BC Cancer Agency
CARE + RESEARCH
An agency of the Provincial Health Services Authority

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

Cancer Related	• Tumor causing obstruction (e.g. bowel, lymph nodes), ascites, or infiltration of nerves • Bone lesions/metastases • Headaches due to CNS tumors • Spinal cord compression • Distension of liver or kidney capsule • Pathologic fractures • Infection: Herpes Zoster • Cancer-related pain increases with disease progression
Side Effects of cancer-related medications	• Hormonal therapy: bone flare • Granulocyte colony stimulating factor (e.g. filgrastim): transient bone pain • Biophosphonates: bone pain, osteonecrosis of the jaw • Ondansetron, intrathecal chemotherapy administration: headache • Vinca alkaloids and taxanes: peripheral neuropathy

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	• 5-Flurouracil: mucositis • Aromatase inhibitors: arthralgia, myalgia
Radiation therapy	• Bone pain flare, mucositis, neuropathy, osteoradionecrosis, dermatitis, esophagitis, cystitis, lymphedema
Surgery and Procedures	• Post operative pain (e.g. mastectomy, axillary lymph node dissection, phantom limb pain). • Procedural pain: Catheter insertion (e.g. pleural, peritoneal)
Other	• Headaches, Arthritis, Myalgia

Consequences

- Quality of life – psychological distress, compromised role function, decreased functional status, exacerbation of other symptoms

Focused Health Assessment

GENERAL ASSESSMENT

Contact and General Information

- Physician name - oncologist, family physician
- Pharmacy
- Home health care
- Other HCP
- Allergies
- History of substance abuse
- History of analgesic use and adverse effects

Consider Causative Factors

- Cancer diagnosis and treatment(s) – note type and date of last treatment
- Medical history (e.g. pre-existing chronic pain)
- Surgical history
- Psychosocial history
- Medication profile
- Recent lab or diagnostic reports
- Spinal cord compression
- Fracture

SYMPTOM ASSESSMENT

Normal

- Do you have any pre-existing pain?

Onset

- When did it begin? Is this a different pain? (new location or quality?)How often does it occur?
- How long does it last?

Provoking / Palliating

- What brings it on? What makes it worse? better?

Quality

- What is your pain like at rest? With movement?
- How would you describe it? (i.e. persistent, burning, stabbing, shooting, numbing)

Region / Radiation

- Where is it? Does it spread anywhere? Ask the patient to point to where the pain is
- Have you received treatment in the area? (i.e. radiation, surgery)

Severity / Other Symptoms

- 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)
- 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)
- What is it on average? At worst? At best?
- Does the pain keep you awake at night?
- Does it hurt if you cough or move?
- Does the pain prevent you from performing ADLs?
- Are you experiencing any other symptoms? (i.e. loss of bowel or bladder functioning, motor weakness)

PHYSICAL ASSESSMENT

Vital Signs

- As clinically indicated

Weight

- Take current weight and compare to pre – treatment or last recorded weight as indicated

Observe Patient General Appearance:

- Observe painful areas for signs of infection, trauma, skin breakdown and changes in boney structure
- Observe facial features, note any grimacing
- Observe posture, gait, affect, and note any guarding

NOTE: 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.

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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
Adapted NCI CTCAE (Version 4.03)

NORMAL	GRADE 1 (Mild)	GRADE 2 (Moderate)	GRADE 3 (Severe)	GRADE 4
No pain	Mild pain	Moderate pain; limiting instrumental ADL (e.g. preparing meals, shopping, managing money)	Severe pain, limiting self care ADL (e.g. bathing, dressing, feeding self, using the toilet, taking medications)	—

***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 ***Appendix A: Pain Relief Ladder below***

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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: • 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

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GRADE 4

EMERGENT: Requires IMMEDIATE medical attention	
Patient Care and Assessment	• Patients generally require hospital admission – notify physician of assessment, facilitate arrangements as necessary • 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 • 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	• Coping with Cancer – Pain: http://www.bccancer.bc.ca/health-info/coping-with-cancer/managing-symptoms/pain • Resources about managing deep breathing, progressive muscle relaxation, positive thinking, etc. In Patient Handout Section: • http://www.bccancer.bc.ca/health-info/coping-with-cancer/emotional-support/managing-stress • BC Cancer Agency: Pain Management and You Video http://mediasite.phsa.ca/mediasite/Play/8c70a524ad11402e987bcb851510b7001d
Opioid Management	• Principles of Opioid Management http://www.fraserhealth.ca/media/16FHSymptomGuidelinesOpioid.pdf
Related Online Resources	• E.g. Fair Pharmacare; BC Palliative Benefits. Can be found in “Other Sources of Drug Funding Section” http://www.bccancer.bc.ca/health-professionals/professional-resources/pharmacy/financial-support-benefit-lists
Bibliography List	• http://www.bccancer.bc.ca/health-professionals/professional-resources/nursing/symptom-management

