

Management of Severe Pain - General Guidelines and Essential Information	Type: Clinical Guideline Register No: 06007 Status: Public
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1. Purpose

- 1.1 It is intended to assist nursing and medical staff to provide timely evidence based practice, ensuring optimum care when assessing and treating patients in severe pain.

2. Scope

- 2.1 This guideline is aimed at all qualified nursing and medical staff working in the acute medical and surgical hospital setting. If an epidural is used please refer to guideline 06006. If patient controlled analgesia (PCA) is used please refer to guideline 06010. For Children also refer to guideline 10045 Acute Pain Management for Children 3 months -16yrs.

3. Staff & Training

- 3.1 Medical and nursing staff are expected to understand the need for the regular assessment of pain and the clinical importance of treating pain promptly and safely.
- 3.2 Training and education is provided by the IPMS (Integrated Pain Management Service), both formally and informally for all clinical staff. The IPMS is available for advice and consultation via the pager system, and through the Lorenzo referral system.
- 3.3 All link nurses will be informed of updated guidelines at regular meetings for them to disseminate to their areas / wards.
- 3.4 Medical staff will be informed of revised guidelines via senior medical staff within the IPMS at audit meetings and twice yearly teaching sessions for all FY1 and FY2 doctors.
- 3.5 Corporate services will ensure that the guideline is uploaded to the intranet and the website and notified to staff via Focus.

4. Responsibilities

- 4.1 For qualified nursing staff, overall responsibility for ward-based pain management practice is that of the ward manager. It is the individuals' responsibility to identify training needs and liaise with their senior to address these.
- 4.2 For medical staff it is the individual's responsibility to identify training needs and seek appropriate help, either from the IPMS or their senior colleagues.

5. Principles of the management of acute onset of severe pain

- 5.1 Principles include
- Thorough initial assessment of the patients' pain is to be made
 - Analgesic plan is to be made, designed to meet the individual patients' need
 - The Patients' Analgesic plan should be discussed with them
 - Analgesic plan implemented

- Effectiveness reassessed
- Changes to Analgesic plan should be made if / when required

5.2 The principles are a continuous cycle. Analgesia will need to be changed according to patients' pain. This may mean a reduction or increase, change in the route of administration, and / or an introduction of additional analgesics.

6. Assessment of pain

6.1 **All** patients should have their pain assessed which should be documented on admission. It should be regularly reassessed throughout their stay in hospital.

6.2 A standardised Trust observation chart, which includes documentation of pain scores, should be in use for each patient. This is inputted onto the Vital PAC system. Scores on Vital PAC and care round documentation should correlate.

6.3 A scoring system of 0 to 3 is used to indicate severity of pain (see section 9.2), and recorded at least twice daily (more often if pain control not stabilised).

6.4 Pain should be assessed when the patient is deep breathing, coughing, and / or moving and not just at rest, or when the patient is asleep.

6.5 Along with regular pain assessments, regular nursing assessments of respiratory rate, level of sedation, nausea scores, heart rate and blood pressure need to be recorded. If an epidural is in progress / has been used, motor block observations will also be required. These can be used to detect potential side effects of the analgesics given.

6.6 Pain assessment practices can be used for both clinical and audit purposes.

6.7 Patients with potential communication problems will need extra help with their assessment. For example, children, those with a language barrier, hard of hearing, stroke patients, those with learning disabilities, and those with mental health issues, etc. Observational assessment tools may be helpful. E.g. FLACC for child assessment, Abbey Pain scoring for cognitively impaired patients. See Safeguarding Vulnerable Adults policy 08034.

