Royal Cornwall Hospitals
NHS Trust

Peri and Post-Operative Pain Control for Complex Pain Patients Clinical Guideline

V4.0

November 2025

Summary

This guideline is to provide a framework for managing complex pain patients in the peri and post-operative setting. Complex pain patient may require deviation from normal protocols and use of alternative pain relief medication or interventions. This guidance provides advice on the following:

- Identification of Complex Patients.
- Use of Medications:
  - Ketamine.
  - Clonidine.
  - Adjuvant Drugs:
    - Antidepressants.
    - Anti-neuropathic agents.
    - Membrane Stabilisers (Lidocaine).
    - Calcitonin.
    - Cannabinoids.
    - Glucocorticoids.
    - Bisphosphonates.
- Alternative Techniques:
  - TENS.
  - Acupuncture.
  - Regional Anaesthesia.
- Opioid prescribing in the opioid tolerant patient.

1. Aim/Purpose of this Guideline

1.1. The purpose of this guideline is to provide anaesthetists with a framework to identify and care for those patients who have complex analgesia requirement peri-operatively.

1.2. This version supersedes any previous versions of this document.

Data Protection Act 2018 (UK General Data Protection Regulation – GDPR) Legislation.

The Trust has a duty under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 to ensure that there is a valid legal basis to process personal and sensitive data. The legal basis for processing must be identified and documented before the processing begins. In many cases we may need consent; this must be explicit, informed, and documented. We cannot rely on opt out, it must be opt in.

Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

For more information about your obligations under the Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 please see the Information Use Framework Policy or contact the Information Governance Team.

Royal Cornwall Hospital Trust rch-tr.infogov@nhs.net

2. The Guidance

2.1. Identification

2.1.1. It is helpful if patients with complex pain needs are identified prior to surgery as these patients do better post operatively if they are reviewed pre operatively, the analgesic alternatives discussed fully and a plan agreed.

2.1.2. Effective management of this group requires an educated, well informed approach utilizing appropriate analgesic options with an understanding of potential long term problems such as persistent post-surgical pain if acute postoperative pain is not adequately treated

2.1.3. The term ‘complex’ would refer to the following patients:

- Complex surgery including large dermatomal spread or two or more sites.
- Previous poor experience of pain relief.
- High risk of neuropathic pain (Hernia, Breast, already painful limb).
- Established chronic pain syndromes.
- Significant anxiety or depression of patient and immediate family.

- Long term opioid therapy.
- Previous drug addiction problems and patient desire to avoid opioids.
- Severe reaction to specific opioids including severe PONV and allergies.

2.2. Pain Terms:

2.2.1. Nociceptive – Stimulation of specialized sensory receptors known as nociceptors in response to noxious stimuli. They are distributed throughout the body (hence site specific) and can be stimulated by mechanical, thermal or chemical injury.

2.2.2. Neuropathic – Spontaneous or abnormal stimulus evoked pain with specific characteristics of burning, shooting, stabbing pain, often non dermatomal (or site specific), to include:

- Allodynia - Pain evoked by normal, usually innocuous, stimuli.
- Hyperalgesia - Increased pain intensity evoked by normally painful stimuli.

2.3. Identification

2.3.1. It is an increasing problem that patients are not seen until day of surgery which means aspects of pain relief may not have been fully identified or discussed. If complex pain issues are anticipated then a face to face pre-operative assessment with an anaesthetic consultant may be appropriate.

2.3.2. It would be expected that general information on available methods of post-operative pain relief be given at pre-operative assessment.

2.3.3. If a patient has been identified at pre op assessment as presenting potential risks, there is still a problem of varying anaesthetic approaches which cannot be absolutely predicted by the pre op assessment team and therefore the pre-operative discussion and agreement is still critical on the day of operation.

2.3.4. All patients should have had the appropriate British Pain Society leaflet preoperatively – ‘Managing Pain After Surgery’.

2.3.5. If a problem is sufficiently concerning, then all attempts should be made to contact the individual anaesthetist for that particular list in advance to alert them or / and to ask for specific advice.

2.3.6. If possible any post-operative plan should be made in conjunction with the ward and surgeon with input from the acute or chronic pain team if necessary and arrangements for appropriate environment to provide the care made (e.g. HDU etc).

