

## Pre-hospital analgesia

Whilst awaiting transfer to secondary care it is good practice to manage pain effectively. There is well-documented evidence that we are reluctant to treat patients in this way.<sup>[1]</sup> This may stem from:

- Concerns about patient honesty in evaluating the severity of pain.<sup>[2]</sup>
- Concern that it may interfere with treatment necessary after admission.
- Not having appropriate treatments available.

Children are most often neglected, with significant disparities in perception of pain, and in frequency that analgesia is given.<sup>[3]</sup> Documentation of assessment and treatment given is often sporadic.<sup>[4]</sup> Non-pharmacological methods of analgesia particularly useful in trauma (such as empathy, ice-packs, elevation, immobilisation and splinting) should not be forgotten.

Recommendations vary regarding pre-hospital analgesia and it is important to follow local guidelines if available. This article provides a very brief overview. For further information, see Reference and Further Reading links to the British National Formulary (BNF), BNF for Children and pre-hospital management guidelines at the end of this article.

## Immediate pain management in adult trauma

Pre-hospital care is a fast-developing subspeciality. The British Association for Immediate Care (BASIC) provides training for any who feel they could benefit.<sup>[5]</sup> Virtually all patients complaining of moderate-to-severe pain are candidates for pain management.

Morphine is potent and should not be used indiscriminately. Entonox® is also available for moderate pain relief. This is contra-indicated in chest injury and head injury associated with reduced [Glasgow Coma Scale \(GCS\)](#).

For pain management in pre-hospital and hospital settings, the National Institute for Health and Care Excellence (NICE) recommends:<sup>[6]</sup>

- Assess pain regularly in patients with major trauma using a pain assessment scale suitable for the patient's age, developmental stage and cognitive function.
- For patients with major trauma, use intravenous morphine as the first-line analgesic and adjust the dose as needed to achieve adequate pain relief.
- If intravenous access has not been established, consider the intranasal route for atomised delivery of diamorphine or ketamine.
- Consider ketamine in analgesic doses as a second-line agent.

#### **General points:**

- Monitor patient observations closely.
- Have naloxone to hand, in case of respiratory depression.
- Use visual analogue scales to document the level of pain before and after treatment.
- Entonox can be used whilst waiting for morphine to take effect.

## **Contra-indications for morphine use<sup>[7]</sup>**

For all opioids:

- Acute respiratory depression.
- Comatose patients.
- Head injury (opioid analgesics interfere with pupillary responses vital for neurological assessment).
- Raised intracranial pressure (opioid analgesics interfere with pupillary responses vital for neurological assessment).

- Risk of paralytic ileus.

For morphine:

- Acute abdomen.
- Delayed gastric emptying.
- Heart failure secondary to chronic lung disease.
- Pheochromocytoma.

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## Further reading

- [Resuscitation Council \(UK\)](#)
- [British National Formulary for Children](#); NICE Evidence Services (UK access only)
- [UK Ambulance Services Clinical Practice Guidelines 2021](#); Joint Royal Colleges Ambulance Liaison Committee Guideline Development Group (JRCALC-GDG).
- [Lindbeck G, Shah MI, Braithwaite S, et al](#); Evidence-Based Guidelines for Prehospital Pain Management: Recommendations. *Prehosp Emerg Care.* 2023;27(2):144-153. doi: 10.1080/10903127.2021.2018073. Epub 2022 Jan 25.
- [Albrecht E, Taffe P, Yersin B, et al](#); Undertreatment of acute pain (oligoanalgesia) and medical practice variation in prehospital analgesia of adult trauma patients: a 10 yr retrospective study. *Br J Anaesth.* 2013 Jan;110(1):96-106. doi: 10.1093/bja/aes355. Epub 2012 Oct 11.

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Authored by:	Peer Reviewed by: Dr Doug McKechnie, MRCP	
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