National Ambulance Service
Quality Improvement Project

Prehospital Pain Management

Every Action Counts, Every Patient Matters.

Introduction

Pain is the most common reason for the public to activate the 999 /112 system, every day frontline staff working for the National Ambulance Service (NAS) have hundreds of interactions with patients suffering from pain, from a multitude of medical or traumatic causes.

Appropriate pain management is a fundamental aspect of patient care, practitioners of all grades, Emergency Medical Technicians, (EMT) Paramedics, (P) and Advanced Paramedics (AP) should all aim to become highly skilled in the accurate assessment, diagnosis and management of pain in the pre-hospital setting.

Each case and each patient is unique, the strategy you choose to treat pain may vary from case to case and from person to person. With hundreds of interactions there are hundreds of opportunities to really make a positive difference in a patient's experience.

NAS is prioritizing pain management as one of the first clinical Key Performance Indicators (KPI) of 2022. We are also launching our KPI with a widespread approach, seeking to improve our standards of pain management regardless of causation.

This Quality Improvement (QI) plan outlines key learning points for practitioners, from patient interactions to pharmacological, non-pharmacological treatments, approaches and barriers to achieving satisfactory analgesia for patients. Keeping accurate documentation of the care provided is critical to patient safety and is a key component of the care we provide.

As a service we believe we can do better for all our patients and through small focused changes in practice we can have an immensely positive impact in patient care every day.

Scope

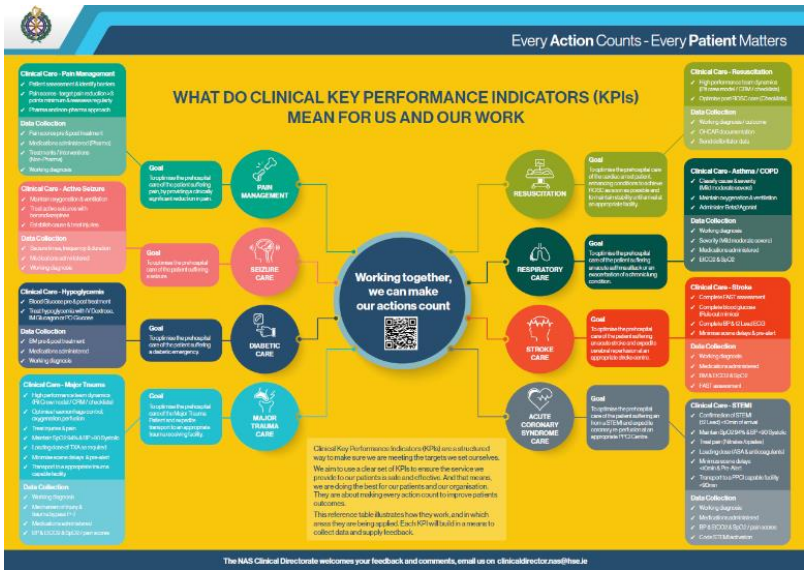
- This document outlines the proposed quality improvement process to maximize the opportunity to reach the targets set out in the clinical KPI for pain management.
- Initial KPIs for pain management focus on all patients in severe pain regardless of, causation of pain, duration of pain or type of pain. NAS will evolve our KPI data collection to identify and seek to report in greater detail about specific populations such as paediatric and geriatric patients and targeted areas of pain management such as medical vs trauma, acute vs chronic or specific clinical conditions such as Acute Coronary Syndromes (ACS).
- Initial KPI reporting focuses on severe pain categories. Patients presenting with moderate or mild pain classification are not currently being reported on as we evolve our KPI data collection we will seek to report in greater detail about the management of mild and moderate pain.
- This document aligns with the introduction of Analgesia / Sedation Clinical Practice Guidelines (CPGs) but will not provide detail of the targeted educational modules for sedation.
- This document does not describe the content of targeted educational modules yet to be devised by the Education and Competency Assurance Team.

Key Messages

- **Rapid, safe and effective management of pain is fundamental part of our role in EMS.**
- **Delve into your pain management toolkit.**
- **Pain management consists of treating the cause wherever possible while incorporating psychological, physical, pharmacological analgesic and Non-pharmacologic interventions.**
- **Identify specific patients' needs quickly.**
- **Acute vs Chronic pain - ACS / Trauma / General medical /Obstetric.**
- **Commence a simultaneous multimodal approach to pain management.**
- **Non pharmacological interventions are as important as pharmacological interventions.**
- **Inhaled analgesics while preparing for IV analgesics.**
- **Intranasal analgesia if IV access is not available.**
- **Oral analgesics as soon as practical as they take longer to have an impact.**
- **Identify barriers and enablers promptly.**
- **Activate a higher clinical (AP practitioner) level if you feel the patients needs are not being met.**
- **Use an aide memoire to help identify pain in the cognitively impaired patient.**
- **Use a field guide to confirm appropriate paediatric drug calculations.**
- **Don't accept the idea that pain cannot be managed effectively until arrival at ED.**
- **Document the first pain score & reassess regularly.**
- **Document changes in pain / concurrent pain scores following intervention.**

Background

Clinical KPIs 'Key Performance Indicators (KPIs) are measures of performance that are used to measure how well our organization is performing against targets or expectations. KPIs measure performance by showing trends to demonstrate that improvements are being made over time.



