clinical area(s):

- ICCU
- Main & Day Case Theatres/ Theatre Recovery (Kings Mill only)
- Wards 11,12,14,14b,31,32 & 33
- Sherwood Birthing Unit & Maternity Ward

2.1.3 Patient group(s):

- Adult patients following major surgery or surgery that has resulted in severe symptoms of pain.
- Adult patients with severe acute pain following traumatic injury or disease.
- Maternity patients post Caesarean section with severe symptoms of pain.

2.1.4 Exclusions:

- Patients who lack mental or physical capacity needed to use the equipment (self - administration button).
- Patients with severe intolerance to morphine, fentanyl or oxycodone.
- Labouring patients requiring a Remifentanil PCA (please refer to Remifentanil PCA in Obstetrics Policy and associated supplementary Remifentanil PCA Prescription Chart).
- Patients under the age of 16 years old (please refer to Morphine PCA in Paediatrics)

3.0 DEFINITIONS/ ABBREVIATIONS

Trust	Sherwood Forest Hospitals NHS Foundation Trust
Staff	All employers of the Trust including those managed by a third party on behalf of the Trust
NRFit	Non-luer connection device
mL	Millilitre
mg	Milligram
TDS	Three times a day
QDS	Four times a day
PRN	As required
IV	Intravenous
PR	Per rectum
PO	Per oral
CVAD	Central venous access device
NG	Nasogastric tube
PCA	Patient controlled analgesia
PCEA	Patient controlled epidural analgesia
NEWS	National Early Warning Score
APPC	Acute Pain Prescription Chart
SOC	Specialist Observation Chart
ACCU	Adult Critical Care Unit
SBU	Sherwood Birthing Unit
NSAID	Non-steroidal anti-inflammatory drug
VIP	Visual inflammatory phlebitis
EIA	Equality Impact Assessment
NC	Nerve Centre
eGFR	Estimated glomerular filtration rate
ACVPU	Alert, Confused, Voice, Pain, Unconscious
ePMA	Electronic Prescribing and Medicines Administration
NMP	Non-medical prescriber
Speciality NMP's (for this Policy)	Prescribing pain nurse specialists/ consultant, ACCU advanced nurse practitioners, Critical Care Outreach Team NMPs & advanced pharmacist for SACC
SACC	Division of Surgery, Anaesthetic & Critical Care

4. ROLES AND RESPONSIBILITIES

4.1 Responsibilities of the anaesthetist:

- To be conversant with this policy and access informal pump training if required via the Pain Team, Theatre Recovery Team or medical equipment training facilitator; ensuring competent use of the **grey** CADD Solis IV PCA pump and associated equipment.
- To discuss the IV PCA with the patient to establish patient compliance, physical and mental capacity to use the system and any sensitivity to the prescribed opioid.
- To prescribe the required IV opioid PCA on the Trust APPC (paper copy) and add 'Acute Pain Prescription Chart' onto EMPA via 'Paper Supplementary Chart', annotating the opioid used.
- To ensure awareness of the patient's post-operative progress.
- The 1st on-call anaesthetist will support clinical areas with setting up PCA infusions and troubleshooting during unsocial hours.
- To ensure that the IV saline flush section on the Medicines Chart/ ePMA is signed and dated.

4.2 Responsibilities for the Registered Nurse/ Midwife/ ODP:

- To be conversant with this policy.
- Access training and be assessed as competent in the use of the **grey** CADD Solis IV PCA pump and associated equipment.
- To ensure that mandatory patient observations are undertaken, documented and reviewed as dictated in the policy.
- Appropriately respond to and escalate untoward events.
- To ensure that the correct preparation of opioid medicine is running as per prescription.
- To observe and maintain patency of peripheral or central IV access.
- If a 'speciality NMP' as outlined above, prescribe the required IV opioid PCA on the Trust APPC.

4.3 Responsibilities for Ward sister/ Charge Nurses/ Department Leaders:

- To act as excellent role models and be responsible and accountable for the policy implementation within their clinical areas.
- To monitor standards of best practice associated with this policy.
- To ensure that all registered practitioners within the sphere of their responsibility has access to and promptly attends the required formal training in order to develop skills and competence in caring for patients with IV PCA. This will include ensuring completion of associated training packages and medical equipment competency documents.

- To ensure that all registered practitioners accountable to them are aware of this policy and adhere to its statement.

4.4 Responsibilities of Pharmacists:

- To monitor prescribing and oversee the administration of medicinal therapies.
- To alert prescribers and other health care professionals to potential or actual problems.

