Symptom Management Guidelines: PAIN

Definition(s)
- Pain: a subjective acute or chronic physical and/or emotional discomfort
- Total pain: includes physical, intellectual, emotional, interpersonal, spiritual, financial, and bureaucratic pain

Pain Classifications:
- Neuropathic pain: nerve pain initiated by damaged nerves, often described as sharp, tingling, burning, cold, and/or a pins and needles
- Nociceptive pain: arises from stimulation of pain receptors within the tissue, which has been damaged or involved in an inflammatory process such as cancer or from the treatment of cancer
- Somatic pain: pain in skin, muscle, and bone described as throbbing, stabbing, aching and pressure e.g. bone fracture
- Visceral pain: pain in organs which may be described as gnawing, aching, cramping, and sharp (e.g. liver capsular pain)
- Allodynia: pain caused by a stimulus (e.g. light touch, cool air, contact with clothing) which does not normally cause pain
- Dysesthesia: abnormal spontaneous sensations (burning, stinging, stabbing) from activities that do not normally cause pain
- Incident pain: breakthrough pain, which is caused by an action such as weight bearing, defecation, or breathing/coughing
- Long acting opioid: also called; sustained release (SR), controlled release (CR), or extended release (ER). These come in oral or transdermal patch formulations.
- Short acting opioid: medications which are also called immediate release (IR)
- Breakthrough dose: extra dose of medicine taken to control pain that has broken through regularly controlled background pain
- Total daily dose: is the 24-hour total of a drug that is taken for regular and breakthrough doses
- Opioid naïve: an individual who has either never had an opioid or who has not received opioid dosing for a 2-3 week period
- Opioid toxicity: symptoms of toxicity include sedation, nausea, delirium, hallucinations (often visual or tactile), cognitive impairment (a fluctuating course) and myoclonus (characterized by "muscle jerking" that can be localized or generalized). If very severe, these can progress to become generalized seizures. Patients with renal impairment and patients on high dose opioids for long periods of time are considered at higher risk
- Tolerance: desensitization of receptors which leads to increasing doses of pain medication needed to accomplish same level of comfort
- Physical dependence: a chemical phenomenon created by receptors in the brain whereby persons who no longer need an opioid after long-term use need to reduce their dose slowly over a prolonged time period to prevent withdrawal symptoms
- Substance abuse / Addiction: a craving for drugs in the absence of pain
- Adjuvant analgesia: class of drugs normally used for medical conditions but have been found to be useful to control pain either on their own or in conjunction with other analgesics
- Complementary/Alternative Therapy: Non pharmacological strategies to relieve pain (may include such techniques as superficial heat and cold, massage, relaxation, imagery, pressure or vibration)

Causative Factors

<table>
<thead>
<tr>
<th>Cancer Related</th>
<th>Side Effects of cancer-related medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tumor causing obstruction (e.g. bowel, lymph nodes), ascites, or infiltration of nerves</td>
<td>Hormonal therapy: bone flare</td>
</tr>
<tr>
<td>Bone lesions/metastases</td>
<td>Granulocyte colony stimulating factor (e.g. filgrastim): transient bone pain</td>
</tr>
<tr>
<td>Headaches due to CNS tumors</td>
<td>Biophosphonates: bone pain, osteonecrosis of the jaw</td>
</tr>
<tr>
<td>Spinal cord compression</td>
<td>Ondansetron, intrathecal chemotherapy administration: headache</td>
</tr>
<tr>
<td>Distension of liver or kidney capsule</td>
<td>Immunotherapy- Checkpoint inhibitors. The result of immune mediated side effects</td>
</tr>
<tr>
<td>Pathologic fractures</td>
<td></td>
</tr>
<tr>
<td>Infection: Herpes Zoster</td>
<td></td>
</tr>
<tr>
<td>Cancer-related pain increases with disease progression</td>
<td></td>
</tr>
</tbody>
</table>

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### Focused Health Assessment