The QI approach to pain management will follow a similar process to the One Life Project, our successful QI process for out of hospital cardiac arrest. In similar fashion we aim to break down the care of the patient suffering from pain and develop and implement targeted educational supports and system enhancements to improve the care we provide.

The Community

We will assess and engage with the community we serve to target the most appropriate calls and signpost for non appropriate cases.

The Call

We will ensure that our clinical dispatch is as focused on pain management as our practitioners at the patients side.

The Care

We will support our frontline crews to develop a comprehensive understanding of pain management to improve the care we provide to patients.

The Data Collection & Feedback

We will standardise the data collection process and the feedback to staff, ensuring the lessons we learn over time enhance the care we provide to patients.

Pain as a Key Performance Indicator

NAS cases are reviewed for pain score compliance. The current targets are a 3 point reduction in pain score in 50% of patients with significant pain. This is evaluated from NAS ePCR and presented in reports for the NAS Clinical Effectiveness committee.

Pain Management Care Principles

To achieve the targets set out by the NAS we have introduced some key principles to improve the assessment and treatment of pain, they were outlined in detain lint this document but can be broadly broken into four key areas;

Patient Engagement	Identification of barriers
Non Pharmacological Pain Management	Pharmacological Pain Management

Data Collection and Feedback

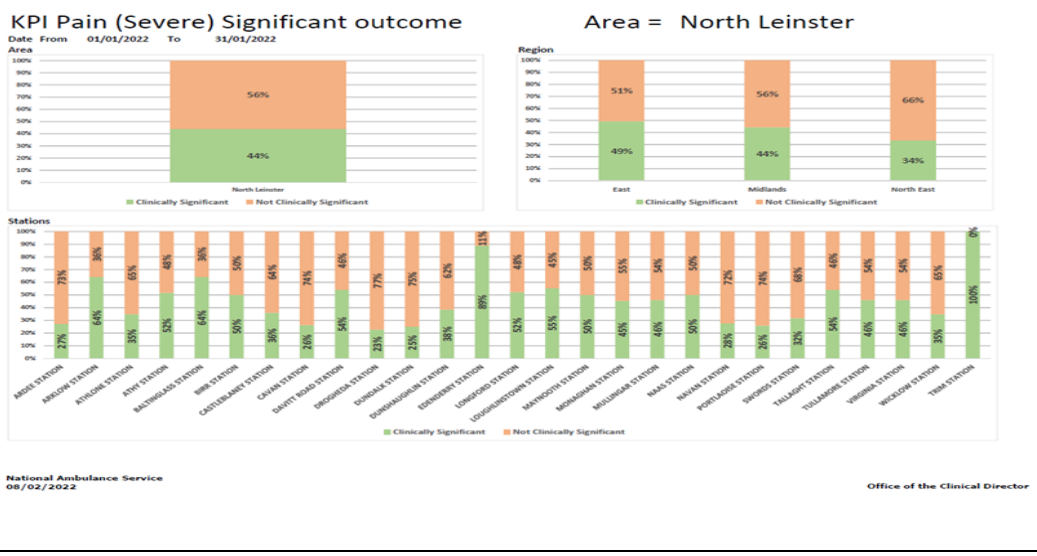
Data collection and feedback are key components of our services ability to assess and improve our performance. Key data collection points are outlined below.

Key Data points	**Description**
Document pain classification	All pertinent information from the patient assessment should be captured on the ePCR, Underlying aetiology / Anatomic location / Temporal nature / Intensity (mild / moderate / severe)
Document pain scores pre / post treatment	Any patient suffering from pain should have documented pain scores appropriate to their treatment plan, single pain scores do not allow for interpretation of the data and therefore do not allow us to establish the positive or negative impact of our care. **Each patient should have a minimum of two pain scores.**
Document the frequency of reassessment and / or interventions;	Vital signs, Non Pharmacological interventions or Pharmacological therapies. As broad guide you should ensure you document at minimum the following intervals; Severe Pain <5min - Moderate Pain <10min - Mild Pain <15min
Document rationale for withholding analgesia	Each patient who presents with pain has the right to be treated for pain, if the practitioner has valid reasons for withholding analgesia they should be clearly documented on the ePCR.

The KPI

Pain Management	4.1	Rate of clinically significant reduction in severe pain in adults and children
	4.2	Rate of clinically significant reduction in moderate pain in adults and children

The ability to report on any KPI is down to appropriate documentation of the assessment and care provided be frontline staff. A sample of data from the ePCR demonstrates the key reported outputs:

Table 1 outlines the service performance in collecting the data on the patient in pain. Did the patient get more than one pain score?	
	Table 2 outlines the service performance on the clinically significant reduction of pain. Where two or more pain scores were captured did we see a clinically significant reduction in pain (≥3points)

Classification of Pain

There are multiple ways in which pain may be classified. For this document we will broadly classified by:

- **Underlying aetiology** – source of the experienced pain.
- **Anatomic location** – site of pain within the body and can be divided into somatic and visceral.
- **Temporal nature** – duration of the pain.
- **Intensity** – how much the pain experience hurts?