4.5 Responsibilities of all above:

- To report incidents or near misses relating to IV medicines using the Trust incident reporting system (Datix).
- To gain valid consent. Patients have a legal and ethical right to determine what happens to them. Valid consent to treatment is essential and paramount when considering invasive techniques. Obtaining consent is also a matter of common courtesy between the health care professional and recipient.
- If required, counsel the patient regarding any fears they may have with using this regimen. Patients are occasionally fearful of opioid self-administration due to concerns about 'having too much' or 'addiction'.

5.0 APPROVAL

Following a period of consultation with appropriate Trust stakeholders, this policy was approved and ratified by the Anaesthetic Governance Group on 23rd July 2024

6.0 DOCUMENT REQUIREMENTS

6.1 Choosing the right opioid

When considering the use of an opioid PCA, it is imperative to recognise that this should only be used as maintenance (PRN) analgesia following a sufficient analgesic pre-load and concomitant regular analgesia (see section 6.3). For example - the use of a morphine PCA in the absence of a small but effective morphine pre-load / loading dose will not allow a peak plasma level of morphine owing to the nature of small incremental boluses delivered via PCA versus the time it takes morphine to reach a peak plasma level (around 8 hrs).

As opioid efficacy and intolerance is subjective, one opioid is not superior to another when it comes to choice – it will be patient dependant. The choice should be made considering any past experience of opioid medication, co-morbidities, and allergy status. Patients admitted on long term opioid medication for chronic pain, especially those on high doses (over 40 mg morphine equivalents per day) must maintain their usual opioid medication in addition to the PCA. Stopping high dose opioids abruptly can lead to acute withdrawal symptoms and increased pain. Advice should be sought from the Pain Team with regard to analgesia

optimisation for this patient group. A pre-op clinic is undertaken by the pain nurse specialists for patient's dependant on regular high dose opioids to manage chronic pain conditions. Recommendations for post-op analgesia plans (if applicable) can be found on a printed/highlighted form which accompanies the paper anaesthetic chart.

Fentanyl and oxycodone PCA have a faster analgesic effect than morphine as these opioids equilibrate in the brain more quickly. In studies, fewer side effects are evidenced with fentanyl and oxycodone PCA in comparison with morphine, especially in relation to opioid toxicity and opioid induced ventilatory impairment: fentanyl however is known to cause higher rates of pruritus.

Fentanyl or Oxycodone PCA are indicated for patients with poor/ reduced renal function (eGFR <50)

6.2 Prescriptions

The standard prescriptions below are internationally recommended based on trial evidence of analgesic efficacy versus side effects. Patients with a body weight <50kg should be prescribed a half dose of the standard prescription. A higher dose may be required for opioid tolerant patients.

6.2.1 Morphine

IV morphine PCA standard prescription:

- Morphine 1mg bolus with a 5 minute lockout interval - no background infusion.
- The initial prescribed dose will be determined by the prescribing anaesthetist/ speciality NMP and may differ from the standard dose.
- Changes from the initial prescription **must** be agreed by the Pain Team or 1st on-call anaesthetist and the reason for the change documented in the patient's medical notes. Any changes to the original prescription must be documented and prescribed on the APPC chart by a doctor or speciality NMP.
- Infusion bags are to be mixed by a registered practitioner under the direct observation of a second registered practitioner.
- 10mL of sodium chloride will be withdrawn from the 100mL bag and discarded prior to morphine being added.
- The infusion bag will contain morphine 100mg (10x10mg/mL ampules) in 100mL of 0.9% sodium chloride: concentration = 1mg/mL. The bag will clearly display a yellow drug additive label, which is dated and signed as per Medicines Policy. **When mixed, the morphine infusion bag will have a life of 24 hours.**

6.2.2 Oxycodone

IV oxycodone PCA standard prescription:

- Oxycodone 0.5mg bolus with a 5 minute lockout interval - no background infusion.
- The initial prescribed dose will be determined by the prescribing anaesthetist and may differ from the standard dose.
- Changes from the initial prescription **must** be agreed by the Pain Team or 1st on-call anaesthetist and the reason for the change documented in the patient's medical notes. Any changes to the original prescription must be documented and prescribed on the APPC chart by a doctor or speciality NMP.
- Infusion bags are to be mixed by a registered practitioner under the direct observation of a second registered practitioner.
- The infusion bag will contain oxycodone 50mg (5 x 10mg/mL ampules) in 100mL of 0.9% sodium chloride; concentration = 0.5mg per mL. The bag will clearly display a yellow drug additive label, which is dated and signed as per Medicines Policy. **When mixed, the oxycodone infusion bag will have a life of 24 hours.**
- If commenced in Theatre Recovery or SBU and prior to discharge from this area, the RN/RM/ODP will inform the patients residing ward/ICCU that an oxycodone PCA is insitu: this is to allow time for injectable oxycodone ampule stock to be ordered from Pharmacy (injectable oxycodone may not be routine ward stock).