2.3.7. Whilst the acute pain team is available 08:00 – 17:30 hours each weekday, it is primarily nurse led, and whilst their remit is to ensure delivery of the prescribed post-operative pain relief and following the agreed peri-operative plans, it should not be expected that they assume prescribing responsibility pre or post operatively. Specific advice can be sought from the consultants involved in the acute and chronic pain service. The acute/inpatient pain team can be contacted on bleep 3323.

2.4. Issues which should be discussed pre-operatively:

2.4.1. That a plan will be drawn up for them for staff to follow, and that an alternative plan will also be given in case of failure or potential problems with original plan.

2.4.2. This plan will have been documented clearly in the notes so that both ward staff and pain nurses can follow.

2.4.3. Depending on the plan, the patient should be in appropriate ward settings to provide this, with the correct level of monitoring to ensure safe delivery by experienced staff.

2.4.4. That the expectation will be for mobilization and conversion to oral analgesia as soon as possible.

2.4.5. Expectations – The primary goal of analgesia is optimal function (such as mobilising, coughing and effective breathing), maximising the likelihood of a positive post-operative outcome. Patient comfort is also desirable. Analgesic drugs and techniques may cause side effects and complications. The goal is to strike an appropriate balance regarding these issues.

2.4.6. Where there are large opioid needs prior to surgery, a plan to restart these post operatively when oral fluids will be tolerated should also be discussed, and the opioid bridging arrangements prior to this outlined.

2.4.7. e.g. use of PCA with background infusion equivalent to daily opioid intake prior to surgery. Background opioid infusions should not be prescribed for opioid naïve patients, and should only be prescribed in complex pain patients after discussion with the acute pain team.

2.4.8. Background infusions should only be used on PCAs in EPOC/HDU/ICU.

2.4.9. Types of pain relief available and the advantages of the multimodal approach i.e. local anaesthetic block, opioids and adjuvant drugs (NSAID’s, paracetamol) and the advantages of a combined approach – which should include the use of local blocks.

2.4.10. Some patients may decline the use of epidural analgesia if performed whilst they are awake; it is the decision of each anaesthetist on the acceptability of the theoretical, but currently not quantified, increase risks of sedation or even anaesthesia to perform this block versus the increased post-operative pain and consequent risks may be justified and explained to the patient. The level of epidural insertion required and the experience of the anaesthetist will be an important factor in this decision.

2.4.11. The potential addition of the pain specific drugs both pre operatively (pregabalin, gabapentin), peri-operatively (eg ketamine) and post operatively (e.g. ketamine) and the potential need for anxiolytics. Where there are potential side effects from the drugs – sickness, mild hallucinations, these should be mentioned but in context to the potential small doses being used and that there would be monitoring to spot early signs and preventative measures taken.

2.4.12. Whilst we should share potential risks and benefits of different techniques we should always attempt to direct the patient choice towards the best method for their particular kind of operation. The more commonly utilised methods with which the wards are familiar should usually be considered first i.e. local block and opioid, NSAID and paracetamol before employing the other choices.

2.4.13. Highly complex patients should be discussed by the anaesthetic consultant with a pain consultant.

2.4.14. Pre-existing chronic pain medications should in general be continued peri-operatively as much as possible, with analgesic plans formed in addition to continuing these medications.

2.4.15. A holistic, biopsychosocial approach to managing these patients is key, addressing and managing anxiety and catastrophisation, as well as unrealistic expectations of analgesia.

2.5. Adjuvant medications:

2.5.1. Ketamine. This should be administered according to the RCHT ketamine guidelines. Specific indications, contraindications and dosage regimens are included there. It could be administered intravenously during anaesthesia, or post operatively as an infusion or a short course of oral medication.

2.5.2. Clonidine. A partial agonist at alpha-2 adrenoceptors. Multiple actions: Reduced sympathetic activity, effect on NMDA receptors, Na 1.7v channel blockade. May reduce cardiac output, reduce blood pressure and cause sedation and constipation. Caution in patients with depression, Raynaud's, and acute porphyria. Often given intravenously under anaesthesia or on critical care, may be given enterally with less constipation and haemodynamic effect.