7. Patient assessment

7.1 Believe the patient, and record his / her description accurately.

7.2 **Use and document findings in the patients' notes. Use the acronym SOCRATES**

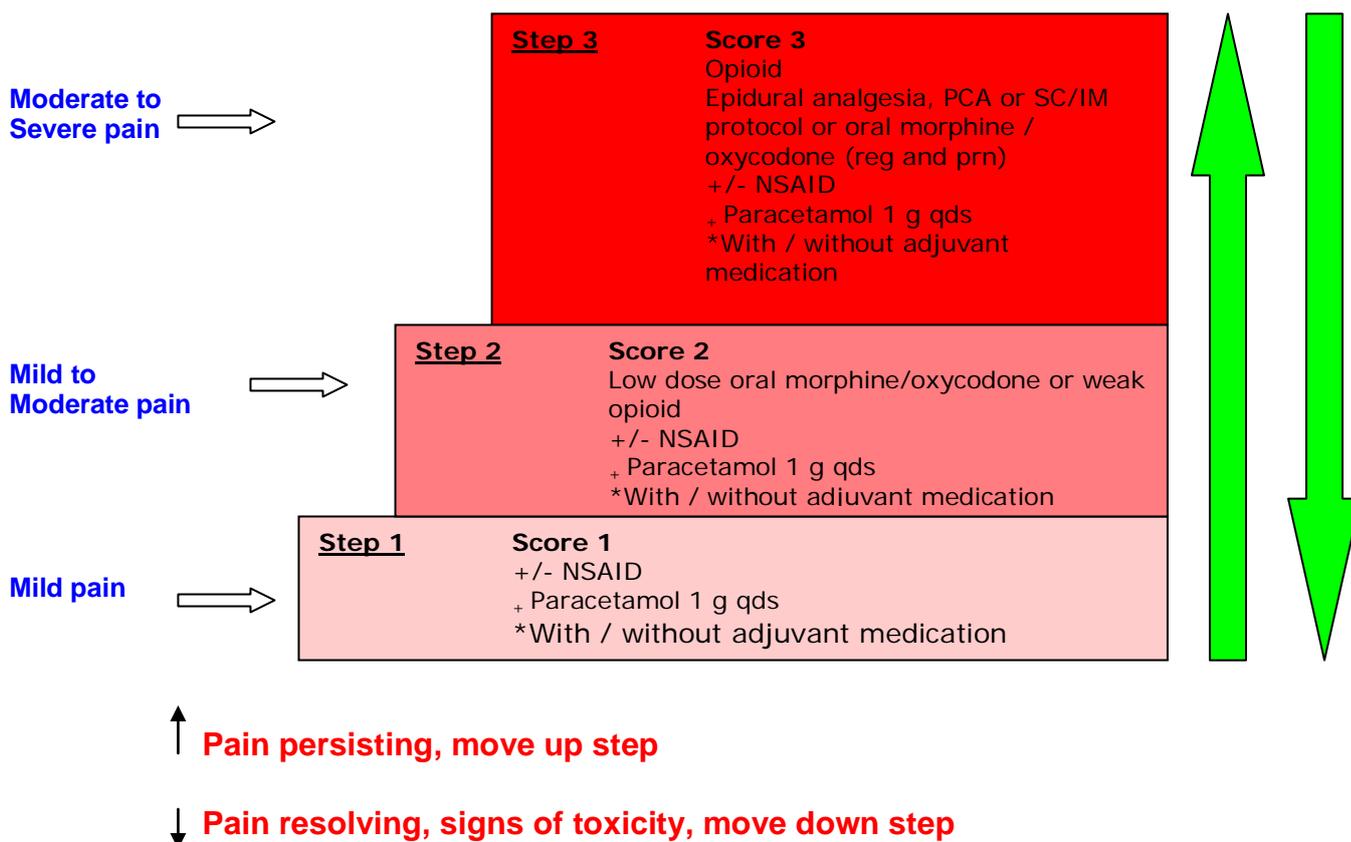
- | | | |
|------------|---|---|
| • S | Site | Where is the pain? |
| • O | Onset | When did it start? |
| • C | Character | Describe the pain? |
| • R | Radiation | Does pain radiate or is it localised? |
| • A | Associations | Other symptoms associated with pain? |
| • T | Time course | Does pain follow a pattern? |
| • E | Exacerbating /
Relieving factors | |
| • S | Severity | Score and what affect does the pain have |

