Cancer Care Ontario

Action Cancer Ontario

Symptom Management Pocket Guides:

PAIN

Ontario

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Assessment

- Prior to treatment an accurate assessment should be done to determine the cause(s), type(s) and severity of pain and its impact.
- A comprehensive assessment of pain should consider the following domains:
  - physical effects/manifestations of pain
  - functional effects (interference with activities of daily living)
  - spiritual aspects
  - psychosocial factors (level of anxiety, mood) cultural influences, fears, effects on interpersonal relationships, factors affecting pain tolerance.
- Self assessment pain scales should be used by patients with no cognitive impairment.

- Observational pain rating scales should be used in patients who cannot complete a self assessment scale.
- The frequency of the review depends upon the severity of the pain and associated distress.

General Principles of Cancer Pain Assessment

1. Perform an adequate pain history.
2. Use tools valid for the patient's age and cognitive abilities, with additional attention to the language needs of the patient (e.g., Brief Pain Inventory (BPI), Edmonton Symptom Assessment System (ESAS), Palliative Performance Scale (PPS)).
3. Record medications currently taken as well as those used in the past, including efficacy and any adverse effect.
4. Classify the pain – nociceptive, neuropathic or mixed?
5. Consider common cancer pain syndromes while conducting the history and physical examination.
6. Assess for functional impairment and the need for safety measures.
7. Incorporate a psychosocial evaluation into the assessment, including determination of the patient's/family's goals of care
8. Use a pain diary to track the effectiveness of therapies and evaluate changes in pain.
9. Review current diagnostic tests for clues to the origin of the pain. Order a diagnostic test (e.g., MRI, CT, laboratory testing) when warranted for new pain or

increasing pain, and only if it will contribute to the treatment plan.

10. Evaluate for the presence of other symptoms, as pain is highly correlated with fatigue, constipation, mood disturbances, and other symptoms.
11. Assess for risk if opioids are being considered.

Non-Pharmacological Treatment

Radiation Therapy

- All patients with pain from bone metastases which is proving difficult to control by pharmacological means should be referred to a radiation oncologist for consideration of external beam radiotherapy

Vertebroplasty

- Vertebroplasty or percutaneous cementoplasty should be considered in patients with pharmacologically difficult to control bone pain from malignant vertebral collapse or pelvic metastases.

Surgery

- Removal of tumours or stabilization of bones may remove localized pain.

Anesthetic Interventions

- Interventions such as coeliac plexus block and neuraxial opioids should be considered to improve pain control and quality of life in patients with difficult to control cancer pain.

Other Therapies

- Consider role for physiotherapy or occupational therapy
- Complementary therapies (e.g. massage, aromatherapy, music therapy, acupuncture, transcutaneous electrical nerve stimulation, reflexology, Reiki, hypnotherapy) may be considered.

Psycho-social-spiritual interventions

- Psycho-social-spiritual interventions (patient education, counseling, recreational activities, relaxation therapy imagery, social interaction, spiritual counseling) should be considered.

Pharmacological Treatment

General Principles in Using Adjuvants

- The type and cause of the pain will influence the choice of adjuvant analgesic (e.g. nociceptive, neuropathic, bone metastases).
- The choice of antidepressant or anticonvulsant should be based on concomitant disease, drug therapy and drug side effects and interactions.
- Patients with neuropathic pain should be given either a tricyclic antidepressant (eg amitriptyline, desipramine, nortriptyline or imipramine) or an anticonvulsant (eg gabapentin or pregabalin) with careful monitoring for adverse effects.
- Cannabinoids may have a role in refractory pain, particularly refractory neuropathic pain.

General Principles in Using Opioids

1. Educate the patient and/or family about the use of opioids and the expected outcomes.
2. Anticipate adverse effects like sedation and educate patients about the fact that they will quickly tolerate most adverse effects except for constipation.
3. In opioid-naïve patients and the frail elderly, start low and go slow with titration. Transdermal fentanyl is **not** recommended in opioid-naïve patients.
4. In patients already on opioids, titrate them fairly quickly to the point where they are getting adequate pain control without intolerable adverse effects.
5. Immediate release or sustained release products can both be used for titration and maintenance.
6. Give opioids regularly, around the clock for constant pain, not 'as required'.
7. Always prescribe breakthrough doses.
8. Prevent adverse effects e.g., for constipation prescribe laxatives right from the initiation of therapy and decide on a plan for the management of constipation.
9. Monitor patients closely as you are titrating opioids.
10. Use universal precautions where a risk for abuse is identified.
11. Specialist pain or palliative care advice should be considered for the appropriate choice, dosage and route of opioids in patients with reduced kidney function or in patients with difficult to control pain.