- Monitoring of pain scores is essential.
- It would not be expected that clonidine be used long term unless in a chronic pain condition where the involvement of the chronic pain team should be sought.
- Sudden withdrawal after long term use may result in rebound hypertension.

- In the acute pain setting it would be expected not to be used for longer than two days when withdrawal of a low dose should not be an issue although monitoring of blood pressure should continue at more frequent intervals up to 24 hours after the drug is stopped.

2.5.3. Antidepressants:

- Based on chronic neuropathic pain states it is reasonable to extrapolate that the tricyclic antidepressants and selective serotonin re – uptake inhibitors may be useful in acute neuropathic pain state.
- There is no evidence that giving one does immediately pre-op helps.
- Adverse effects are common and all drugs should be started in low dose.
- Elective patients may benefit from a two week course prior to surgery and continuation for a time period post operatively.
- Amitriptyline 10 – 25mg once daily at 8pm is a typical dose.

2.5.4. Anticonvulsants

- Peri operative gabapentinoids (Gabapentin/Pregabalin) reduce post-operative pain and opioid requirements and may reduce the incidence of vomiting, pruritis and urinary retention but increase the risk of sedation in the post-operative patient. They may be useful in the acute neuropathic pain states.

2.5.5. Membrane Stabilisers: Lignocaine

- Peri operative lignocaine as an infusion has been shown to opioid spare, reduce pain scores, PONV and duration of ileus and would seem reasonable to treat acute neuropathic pain state. It is not without risk and requires appropriate monitoring. Please refer to the ‘Intravenous Lidocaine (Lignocaine) Use for Perioperative Analgesia Clinical Guideline’ for dosing regimens.

2.5.6. Calcitonin

- Calcitonin is a peptide hormone which regulates calcium homeostasis is vertebrates but also has analgesic properties via serotonin pathways. It is sometimes used to reduce acute phantom limb pain.

2.5.7. Glucocorticoids

- These inhibit production of prostaglandins, leukotrienes and cytokines.
- Dexamethasone (4-8mg) can reduce post-op pain, nausea and fatigue.
- IV administration can cause flushing and perineal tingling.

- Care should be taken in administration to diabetics and blood sugar should be monitored immediately post op.

2.6. Non-medication treatments for pain

2.6.1. TENS machine:

Transcutaneous electrical nerve stimulation may activate the gate theory of pain and lead to opioid sparing if pads are placed near wound.

2.7. Regional anaesthesia: Nerve catheters and epidurals

2.7.1. Wherever possible these should form part of the treatment plan.

2.7.2. A well-managed epidural should still be considered the gold standard for postoperative pain relief for laparotomies in patients with complex pain needs, particularly in the opioid tolerant patient, the young and those with previous poor pain relief experiences. (see separate epidural guidelines for more detail).

2.7.3. Patients at risk of neuropathic pain states – particularly in limb surgery where prior sensitisation is an indwelling local anaesthesia post operatively via a catheter and infusion pump or an elastomeric infusion device.

2.7.4. Indwelling infusions should be in line with hospital policies and the appropriate pump used for epidural (yellow McKinley 575), white-fronted for local anaesthetics

2.7.5. Extension of the block for two to three days post-operatively will decrease immediate opioid requirements and allow previous opioid doses to be resumed.

2.7.6. Tunnelled catheters will remain more firmly fixed and can be left in for longer at the discretion of the anaesthetist who sited them.

2.8. Weaning

2.8.1. Most patients require the more invasive forms of analgesia (epidurals, LA infusions and PCA) for the first 48 hours post operatively – complex pain patients may require a longer period of time with both infusions of local anaesthetic and PCA's and a period of reassurance when the block is turned off that they can reassess it if required, (i.e. do not immediately remove catheter).

2.8.2. Epidurals do not require weaning, when the decision to stop occurs they should be turned off. If in conjunction with a PCA, the epidural should be stopped first, and, after a period of observation of adequate pain relief, removed at a suitable time post thromboprophylaxis.

2.8.3. Similarly, local anaesthetic infusions should be stopped and a period of observation with PCA still in use to ensure adequate analgesia prior to removal of catheter.