TYPES OF PAIN	MECHANISM	CINICAL EXAMPLES	PHARMACOLOGICALTREATMENT OPTIONS*
UNDERLYING ETIOLOGY			
Nociceptive	The result of direct tissue injury from a noxious stimuli.	Bone fracture, fresh surgical incision, and fresh burn injury.	May include both opiate and non-opiate medications depending on injury.
Inflammatory	The result of released inflammatory mediators that control nociceptive input.	Late stages of burn healing, neuritis, and arthritis	Anti-inflammatory agents
Neuropathic	The result of direct injury to nerves leading to an alteration in sensory transmission.	Diabetic neuropathy, peripheral neuropathic pain, and post-herpetic neuralgia.	Tricyclic, selective norepinephrine reuptake inhibitors, gabapentinoids, or antidepressants
Psychogenic	Somatic manifestation of psychiatric illness or exacerbation of pain severity due to previous experience.		Treating the psychiatric illness may help in certain cases where pain is truly a somatic symptom of depression.
Idiopathic	Unknown	Chronic back pain without preceding trauma or obvious inciting event.	Maybe difficult to adequately address pain since underlying aetiology is unknown
ANATOMIC LOCATION			
Somatic	A delta fibre activity located in peripheral tissues	Superficial lacerations, superficial burns, superficial abscess	Topical and/or local anaesthetics, opiates, non-opiates
Visceral	C fibre activity located in deeper tissues such as organs	Uterine fibroid pain, pyelonephritis, biliary colic	Opiates
TEMPORAL NATURE			
Acute	A neuro physiological response to noxious injury that should resolve with normal wound healing.	Acute fracture, acute knee sprain	Opiate, non-opiates
Chronic	Pain that extends beyond the time for normal wound healing with resultant development of multiple neurophysiological changes	Chronic low back pain, fibromyalgia, arthritis	Depends on the nature of the pain.
Acute-on-chronic	An acute exacerbation of a chronic pain syndrome	Sickle cell disease, cancer, rheumatoid arthritis, acute injury in chronic pain patient	

Perception of pain

The patient's ability to describe and locate pain is directly impacted by a number of factors outside of the patient's control. Some factors are simply physiological while others are a complex blend of genetic, developmental, familial, psychological, social and cultural variables.

Physiologically, if the injured area is well innervated with pain fibres such as the skin or connective tissue, the location of pain is easily established. This is defined as somatic pain, examples of this are a burn to the finger tips or a fractured ankle. Body cavities are also well lined with connective tissue so for example a rib fracture can be easily localised due to the connective tissue of the pleura being effected.

Visceral pain is may prove more challenging, visceral pain is related to the internal organs in the midline of the body. The organs have fewer nerves and very often those nerves feed back into more than one spinal cord segment resulting in a vague sense of location, and often the pain feels like a deep ache or pressure. Pain from internal organs also can also be confused with pain in completely different areas of the body due to the nerves feeding into multiple spinal cord segments, this is known as referred pain. An example of this is the feeling of right shoulder tip pain associated with liver or biliary tract disease or the feeling of pain down an arm associated with cardiac disease.

Pain is also perceived and interpreted by patients in a very individual manner, which may differ substantially from the observer's own experience and preconceptions. Some common variations that we see in practice are;

- Age, gender, ethnicity
- Genetics
- Previous experiences / Patient perceptions
- Socioeconomic and psychiatric factors
- Culture and religion
- Patient expectations and perceived care by the treating provider

There are many types of pain and factors that affect a patient's expression of pain and response to treatment. Assessing and evaluating the symptoms of pain must be done in a systematic fashion as would be done for any other chief complaint or abnormal vital sign.

Assessment of pain

Pain assessment should be evaluated as part of general patient care in every child and adult. Assessment of pain should be performed early and re-assessed after an intervention is performed. Consider all patients as candidates for pain management and comfort measures regardless of transport interval. Thankfully the majority of patients we meet are in a position to clearly express their level of pain.

Comprehensive assessment of pain requires trust between the care giver and the patient, establishing trust starts at the first point of contact. A friendly clear introduction using your name and taking the first few seconds to reassure the patient that you are there to help them will help towards developing that trust.

Your method of questioning patients in pain is also important. Simple things like phrasing questions in a positive light can have a significant effect on the patient's perception of their pain. *"You appear to be a little more comfortable now."* or *"let me know when your pain starts to build up again and we will take care of it".*

Practitioners are required to not only take into consideration the patient's description of pain, pain score and pain behaviours, but also physiological parameters such as tachycardia, tachypnoea, sweating and hypertension all of these parameters can assist in recognising the patient in pain and commencing appropriate treatment.