6.2.3 Fentanyl

IV fentanyl PCA standard prescription:

- Fentanyl 20 microgram bolus with a 5 minute lockout interval - no background infusion.
- The initial prescribed dose will be determined by the prescribing anaesthetist or speciality NMP and may differ from the standard dose.
- Changes from the initial prescription **must** be agreed by the Pain Team or 1st on-call anaesthetist and the reason for the change documented in the patient's medical notes.
- Any changes to the original prescription must be documented and prescribed on the APPC chart by a doctor or speciality NMP.
- Infusion bags are to be mixed by a registered practitioner under the direct observation of a second registered practitioner.
- 20mL of sodium chloride will be withdrawn from the 100mL bag and discarded prior to fentanyl being added.
- The infusion bag will contain fentanyl 1000 micrograms (2 x 500 microgram/10mL ampules = 20mL total) in 100mL of 0.9% sodium chloride; concentration = 10 micrograms/mL. The bag will clearly display a yellow drug additive label, which is dated and signed as per Medicines Policy. **When mixed, the fentanyl infusion bag will have a life of 24 hours.**

- If commenced in Theatre Recovery or SBU and prior to discharge from this area, the RN/RM/ODP will inform the patients residing ward that a fentanyl PCA is insitu: this is to allow time for fentanyl 500ml ampule stock to be ordered from Pharmacy (fentanyl may not be routine ward stock).

6.3 Setting up the PCA System (See Appendix 2 for full guidance)

6.3.1 Regimen set up during non-unsociable hours (Mon- Fri 8am- 5pm)

- Immediate post-op/ post Cesarean section patients:
 - IV PCA's will be set up in Theatre Recovery / SBU by two registered practitioners.
- ICCU / ward based patients:
 - IV PCA's will be set up on ICCU by two registered ICCU practitioners.
 - Ward 31 – IV PCA will be set up on the ward by two registered practitioners (Ward 31 RNs must achieve competences to do this).
 - Maternity Ward will be supported by midwives / ODPs with PCA set up competences.
 - IV PCA set up in other ward environments (Wards 11,12,14,14b, 32and 33) will be done so by the pain nurse specialists.
- Please note that the registered practitioner setting up the PCA **must** be PCA competent, the 2nd registered checker must have (as a minimum) IV medicine administration competencies as per Trust Medicine Policy.

6.3.2 Regimen set up during un-sociable hours (evenings / weekends)

- Immediate post-op/ post Cesarean section patients and ICCU, Maternity Ward and Ward 31 based patients:
 - As per section 6.3.1.
- Ward based patients:
 - IV PCA set up in a ward environment (Wards 11,12,14,14b,32 & 33) will be undertaken by the 1st on-call anesthetist supported by an IV competent registered ward nurse or a Theatre Recovery registered practitioner (if available only) supported by an IV competent ward nurse.
- Please note that the registered practitioner setting up the PCA **must** be PCA competent, the 2nd registered checker must have (as a minimum) IV medicine administration competencies as per Trust Medicine Policy.

