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General Palliative Care Guidelines

The Management of Pain at the End Of Life

www.gain-ni.org

November 2010

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Aim

To provide a user friendly, evidence based guide for the management of pain at the end of life in adult patients with advanced life limiting conditions

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Pain

- "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage."

  International Association of Pain 1986

- "An experience that affects, and is affected by, both the mind and the body. It involves the perception of a painful stimulus by the nervous system and the reaction of a person to this".

  Stannard and Booth 2004

Definitions and Terminology

Acute pain

- Pain with well defined onset
- Associated with subjective and objective physical signs and with hyperactivity of the autonomic nervous system
- Usually responds to analgesic drug therapy and treatment of its underlying cause.

Definitions and Terminology

Chronic pain

- Persists over weeks or months
- May be associated with significant changes in lifestyle, functional ability and personality
- Requires careful assessment, not only of the nature and intensity of pain, but also of the degree of psychological distress
- Management is challenging

Impact of acute and chronic pain

ACUTE PAIN	CHRONIC PAIN
Meaningful	Meaningless
Defined Onset	Often gradual onset
Usually single pain	May be multiple pains
Easy to describe	Difficult to describe
Clinical signs of pain evident (tachycardia, sweating, rapid respirations)	Clinical signs of pain not maintained over time
Pain behaviour apparent e.g. crying out, moaning, rubbing, rocking, protecting painful area	May not demonstrate overt pain behaviour but may become withdrawn, depressed and hopeless

Types of Pain- Nociceptive Pain

- Somatic pain
- Visceral pain

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Types of Pain- Neuropathic Pain

- Differentiation pain
- Central pain
- Sympathetic-maintained pain
- Complex regional pain syndrome (CRPS)
- Referred pain

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Patterns of Pain

- Background pain
- Breakthrough pain
- Incident pain
- Idiopathic/ spontaneous pain
- Total pain

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Principles of Pain Management

- An understanding that pain is a subjective experience
- Aetiology should be considered to optimise pain management
- Comprehensive, individualised and holistic assessment and treatment planning
- Regular review and reassessment with involvement of the wider multiprofessional team as appropriate
- Patient and carer involvement

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Principles of Pain Management

- Treatment should start at the level of the World Health Organisation (WHO) analgesic ladder appropriate for the severity of the pain
- Oral analgesia should be the preferred form of medication delivery
- Morphine is currently considered to be the strong opioid of choice
- Analgesia for continuous pain should be prescribed on a regular basis, and also prescribed as needed for "breakthrough pain" in appropriate dosages
- Adjuvant analgesics should be considered where appropriate as per WHO ladder.

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Assessment of Pain

Dimensions of Pain can be classified under the following headings

- Physical
- Psychosocial
- Spiritual

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Pain Assessment

A detailed pain assessment should include

- Clinical History
- Physical examination
- Identification of likely cause of pain and classify the type of pain
- Arrangement for appropriate diagnostic investigations
- Arrangement for multidisciplinary professional assessment
- Regular Review to determine effectiveness of treatment

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Pain Assessment

No universally accepted tool for the assessment of pain although there are many different pain assessment tools available

General Principles of Analgesic Prescribing

- By the mouth
- By the clock
- By the ladder (see WHO Ladder)
- Individual dose titration
- Use of adjuvants
- Attention to detail

