

**Title CSOP Analgesia**

Version No: 2.4

Effective date: 12/02/2024

APPROVALS

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Next Review Date:	February 2026		

HISTORY

Effective Date	Version No.	Summary of Amendment
18/10/12	2.0	
15/05/15	2.1	Review
September 2018	2.2	Review
October 2021	2.3	Amends to Annex 1
Dec 2023	2.4	Review and addition of Pentrox information

REFERENCES

JRCALC Clinical Practice Guidelines, 2016 https://www.jrcalc.org.uk/guidelines/
Sasada M and Smith S Drugs Used in Anaesthesia and Intensive Care, 3 rd Edition 2003, Oxford University Press
Bredmose P, Lockey D, Grier G, Watts B, Davies G Pre-hospital use of ketamine for analgesia and procedural sedation Emerg Med J 2009;26:62-64 http://emj.bmj.com/content/26/1/62.full
Gausche-Hill M, Brown K, Oliver Z, Sasson C An Evidence-based Guideline for Prehospital Analgesia in Trauma Prehospital Emergency Care 2014;18;25-34



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1. PURPOSE

All patients are to have their analgesic needs assessed and addressed. Masking of clinical signs is not a reason to withhold pain relief. Effective analgesia improves early and late physiological and psychological parameters and facilitates easier transfer. Balanced analgesia as part of a multi-modal approach should be used. Pain, analgesic requirements, and their effectiveness should be repeatedly assessed and documented.

This document is designed to ensure a safe and uniform approach to the provision of analgesia for patients. This CSOP should be read in conjunction with CSOP 011 - Procedural Sedation, the PGD for Ketamine (CCPs) and the guidance on intra-nasal Diamorphine or Fentanyl.

2. ANNEX/APPENDICES

Document Reference Number	Document Title
Annex 1	Analgesic Medicines
Annex 2	Pain scales

3. SCOPE

Analgesia is important not only on humanitarian grounds, but also in meeting clinical endpoints that are vital to the resuscitation philosophy of the service. The use of analgesia will facilitate fracture manipulation and splintage, therefore reducing blood loss. In some circumstances, such as entrapment, movement during extrication may precipitate pain and therefore delay the release of the patient. Judicious use of an analgesic will facilitate extrication and reduce time to critical and definitive interventions.

Where possible, analgesia should be given intravenously and titrated to effect. If the intravenous route is not available, use of inhalational analgesia (Entonox) or intra-nasal Diamorphine or Fentanyl is preferred to intramuscular analgesia. Intramuscular analgesia can be effective, but is unpredictable in terms of onset, duration and side-effects.



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3.1 NON-PHARMACOLOGICAL STRATEGIES

The benefit of non-pharmacological analgesic strategies must not be underestimated. These include:

- Reassurance
- Traction & splinting of fractured limbs
- Elevation of peripheral injuries
- Manual support to splint chest wall injuries or instability
- Gentle, controlled and coordinated movement

All of these can be used in place of, or in conjunction with conventional medication

3.2 INTRAOSSEOUS ACCESS

All analgesic drugs carried by TAAS that can be administered IV can also be administered IO. However, it should very seldom be necessary to establish IO access in order to administer analgesia in the fully conscious patient.

3.3 LICENSING & RESTRICTIONS

A paramedic may only administer a medication

1. That is listed in the Prescription Only Medications (POMS) exemptions and contained in the most recent copy of the JRCALC Clinical Practice Guidelines, or
2. Which is covered by a specific Patient Group Direction (PGD) issued by The Air Ambulance Service in which the paramedic has been trained, or
3. On behalf of a HEMS Doctor who is present at the scene.

3.4 RISK ASSESSMENT, PREPARATION & MONITORING

The administration of medications to seriously ill or injured patients is not without risk. As part of the overall assessment of the patient and the scene, consideration must be given to the possible effects of analgesic medications that are to be administered. Secure IV access should be obtained as soon as possible.

Suction, oxygen, resuscitation equipment and airway management equipment must be immediately available.