6.3.3 Setting up the IV PCA

- Controlled medicines should not be transferred between departments unless the required opioid is unavailable. Please check the opioid ward stock availability prior to setting up the PCA.
- Select the dedicated **grey** CADD Solis pump with a lock box marked for '*intravenous use only*' and specifically configured for IV PCA.
- Dedicated CADD Solis giving sets/infusion lines have an anti-syphon and anti-reflux valves and "Y"- extension. In the rare event that a single lumen giving set is used (without the Y connector) a double lumen anti-reflux needle free device can be attached to the end of the CADD Solis giving set / infusion line. Once primed with normal saline, the extension connector will allow a fluid management infusion to run alongside the PCA infusion into a single cannula.
- **The PCA infusion line must be labelled with a blue IV PCA sticker.** All lines must have an additional infusion line sticker denoting the date and time the infusion line was set up and the date and time the line must be changed (line change at 72 hrs.) This is due to the sterility of non-prefilled bags and medicine additives. Contact the Pain Team or 1st on-call anaesthetist if you need advice on changing the line / line priming. Line changing should occur where possible during daytime hours.
- Non-NRFit yellow epidural CADD Solis giving sets/infusion lines must never be used for IV PCA infusions as in terms of patient safety the yellow line denotes 'epidural use only.' All epidural equipment at the Trust should be NRFit and will not attach to Luer connectors.
- The pump programme and opioid infusion bag must be checked by two registered practitioners who are appropriately IV medicine trained as per CD Policy.
- The process for priming the line and preparing the pump is described in the quick guide for the CADD Solis and the CADD Solis Operator's Manual (see title page 2).
- Ensure the prescribed opioid programme is selected (morphine, oxycodone and fentanyl programme options are all available on the grey CADD Solis pumps).
- The pump is automatically programmed to the standard prescribed dose with a 5-minute lockout on set up, but this programme may need to be changed on occasion due to a higher / lower prescribed dose based on individual patient need.
- The pump will only allow for bolus delivery and will not allow a background infusion.

6.4 **Supportive Medication**

Recommendations below are based on standard prescription doses for adult patients. Patients with a body weight <50Kg or have known hepatic or renal dysfunction may require a reduced dose of the recommended medicines as per BNF / Medusa guidance.

6.4.1 Analgesia

These are an essential part of PCA management. The requirement for opioids and severity of side effects can be effectively minimised with additional analgesia. Supportive analgesia includes:

- Paracetamol 1g QDS – PO/PR/NG/IV
- NSAID (unless contraindicated) – oral ibuprofen 200-400mg TDS, celecoxib 100mg bd or IV parecoxib 40mg (Theatre Recovery only).
- Weak opioids e.g. tramadol 50-100mg QDS or a codeine phosphate 30-60mg QDS. This provides background analgesia and may reduce the amount of IV PCA administered opioid required.
- In certain cases, zomorph or longtec can also be prescribed alongside the IV PCA as an alternative to the weaker opioids named above if the patient has sufficient renal function (eGFR>50). However, please be aware that zomorph, longtec and opioid patches (fentanyl/ buprenorphine) are not recommended as first line for acute post-operative pain due to administration to efficacy time (up to 48 hrs in some cases). Optimisation of normal release medication should always be first line management.

6.4.2 Antiemetics

Follow Trust post-operative nausea and vomiting guidance:

- First line: IV/PO ondansetron 4mg 6 hourly either PRN or QDS
- Second line: PO cyclizine 50mg 8 hourly either PRN or TDS (please avoid IV cyclizine in ward-based areas).
- Metoclopramide 10mg 8 hourly either PRN or TDS (for nausea and vomiting relating to poor bowel motility).

6.4.3 Antihistamines

Opioids can cause itching:

- Explain to the patient that this can be an effect of intravenous opioids.
- Consider administering ondansetron 4mg IV or an antihistamine such as chlorphenamine (chlorphenamine is a sedating antihistamine which could potentially lead to increased levels of sedation when used alongside morphine).
- A small dose of naloxone (50 microgram) can be efficacious in symptom relief of severe opioid related itching.

6.4.4 Laxatives

Opioids cause constipation. Ensure a selection of laxatives are prescribed that encourage bowel motility and faecal softening.

6.5 Patient Monitoring

Ensure that the patient is monitored as stipulated below as opioids have a significant side effect profile

Document via:	Observation	First 2 hours	Next 4 hours	Then 2-4 hourly for: (patient's condition determines)
NC / SOC	Blood pressure	30 mins	hourly	Duration of IV PCA
NC / SOC	Pulse	30 mins	hourly	Duration of IV PCA
NC / SOC	Respirations	30 mins	hourly	Duration of IV PCA
NC / SOC & APPC	ACVPU	30 mins	hourly	Duration of IV PCA
NC / SOC	Oxygen saturation	30 mins	hourly	Duration of IV PCA
NC / SOC	Temperature	30 mins	hourly	Duration of IV PCA
NC / SOC & APPC	Pain	30 mins	hourly	Duration of IV PCA
APPC	Itching	30 mins	hourly	Duration of IV PCA
NC / SOC & APPC	Nausea & Vomiting	30 mins	hourly	Duration of IV PCA
NC / SOC	NEWS	30 mins	hourly	Duration of IV PCA

The table above demonstrates standard requirements for patient monitoring with IV PCA. Observations may need to be increased if a patient's condition deteriorates as per guidelines set out in the Trust's Observations and Escalation Policy for Adult Patients.