- 7.3 Is there a neuropathic element to the patients' pain?
Certain pain can be due to damage to the nerves. These types of pain are not wholly opioid responsive and will require specific treatment. Neuropathic pain can be described as burning, searing, shooting, an electric shock type pain, usually in a dermatomal distribution. Common examples of neuropathic pain include sciatica or post-herpetic neuralgia, brachial plexus injury, etc. Please contact the IPMS if the patient describes this sort of pain. See Neuropathic Pain guidelines on the intranet.
- 7.4 Record the patients' allergies on the patients prescription chart, medical notes, and a wristband for allergies should be placed on the patient.
- 7.5 Route of administration available, i.e., is patient able to tolerate oral analgesia.
- 7.6 Document in notes your assessment.
- 7.7 Use the Pain / sedation and nausea measurement tool. This can be found at the back of the Trust Adult Vital Signs Observation Chart. Please see **Appendix 1**. Determining severity of pain allows correlation with a simple analgesic stepladder as a guide to treatment.

8. Making an Analgesic Plan

- 8.1 Using medicines to treat pain is a simple first step.
- 8.2 We recommend that initial treatment follows the World Health Organization's (WHO) Analgesic ladder recommendations. This is a tool which promotes a stepwise, logical approach to the treatment of mild, moderate, and severe pain. It can be used when the patient requires step down analgesics once the source of pain is treated and the patients' pain improves. It involves a multi-modal analgesic approach.
- 8.3 Multi-modal means combining analgesics from different groups. Evidence shows this gives an additive or synergistic affect where opioids are used. Lower doses of opioid are therefore required, which means the risk of side effects from opioids can be reduced.
- 8.4 Appropriate analgesia should be initiated as soon as possible.
- 8.5 Consider non-pharmacological support, i.e., patient positioning, stabilization of fractures.
- 8.6 Consider if patient would be better suited for
- Epidural
 - Patient Controlled Analgesia
 - Regional Nerve Block
 - Wound Infiltration
 - Entonox

8.7 World Health Organisation (WHO) Analgesic Ladder



***Adjuvant medications** are those used for other conditions that also have analgesic properties. For example, some anticonvulsants have shown to be a safe and effective medication that may decrease peri-operative opioid use in patients with more acute neuropathic pain than acute inflammatory pain. When surgery involves more neuropathic-type acute pain there is growing evidence that adjuvant analgesics may decrease the incidence of chronic pain. See Neuropathic Pain guidelines on the intranet.

9. Opioids

9.1 About Opioids:

- Refers to any substance, natural or synthetic, that binds to an opioid receptor
- Three main opioid receptors on which opioid drugs bind - mu, delta, kappa
- These receptors are found in the brain, spinal cord and peripheral nerves
- Preferential Mu receptor agonists produce pain relief
- Can be used in acute and cancer pain, with limited use in chronic pain (ref BPS opioid guidance)
- Side effects are a limiting factor
- Treat side effects actively

9.2 Possible complications of opioids and action to take

Complication	Action
Drowsiness	<ul style="list-style-type: none"> • Ascertain if due to true opioid toxicity • Consider other causes • If sedation score 2 observe patient closely, reduce opioids if required • If sedation score 3 treat as respiratory depression
Respiratory depression	<ul style="list-style-type: none"> • If respiratory rate less than 8 and sedation score 2 or more • Maintain airway, give oxygen via facemask • Close patient observation • Stop opioid • Give opioid antagonist - Naloxone <ul style="list-style-type: none"> ○ 0.1mg to 0.4mg, titrated to effect ○ Half-life (t1/2) of antagonist maybe < t1/2 of opioid ○ IV Naloxone + consider IM dose ○ May require SC infusion ○ Inform ward doctor, anaesthetist on call and IPMS ○ Opioid analgesic effect will be reversed
Anaphylaxis	Difficulty with breathing, swallowing, rapid heart rate, low B.P, rash. Immediate crash call. Proceed as clinically indicated (Airway, breathing, circulation, oxygen, hydrocortisone, and adrenaline).
Nausea and Vomiting	See algorithm (guideline 06004). Treat early.
Constipation	Give oral laxative and / or bulk forming agent, plus stimulant if required. Prescribe laxatives on the regular side and encourage oral fluid intake.
Itching	Apply calamine lotion topically, give antihistamine; e.g. chlorphenamine 4mg prn. If severe give low dose naloxone; 100mcg STAT. For prolonged itch see the 'Itch Ladder' (Burns Guidelines 06009).