- All patients with moderate to severe cancer pain, regardless of etiology, should receive a trial of opioid analgesia.
- In the presence of reduced kidney function all opioids should be used with caution and at reduced doses and/or frequency.
- Fentanyl, methadone and oxycodone are the safest opioids of choice in patients with chronic kidney disease.
- Methadone requires an experienced prescriber.
- **Check for significant drug interactions before prescribing any drug to a patient on methadone**.
- When using a transmucosal fentanyl formulation for breakthrough pain the effective dose should be found by upward titration independent of the regular opioid dose.
- For those with stabilized severe pain and on a stable opioid dose or those with swallowing difficulties or intractable nausea and vomiting, fentanyl transdermal patches may be appropriate.

Adverse Effects of Opioids

- Many opioid-naïve patients will develop nausea or vomiting when starting opioids, tolerance usually occurs within 5-10 days. Patients commencing an opioid for moderate to severe pain should have access to an antiemetic to be taken if required.
- The majority of patients taking opioids will develop constipation. Little or no tolerance develops. The commonest prophylactic treatment for preventing opioid-induced constipation is a combination of stimulant (senna or bisacodyl)and osmotic laxatives (lactulose or PEG 3350)

Patient Education should include:

- Taking routine and breakthrough analgesics, adverse effect management, non pharmacologic measures that can be used in conjunction with pharmacologic treatment.

Mild Pain ESAS 1 to 3

TREATMENT WITH NON-OPIOIDS

Acetaminophen and NSAIDS

- Acetaminophen and NSAIDS including COX-2 inhibitors should be considered at the lowest effective dose.
- The need for ongoing or long term treatment should be reviewed periodically, if no significant response in one week drugs should be stopped.
- Long term use of NSAIDs should require gastric mucosa protection.

Bisphosphonates

- There is insufficient evidence to recommend bisphosphonates for first line therapy for pain management.

TREATMENT WITH OPIOIDS

- For mild to moderate pain, weak opioids such as codeine or tramadol could be given in combination with a non-opioid analgesic.
- If pain is not controlled with these combinations go to “Moderate Pain” re: initiation and treatment with opioids

Moderate Pain ESAS 4 to 6

TREATMENT WITH OPIOIDS

- If the person is opioid naïve:
  - Morphine starting dose is usually 5mg Q4h with 2.5-5mg Q1H PRN for breakthrough pain. For elderly or debilitated patients consider a starting dose of 2.5mg Q4h.
  - Hydromorphone starting dose is 1mg Q4h with 0.5-1mg Q1h PRN for breakthrough pain. For elderly or debilitated patients consider a starting dose of 0.5 mg Q4h.
  - Oxycodone starting dose is 2.5 mg or one half tablet Q4H with 2.5 mg or one half tablet Q2H PRN for breakthrough.(The lowest dose oxycodone tablets available, either in combination with acetaminophen or alone, contain 5mg of oxycodone, equivalent to ~5-10mg of morphine).

- If the person is taking an opioid:
  - As an immediate release preparation with q4h dosing, increase the regular and breakthrough doses by 25%.
  - As a sustained release opioid, increase this dose by 25%. Change the breakthrough dose to 10% of the regular 24h dose, either q1-2h PRN PO or q30 min PRN subcut.
  - Patients with stable pain and analgesic usage, receiving oral morphine, oxycodone or hydromorphone should

have the drug converted to a sustained or controlled release formulation given q12h for ease of administration. The short acting breakthrough dose is usually 10% of the total daily dose.

- The frequency of breakthrough doses for oral opioids is Q1-2h PRN. After conversion to a long acting preparation, if pain is not well controlled, reassess the patient and consider why multiple breakthrough doses are being used and the effectiveness of the breakthrough doses.
- If indicated after proper assessment, the daily dose can be titrated by adding 20 to 30% of the breakthrough doses used in the preceding 24 hrs to the daily sustained release formulation.
- Make frequent assessments and adjustments to the opioid dose until the pain is better controlled.

Severe Pain ESAS 7 to 10

TREATMENT WITH STRONG OPIOIDS

- **<u>If the person is opioid naïve</u>*: Oral:*** Morphine 5-10 mg PO q4h and 5mg PO q1h PRN **OR** hydromorphine 1.0-2.0 mg PO q4h and 1.0 mg PO q1h PRN **OR** ***Subcutaneous:*** Morphine 2.5 - 5 mg subcut q4h & 2.5 mg subcut q30min PRN **OR** hydromorphone 0.5 - 1.0 mg subcut q4h & 0.5 mg subcut q30min PRN.

- **<u>If the patient is taking an opioid</u>** with q4h dosing, increase the regular and breakthrough doses by 25%. Change frequency of the breakthrough to q1h PRN if PO and q30min PRN if subcut.
- If the patient is taking a sustained release opioid, increase this dose by 25%. Change the breakthrough dose to 10-15% of the regular 24h dose, either q1h PRN PO or q30 min PRN subcut.
- Titrate the dose every 24h to reflect the previous 24h total dose received
- If unmanageable opioid-limiting adverse effects are present (e.g. nausea, drowsiness, myoclonus), consider switching to another opioid and re-titrate or consult palliative care.
- For patients with severe uncontrolled pain consider switching back to an equivalent daily dose of immediate release morphine to allow more rapid titration of dose or switch to a sc preparation/infusion.
- Meperidine and pentazocine should generally not be used in cancer patients with chronic or acute pain.
- If there is difficulty getting the pain under control consider a consultation to palliative care.