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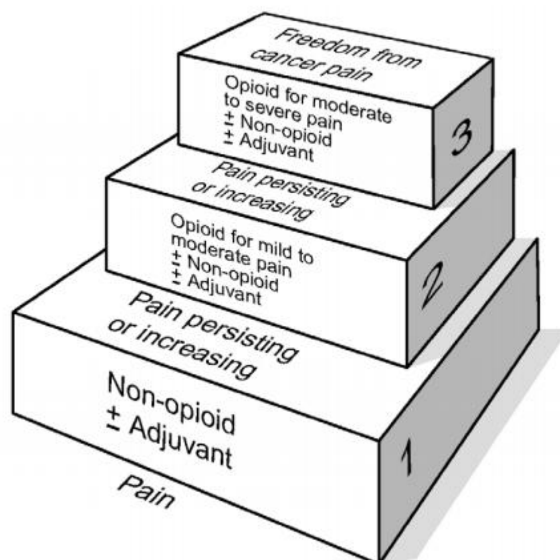
Appendix A. WHO's Pain Relief Ladder



Source http://www.who.int/cancer/palliative/painladder/en/

Appendix B. Opioid Side-Effects

Constipation	• Common side effect • Ensure BCCA bowel protocol is initiated (once obstruction and/or impaction have been ruled out
Nausea and Vomiting	• 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
Sedation	• Common side effect • Usually temporary (2- 4days) 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
Respiratory Depression	• 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
Myoclonus	• 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
Pruritus	• Rare • May need an antihistamine • Consider opioid rotation if severe
Urinary Retention	• Usually temporary and passes within a week • More common in men with prostatic hypertrophy, or those with pelvic tumors
Reduced libido	• Suggestion of reduced libido while on opioids. Long-term opioid therapy may suppress testosterone levels
Delirium	• Consider opioid rotation

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Appendix C. Comparison of Available Opioids

Comparison of Available Opioids:

Opioid	Codeine	Oxycodone	Morphine	Hydromorphone	Fentanyl
Immediate release preparations	15, 30 mg IR tablet Liquid: 5 mg per mL	5, 10, 20 mg IR tab Liquid: N/A	5, 10, 30 mg IR tab Liquid: 1, 5, 10, 20, 50 mg per mL	1, 2, 4, 8 mg IR tab Liquid: 1 mg per mL	No IR tablet ** Parenteral solution may be given as sublingual dose
Sustained release preparations	50,100,150, 200 mg SR tablets	5, 10, 20, 40, 80 mg SR tablets	12 Hour formulations: 10, 15, 30, 60, 100, 200 mg SR 24 Hour formulations: 10, 20, 50,100 mg capsule	3, 6, 12, 18, 24, 30 mg SR capsules	12, 25, 50, 75, 100 mcg patch
Rectal	No suppository	No suppository	5, 10, 20, 30 mg suppositories	3 mg suppository	No suppository
Parenteral	30,60 mg/mL	No injection	2, 10, 15, 25, 50 mg/mL injection	2, 10, 50 mg/mL injection	50 mcg/mL injection
Relative potency: compared to 10 mg PO Morphine	PO:1 mg NOTE: 10 mg morphine =100 mg codeine	PO: 6.7 mg	PO: 10 mg Parenteral: 5 mg	PO: 2 mg S.C., I.V.: 1 mg	50 to 100 mcg when administered sublingually
Opioid Class	Naturally occurring	Naturally occurring	Semi-synthetic	Semi-synthetic	Synthetic
Comments:	• Ceiling effect at 360- 600 mg • Ineffective analgesic in 10 percent of Caucasians as they lack an enzyme to convert codeine to morphine.[1, 13, 14, 21]		• In renal failure metabolites may accumulate to toxic levels.[1]	• Lower incidence of pruritus, sedation and nausea and vomiting.[1]	Half-life is 2 to 4 hours with duration of analgesic action between 30 minutes and 4 hours ***See Appendix A*

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

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