9.3 Opioids used in the Trust

- Morphine is the standard drug of choice in the Trust
 - Tramadol
 - Oxycodone
- Alternative to morphine, sometimes tolerated when morphine is causing excess sedation, nausea, and / or hallucinations. The oral dose is 50% of the oral

morphine dose. Available in intravenous preparation for PCA or via subcutaneous cannula

- Fentanyl.
This is a second line drug for use in PCA and epidurals; see IPMS for further advice. Transmucosal lozenges are available for use in procedural pain. Transdermal patches are not commonly used in acute pain
- Diamorphine. Used mainly within the Burns Unit. See Guideline 09072 (Intranasal Diamorphine for Burns Patients)
- Methadone. Contact Pain Team if considering
- Tapentadol: IPMS initiation only
- Codeine/dihydrocodeine – not suitable for severe pain.

10. Non-steroidal anti-inflammatory drugs (NSAIDs)

10.1 Non-selective inhibition of cyclo-oxygenase (COX) I and II, blocks the synthesis of prostaglandins which cause pain and inflammation.

10.2 Prostaglandins, however, also protect the gastrointestinal (GI) mucosa and support renal and platelet function. In turn the side effects of NSAID use may include

- Gastric irritation
- Reduced renal function
- Prolonged bleeding times
- Bronchospasm in sensitive asthmatics

10.3 Use is contraindicated in those with

- Renal impairment / renal transplant
- Hypovolaemia
- Warfarinised patients
- Active GI bleeding
- Post cardiac surgery
- Neurosurgical patients
- Use with caution in patients who are
- Elderly as creatinine clearance reduces with age
- Dehydrated, have a low urine output (0.5 x patient weight / hour)
- Those also receiving nephrotoxic drugs: e.g.: Gentamycin, ACE inhibitors

10.4 When prescribing NSAIDs

10.5 Prescribe short term only.

10.6 To protect against GI side effects

- consider PPI (protein-pump inhibitor) cover whilst in progress
- PR / IV / topical NSAIDs may still produce GI side effects as they are absorbed systemically

10.7 Avoid I.M. injections

- Intramuscular (I.M.) diclofenac is not recommended as painful and can cause abscess / necrosis around the injection site

10.8 Asthmatics

- Only 1 in 5 asthmatics is sensitive

- If they take NSAIDs at home with no ill effect they can have them in hospital if there are no other contra-indications.
- Consider a test dose under scrutiny of NSAID naïve and not exhibiting asthmatic wheeze

10.9 Preparations

Ibuprofen

Ibuprofen has a lower GI and cardiovascular side effect incidence than Diclofenac

Naproxen

Diclofenac

11. Cyclo-oxygenase (COX) II selective inhibitors

11.1 This group of anti-inflammatory drugs selectively target the COX II enzyme, which is solely responsible for pain and inflammation. By bypassing COX I inhibition the gastro-intestinal and platelet aggregation effects are reduced. COX II selective NSAIDs do not cause bronchospasm, and therefore can be used in asthmatics.

11.2 Available on Trust Formulary

<i>Drug</i>	<i>Preparation</i>	<i>Amount</i>	<i>Frequency</i>
Paracoxib	IV	40mg	bd
Celecoxib	PO	100mg	bd

12. Paracetamol

12.1 Mechanism of action largely unknown. Very effective analgesic. Side effects are rare. Foundation of multi-modal analgesia. By adding paracetamol, opioid usage maybe reduced by up to 30%

12.2 When prescribing Paracetamol

- 1g QDS
- Overdose >8g per day (delayed onset of liver failure and necrosis)
- More effective when given regularly
- Be aware of double prescribing. Check that prescribed regularly and not on PRN prescription also. Check also the patient is not receiving other analgesics containing paracetamol, for example, compound analgesics such as co-codamol
- Paracetamol is poorly absorbed rectally, 40mgs/kg are required to reach a therapeutic blood level. It is preferable, therefore, to use the oral route (soluble paracetamol can be put down a nasogastric tube), or intravenous route, if oral route is unavailable
- When prescribing both IV / oral please use paracetamol stickers as per CQC requirements for the trust

Contraindications

- Hepatic and renal impairment are relative contraindications, prolonged use may exacerbate the effect of warfarin.
- Caution when used for patients on enzyme inducing drugs such as some anti-epileptics. The increased metabolism of paracetamol has caused toxicity when less than 8g /day used.