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The level of monitoring should be proportionate with the condition of the casualty and the medication to be given, if the drug has a sedating effect (opiates, ketamine) then nasal end tidal CO₂ should be monitored. Ideally, a full set of observations should be recorded prior to any drug being administered. Where the patient is in extreme pain, this may be deferred until after an initial dose.

3.5 DRAWING UP AND ADMINISTERING MEDICATIONS

All drugs must be checked by two clinicians, there are no exceptions to this rule. When cross checking, ask the question "what is this?" which prompts the checker to stop and read the vial or bottle, rather than tell the checker what the drug is, which may elicit a positive or confirmatory response without a proper check.

Drugs must only be drawn up in the stipulated concentrations and syringe sizes. This greatly reduces the risk of error.

All syringes must be labelled with an approved colour-coded label, with the concentration clearly marked.

3.6 THIRD PARTY ADMINISTRATION

In some circumstances it may be necessary for personnel other than members of the medical team to administer drugs on our behalf (e.g. during RSI and intubation or when access to the patient is restricted). In these circumstances errors are more likely to occur due to the use of unfamiliar drugs, dilutions, and equipment.

Where at all possible, the person administering the medication on behalf of the lead clinician should be a paramedic or someone experienced in the administration of IV medications.

The following is the suggested method to minimise errors:

1. Ensure personnel are content to administer drugs.
2. If wishing to give 2mg (2mls) of morphine, for example, state "I would like you to give 2 mls of this. We are at 10mls now, therefore give it until you are at 8mls".
3. Get personnel to repeat the instructions back to you.
4. Monitor the amount being given.
5. If possible, give instructions for and pass over only 1 drug syringe at a time.



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If you feel your instructions are not comprehended, an alternative is to take a smaller syringe, draw up the exact amount you want given and only hand that over.

3.7 PATIENT HANDOVER

A patient must not be handed over to a clinician who is not trained and authorised to administer the medication that has been given. For example, if Ketamine has been given, a doctor or a paramedic who has been signed off to use Ketamine under the PGD MUST accompany the patient to hospital; if Morphine or Oramorph have been given, the patient must be accompanied by a Paramedic (NHS/HEMS) or a doctor; if Diamorphine or Fentanyl have been given, the patient must be accompanied by a doctor.

3.8 ANALGESIC OPTIONS

Evidence-based guideline for pre-hospital analgesia:

Assess pain as part of general patient care in children and adults



Use an age-appropriate pain scale to assess pain (See Annex 2):

Age <4 yrs: Consider using an observational scale such as FLACC

Age 4-12 yrs: Consider using a self-report scale such as FPS-revised or Wong-Baker Faces

Age >12 yrs: Consider using a self-report scale such as NPRS



Use narcotic analgesics to relieve moderate to severe pain.

Analgesics proven safe and effective are:

IV or IO Morphine (0.1 mg/kg), or

IV, IO, or IN Fentanyl (1-2mcg/kg)



Reassess every 5 minutes. Evidence of adverse effects should preclude further drug admin

Adverse Effects and Relative Contraindications:

Sedation, Hypotension, SPO2 < 90%, Allergy, Condition preventing admin (blocked nose, no IV)



If still in significant pain, re-dose at half the original dose



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It is often appropriate to use a combination of methods to achieve both early and longer-term analgesia. For example:

1. Adult, Fractured femur with severe deformity:

Entonox
IV Fentanyl +/- Ketamine (or IN Diamorphine/Fentanyl)
Traction splint
IV Morphine

2. Young child, closed fracture of the distal forearm:

IN Diamorphine/Fentanyl
Oramorph
Oral Paracetamol
Vacuum splint

3. Young child, severe burns, hysterical, unable/refusing to take oral fluids or medication

IN Diamorphine/Fentanyl (or IM ketamine)
Burns dressing
IV access
IV Paracetamol & Morphine

Note that consent needs to be obtained in all cases but is especially important in case three.

3.9 APPROVED MEDICINES

Annex 1 contains a list of Medicines Currently approved for use in the unit. This may be changed based on approval by the Clinical Supervisors and the Clinical Governance Group.

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