<table>
<thead>
<tr>
<th>GENERAL ASSESSMENT</th>
<th>SYMPTOM ASSESSMENT</th>
<th>PHYSICAL ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contact and General Information</strong></td>
<td><strong>Normal</strong></td>
<td><strong>Vital Signs</strong></td>
</tr>
<tr>
<td>Physician name - oncologist, family physician</td>
<td>• Do you have any pre-existing pain?</td>
<td>• As clinically indicated</td>
</tr>
<tr>
<td>Pharmacy</td>
<td><strong>Onset</strong></td>
<td><strong>Weight</strong></td>
</tr>
<tr>
<td>Home health care</td>
<td>• When did it begin? Is this a different pain? (new location or quality?)</td>
<td>• Take current weight and compare to pre – treatment or last recorded weight as indicated</td>
</tr>
<tr>
<td>Other HCP</td>
<td>• How often does it occur?</td>
<td><strong>Observe Patient General Appearance:</strong></td>
</tr>
<tr>
<td>Allergies</td>
<td>• How long does it last?</td>
<td>• Observe painful areas for signs of infection, trauma, skin breakdown and changes in boney structure</td>
</tr>
<tr>
<td>History of substance abuse</td>
<td><strong>Provoking / Palliating</strong></td>
<td>• Observe facial features, note any grimacing</td>
</tr>
<tr>
<td>History of analgesic use and adverse effects</td>
<td>• What brings it on? What makes it worse? better?</td>
<td>• Observe posture, gait, affect, and note any guarding</td>
</tr>
<tr>
<td><strong>Consider Causative Factors</strong></td>
<td><strong>Quality</strong></td>
<td><strong>NOTE:</strong> Cognitive impairment and age related factors may impair the client’s ability to express pain. Does not decrease the ability to feel pain. Objective cues of pain and observation is critical.</td>
</tr>
<tr>
<td>Cancer diagnosis and treatment(s) – note type and date of last treatment</td>
<td>• What is your pain like at rest? With movement?</td>
<td><strong>Region / Radiation:</strong></td>
</tr>
<tr>
<td>Medical history (e.g. pre-existing chronic pain)</td>
<td>• How would you describe it? (i.e. persistent, burning, stabbing, shooting, numbing)</td>
<td>• Where is it? Does it spread anywhere? Ask the patient to point to where the pain is</td>
</tr>
<tr>
<td>Surgical history</td>
<td><strong>Severity / Other Symptoms</strong></td>
<td>• Have you received treatment in the area? (i.e. radiation, surgery)</td>
</tr>
<tr>
<td>Psychosocial history</td>
<td>• How would you rate your pain level on a scale of 0 – 10, with 0 being not at all to 10 being the worst imaginable)</td>
<td><strong>Severity / Other Symptoms:</strong></td>
</tr>
<tr>
<td>Medication profile</td>
<td>• How bothered are you by this symptom? (on a scale of 0 – 10, with 0 being not at all to 10 being the worst imaginable)</td>
<td>• How would you rate your pain level on a scale of 0 – 10, with 0 being not at all to 10 being the worst imaginable)</td>
</tr>
<tr>
<td>Recent lab or diagnostic reports</td>
<td>• What is it on average? At worst? At best?</td>
<td>• How bothered are you by this symptom? (on a scale of 0 – 10, with 0 being not at all to 10 being the worst imaginable)</td>
</tr>
<tr>
<td>Spinal cord compression</td>
<td>• Does the pain keep you awake at night?</td>
<td>• What is it on average? At worst? At best?</td>
</tr>
<tr>
<td>Fracture</td>
<td>• Does it hurt if you cough or move?</td>
<td>• Does the pain keep you awake at night?</td>
</tr>
<tr>
<td></td>
<td>• Does the pain prevent you from performing ADLs?</td>
<td>• Does it hurt if you cough or move?</td>
</tr>
<tr>
<td></td>
<td>• Are you experiencing any other symptoms? (i.e. loss of bowel or bladder functioning, motor weakness)</td>
<td>• Does the pain prevent you from performing ADLs?</td>
</tr>
</tbody>
</table>

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Treatment
• What medications or treatments are you using right now? (Include over the counter, complementary and alternative treatments). How much? How often? Has this been effective? Any side effects?
• What medications have you tried in the past?