13. When prescribing multi-modal analgesia

- 13.1 Titrate analgesia against the patient's pain assessment, not against the type of surgery or circumstances.
- 13.2 Pre-emptive analgesia will allow the patient's pain to be better controlled. Therefore prescribe regularly.
- 13.3 Use PRN analgesia prior to extra activity, for example, mobilisation, drain removal, physiotherapy, etc.
- 13.4 Consider the patient's renal and hepatic function.
- 13.5 Consider possible drug interaction with the patient's current medications.
- 13.6 Check for allergies.
- 13.7 Use oral route first, when available.
- 13.8 If using opioids prescribe naloxone PRN.
- 13.9 Actively treat side effects of opioids, i.e., nausea, constipation, etc. Prescribe anti-emetics, and give according to algorithm (Guideline 06004).

14. Treating Severe Pain - Step 3 WHO Ladder

- 14.1 Use
 - Strong opioid
 - PRN strong opioid
 - Paracetamol
 - +/- NSAID
 - Is there a neuropathic element?
 - Adjuvant if required
- 14.2 When prescribing consider
 - Renal / hepatic function
 - Need for rapid titration
 - Consider potential side effects, e.g. constipation, hypotension, dizziness
 - Administration route
 - DO NOT PRESCRIBE MULTIPLE ROUTES FOR OPIOIDS, BIOAVAILABILITY DIFFERS
 - Discharge analgesia: plan weaning and communicate to GP for review

- 14.3 Consider if patient may require
- Epidural*
 - Patient Controlled Analgesia (PCA)*
 - Regional Nerve Block*
 - Wound Infiltration*
 - Entonox

*Contact IPMS for advice and assessment if required

15. Protocol for the titration of oral morphine

15.1 Morphine is the standard opioid used in the Trust.

15.2 The initial dose is based on multiple factors:

- severity of pain
- effectiveness of previous analgesia i.e. if 5mg morphine (or the equivalent) had slight effect, increase to 10mg
- consider whether patient opioid naïve (check for transdermal patches in situ)
- clinical status (e.g. age, respiratory function, renal function)

15.3 Drug: morphine sulphate: sevredol tablets or liquid (state which)

- Route: PO
- Dose: 10 to 20milligrams
- Other directions: hourly PRN titrated against pain

15.4 Anti emetic and opiate antagonist is prescribed PRN

15.5 Dose and frequency should be appropriate to chosen route of administration: i.e.

- Oral = hourly prn, 10 – 20mg*
- Subcutaneous/intramuscular = hourly prn, 7.5 – 10mg*
- Intravenous = 5 minute intervals, 1 – 2mg* (*high dependency areas only*)

(*normal adult dose)

