



First Responder Accreditation

Assessment and management of acute pain

Acknowledgements

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Introduction

Each year, many patients present to St John volunteers due to pain. In the prehospital setting, pain is often under recognised and under treated. Effective management of acute pain is a basic human right and we should wherever possible try to identify and manage acute pain in patients who present for care. It is well accepted that pain is complex and how pain is experienced involves biological, psychological, social and cultural dimensions as well as beliefs and experiences of patients. What is universally accepted however is that pain is a subjective experience and is experienced by the patient and not by the person providing clinical care. It is imperative that we routinely ask our patients if they have pain and believe their report of severity and act accordingly. For example, some patients will have almost no pain despite an obvious and severe injury and conversely, some patient have very severe pain and a seemingly minor injury. Regardless of the injury or illness, responders should routinely obtain a pain history and assess pain severity for all patients.

Just as the experience of pain is multifaceted, so too is the management of pain. Pain management involves reassurance, pain relievers (analgesics) and adjuncts (including oxygen, rest, immobilisation, ice and non-analgesic medications).

Causes of acute pain

Injury: Injury is the most common and obvious cause of acute pain in the prehospital setting. Common causes include fractures, dislocations, sprains, strains, lacerations, abrasions and injuries caused by falls and vehicle collisions. Following all injuries, it is important to obtain a pain history and to assess pain severity for all patients.

Medical: Various medical conditions present with acute pain. Common presentations include non-traumatic chest pain (e.g. acute coronary syndrome – including angina and heart attack), abdominal pain (e.g. appendicitis, gastroenteritis, gall stones, kidney stones), non-traumatic back pain, deep vein thrombosis and skin infections.

Irrespective of the cause of the pain, a thorough pain history and assessment of pain severity is required.

Taking a pain history

Various pneumonics are available to remind clinicians what questions to ask when taking a pain history. In addition to the AMPLE history you will find any of the following pneumonics (OPQRST, SRCODPRA and DOLAR) helpful in your clinical practice.

OPQRST	SRC DOPRA	DOLOR
O Onset	S Site	D Description
P Provoking factors	R Radiation	O Onset and duration
Q Quality/Description	C Character	L Location
R Region/Radiation	D Duration	O Other signs and symptoms
S Severity	O Onset	R Relieving factors
T Time (History)	P Provoking factors	
	R Relieving factors	
	A Associated symptoms	

You will note the similarity between all pneumonics with regard to the types of questions to ask. At the end of the pain history you should have a good understanding of **where** the pain is, **what** the pain feels like, what the patient was doing when the pain started, **when** the pain started and **how** severe the pain is. Provoking and relieving factors, radiation and associated signs and symptoms complete the pain history.

A sample pain history (SRC DOPRA): *You are responding to a 46 y.o. male with chest pain at the Royal Easter show. Some useful questions could include:*

Where is your pain? Can you point to where your pain is? Does the pain go anywhere else? What does your pain feel like? (Is it sharp / dull / burning / cramping / stabbing / pressure / heaviness etc.) When did your pain start? What were you doing when your pain started? Does anything make the pain worse? Does anything make the pain better? (e.g. a certain posture or position, oxygen, sitting forward, lying down etc.) Besides the pain, do you have any other symptoms or complaints? (e.g. nausea, vomiting, dizziness, sweating etc.)

You discover Mr Jones is a 46 year old man who was at rest enjoying a Devonshire tea at the Country Women's Association café when he had a sudden onset of 'pressure' in the centre of his chest (pointing to his sternum). He reports the pain is of moderate severity, at most 5/10 when asked. He says the pressure radiates to his right shoulder and arm. He did not report anything making the pain worse but said his wife's angina medication (Nitrolingual® Pumpspray) made the pain a little better. When asked he reports mild breathlessness and mild nausea. He denies any dizziness or light-headedness. He feels that things are settling as he rests.

Assessment of pain severity

Once it is established that patients have pain and the pain history has been obtained, it is important to assess the severity of the pain. Many methods of pain assessment are routinely used in the prehospital setting. Three of the most common are the verbal rating scale, numerical rating scale / verbal numerical rating scale and the visual analogue scale.

Numerical rating scale / verbal numerical rating scale (NRS/VNRS)

This is probably the most well-known of the pain severity scales. The most common variant is an 11-point rating scale from 0-10. Patients are asked to rate their pain from zero (no pain) to ten (worst imaginable pain). This can be recorded graphically (NRS) or as is more

commonly the case, verbally whereby patients are asked to respond verbally to the question “Can you rate your pain from zero to ten with zero representing no pain to ten representing the worst imaginable pain?” (VNRS).

Verbal rating scale (VRS):

The VRS describes the intensity of pain in ascending order – no pain (0), mild pain (1), moderate pain (2) and severe/intense pain (3). It is important that numbers between the VRS and the NRS / VNRS.

