

The College of Emergency Medicine

Best Practice Guideline

**Management of Pain
in Adults**



December 2014

Summary of recommendations

1. Recognition and alleviation of pain should be a priority when treating the ill and injured. This process should start at triage, be monitored during their time in the ED and finish with ensuring adequate analgesia at, and if appropriate, beyond discharge.
2. The CEM standard of analgesia for moderate and severe pain within 20 minutes of arrival in the ED should be applied to patients in all Emergency Departments.
3. Patients in severe pain should have the effectiveness of analgesia re-evaluated within 30 minutes of receiving the first dose of analgesia.
4. Pain management should be regularly audited, ideally annually.
5. Training in pain relief for all staff involved in patient care is essential to ensure quality and timely management.

Scope

This guideline has been developed and reviewed in order to provide clear guidance on the standards for timeliness of provision of analgesia, and to provide an approach to the delivery of analgesia for adult patients presenting to the emergency department (ED). The guidance does not cover children, palliative care or the issue of discharge medication.

Reason for development

Pain management is one of the most important components in patient care, which is why it is given such a high priority in the CEM 'Clinical Standards for Emergency Departments' and the Manchester Triage Scale ^[1].

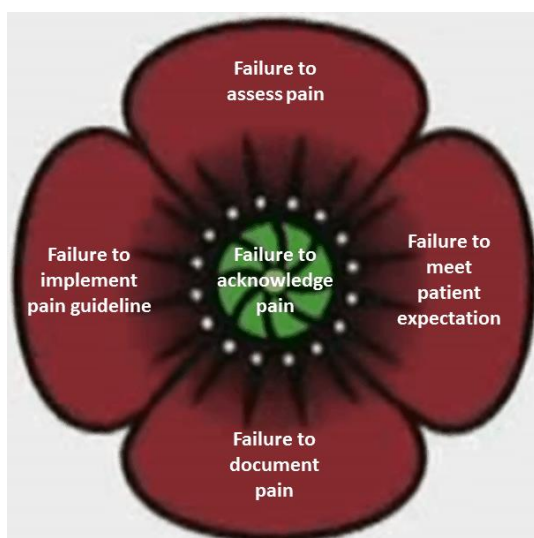
Introduction

Pain is commonly under-recognised, under-treated and treatment may be delayed ^[2,3]. Recognition and alleviation of pain should be a priority when treating the ill and injured. This process should start at the triage, be monitored during their time in the ED and finish with ensuring adequate analgesia at, and if appropriate, beyond discharge. There is some evidence that pain relief is related to patient satisfaction ^[4].

Pain Assessment

Pain assessment forms an integral part of the National Triage Scale ^[1]. Multiple assessment tools are in use. The better known scales have not been validated in the context of an ED environment but are nevertheless satisfactory for the purpose of pain assessment and management. The recording of pain scores is often suboptimal ^[3]. The experience of the member of staff triaging will help in estimating the severity of the pain.

The literature suggests that assessment of pain in the ED is often not as good as it could be ^[5] which is particularly concerning since pain is often the reason for attending, patient assessment is improved by giving adequate analgesia, painful or uncomfortable procedures may be undertaken in the ED and there are clear physiological benefits to providing adequate analgesia ^[6]. Below a schematic showing potential barriers to adequate pain assessment, adapted from Motov et al ^[5].



Assessment of acute pain in the Emergency Department

	No Pain Pain score: 0	Mild Pain 1 - 3	Moderate Pain 4 - 6	Severe Pain 7 - 10
Suggested route & type of analgesia	No action	Oral analgesia	Oral analgesia	IV Opiates or PR NSAID
Initial Assessment	Within 20 mins of arrival	Within 20 mins of arrival	Within 20 mins of arrival	Within 20 mins of arrival
Re-evaluation	Within 60mins of initial assessment	Within 60mins of analgesia	Within 60mins of analgesia	Within 30 mins of analgesia

- Using this method of pain scoring it should be possible to adequately assess into one of four categories and treat pain appropriately.
- Once the category has been established, appropriate analgesia may be prescribed according to the flow chart.
- In all cases it is important to think of using other non-pharmacological techniques to achieve analgesia, which may include measures such as applying a dressing or immobilising a limb etc.
- Following reassessment if analgesia is still found to be inadequate, stronger / increased dose of analgesics should be used along with the use of non-pharmacological measures.
- It is important to re-assess the pain control within 30-60 minutes in severe and moderate pain.