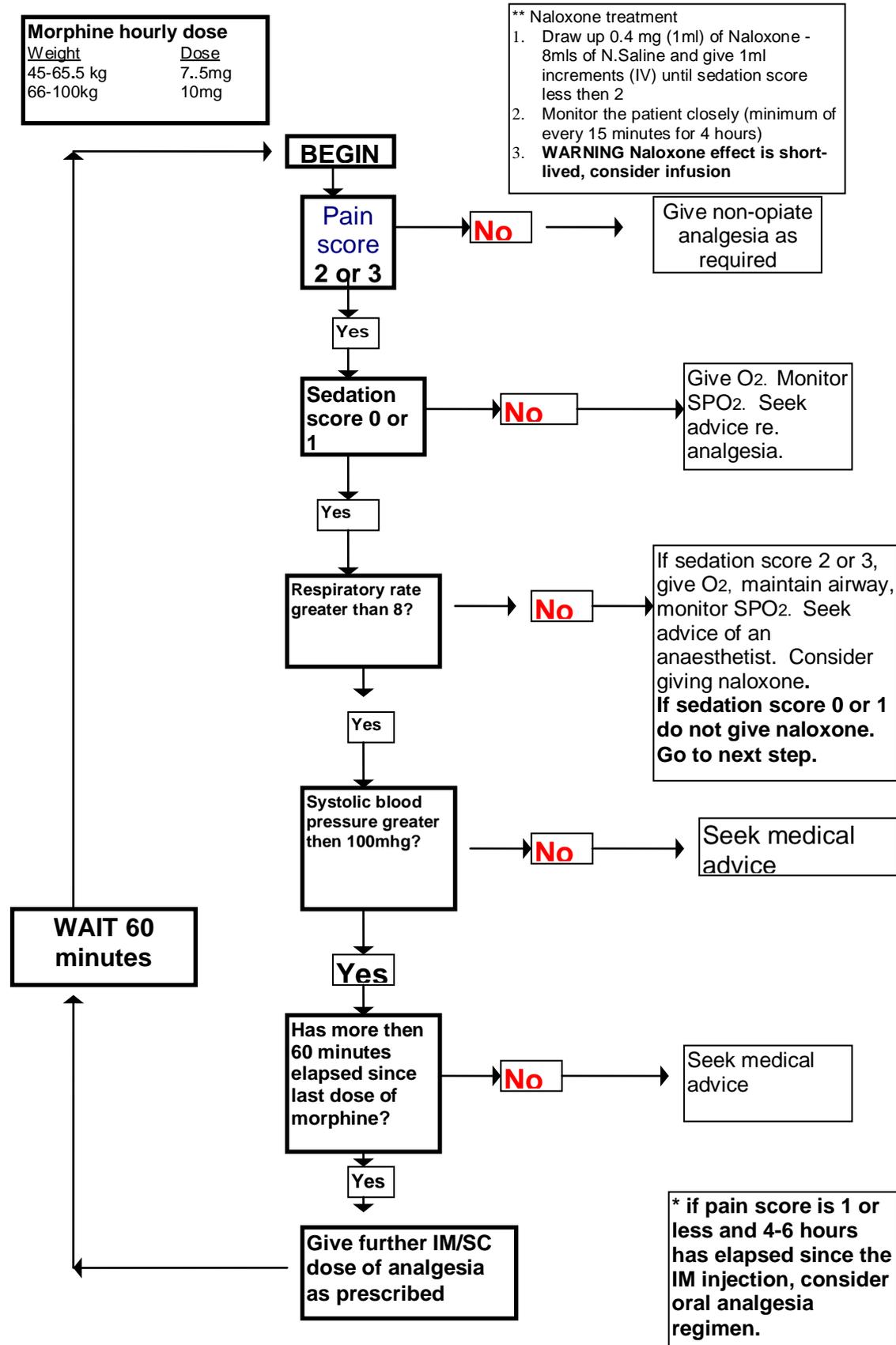
15.6 Monitoring of pain and nausea score, sedation level and respiratory rate are recorded. Side effects are treated promptly and further analgesic needs are based on assessment and evaluation.

16. Protocol for the titration of Intramuscular / subcutaneous morphine

16.1 This can be used where PCA / epidural infusion are not appropriate or cannot be used at the time.

16.2 The patient should have a y-cannula into muscle or subcutaneous tissue: Preferred site – deltoid. Intravenous access should be obtained.

16.3 Use flowchart



17. Moderate Pain - Step 2 WHO Ladder

17.1 Use

- Weak opioid regularly
- **PRN** strong opioid e.g. Oral Morphine 10-20mg hourly
- Paracetamol 1g qds
- +/- NSAID
- Is there a neuropathic element
- Adjuvant if required

17.2 When prescribing consider

- Renal / Hepatic function
- 1 regular weak opioid only
- Consider Oxford League table of Analgesics
<http://www.medicine.ox.ac.uk/bandolier/Extraforbando/APain.pdf>
- Ceiling effect of weak opioids
- Consider potential side effects, e.g. constipation, hypotension, dizziness
- Consider administration route
- Consider discharge analgesia