2.8.4. If using a PCA with a background infusion, decrease the background infusion initially and leave the bolus dose.

2.8.5. If previous opioids have been stopped, restart either patch or slow release formulation for a minimum of 12 hours prior to removing PCA.

2.8.6. When removing PCA ensures that there is adequate amount of breakthrough (e.g. Oramorph) prescribed, both in frequency (usually hourly) and amount.

2.8.7. Caution should be taken where there is renal impairment and opioids should be prescribed less frequently than hourly and correlated with pain scores and respiratory rate.

2.8.8. Convert Ketamine IV form to oral or stop after two days.

2.9. Opioid Prescribing for the Opioid Tolerant Patient

2.9.1. Many patients requiring surgery may already be on a strong opioid either for the condition requiring surgery or for some other chronic ailment.

2.9.2. These patients will be opioid tolerant and require modified regimes to obtain both analgesia and to prevent withdrawal.

2.9.3. Establish why the patient is on opioids – if the cause is to be surgically corrected their need may be less post operatively, if however, there is unrelated pathology then their original opioid requirement is not likely to change and should be maintained pre and post operatively.

2.9.4. If local anaesthetic blocks are used in a patient taking slow acting opioid preparations there is a risk of side effects such as respiratory depression occurring if the pain stimulus is obtunded and careful monitoring should occur around the time of the local block and duration of infusion.

2.9.5. In general, for most patients, slow-release and patch opioids should be continued perioperatively. They should be prescribed appropriately.

2.9.6. However, where there is a great concern about drug absorption or respiratory depression post operatively or concerns that there may be confusion over slow release opioids then the simplest policy would be to convert the patient several days prior to operation to the more rapidly metabolised form of the drug – e.g. convert MST bd to equivalent amounts of Oramorph, use a PCA post operatively and then recommence Oramorph followed by reconversion to MST.

2.9.7. Where it is felt that there will be no renal impairment and oral fluids will be tolerated rapidly post operatively then the longer acting drugs may be continued with appropriate monitoring and the addition of a PCA – but with bolus only regimes. This must be made very clear on the prescription chart that the two are running in synchrony and that naloxone is prescribed for low respiratory rates.

2.9.8. Slow release drugs should be started 12 hours prior to cessation of PCA.

2.9.9. When a patient is opioid tolerant the post-operative needs may require a PCA delivering both a background infusion and larger bolus doses. These patients should have more frequent monitoring than for the standard PCA user.

2.10. Calculating the PCAs in the Opioid Tolerant

2.10.1. This is never an exact science as pain levels will vary tremendously in patients.

2.10.2. Look at daily morphine requirements prior to operation: if not morphine, convert to morphine equivalent dose as per BNF. You may expect the patient to require additional analgesia over and above this for the operative intervention however the background and bolus dosage together should not exceed the baseline requirement by more than an additional 30%. PCAs with a background must be delivered in monitored circumstances, usually on EPOC or in an HDU environment.

2.10.3. Conversion from total 24 hours dosage of oral morphine to amount required as a total intravenous dose should mean a reduction in total by 60% delivered as both a background and bolus mix.

2.10.4. Background infusions should not normally exceed 2mg per hour unless discussed with the Acute Pain Team and bolus doses 3mg maximum in exceptional circumstances. Where the bolus dose is increased it would be expected that the time interval between doses also be increased.

2.10.5. If local anaesthetic blocks are used then the background and bolus should be much lower e.g. 1mg background and 2mg bolus

2.10.6. As soon as the patient is able to tolerate oral fluids their pre op regime can be recommenced. If the original cause of the pain is thought to have been eradicated by the surgery they may still require some opioids initially from which they can wean down their dependence.

2.10.7. Where a patient cannot tolerate oral drugs but the PCA is restricting their activity then opioids such as buprenorphine or fentanyl can be used in patch form and sublingual/lozenge preparations. (These will take up to 12 hours to become effective.) These should only be used in exceptional circumstances with the advice of the inpatient pain team, and for the minimum length of time (eg a single patch) to bridge to return of gut function or lack of need for opioid analgesia.

2.10.8. When in doubt ask, prescribe less than the maximum dose until you are sure of the patients tolerance and ensure adequate monitoring and follow up occurs.