How to Manage Pain

Patients in severe pain should be transferred to an area where they can receive appropriate intravenous or rectal analgesia within 20 minutes of arrival. Patients in severe pain should have the effectiveness of analgesia re-evaluated within 30 minutes of receiving the first dose of analgesia.

Patients in moderate pain should be offered oral analgesia at triage / assessment. Patients with moderate pain should have the effectiveness of analgesia re-evaluated within 60 minutes of the first dose of analgesia.

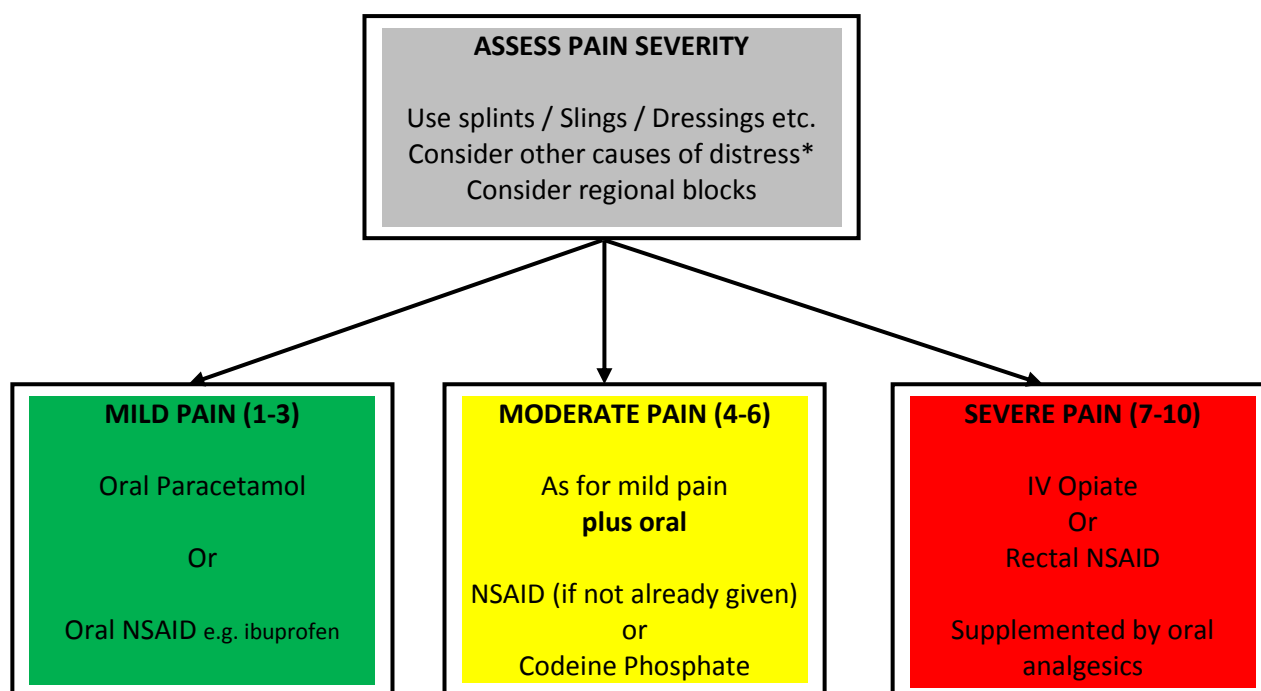
Documentation of analgesia is essential and departments are encouraged to formalise pain recording in the same manner as the regular documentation of vital signs.

The guidance in this document is primarily aimed at ensuring patients get appropriate and adequate analgesia in a timely fashion. When patients first present to the ED the diagnosis may be unclear and it is important that the lack of diagnosis does not delay administration of appropriate analgesia. It is recognised however that there are a number of conditions or presentations in which certain types or combinations analgesics are known to perform particularly well e.g. angina and nitrates.

Emergency physicians are sometimes placed in the very difficult position of having to decide whether a patient's pain is genuine or not (i.e. is the patient displaying 'drug seeking' behaviour?). Careful decision making is required to balance the embarrassment of 'being tricked' by a drug seeker as opposed to denying a patient with genuine pain appropriate and adequate analgesia. Being 'wise after the event' and instituting appropriate measures [see separate CEM guidance] is likely to be preferable.

Algorithm for treatment of undifferentiated acute pain in the Emergency Department

	No Pain Pain score: 0	Mild Pain 1 - 3	Moderate Pain 4 - 6	Severe Pain 7 - 10
Suggested route & type of analgesia	No action	Oral analgesia	Oral analgesia	IV Opiates or PR NSAID
Initial Assessment	Within 20 mins of arrival	Within 20 mins of arrival	Within 20 mins of arrival	Within 20 mins of arrival
Re-evaluation	Within 60mins of initial assessment	Within 60mins of analgesia	Within 60mins of analgesia	Within 30 mins of analgesia



*Other causes of distress include: fear of the unfamiliar environment, needle phobia, fear of injury severity etc.