Visual analogue scale (VAS):

The VAS is typically a 10 cm (100 mm) line where 0 mm represents no pain and 100 mm represents worst imaginable pain. Patients indicate on usually a horizontal scale their pain severity using the no pain and worst imaginable pain descriptors as a guide. The number of millimetres from zero to the patient score indicates the pain severity. Commercially available rulers are sometimes used rather than paper based tools.

<i>Visual analogue scale</i>												
No pain											Worst pain imaginable	

<i>Numerical rating scale</i>												
No pain											Worst imaginable pain	
0	1	2	3	4	5	6	7	8	9	10		
<i>Verbal ratingscale</i>												
0	No pain											
1	Mild pain											
2	Moderate pain											
3	Severe pain											

All pain severity tools have been shown to be useful. The verbal numerical rating scale and the verbal rating scale are the easiest for patients to use. Most importantly however is the ability to discriminate improvement or worsening of pain states. The verbal numerical rating scale is typically more sensitive than the verbal rating scale to indicate changes. Frequent reassessment of pain severity is an important aspect of clinical management, especially after interventions are performed (e.g. splinting) or medications / pain relievers are administered. An initial and final pain score should be recorded and the times these were assessed. Serial pain assessment is encouraged to better describe the pain trend whilst in our care.

Assessment of pain in different demographics

Novel pain assessment techniques have been developed for special populations including children. One such assessment tool is the Wong-Baker FACES Pain Rating Scale[©]. This scale uses a series of six faces to rate pain severity. Face 0 doesn't hurt at all. Face 2 hurts just a little bit. Face 4 hurts a little more. Face 6 hurts even more. Face 8 hurts a whole lot. Face 10 hurts as much as you can imagine, although you don't have to be crying to have this worst pain. Patients are asked to choose the face that best describes the pain they have. Importantly, patients do not have to be crying to score a 10.

Wong-Baker FACES™ Pain Rating Scale



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This pain scale is especially useful for children and each face is allocated a numerical value that can be recorded. Like other assessment tools, serial observations should be recorded.

Goals in pain management

The main aim is that patients receive effective pain relief. Whilst there are many definitions of "effective", the patients experience is paramount. Depending on the tool used, measures of effective analgesia include:

1. VNRS
 - a. A decrease in pain score by two or more points (e.g from 9 → 7)
 - b. A decrease in pain score by 30% or more (e.g. from 6 → 4)
 - c. A final pain score less than 3
2. VRS
 - a. A decrease in pain from severe → moderate (or lower)
 - b. A decrease in pain from moderate → mild (or lower)
 - c. A decrease in pain from mild → no pain
3. VAS
 - a. A 30% or more reduction in pain score (e.g. 70 mm → 59 mm)
 - b. A final pain score 30 mm or less

4. FACES

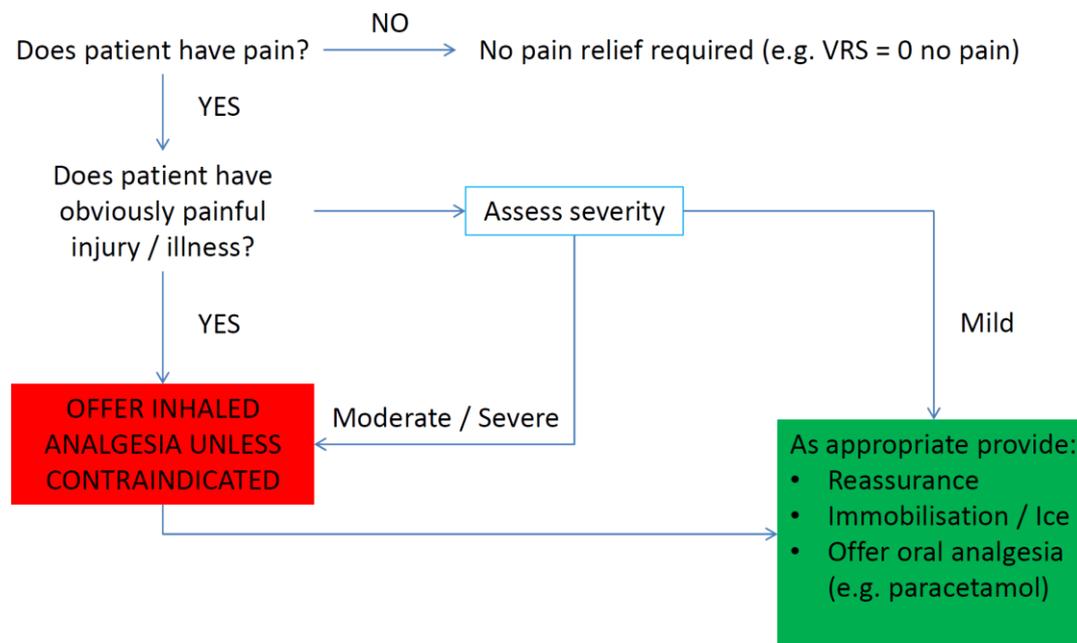
- a. A decrease in in pain score by 2 or more
- b. A final pain score of 2 or less

Another perspective is from the patient's direct perspective. If the patient has pain, asking the patient if they require something for the pain and they indicate they do, this can be a very simple way to decide if pain relief is required. Following reassessment, decisions to give further pain relief can be made (if clinically appropriate).