6.6 Pump and System

Pump settings **must** be checked against the prescription by performing a programme review:

- On hand over from the Theatre Recovery/ ACCU or SBU RN/RM/ODP to the ward RN/RM and documented on the APPC
- At every shift change with two registered practitioners, one from either shift to ensure that the programming is correct.

Also ensure that:

- The pump screen is displaying the correct colour background. The morphine programme has a blue background, the oxycodone programme has a purple background and the fentanyl programme has a green background.

- You document the PCA bolus dose, lockout period and PCA demands on the APPC at the observation times stated above and any issues that may have arisen in the comments section.

6.7 Cannula/ CVAD

- The cannula / CVAD must be checked and deemed patent as per instruction set out in the Trusts VIP Protocol and CVAD Policy.
- Information with regard cannula / CVAD observations must be recorded on the appropriate Cannulation / CVAD Observation Charts.

6.8 Troubleshooting Problems

6.8.1 Unrelieved pain

- Should be reviewed by a senior surgical / obstetric / orthopaedic doctor to eliminate underlying causes.
- Inform the pain nurse specialists via phone during non-unsociable hours or 1st on- call anaesthetist during unsociable hours.
- Check that the pump is functioning correctly.

6.8.2 De-functioning pump

- Follow the quick guide for the CADD®-Solis (see title page 2).
- Contact the pain nurse specialists via phone during non-unsociable hours or 1st on-call anaesthetist during unsociable hours.

6.8.3 Sedation and respiratory depression

If the patient is drowsy or difficult to rouse (ACVPU at P or U) and/or respiratory rate is less than 8 breaths per minute:

- The bolus function handset must be taken away from the patient and pump stopped.
- Administer oxygen at 15L/min via non-rebreathe face mask.
- Prepare and administer naloxone 200mcg IV as per APPC prescription and contact the ward/ unit doctor immediately.
- Inform the 1st on- call anaesthetist during unsociable hours or the pain nurse specialist during non-unsociable hours and record event on the APPC
- The IV PCA must not be recommenced without prior advice from the on- call anaesthetist or pain nurse specialist.
- If naloxone is administered for over sedation or respiratory depression this must be reported via Datix.

6.9 Cautions

- Only the patient **must** press the PCA bolus button.
- Ensure the bolus demand button is visible at all times.

6.10 Discontinuation

- Ensure adequate step-down analgesia is prescribed prior to discontinuation of the IV PCA.
- The opioid bag and pump infusion line must be discarded into a blue medicines bin on immediate discontinuation of the regimen. If more than 10mL fluid remains in the bag, this must be first poured into a CD denaturing kit before disposal. Opioid medicines must never be left in the pump unattended when disconnected from the patient.
- Please wipe the pump using anti-microbial wipes and return the pump and power cable to Theatre Recovery promptly following discontinuation.

6.11 Contact Information

- Pain nurse specialists on clinical duty will be logged onto and visible on nerve centre under 'staff list' on handheld devices. Please note the Vocera system is no longer active.
 1. Via telephone (office ext.) 4047 / 6691 or 6695 (Pain PPC's)
 2. Mobile phone short code – Clare Burton /Corrine #6103 or 07386 698821
 - Michelle Campbell #6104 or 07386 698818
 - Louise Staves #6105 or 07500 815072
 - Nicola Moody #6106 or 07386 698815
- 1st on-call anaesthetist – bleep no. 277

7.0 MONITORING COMPLIANCE AND EFFECTIVENESS

Minimum Requirement to be Monitored	Responsible Individual	Process for Monitoring e.g. Audit	Frequency of Monitoring	Responsible Individual or Committee/ Group for Review of Results
(WHAT – element of compliance or effectiveness within the document will be monitored)	(WHO – is going to monitor this element)	(HOW – will this element be monitored (method used)	(WHEN – will this element be monitored (frequency/ how often))	(WHERE – Which individual/ committee or group will this be reported to, in what format (eg verbal, formal report etc) and by who)
Competency packs are complete	Department leaders / ward sisters / charge nurses	Appraisals, Induction	On going	Department / Ward Leaders Group
Training pack completion	Training and Development	Register of Training	On going	Divisional Governance Forums
Reported incidents	Pain nurse consultant	Datix	Following each incident	Anaesthetic Governance Group / Divisional Governance Forums / learning events Medicines Safety Group

8.0 TRAINING AND IMPLEMENTATION

8.1 For Anaesthetists:

- Be conversant with this policy and access informal training available via Pain or Theatre Recovery Teams.
- Ensure competent to use the equipment.