When prescribing for the **elderly** it is worth remembering that paracetamol (including intravenous) is a safe first line treatment with a good safety profile. NSAIDs should be used with caution and at the lowest possible dose in older adults in view of gastrointestinal, renal and cardiovascular side effects as well as drug-drug interactions and the effects on other co-morbidities [7]. When using opiate medication in the elderly appropriate dose reduction should be used as well as anticipating any other drug interactions; particularly those acting on the central nervous system which may increase the likelihood of respiratory depression.

When prescribing in **pregnancy** the general rule is try to avoid any medication, however this is not always practical. Paracetamol is considered safe in all three trimesters, ibuprofen is best avoided and can only be used during the second trimester (if essential). Morphine and codeine can be used in all three trimesters if necessary but should be avoided during delivery.

Drug Notes

Paracetamol

Available as oral, rectal and intravenous preparations. The standard oral and IV dose for adults is 1gram qds however when administering the IV preparation the dose must be adjusted for those patients weighing less than 50Kg (adults 40-49kg 750mg qds, 35-39kg 500mg qds). The IV route is particularly useful when patients need to be kept nil by mouth and rapid mild-moderate analgesia is required [6]. The rectal preparation is probably best avoided due to variable and slow absorption in adults [8].

Before prescribing paracetamol inquiry must be made regarding previous paracetamol use (including preparations such as co-codamol and OTC preparations e.g. cold relief powders as well as paramedic use prior to arrival in the ED).

Non-Steroidal Anti-inflammatory Drugs (NSAIDs)

Available as oral, rectal, intravenous and intra-muscular preparations (although it should be noted IM diclofenac has been associated with sterile abscesses following IM use).

- Ibuprofen 400mg PO tds; fewer side effects than other NSAIDs, good analgesic but relatively weak anti-inflammatory properties.
- Naproxen 500mg PO initially then 250mg every 6-8hrs in acute musculoskeletal disorders; stronger anti-inflammatory properties than ibuprofen but with relatively fewer side-effects compared to other NSAIDs [9].
- Diclofenac 50mg PO tds, 100mg PR; particularly useful for the treatment of renal colic pain via the rectal route however in recent years concern has been raised regarding increased risk of thrombotic events (incl. MI) and Clostridium difficile [10] and it is contra-indicated in IHD, PVD, CVD and heart failure [9].

Avoid NSAIDs in asthmatics who are known to get worsening bronchospasm with NSAIDs, also avoid in patients with previous or known peptic ulcer disease. NSAIDs should be used with caution in the elderly (risk of peptic ulcer disease) and women who are experiencing fertility issues. It should also be avoided in pregnancy, particularly during the third trimester.

Opiates

- Codeine Phosphate is available as oral and IM preparations, 30-60mg qds are typical adult doses however consider lower doses in the elderly. Codeine prescribed in combination with paracetamol is significantly more effective than codeine when prescribed alone ^[11].
- Morphine is available as oral, intravenous and intra-muscular preparations (due to its relatively slow onset of action the oral preparation is not recommended for acute pain control in the ED, unless the patient is already taking the drug in which case this might be a reasonable alternative). Morphine 0.1-0.2mg/kg IV is a typical adult dose, however a titrated dose to provide the desired response is recommended; consider lower doses in the elderly.

Use with caution if risk of depression of airway, breathing or circulation. The routine prescription of an anti-emetic with an opiate is not recommended, and only required if patient is already experiencing nausea / vomiting ^[12]. It should be noted that the use of opioids in abdominal pain does not hinder the diagnostic process ^[13].

Others

Entonox, a 50% mixture of nitrous oxide and oxygen, is very useful for short term relief of severe pain and for performing short lasting uncomfortable procedures. It should not be viewed as a definitive analgesic and EDs need mechanisms in place to ensure rapid assessment and institution of appropriate analgesia when paramedics bring patients to the ED who are using Entonox as their sole source of analgesia. Entonox should be avoided in patients with head injuries, chest injuries, suspected bowel obstruction, middle ear disease, early pregnancy and B12 or folate deficiency ^[14].