Physiological parameters may take on greater significance as an indicator of pain when the patient is unable to communicate their experience or have a reduced level of consciousness. While physical signs may be a reasonable confirmation of pain, the absence of these signs does not necessarily indicate a lack of pain

However, practitioners must be cognisant of barriers to effective pain assessment such as a patient with an impaired conscious state through dementia or a disability. In these circumstances look also or instead for alterations in patient behaviour (agitation, restlessness, rocking, guarding etc.) and seek support from family members or nursing staff to enhance the assessment, similar approach may be needed when assessing pain in children.

The patient's perception of pain belongs to them as does their behaviour. Again, combine what the patient states with how the patient presents but never ignore a patient's claim they are in pain. If there is a clinical reason for withholding pain relief then this should be clearly documented on the ePCR. The same applies if there is a belief that the patient may be drug seeking, in particular for repeat presentations with clear drug seeking behaviours. Ensure there is clear documentation on the ePCR regarding the history of the behaviour.

Pain assessment acronyms

OPQRST – Is one of the most common acronyms for the assessment of pain, through a comprehensive, structured process we can gain significant insight into the patient's needs.

O	Onset of event	What was the patient doing when it started? Were they active, inactive, and or stressed? Did that specific activity prompt or start the onset of pain? Was onset of pain sudden, gradual or part of an ongoing chronic problem?
P	Provocation or palliation of symptoms	Is the pain better or worse with: Activity? Does walking, standing, lifting, twisting, reading, etc… have any effect of the pain? Position? Which position causes or relieves pain? Provide examples to the patient sitting, standing, supine, lateral, etc… Adjuvant? Which type of medication relieves the pain (Ibuprofen, paracetamol etc.)? Does the use of heat or ice packs alleviate pain? What type of alternative therapy (massage, acupuncture) have you used before? • Does any movement, pressure (such as palpation) or other external factor make the problem better or worse? This can also include whether the symptoms relieve with rest.
Q	Quality	Ask the patient to describe the quality of pain – is it throbbing, dull, aching, burning, sharp, crushing, shooting, etc…? Questions can be open ended "Can you describe it for me?" Ideally, this will elicit descriptions of the patient's pain: Whether it is sharp, dull, crushing, burning, tearing, along with the pattern i.e. intermittent, constant, or throbbing.
R	Region and radiation	Where pain is on the body and whether it radiates (extends) or moves to any other area? Referred pain can provide clues to underlying medical causes. Location: body diagrams may help patients illustrate the distribution of their pain. Dermatome map may help determine the relationship between sensory location of pain and spinal nerve segment
S	Severity	Ask the patient to describe the intensity of pain at baseline and during acute exacerbations. The pain score (usually on a scale of 0 to 10) where 0 is no pain and 10 is the worst possible pain.
T	Timing	Identify when the pain started, under what circumstances, duration, onset (sudden/gradual), and frequency. Acute Vs Chronic. How long the condition has been going on and how it has changed since onset (better, worse, different symptoms)? Whether it has ever happened before, and how it may have changed since onset, and when the pain stopped if it is no longer currently being felt?

SOCRATES – Is less frequently used but is also an excellent system of structured questions. If you use SOCRATES, please be aware that you will need to convert the information into OPQRST on the ePCR.

S	Site	Where is the pain? Or the maximal site of the pain.
O	Onset	When did the pain start, and was it sudden or gradual? Include also whether if it is progressive or regressive
C	Character	What is the pain like? An ache? Stabbing?
R	Radiation	Does the pain radiate anywhere? (See also Radiation.)
A	Associations	Any other signs or symptoms associated with the pain?
T	Time course	Does the pain follow any pattern?
E	Exacerbating / Relieving factors	Does anything change the pain?
S	Severity	How bad is the pain?

Pain assessment tools

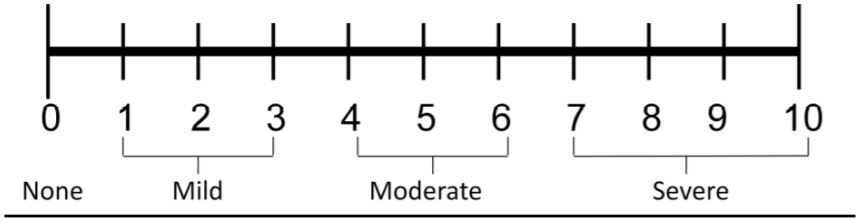
A fundamental part of treating pain is establishing a baseline pain score against which effectiveness of interventions can be measured. A number of different methods for evaluating pain exist outside those used by the NAS, our most commonly used pain assessment tools are the;

- Numeric Rating Scale
- Wong Baker Faces Pain rating scale
- FLACC Scale

These scales attempts to add a level of objectivity to a subjective assessment. We would ask practitioners to, where possible use only one scale for each patient contact. **Within each set of vital observations recorded please ensure you use only one of the pain scales available to record a pain value.**

Numeric Rating Scale

The patient is asked to rate their pain, corresponding to current, best and worst pain experienced. “Please indicate the intensity of current pain on a scale of 0 (no pain) to 10 (worst pain imaginable)”



Wong Baker Faces

Numeric rating scales are an excellent assessment tool but are limited to patients who are full responsive, not cognitively impaired or who have the capacity / understanding to self-rate their pain. In circumstances where the practitioner is unable to get the patient to directly rate their pain, they should use an alternative tool such as the Wong Baker Faces - pain rating scale that allows the caregiver to apply a numeric rating to a patients experience without the need to verbally communicate.