Understanding / Impact on You
• Assess patient’s understanding of the importance of reporting any new pain to the nurse or oncologist
• Assess patient’s understanding of taking the medication regularly as prescribed
• Assess patients level of distress related to the pain and physical and psychological impact

Value
• What are your beliefs surrounding pain and pain management?
• Goals for pain management?

PAIN GRADING SCALE*
NCI Common Terminology Criteria for Adverse Events (Version 4.03)

<table>
<thead>
<tr>
<th>GRADE 1</th>
<th>GRADE 2</th>
<th>GRADE 3</th>
<th>GRADE 4</th>
<th>GRADE 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Mild)</td>
<td>(Moderate)</td>
<td>(Severe)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mild pain</td>
<td>Moderate pain; limiting instrumental ADL (e.g. preparing meals, shopping, managing money)</td>
<td>Severe pain, limiting self-care ADL (e.g. bathing, dressing, feeding self, using the toilet, taking medications)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*A semi-colon indicates ‘or’ within the description of the grade and a single dash (-) indicates a grade is not available

*Step-Up Approach to Symptom Management:
Interventions Should Be Based On Current Grade Level and Include Lower Level Grade Interventions As Appropriate

Management of Cancer Related Pain

GRADE 1

NON – URGENT:
Support, teaching, & follow-up as clinically indicated

Patient Assessment and Care
• Collaborate with physician to rule out other causes or concomitant causes of pain (e.g. oncologic emergency such as spinal cord compression, pathologic fracture) and to determine if further investigation warranted
• If neuropathic pain, see Peripheral Neuropathy SMG
• Assess for opioid toxicity (see definition – page 1)
• Reassure patient and family that pain can be relieved and effectively managed

Pharmacological Management
Medications as prescribed by physician:
• Acetaminophen or NSAIDS prn or regularly
• Local anesthetics may be prescribed for prevention of procedural related pain
• Refer to protocol specific algorithm if patient is on Immunotherapy

Appendix A: Pain Relief Ladder below
Non-Pharmacological Management

- Light exercise (e.g. walking, cycling, swimming)
- Heat (note: heating pads are no longer used at the BCCA)
- Ice (max 15 minutes at a time)
  *caution: heat and cold compresses should be avoided on irradiated tissue
- Imagery, hypnosis, distraction, relaxation, meditation, yoga, deep breathing, music
- Acupuncture, therapeutic touch, reiki, massage, Transcutaneous electrical nerve stimulation (TENS), ultrasound

Patient Education and Follow-Up

How & when to access resources:

- Review contact numbers
- Reinforce when to seek immediate medical attention:
  - T ≥ 38° C
  - Pain onset is sudden and/or severe and/or acute

Follow up:

- Instruct patient/family to call back or see family physician if pain not improved, increases, or if new pain develops
- Arrange for follow up in ambulatory care setting if indicated

Possible Referrals

- Patient Support Centre
- Telephone Care for follow-up
- Massage therapist
- Acupuncturist
- Physiotherapist

GRADE 2 – GRADE 3

URGENT:
Requires medical attention within 24 hours

Pharmacological Management

- In collaboration with physician and pharmacist, consider rotation to another opioid
- Medications as prescribed by physician:
- Refer to protocol specific algorithm if patient is on Immunotherapy
- Opioids (e.g. morphine)
- Adjuvant medications:
  - Anticonvulsants (e.g. Gabapentin) for neuropathic pain
  - Antidepressants (e.g. Nortriptyline) for neuropathic pain
  - Local anesthetics may be prescribed for neuropathic pain
  - Biophosphonates (e.g. pamidronate IV, zoledronic Acid IV) for bone pain

Patient Education

- Ask patient to express any concerns re: starting an opioid. Provide support re: myths and fears as necessary
- Discuss the importance of:
  - Taking analgesics regularly around the clock and as prescribed
  - Taking breakthrough medications as necessary
  - Anticipating a possible painful event and taking analgesics 30 minutes prior
  - Not running out of their opioid prescription
- Keeping a pain diary and recording pain levels and breakthrough doses and times. See resources for sample medication record flow sheet
- As necessary, write the analgesic schedule out for patient
- Discuss common side effects of opioids (Appendix B: Opioid Side Effects)
- Advise patient that long acting medications should not be crushed or chewed; capsules may be opened and granules spread on pudding, apple sauce etc