17.3 Other Opioids used in the Trust include: **TRAMADOL IS A CONTROLLED DRUG**

DRUG	DOSE	ACTION	POTENTIAL PROBLEMS	SIDE EFFECTS
Tramadol	400mgs/24hrs	Partial Mu agonist and inhibits neuronal uptake of noradrenaline and enhances 5-HT release	1. Action only partially reversed (30%) by naloxone. 2. Avoid in patients with epilepsy or on drugs that can lower seizure threshold. 3. Do not give concomitantly with SSRI's.	Opioid related Specific to Tramadol Can cause hypotension, dizziness, confusion, sweating. Side effects may be reduced by using slow release versions.

18. Mild Pain - Step 1 WHO Ladder

18.1 Use

- Paracetamol
- PRN weak opioid
- +/- NSAID
- Is there a neuropathic element?
- Adjuvant if required

18.2 When prescribing consider

- Renal / hepatic function

- Consider Oxford League table of Analgesics
<http://www.medicine.ox.ac.uk/bandolier/Extraforbando/APain.pdf>
- Administration route

19. Complex patients

19.1 This may include:

- Patients already receiving opioids for other medical conditions
- Renally impaired patients
- Substance misuse patients
- Patients with chronic pain conditions
- Patients who are admitted in sickle cell crisis

19.2 **Please refer to the IPMS for help with these patients.**

20. Discuss with the patient

20.1 All patients should be encouraged to voice to the nurse / doctor when they have pain.

20.2 All patients undergoing elective surgery should have appropriate levels of knowledge and expectations about their postoperative pain relief.

20.3 Non elective surgical / trauma patients should be given explanations about their pain relief when possible.

21. Implementing analgesic plan

21.1 When proper assessment, choice of plan and discussion with the patient has been done, implementation of plan can be carried out.

21.2 All patients should be managed in a clinical area where the level of nursing surveillance and skills, and availability of special monitoring are appropriate for the patients pre-existing health, surgical condition and method of analgesia.

21.3 If the patient is receiving a PCA or an epidural infusion they should be nursed only in the designated wards and units that have received specialist training to safely deal with these modes of analgesic delivery. There is a complete list of these wards available in recovery and via the IPMS.

21.4 When the patient's pain is severe and uncontrolled, intravenous (IV) morphine may be required. IV morphine can be given and titrated to effect only in areas where qualified staff are able to monitor the patient closely: i.e. Recovery, GITU, GHU, Burns Unit. In ward areas IV morphine may be administered by a qualified doctor who must remain with the patient to completion of titration and is then satisfied that the patient is safe to remain in their current environment, i.e., patient is rousable, has no signs of respiratory depression, and is able to maintain eye contact etc. Patient observation frequency will need to be increased post IV opioid titration.

21.5 All prescriptions to be written on the treatment chart according to Trust policy and national legislation.

- 21.5 All medications given must be signed for, and countersigned if necessary, in line With Trust Policy for the Use of Medicines***, national legislation and the NMC Code
- 21.6 A Trust produced drugs formulary and Policy for the Use of Medicines is available from Pharmacy and advice can be sought from the Drug Information Line at Broomfield Hospital ext. 4822.
- 21.7 When prescribing analgesia, consider the most appropriate route.
- 21.8 Timing of medication should be considered both to optimise analgesic effect and to avoid an unpalatable mix for the patient.
- 21.9 Always consider discharge / inter-hospital transfer analgesia.