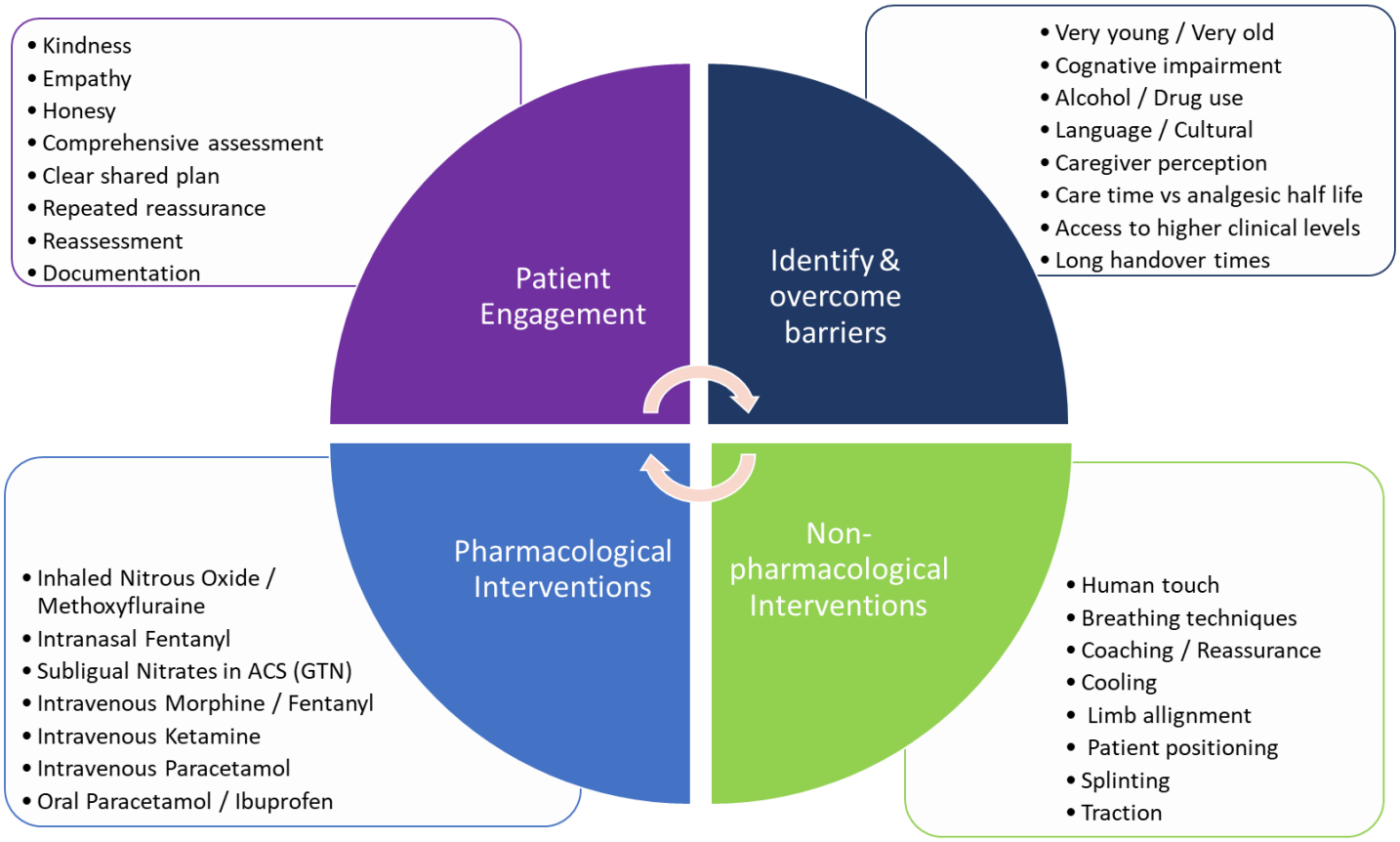
FLACC Scale

The NAS has also adopted a secondary nonverbal pain assessment tool, The FLACC scale or Face, Legs, Activity, Cry, Consolability scale is a measurement used to assess pain for children between the ages of 2 months and 7 years or individuals that are unable to communicate their pain. The scale is scored in a range of 0–10 with 0 representing no pain. The scale has five criteria, which are each assigned a score of 0, 1 or 2. The FLACC scale has also been found to be accurate for use with adults in intensive-care units who are unable to speak due to intubation.