Follow-Up

- Instruct patient/family to call back or see family physician if pain not improved, increases, if new pain develops, or if adverse effects related to analgesics occur
- Arrange for nurse initiated telephone follow – up in 24 hours
- Arrange for physician follow – up in ambulatory care setting if indicated
# EMERGENT:
Requires IMMEDIATE medical attention

## Patient Care and Assessment
- Patients generally require hospital admission – notify physician of assessment, facilitate arrangements as necessary
- If patient is on Immunotherapy, remind them to present their Immunotherapy alert card.
- Assess:
  - if pain onset is sudden and acute (possible bone fracture) or if acutely exacerbated from previous level
  - for any associated motor weakness, tingling and numbness of extremities and loss of bladder and bowel function (possible spinal cord compression)
  - bowel function (possible bowel obstruction)
- Nursing Support:
  - Monitor vital signs (as clinically indicated)
  - Pain and symptom assessment and management as appropriate

## Pharmacological Management
- In collaboration with physician and pharmacist, consider rotation to another opioid
- Refer to protocol specific algorithm if patient is on Immunotherapy
- Medications that may be prescribed or titration of dosages:
  - SC or IV opioids
  - Adjuvant medications:
    - Corticosteroids (e.g. Dexamethasone) for bone and neuropathic pain, pain from spinal cord compression and bowel obstruction, lymphedema pain, liver capsule pain, and headache caused by increased intracranial pressure.
    - Anticonvulsants (e.g. Gabapentin) for neuropathic pain
    - Antidepressants (e.g. Nortriptyline) for neuropathic pain
    - Local anesthetics may be prescribed for neuropathic pain
    - Biophosphonates (e.g. pamidronate IV, zoledronic Acid IV) for bone pain

## Other Treatments
- Radiotherapy – useful in the management of bone pain or spinal cord compression
- Surgery (e.g. surgical pinning for an impending fracture or cementoplasty)
- Interventional treatments (e.g. epidural, intrathecal, or celiac block)

### RESOURCES

#### Possible Referrals
- Patient Support Centre
- Telephone Care for follow-up
- Pain and Symptom Management/Palliative Care (PSMPC)
- Home health Nursing
- Patient and family Counseling

#### Patient Education Resources
- BC Cancer Agency: Pain Management and You Video [http://mediasite.phsa.ca/mediasite/Play/8c70a524ad11402e987bcb85f1510b7001d](http://mediasite.phsa.ca/mediasite/Play/8c70a524ad11402e987bcb85f1510b7001d)

#### Immunotherapy
- Immunotherapy Alert Card
- Please refer to protocol specific algorithms to guide management of immune mediated side effects.

#### Opioid Management

#### Related Online Resources
- E.g. Fair Pharmacare; BC Palliative Benefits. Can be found in “Other Sources of Drug Funding Section”

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Appendix A. WHO’s Pain Relief Ladder