22. Reassessing the patient

- 22.1 Reassess the patient regularly for effectiveness and suitability of analgesia.
- 22.2 Document each, assessment, intervention, and reassessment.
- 22.3 Discuss management with other disciplines, and seek help / advice when needed.
- 22.4 A minimum of twice daily pain assessments for every in-patient is required, increasing in frequency as required (ie after analgesia or post procedure)

23. The management of inadequate analgesia

- 23.1 Despite efforts consider
- Medical deterioration / change
 - Prescription inappropriate
 - Gap between doses
 - Is patient receiving all analgesia prescribed?
 - PRN analgesia; is it being used?
 - Prior opioid exposure / tolerance
 - Increase dose / frequency of opioid if appropriate
 - Ensure Paracetamol +/- NSAIDs has been prescribed and given
 - For pain between doses, consider slow release preparations
 - Neuropathic element to pain
 - Consider adjuvants
- 23.2 Assess the type of pain – identify unusual / atypical pain
- 23.3 Consider cause
- 23.4 Provide non-pharmacological support (e.g. relaxation, repositioning, TENS)
- 23.5 Consider a different approach to analgesia, i.e., PCA, Epidural, regional nerve block, etc.
- 23.6 Get advice. Contact the IPMS to assess for suitability for PCA OR Epidural if appropriate (between the hours of 8.00a.m. and 5.00p.m.)

24. Non-Compliance with this Policy

- 24.1 Failure to provide regular assessment and effective pain management is a breach of patient rights, and has clinical and non-clinical repercussions:

- Patient satisfaction and well-being is compromised
- Accountability and professional responsibility is breached
- Clinical risk is increased, due to multi-systemic influence of pain
- Delayed discharge from hospital decreases Trust efficiency and increases risk of hospital-acquired infection

24.2 A risk event form should be completed and submitted to the Risk Management Department for non-compliance with this guideline.

25. Audit & Monitoring

25.1 Yearly audit of compliance to regular pain assessments on wards is carried out by the IPMS.

25.2 Incidence of clinical risk or patient complaints resulting from non-compliance of this guideline is recorded via the central risk events database and Patient Liaison Service (PALS) if involved.

25.3 The IPMS manager and lead consultant will liaise at corporate level to put strategies in place to address issues.

26. References

1. Epidural Analgesia Guideline, MEHT 06006
2. Patient Controlled Analgesia (PCA) Guideline, MEHT 06010
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4. Post-Operative Nausea and Vomiting Guideline, MEHT 06004
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Appendix 1: Pain / sedation and nausea measurement tool

Pain Score	
Score 0 (none) =	No pain at rest, no pain on movement.
Score 1 (mild) =	No pain at rest, mild pain on movement.
Score 2 (moderate) =	Intermittent pain at rest, moderate pain on movement.
Score 3* (severe) =	Continuous pain at rest, severe pain on movement.
*Call doctor or pain team	

Sedation Score	
Score 0 =	Awake and fully responsive
Score 1 =	Mild or occasionally drowsy, easy to rouse
Score 2 =	Moderate (frequently drowsy, easy to rouse)
Score 3* =	Severe (somnolent, difficult to rouse)
*Call ward doctor/anaesthetist	

Nausea Score	
Score 0 =	No Nausea
Score N =	Nausea
Score V =	Vomiting
Score R =	Refuses treatment

Appendix 2: Abbey Pain scoring system

Whilst observing patient score questions 1-6	Absent	Mild	Moderate	Severe	Score
Q1. VOCALISATION e.g. whimpering, groaning, crying, verbal aggressive outbursts	0	1	2	3	
Q2. FACIAL EXPRESSION e.g. looking tense, frowning, grimacing, looking frightened	0	1	2	3	
Q3. CHANGE IN BODY LANGUAGE e.g. fidgeting, rocking, guarding part of body, physical aggression	0	1	2	3	
Q4. BEHAVIOURAL CHANGE e.g. increased confusion, refusing to eat, alteration in usual patterns	0	1	2	3	
Q5. PHYSIOLOGICAL CHANGE e.g. pulse, BP, perspiring, flushing, pallor, increased respiratory rate	0	1	2	3	
Q6. PHYSICAL CHANGES e.g. skin tears, pressure areas, arthritis, contractures, previous injuries	0	1	2	3	
TOTAL SCORE					

- The Abbey Pain assessment tool is used by observing categorised patient behaviours
- There are 6 separate category behaviours to observe, each category scores between 0-3. When added together the maximum score is 18
- Sometimes when the score is high it can be difficult to know for certain if pain is the cause. However, when analgesia is given and the score reduces this is indicative that pain was the cause for the high score
- **This is why re-assessment post intervention is essential**