Criteria[1]	Score 0	Score 1	Score 2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, uninterested	Frequent to constant quivering chin, clenched jaw
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting, back and forth, tense	Arched, rigid or jerking
Cry	No cry (awake or asleep)	Moans or whimpers; occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging or being talked to, distractible	Difficult to console or comfort

Principles of Pain Management

The aim should always be to relieve pain - unless there is some specific impediment to doing so. The idea that pain cannot be adequately managed in the prehospital setting or until arrival at an emergency department are now considered redundant. Over the past decade there has been significant development in the range of medications and associated training available to treat pain.



This is not a limited list of options available to practitioners, patient engagement is an underutilised and valuable tool.

Key Message

Frontline staff should consider pain management as a cyclical process rather than a linear or ladder model providing multiple modalities of care simultaneously with continual reassessment and adjustment of care accordingly.

Patient Engagement

As pain management is the combination of psychological, physical and pharmacological interventions it has to commence with positive patient engagement. Introduce yourself and gain your patients trust will significantly impact on how the patient responds to your care and advice.

Empathy and honesty are essential in gaining trust, combined with reassurance and repeated collaborative strategy with the patient. Practitioner and the patient can coordinate the most appropriate and effective interventions and medications.

The cyclical model reminds us that at different stages throughout the patient journey at the reassessment phase we may need to reengage our patient, reassess the plan and ask ourselves and the patient if we are still meeting their needs or do we need to adjust our plan.

Frequent documentation of the interventions or medications administered and the associated change in vital signs and pain scores is essential to show patient trends through the cycle of care.

Key Message

Be kind and honest, get your patient involved in the plan, reassess and reassure regularly.

Identification of Barriers

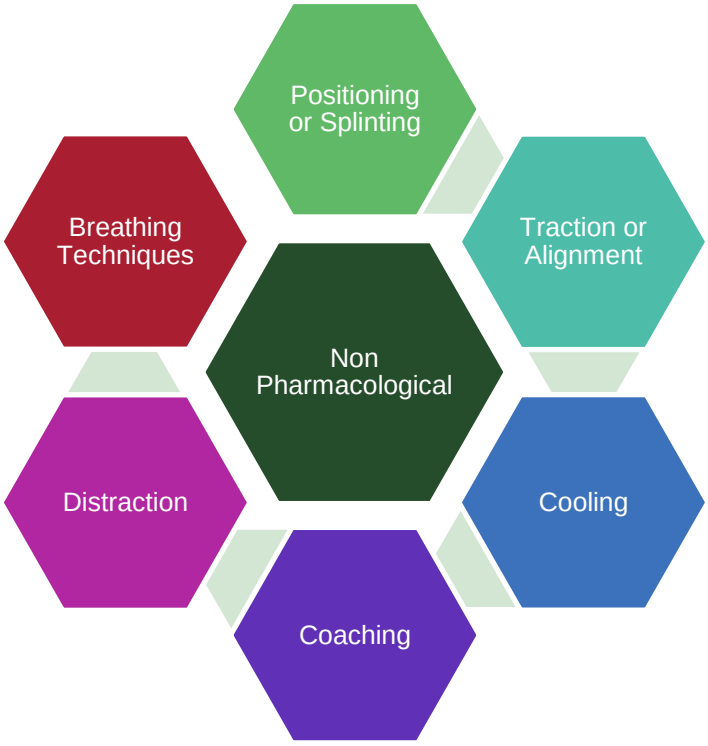
Pain management can be a complex process with unanticipated barriers that can derail any practitioner's plan. Barriers should not be significant enough to disrupt "Plan B" and successful intervention. However, there is significant evidence to suggest that prehospital care is littered with cases of sub optimal analgesia due to failing to overcome those barriers.

Key Message

It is important to identify potential barriers early in the process and make every effort to overcome these items, the use of cognitive aides, interpreters, field guides and reference tools can all improve delivery of care.

Non-Pharmacological Pain Management

Non-pharmacologic pain management is the combination of the key components of patient engagement (empathy, trust, kindness) in combination with practical psychological supports such as coaching, breathing techniques, distraction and practical interventions such as limb alignment or splinting. Practitioners should continually consider non-pharmacological interventions through the pain management cycle.



Key Message

The impact of non-pharmacological interventions can be significant and at times, as effective as or more effective than pharmacological interventions. By reminding ourselves of the importance of these techniques and continuing to revisit them we can improve our care.

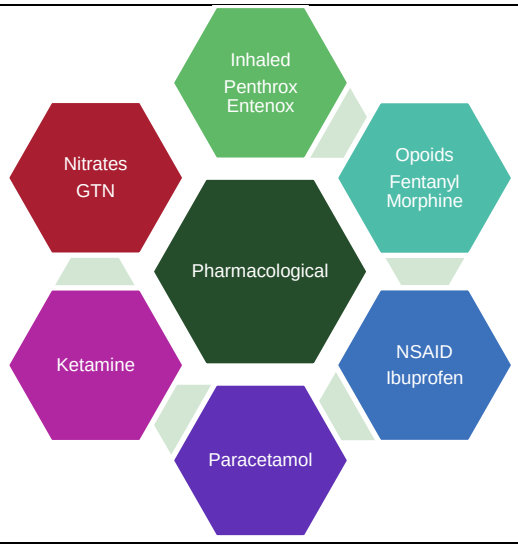
Pharmacological Pain Management

NAS practitioners now have a broad range of medications to choose from, each medication has its own strengths and weaknesses. Each patient is unique and may respond differently to each medication, the below table summarises some of the key variables in each medication. Particularly the time of onset and duration may support the practitioner in planning out the best strategy for the patients journey.