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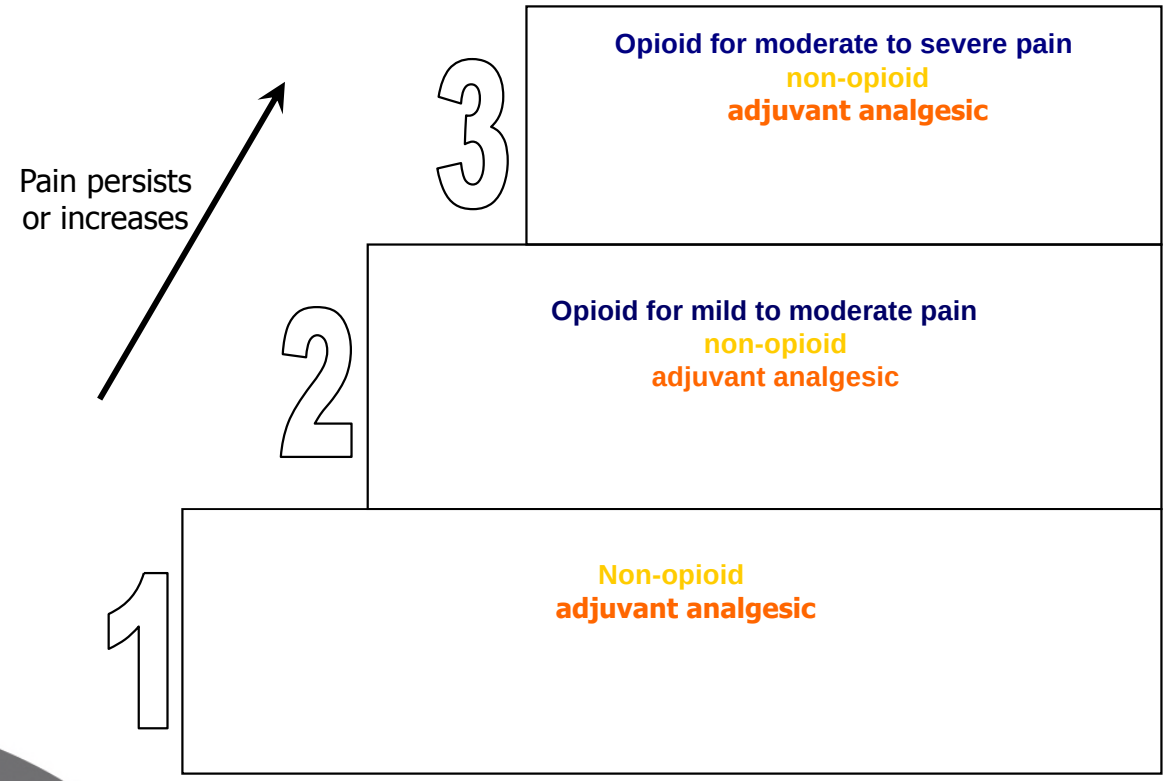
WHO Analgesic Ladder



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Ref: GAIN guidelines (2010)

WHO Analgesic Ladder (contd)

Step 1:

Drug Options - Non-Opioid +/- Adjuvants

Paracetamol 1 g QDS

Non-Steroidal anti-inflammatory drugs (NSAIDS)

Step 2:

Drug Options-Opioid for mild to moderate pain + Non-Opioid +/- Adjuvants

Co-codamol (30/500 max 8 tablets in 24 hrs)

Tramadol- up to 400mg/24hrs

WHO Analgesic Ladder (contd)

Step 3:

Drug Options-Opioid for moderate to severe pain + Non Opoid +/- Adjuvants

Oral 1st line Morphine

Oral 2nd Line Oxycodone

Subcutaneous opioid

1st Line Diamorphine/morphine

2nd Line Oxycoden

Opioid Choice

The decision to use a specific opioid preparation should be based on a combination of factors:

- pain characteristics
- the product characteristics
- the patient's previous response to opioids
- the patient's preference

It is extremely unlikely that any one opioid preparation will be suitable for all patients with breakthrough pain.

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Opioid Routes

- Oral
- Parenteral
- Transdermal

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First Line- Oral Strong Opioids

- First Line- Morphine Sulphate
- Opioid with most evidence supporting its use and is therefore considered the first line oral strong opioid when renal and hepatic function is normal
- Morphine is available in a variety of formulations

First Line- Oral Strong Opioids

Two commonly used approaches to initiating opioid therapy

- **Using immediate release (short-acting) morphine** (preferred option)

  or

- **Using modified and immediate release morphine** (alternative option)

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Second Line- Oral Strong Opioids

- Alternative opioids may be considered if a patient develops intolerable adverse effects with their current opioid without achieving adequate pain relief
- This decision is optimally made in conjunction with a specialist in palliative medicine
- Where this is not possible the **opioid conversion tables** can be used to calculate the dose of an alternative opioid.
- Equi-analgesic doses can only be taken as an approximate guide when switching patients from one opioid to another and **careful clinical observation is required when changing between opioids.**
- ***Caution- consider dose reduction for first 12-24 hours of alternative opioid, especially when converting between high doses.***

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Approximate Equivalent Doses of Opioid Analgesic for Adults

- Caution should be used when converting opioids in opposite directions as potency ratios may be different

- Where there is no direct conversion between opioids,it is conventional practice to use Oral Morphine equivalents

- **ALWAYS REVIEW PATIENT REGULARLY AFTER ANY OPIOID SWITCH AS CONVERSION RATIOS ARE APPROXIMATE AND CONSIDERABLE INTER-PATIENT VARIATION MAY OCCUR**.