Appendix B. Opioid Side-Effects

<table>
<thead>
<tr>
<th>Side-Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constipation</td>
<td>Common side effect. Ensure BCCA bowel protocol is initiated (once obstruction and/or impaction have been ruled out)</td>
</tr>
<tr>
<td>Nausea and vomiting</td>
<td>Common side effect; usually mild and temporary when first starting opioid. May need an antiemetic (e.g. metoclopramide) during first week of opioid initiation. If lasts longer than a week, assess for other causes and consider opioid rotation.</td>
</tr>
<tr>
<td>Sedation</td>
<td>Common side effect. Usually temporary (2-4 days) when first starting opioids or increasing doses. Inform patient that it could be a matter of catching up on lost sleep due to pain. If continues, assess for other causes and consider lower dose or opioid rotation.</td>
</tr>
<tr>
<td>Respiratory depression</td>
<td>Very uncommon as pain serves as a stimulus so keeps patient awake. If unable to rouse: call 911. For patients in hospital: monitor respirations closely and discuss use of Naloxone with MD.</td>
</tr>
<tr>
<td>Myoclonus</td>
<td>May occur with any dose and any route of opioid (usually high doses of opioids). Possible opioid-induced neurotoxicity (elderly most susceptible), assess renal function and electrolytes. May precede hallucinations, agitation, delirium, and possible seizures. Patient needs assessment by GP with possible opioid rotation. If interferes with sleep or function may need a medication to counter this side effect.</td>
</tr>
<tr>
<td>Pruritus</td>
<td>Rare. May need an antihistamine. Consider opioid rotation if severe.</td>
</tr>
<tr>
<td>Urinary retention</td>
<td>Usually temporary and passes within a week. More common in men with prostatic hypertrophy, or those with pelvic tumors.</td>
</tr>
<tr>
<td>Reduced libido</td>
<td>Suggestion of reduced libido while on opioids. Long-term opioid therapy may suppress testosterone levels.</td>
</tr>
<tr>
<td>Delirium</td>
<td>Consider opioid rotation.</td>
</tr>
</tbody>
</table>
### Appendix C. Comparison of Available Opioids

#### Comparison of Available Opioids:

<table>
<thead>
<tr>
<th>Opioid Class</th>
<th>Codeine</th>
<th>Oxycodone</th>
<th>Morphine</th>
<th>Hydromorphone</th>
<th>Fentanyl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate release preparations</td>
<td>15, 30 mg IR tablet</td>
<td>5, 10, 20 mg IR tab</td>
<td>5, 10, 30 mg IR tab</td>
<td>1, 2, 4, 8 mg IR tab</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liquid: 5 mg per mL</td>
<td>Liquid: N/A</td>
<td>Liquid: 1, 5, 10, 20, 50 mg per mL</td>
<td></td>
<td><strong>Parenteral solution may be given as sublingual dose</strong></td>
</tr>
<tr>
<td>Sustained release preparations</td>
<td>50, 100, 150, 200 mg SR tablets</td>
<td>5, 10, 20, 40, 80 mg SR tablets</td>
<td>12 Hour formulations: 10, 15, 30, 60, 100, 200 mg SR</td>
<td>3, 6, 12, 18, 24, 30 mg SR capsules</td>
<td>12, 25, 50, 75, 100 mcg patch</td>
</tr>
<tr>
<td>Rectal</td>
<td>No suppository</td>
<td>No suppository</td>
<td>5, 10, 20, 30 mg suppositories</td>
<td>3 mg suppository</td>
<td>No suppository</td>
</tr>
<tr>
<td>Parenteral</td>
<td>30, 60 mg/mL</td>
<td>No injection</td>
<td>2, 10, 15, 25, 50 mg/mL injection</td>
<td>2, 10, 50 mg/mL injection</td>
<td>50 mcg/mL injection</td>
</tr>
<tr>
<td>Relative potency compared to 10 mg PO Morphine</td>
<td>PO: 1 mg</td>
<td>PO: 6.7 mg</td>
<td>PO: 10 mg Parenteral: 5 mg</td>
<td>PO: 2 mg S.C., I.V: 1 mg</td>
<td>50 to 100 mcg when administered sublingually</td>
</tr>
<tr>
<td>Opioid Class</td>
<td>Naturally occurring</td>
<td>Naturally occurring</td>
<td>Semi-synthetic</td>
<td>Semi-synthetic</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Comments:</td>
<td>• Ceiling effect at 360-600 mg</td>
<td>• In renal failure metabolites may accumulate to toxic levels (^{1})</td>
<td>• Lower incidence of pruritus, sedation and nausea and vomiting (^{1})</td>
<td><strong>Half-life is 2 to 4 hours with duration of analgesic action between 30 minutes and 4 hours</strong></td>
<td><strong>See Appendix A</strong></td>
</tr>
</tbody>
</table>

Source: Fraser Health Authority, Hospice Palliative Care Program, Symptom Management Guidelines, 2006

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