Abbreviations

IM intramuscular

PO oral

PR rectal

IV intravenous

Kg Kilogram

Mg Milligram

OD once a day

BD twice a day

TD three times a day

QDS four times a day

OTC over the counter

NSAID non-steroidal anti-inflammatory drug

IHD ischaemic heart disease

PVD peripheral vascular disease

CVD cerebrovascular disease

Authors

James France

Simon Smith

Lindsay Smith (ED Pharmacist)

First published in June 2010, revised December 2014

Review

2016 or sooner if important information becomes available.

Conflicts of Interest

None

Disclaimers

The College recognises that patients, their situations, Emergency Departments and staff all vary. This guideline cannot cover all possible scenarios. The ultimate responsibility for the interpretation and application of this guideline, the use of current information and a patient's overall care and wellbeing resides with the treating clinician. The drug doses contained in the text are only indicative and the prescribing clinician should check the most up-to-date product information.

Research Recommendations

None identified. Given the high incidence of pain in an ED, and the paucity of evidence in evaluation, difficulties with identification and pain and provision of pain relief in acute settings (especially in paediatrics), and the confounding variables that are known to exist there is a lot of scope for research in this area.

Audit standards

There should be a documentation and audit system in place within a system of clinical governance.

Key words for search

Pain, analgesia

Appendix 1

Methodology

Where possible, appropriate evidence has been sought and appraised using standard appraisal methods. High quality evidence is not always available to inform recommendations. Best Practice Guidelines rely heavily on the consensus of senior emergency physicians and invited experts.

Evidence Levels

1. Evidence from at least one systematic review of multiple well designed randomised control trials.
2. Evidence from at least one published properly designed randomised control trials of appropriate size and setting.
3. Evidence from well designed trials without randomisation, single group pre/post, cohort, time series or matched case control studies.
4. Evidence from well designed non experimental studies from more than one centre or research group.
5. Opinions, respected authority, clinical evidence, descriptive studies or consensus reports.

References

1. Emergency Triage, 2nd Ed. BMJ Publishing Group, 2005
2. Todd KH, Sloan EP, Chen C et al. Survey of pain etiology, management practices and patient satisfaction in two urban emergency departments. CJEM 2002; 4(4):252-6
3. Brown J, Klein C, Lewis B et al. Emergency Department analgesia for fracture pain management. Ann Emerg Med 2003;42(2):197-205
4. Stahmer SA, Shofer FS, Marino A et al. Do Quantitative Changes in Pain Intensity Correlate with Pain Relief and Satisfaction? Acad Emerg Med 2008; 5(9): 851-7
5. Motov SM, Khan AN. Problems and barriers of pain management in the emergency department: Are we ever going to get better? Journal of Pain Research 2009; 2: 5-11
6. Thomas SH. Management of Pain in the Emergency Department. ISRN Emergency Medicine 2013 <http://dx.doi.org/10.1155/2013/583132>. Accessed November 2014
7. Abdulla A. Guidance on the management of pain in older people. Age and Ageing 2013; 42: i1-i57
8. Kuczynska J. What is the evidence to support the use of IV paracetamol for the short-term treatment of moderate to severe pain? 2013 [https://www.evidence.nhs.uk/medicine/paracetamol?ps=30&om=\[%22srn%22%3A\[%22%20nelm%20%22\]\]](https://www.evidence.nhs.uk/medicine/paracetamol?ps=30&om=[%22srn%22%3A[%22%20nelm%20%22]]). Accessed November 2014
9. British National Formulary. BMJ Group and the Royal Pharmaceutical Society. November 2014.
10. Suissa D et al. Non-steroidal anti-inflammatory drugs and the risk of Clostridium difficile-associated disease. Br J Clin Pharm 2012; 74(2): 370-375.
11. Acute Pain. Bandolier extra <http://www.medicine.ox.ac.uk/bandolier/booth/painpag/acute.html>. Accessed November 2014.
12. Simson PM et al. Prophylactic metoclopramide for patients receiving intravenous morphine in the emergency setting: a systematic review and meta-analysis of randomized controlled trials. EMA 2011; 23(4):452-7.
13. Manterola C, Astudillo P, Losada H et al (2007) Analgesia in patients with acute abdominal pain. Cochrane Database Syst Rev(3): CD005660.
14. O'Sullivan I, Bengner J. Nitrous oxide in emergency medicine. Emerg Med J 2003;20:214-217



The College of Emergency Medicine

7-9 Breems Buildings

London

EC4A 1DT

Tel: +44 (0)20 7400 1999

Fax: +44 (0)20 7067 1267

www.collemergencymed.ac.uk

Incorporated by Royal Charter, 2008

Registered Charity number 1122689

Excellence in Emergency Care