Medication	Route	Onset	Analgesic Duration	Comments
Entonox	INH	2-5 minutes	5-10 minutes	Rapid onset - Patient Controlled -
Penthrox	INH	1-3 minutes	5-10 minutes	Rapid onset - Patient Controlled - Caution in Renal Patients
Paracetamol	IV	5-10 minutes	4-6 hours	AP only - Caution in Paediatrics and Geriatrics.
Paracetamol	PO	<1 hour	4-6 hours	Slow onset - No PO with altered LOC - Caution in liver disease
Ibuprofen	PO	30-60 minutes	6-8 hours	Slow onset - No PO with altered LOC - Caution in renal / elderly
GTN (ACS)	SL	1-3 minutes	15-20 minutes	Rapid onset - ACS only - reduction of pain through improved myocardial perfusion
Morphine	IV	5-10 minutes	4-5 hours	Moderately rapid and predictable onset. Consider for patients who need prolonged pain control,
Morphine	IM	10-30 minutes	4-5 hours	Slow onset, less predictable than when given IV
Fentanyl	IV	30 -60 seconds	30-60 minutes	Rapid onset, short duration, potent analgesic.
Fentanyl	IN	5-10 minutes	1 hour	Useful first line when no IV available but less predictable than IV administration
Ketamine	IV	30 -60 seconds	5-15 minutes	Rapid onset, short duration, potent analgesic. More effective in combination with an opioid.

Key Message

Consider multiple adjuncts early in the pain management cycle. It is appropriate to commence inhaled analgesics while establishing vascular access and it is appropriate to target pain by using a combination of medications simultaneously



Sample Case Study

John is a 55 year old gentleman who suffered a possible femur fracture in a farming accident. Initial paramedic crew establish quickly that this is a more significant injury than first thought and appropriately request AP support.

The patient is distressed, anxious and clearly in significant pain. The crew are very experienced, they understand the importance of establishing trust to complete a comprehensive assessment and get the patient engaged in the plan. Through their kind and clear instructions John feels safe and is responsive to their instructions.

The crew commence John on inhaled Penthrox, documenting the start time and Johns pain score which is 10/10, they prepare a traction splint and make the decision not to realign what appears to be a very unstable and badly angulated fracture until the arrival of the AP.

In the interim however they commence oral ibuprofen as they understand that oral analgesics take longer to take effect, the discuss and decide to hold off on oral paracetamol at they would rather have that medication administered via the IV route upon the APs arrival. They ensure to reassess and reengage with John during this time and document any changes in his pain scores and vital signs.

Upon arrival the AP finds it challenging to establish IV access as John has been out in the cold for some time, the team decide to administer IN Fentanyl which in conjunction with inhaled Penthrox and coaching of the patient through the process they provide adequate analgesia and psychological support to realign Johns leg and apply the traction splint.

Reassessing John and continually reassuring him they move him to the ambulance, in this warmer well lit environment they establish IV access and consider the next phase of Johns journey, his pain is 7/10. The team commence IV Paracetamol and IV morphine simultaneously while encouraging John to use the inhaled Penthrox as required throughout the journey to hospital, understanding that the combination of medications, reassurance and patient directed care is working well.

Upon arrival at the ED Johns pain is well managed, his pain score is 2/10 and he is comfortable considering the extent of his injury. The crew continue to monitor, treat and document John's pain until he is handed over and is fully in the care of the receiving team. This case would be considered successful from a Pain Management KPI perspective, but far more importantly is has been a highly successful collaborative approach to managing a patient's journey.

Key Message

Teamwork is essential to improving how we manage pain, communicating and developing the plan with the patient, family, other practitioners or the receiving staff will ensure we provide effective analgesia. The combination of each component of the cyclical model, patient engagement, identification of barriers, non-pharmacological and pharmacological pain management techniques all lead to improved care.

Special Populations

Often untreated or under dosed, common barriers to paediatric pain management include:

- Difficulty assessing pain and lack of pain score documentation
- Wide range of developmental stages and responses to pain
- Difficulty obtaining vascular access
- Provider discomfort with administering opioids to small children

Less than 4 years old:
Consider using an observational scale, such as
•Faces, Legs, Arms, Cry, Consolability (FLACC)

4 to 12 years old:
Consider using a self-report scale, such as
•Wong Baker Faces, Faces Pain Scale (FPS)

Greater than 12 years old:
Consider using a self-report scale, such as
•Numeric Rating Scale (NRS)
•Visual Analog Scale (VAS)

Key Message

Paediatric patients can be challenging but by using their name, speaking calmly and gently, getting down on their level will help develop their trust in you. Helping the parents remain calm creates a calm environment and using age-appropriate pain scales allow more accurate assessment and using aide memoirs / field guides will confirm the correct and safe medication dose.