Be mindful however that some patients are obviously in pain and decline analgesia. Encouraging these patients to have pain relief is important. Frequent reassessment of pain severity and regularly offering pain relief will see most patients who need pain relief receiving pain relief.

Pain management clinical decision making algorithm

Members may find the following algorithm useful in assessing and treating patients for acute pain in the pre hospital setting.



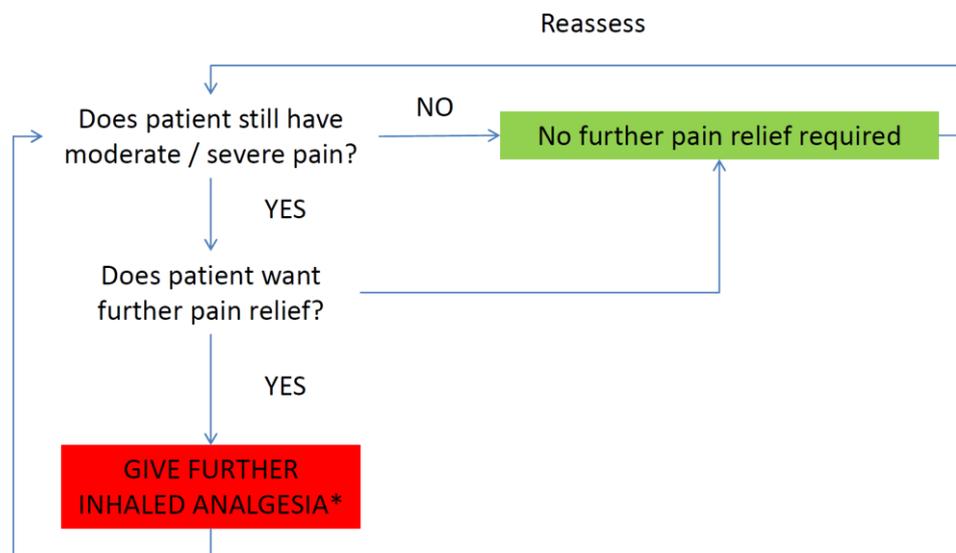
Following this algorithm ensures that patients obviously in distress with a painful injury or illness receive analgesia early. An inhaled analgesic agent would be most appropriate (e.g. methoxyflurane). If not in that category, following assessment of pain, if the patient is found to have moderate or severe pain, then an inhaled analgesic should be offered. If the patient only has mild pain, adjuncts such as reassurance, ice and oral analgesia (e.g. paracetamol) as appropriate should be provided. Additionally, for patients with an obvious painful

injury/illness or moderate/severe pain are also offered the management as indicated in the green box.

Ongoing pain management

Serial clinical observations and assessment of pain severity is required for all patients with acute pain, especially in those receiving or have been administered analgesia. All patients with moderate and severe pain should be closely observed to ensure than condition is improving or whilst awaiting the arrival of health professionals.

Members may find the following clinical algorithm helpful in guiding the further analgesic requirements. The underpinning principle is frequent reassessment of pain severity and continuing to offer analgesia for patients with moderate or severe pain. If patient has mild or no pain, inhaled analgesia can be ceased but pain needs to be frequently reassessed and inhaled analgesia recommenced if pain again increases to mild or severe.



Documentation and clinical handover

The pain history and the clinical assessment of pain severity must be well documented to ensure a complete clinical encounter is recorded contemporaneously. Times of clinical observations and pain scores (ideally initially, during treatment and at time of handover (or discharge)) are required. Times and doses of analgesic agents and medications should also be documented. For further information refer to the Patient Record (OB12) Completion Guide 2011. If the OB12 has not been completed at the time of the clinical handover, ensure that necessary clinical information (e.g. using MRMISTO, IMISTAMBO or ISOBAR) has been communicated, in particular doses and times of analgesia given and key elements of the pain history and severity assessment.

When to seek assistance

Help should be sought when:

- The patient has an injury or illness which requires further assessment or management in a medical centre / emergency department
- The patient has severe pain
- The patient develops new or worsening pain
- The patient has or develops non-traumatic chest pain
- Patients who have been administered inhaled an inhaled analgesic agent
- The patient has uncontrolled or unrelieved pain
- Patients where the cause of pain is unclear
- Patients who have pain seemingly disproportionate to the injury or illness
- Patients with abnormal vital signs
- Any patient you are worried about