2.10.9. Remember that you should be using a multi modal approach to analgesia utilising both local anaesthetic, NSAID’s, paracetamol and occasionally less strong supplementary opioids such as tramadol particularly when looking to decrease drug regimes.

2.10.10. Patients on blocking doses of medications like buprenorphine should be managed according to the hospital opioid-replacement therapy policy and should follow the general principles of multimodal analgesia and anaesthesia.

3. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	Adherence to RCHT Guidelines.
Lead	Pain Service.
Tool	Regular audit of the pain service is undertaken along with daily review of complicated cases. Audit and review Tool using patient documentation.
Frequency	See above.
Reporting arrangements	The committee reviewing the cases will be the anaesthesia directorate. Cases will be discussed at audit meetings and the details will be recorded in the minutes.
Acting on recommendations and Lead(s)	See above.
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within a month. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the Equality Diversity And Inclusion Policy or the Equality and Diversity website.

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Peri and Post-Operative Pain Control for Complex Pain Patients Clinical Guideline V4.0
This document replaces (exact title of previous version):	Peri and Post-Operative Pain Control for Complex Pain Patients Clinical Guideline V3.0
Date Issued/Approved:	November 2025
Date Valid From:	November 2025
Date Valid To:	November 2028
Directorate/Department responsible (author/owner):	Dr Neil Roberts, Consultant Anaesthetist
Contact details:	01872 252792
Brief summary of contents:	The purpose of this guideline is to provide anaesthetists with a framework to identify and care for those patients who have complex analgesia requirements peri- operatively.
Suggested Keywords:	Chronic pain, acute pain, opioid abuse, neuropathic pain, Ketamine, epidural, clonidine.
Target Audience:	**RCHT:** Yes **CFT:** No **CIOS ICB:** No
Executive Director responsible for Policy:	Chief Medical Officer
Approval route for consultation and ratification:	Specialty leads for Anaesthesia. Critical Care and Pain.
Manager confirming approval processes:	Doug Riley
Name of Governance Lead confirming consultation and ratification:	Suzanne Barber
Links to key external standards:	AAGBI, British Pain Society
Related Documents:	None

Information Category	Detailed Information
Training Need Identified?	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Clinical/Anaesthetics

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
10.01.2012	V1.0	Initial issue	Acute Pain Team: Lead Clinician, Dr Anne Dingwall
03.04.2013	V1.1	Reformat.	Dr N Marshall, Consultant Anaesthetist
29.9.2016	V1.2	Review and reformat	Dr N Marshall, Consultant Anaesthetist
16.11.2019	V2.0	Review and reformat	Dr N Marshall, Consultant Anaesthetist
22.11.2022	V3.0	Review and reformat	Dr Keith Mitchell, Consultant Anaesthetist
20.10.2025	V5.0	Review and reformat	Dr Neil Roberts, Consultant Anaesthetist

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust The Policy on Policies (Development and Management of Knowledge Procedural and Web Documents Policy). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy/policy/proposal/service function to be assessed:	Peri and Post-Operative Pain Control for Complex Pain Patients Clinical Guideline V4.0
Directorate and service area:	ACCT/Anaesthesia
Is this a new or existing Policy?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Dr Neil Roberts, Consultant Anaesthetist
Contact details:	01872 252792

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	The purpose of this guideline is to provide a framework for the management of Peri and Post-Operative Pain Control for Complex Pain Patients.
2. Policy Objectives	To provide a framework for the management of Peri and Post-Operative Pain Control for Complex Pain Patients.
3. Policy Intended Outcomes	Appropriate and safe management of Peri and Postoperative Pain Control for Complex Pain Patients.
4. How will you measure each outcome?	Monitoring through audit and case discussion at governance meetings.
5. Who is intended to benefit from the policy?	Patients.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	• Workforce: Yes • Patients/visitors: No • Local groups/system partners: No • External organisations: No • Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	**Please record specific names of individuals/groups:** Anaesthetic department.
6c. What was the outcome of the consultation?	Agreed.
6d. Have you used any of the following to assist your assessment?	**National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys:** No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Dr Neil Roberts, Consultant Anaesthetist.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
Section 2. Full Equality Analysis