Special Populations

Older patients have been shown to receive less analgesia than younger patients.

One study showed only 28% of patients >/= 60 years of age with a hip fracture received analgesics by EMS. Those who did had a nearly 5 point drop in their numeric rating score (7 to 2.8) upon arrival the ED.

Often untreated or occasionally under or over medicated, common barriers to geriatric pain management include:

- Difficulty assessing pain and lack of pain score documentation
- Cognitive / visual / hearing impairment associated with the aging process.
- May have multiple underlying chronic conditions, many co-morbidities such as renal failure or hepatic failure may change the elimination of pain medications and necessitate a lower dose.
- May be on multiple medications that can interact with or impede analgesic medications.

Key Message

Geriatric patients require a comprehensive assessment and a detailed review of their clinical history and current medications. Challenges in cognition should not be a barrier to appropriate and safe analgesic medication administration. IV medications should be titrated to effect commencing at a low dose and frequently reviewed.

Special Populations

Pain management in pregnancy can be complex and poses several challenges.

Because of physiological changes, pregnant patients metabolize medications differently. Additionally, when caring for pregnant patients providers are potentially treating two patients.

Thus medication effects on the foetus must be considered when selecting treatment options.

- Assessment of pregnant patients is similar to that of non-pregnant adults. However, additional considerations should be taken such as assessing gestational age, pregnancy related symptoms (abdominal/pelvic pain, vaginal bleeding/fluid, etc.)
- Non pharmacological options for treating pain should be tried first to reduce risk to the foetus. However, pharmacological medications should be used when needed after a careful evaluation of risks.
- PHECC in association with the NAS developed a standard for the administration n of medication during pregnancy and should be reviewed frequently for changes.

Key Message

Practitioners treating pregnant patients should use the appropriate reference material to ensure safe analgesic medication administration.

Special Populations

Special Populations: Intellectual Disability

Individuals with intellectual disability (ID) are considered among the most vulnerable population from a healthcare point of view. ID may have multiple origins, involving various brain areas and functions related to pain processing, but there is still an ongoing belief that adults with ID have a higher pain threshold than the general population. This misconception is highly related to the challenges of pain assessment in adults with ID. People with severe ID may be less expressive than the general population, leading to believe that they do not experience pain. Moreover, adults with ID may have difficulties communicating their pain, even when they are verbal and may elicit idiosyncratic and atypical responses or attitudes to pain such as “freezing” or stereotyped movements

- The very first key step for adequate pain management in adults with ID is the use of one of the validated pain assessment tools adapted to the individual patient's cognitive ability such as the FLACC or Wong Baker Scales. Families / carers may also have access to a more appropriate / individualised pain assessment tools.
- ID patients may have multiple underlying chronic conditions such as diabetes, cardiovascular disease, asthma, and conditions affecting the bones and joints—osteoporosis, arthritis. The cause of the pain may be challenging to establish.
- Assessment of pain in the cognitively impaired adult may require the establishment of individual benchmarks for behaviour. This is done by asking carers, relatives or close friends to describe normal behaviour and any recent changes in the patient's behaviour.

Key Message

Practitioners treating individuals with intellectual disability should, identify possible causes of pain, take time to observe patient behaviour and seek information from others to establish the most appropriate pain assessment tools for the individual. If all the available evidence suggests that the patient is experiencing pain and other non-pharmacological interventions have failed to relieve the pain it may be reasonable to administer an analgesic to observe the response this has on pain-related behaviours.

Documenting the Effectiveness of Interventions

As reduction in pain is a measurable KPI, it is important to not only accurately assess pain, but to document the effect (or in some circumstances the lack thereof) of our interventions on pain scores. As standard practice practitioners should also document the lack of pain; i.e. if a patient is not in pain they should have a zero pain score documented in their vital observations.

Ensuring documentation is accurate allows analysis of the effectiveness of treatments and enables future research into other pain relief options.

Importantly, documentation also provides the justification for your choice of dose, type of drug, time of administration and recording of effects and side effects. It is important when completing ePCRs for patients in pain that you include the following;

Key Data points	**Description**
Document pain classification	All pertinent information from the patient assessment should be captured on the ePCR, Underlying aetiology / Anatomic location / Temporal nature / Intensity (mild / moderate / severe)
Document pain scores pre / post treatment	Any patient suffering from pain should have documented pain scores appropriate to their treatment plan, single pain scores do not allow for interpretation of the data and therefore do not allow us to establish the positive or negative impact of our care.
Document the frequency of reassessment and / or interventions;	Vital signs, Non Pharmacological interventions or Pharmacological therapies. As broad guide you should ensure you document at minimum the following intervals; Severe Pain <5min - Moderate Pain <10min - Mild Pain <15min
Document rationale for withholding analgesia	Each patient who presents with pain has the right to be treated for pain, if the practitioner has valid reasons for withholding analgesia they should be clearly documented on the ePCR.