Approximate Equivalent Doses of Opioid Analgesic for Adults- Guiding Principles

Suggested current practice guidelines are:

- Oral Morphine to Subcutaneous (SC) Diamorphine – Divide by 3
- Oral Morphine to Oral Oxycodone – Divide by 2
- Oral Morphine to SC Morphine- Divide by 2
- Oral Morphine to Oral Hydromorphine – Divide by 7.5
- Oral Oxycodone to SC Oxycodone- Divide by 2 (Suggested safe practice)
- Oral Oxycodone to SC Diamorphine Divide by 1.5 (Suggested safe practice)*
- Oral Hydromorphine to SC Hydromorphine Divide by 2

Approximate Equivalent Doses of Opioid Analgesic for Adults- Guiding Principles

Suggested current practice guidelines are

- SC Diamorphine to SC Oxycodone – Treat as equivalent up to doses of 60mg/24hrs. Use caution when converting higher doses. Calculate by using oral morphine equivalents
- SC Diamorphine to SC Alfentanil- Divide by 10
- SC Diamorphine to SC Morphine- ratio is 1:1.5 and 1:2 Multiply by 1.5
- Oral Tramadol to Oral Morphine – Divide by 10 (Suggested safe practice)**
- Oral Codeine/ Dihydrocodeine to Oral Morphine – Divide by 10

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Parenteral Opioids

First Line

- Diamorphine
- Morphine Sulphate

Second Line

- Oxycodone
- Alfentanil
- Fentanyl
- Hydromorphone

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Transdermal Opioids

Indications for Use

- Patients who have difficulty with the oral route
- Unacceptable side- effects with other opioids
- Renal impairment
- Medication compliance
- Patient preference
- Transdermal preparations should not be commenced in patients with uncontrolled pain or who are moribund.

Breakthrough Pain

"A transient exacerbation of pain that occurs either spontaneously, or in relation to a specific predictable or unpredictable trigger, despite relatively stable and adequately controlled background pain"

Davis et al 2009

Managing Breakthrough Pain

- Patients with pain should be assessed for the presence of breakthrough pain and breakthrough pain should be specifically assessed
- Management of breakthrough pain should be individualised
- Consideration should be given to:
  - treatment of the underlying cause of the pain e.g. radiotherapy
  - avoidance/ treatment of the precipitating factors of the pain modification of the background analgesic regimen which may include titration of opioid analgesics, switching of opioid analgesics, or the addition of adjuvant analgesics

Managing Breakthrough Pain

- Opioids are the "rescue medication" of choice in the management of breakthrough pain episodes .

  Dose of opioid "rescue medication" should be determined by individual titration

- Non-opioid analgesics may be useful in the management of breakthrough pain episodes e.g. paracetamol, NSAIDs

- Interventional techniques and non-pharmacological methods may be useful in the management of breakthrough pain

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Fentanyl Preparations

- These preparations have been developed specifically for breakthrough cancer pain (BTcP)
- Have faster onset of action and shorter duration of effect, making them more suitable for traditional BTcP management
- **They should only be used in patients who are on a daily minimum of 60mg PO morphine equivalent**
- Currently available in oral transmucosal, buccal and intranasal preparations
- Dose of all short acting fentanyl preparations should be determined by individual titration as data suggests that there is no relationship between the most effective dose of these preparations and the effective dose of the background opioid medication

Opioid Adverse Effects

- Constipation
- Nausea and vomiting
- Sedation
- Dry mouth
- Opioid Toxicity

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Adjuvant/Co Analgesics

Medications whose prime function are not analgesic but which can enhance the management of pain

Neuropathic pain First line

Tricyclic Antidepressants

Anticonvulsants

Neuropathic pain Second line

Combination of tricyclic and antidepressant

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Adjuvant/Co Analgesics

Neuropathic pain Second line

Consider use of

- Lidocaine 5% patches
- Capsaicin
- Corticosteriods
- Neuropathic agents which may be used by specialists e.g selective noradrenaline reuptake inhibitors, selective serontonin reuptake inhibitors, clonazepam, ketamine,parental lidocaine

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Adjuvant/Co Analgesics

- **Bone Metastases-** Bisphosphonates
- **Muscle Spasm-**Antispasmodics. Muscle relaxants (limited evidence)
- **Liver capsule pain-** Corticosteroids or NSAIDS
- The use of other drugs under specialist supervision only e.g topical opoids and cannabinoids may be indicated

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Pain Management - Other Interventions

- Complementary therapies
- Transcutaneous electrical nerve stimulation (TENS)
- Acupuncture
- Creative Therapies
- Occupational Therapy
- Anti-cancer therapy

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Pain Management - Other Interventions

Anaesthetic Procedures

- Local nerve blocks
- Neuroaxial techniques
- Chemical neurolysis
- Spinal cord compression
- Vertebroplasty

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Challenges in Managing Pain

Assessing and managing pain in patients who are

- cognitively impaired
- have a learning disability

Prescribing analgesics in patients with

- Renal impairment
- Renal replacement
- Hepatic impairment
- Respiratory impairment
- Cardiac failure
- Neurological conditions

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