8.2 For Registered Nurses/ Midwives/ ODPs:

- To be conversant with this policy. This policy will be promoted by the pain nurse specialists during the Trust Induction Programme and Pain Management Study Day.
- To have completed the IV PCA training package via Sherwood eAcademy and have been assessed as competent by a competent senior member of staff in your clinical area.

9.0 IMPACT ASSESSMENTS

- This document has been subject to an Equality Impact Assessment, see completed form at [Appendix 1](#).
- This document is not subject to an Environmental Impact Assessment.

10.0 EVIDENCE BASE (Relevant Legislation/ National Guidance) AND RELATED TRUST DOCUMENTS

10.1 Evidence Base:

- Australia and New Zealand College of Anaesthetists (ANZCA). Acute Pain Management: Scientific Evidence: 5th Edition. 2020: pp 402 - 429
- Lee, O'Loughlin, Roberts. A double-blinded randomized evaluation of alfentanil and morphine PCA versus fentanyl PCA: analgesia and sleep trial. 2013. BJA 110 (2): pp 293 – 298
- National Patient Safety Advisory (NPSA). Medicine Management. 2008
- Royal College of Anaesthetists. Guidelines for the Provision of Anaesthesia Services (GPAS) Chapter 11: Guidance on the Provision of Anaesthesia Services for Inpatient Pain Management. 2024
- Smiths Medical. CADD®-Solis 2100, 2110 Ambulatory Infusion Pumps- Operator's Manual. 2011
- Smiths Medical. Quick Guide for the CADD®-Solis. 2009

10.2 Related Trust Documents:

- Standard Operating Procedure Infection Prevention and Control ICP 1
- Policy for the Care of the Patient Undergoing Intravenous Therapy (Bolus, Continuous and Intermittent)
- The Observations and Escalation Policy for Adult Patients
- Medicines Policy & Controlled Drug Policy
- Medical Equipment User Training Policy
- Medical Device Management Policy
- Consent to Examination, Treatment and Care Policy

11.0 KEYWORDS

Pain management, medicines, pain relief, analgesia pumps, Cadd Solis

12.0 APPENDICES

[Appendix 1](#) – Equality Impact Assessment

APPENDIX 1 – EQUALITY IMPACT ASSESSMENT FORM (EQIA)

Name of service/policy/procedure being reviewed: Administration of Morphine, Fentanyl or Oxycodone via Intravenous (IV) Patient Controlled Analgesia (PCA) System in Adults Policy			
New or existing service/policy/procedure: New policy but combines 3 separate previous versions			
Date of Assessment: 9 th July 2024			
For the service/policy/procedure and its implementation answer the questions a – c below against each characteristic (if relevant consider breaking the policy or implementation down into areas)			
Protected Characteristic	a) Using data and supporting information, what issues, needs or barriers could the protected characteristic groups' experience? For example, are there any known health inequality or access issues to consider?	b) What is already in place in the policy or its implementation to address any inequalities or barriers to access including under representation at clinics, screening?	c) Please state any barriers that still need to be addressed and any proposed actions to eliminate inequality
The area of policy or its implementation being assessed:			
Race and Ethnicity	None	None	None
Gender	None	None	None
Age	None	None	None
Religion	None	None	None
Disability	Patients with physical disabilities affecting use of hands will not be able to operate this equipment. Patients who lack the mental capacity to effectively uses this device will not be offered this analgesic technique.	Alternative analgesic techniques / plans will be available / prescribed for patients who cannot physically operate the self-administration (bolus) button or for patients who lack the mental capacity understand or use the device.	None
Sexuality	None	None	None
Pregnancy and Maternity	None	None	None

Gender Reassignment	None	None	None
Marriage and Civil Partnership	None	None	None
Socio-Economic Factors (i.e. living in a poorer neighbourhood / social deprivation)	None	None	None
What consultation with protected characteristic groups including patient groups have you carried out? None			
What data or information did you use in support of this EqIA? None			
As far as you are aware are there any Human Rights issues be taken into account such as arising from surveys, questionnaires, comments, concerns, complaints or compliments? No			
Level of impact From the information provided above and following EQIA guidance document Guidance on how to complete an EIA (click here), please indicate the perceived level of impact: Low Level of Impact For high or medium levels of impact, please forward a copy of this form to the HR Secretaries for inclusion at the next Diversity and Inclusivity meeting.			
Name of Responsible Person undertaking this assessment:			
Signature: Clare Burton			
Date: 9 th July 2024			