Severe Pain Crisis

1. A severe pain crisis requires prompt use of analgesics, adjuvant therapies, reassurance and a calm atmosphere.

2. **Consider a consultation to palliative care or a cancer pain specialist.**
3. If IV access is present, and the person is **opioid naïve** give stat morphine 5-10 mg IV q10min until pain is relieved; if the person is **on opioids** give the po PRN dose IV q10min until pain is relieved. Monitor carefully.
4. If no IV access available, and the person is **opioid naïve** give stat morphine 5-10 mg subcut q20-30min until pain is relieved; if the person is on opioids give the po PRN dose subcut q20-30min until pain is relieved.
5. Titrate dose by 25% every 1 - 2 doses until pain is relieved.
6. When pain is controlled: If the patient is taking a sustained release opioid increase this dose by 25% and change to q4h dosing po or subcut. **Do Not** try to manage a severe pain crisis with a long-acting opioid. Change the breakthrough dose to half of the regular dose, either q1h PRN PO or q30 min PRN subcut.

CONVERSION RATIOS

- It should be noted that these conversion ratios, based on available evidence, are conservative in the direction specified; if converting in the reverse direction, a reduction in dose of one third should be used following conversion, or specialist advice sought.

Drug	Approximate Equivalent Dose [a]	
	Parenteral	Oral
Codeine	120	200
Fentanyl	0.1-02	n/a [b]
Morphine	10	20-30 [c]
Hydromorphone	2	4-6
Oxycodone	n/a	30
Pethidine (Meperidine)	75	300
Sufentanil	0.01-0.04	n/a [b]
Tramadol	[d]	[d]
Methadone	[e]	[e]

a. From single dose studies using immediate-release dosage forms. These approximate analgesic equivalences should be used only as a guide for estimating equivalent doses when switching from one opioid to another. Additional references should be consulted to verify appropriate dosing of individual agents.
b. Route of administration not applicable.
c. With repeated dosing.
d. Tramadol's precise analgesic potency relative to morphine is not established. Consult the product monograph for dosing recommendations.
e. For methadone, see Guide-to-Practice: Pain

Conversion doses from oral morphine to transdermal fentanyl

Oral 24-hour morphine (mg/day)	Transdermal Fentanyl (mcg/h)
<90	25
90 – 134	37 (if available, otherwise 25)
135 – 189	50
190 – 224	62 (if available, otherwise 50)
225 – 314	75
315 – 404	100
405 – 494	125
495 – 584	150
585 – 674	175
675 – 764	200
765 – 854	225
855 – 944	250
945 – 1034	275
1035 – 1124	300

TITRATION GUIDE

General principles:

1. Calculate the total opioid dose taken by the patient in 24 h (regular q4h dose x 6 **PLUS** the total number of breakthrough doses given x breakthrough dose).
2. Divide this 24 h total by 6 for the equivalent q4h dose.
3. Divide the newly calculated q4h dose by 2 for the breakthrough dose.
4. Use clinical judgment regarding symptom control as to whether to round up or down the obtained result (both breakthrough and regular dosing). Remember to consider available dosage forms (in the case of PO medications especially).
5. If the patient is very symptomatic a review of how many breakthrough doses have been given in the past few hours might be more representative of his/her needs.

Example:

A patient is ordered morphine 20 mg q4h PO and 10 mg PO q2h PRN, and has taken 3 breakthrough doses in the past 24 h.

1. Add up the amount of morphine taken in the past 24 h:
   6 x 20 mg of regular dosing, plus 3 x 10 mg PRN doses equals a total of 150 mg morphine in 24 hours
2. Divide this total by 6 to obtain the new q4h dose: 150 divided by 6 = 25 mg q4h
3. Divide the newly calculated q4h dose by 2 to obtain the new breakthrough dose: 25 mg divided by 2 = 12.5 mg q1 - 2h PRN
4. If this dose provided reasonable symptom control, then order 25 mg PO q4h, with 12.5 mg PO q1 - 2h PRN. (It would also be reasonable to order 10 mg or 15 mg PO q2h for breakthrough.)

CONVERSION GUIDE

(To convert from long-acting preparations to short-acting preparations)

General principles in converting from *sustained release* to *immediate release* formulations (for the same drug):

1. Add up the total amount of opioid used in the past 24 h, including breakthrough dosing.
2. Divide this total by 6 to obtain equivalent q4h dosing.
3. Divide the q4h dose by 2 to obtain breakthrough dosing.
4. Use clinical judgment to adjust this dose up or down depending on symptom control.
5. Consider available tablet sizes when calculating doses.

Example:

A patient is ordered a long-acting morphine preparation at a dose of 60 mg PO q12h, with 20 mg PO q4h for breakthrough, and has taken 4 breakthrough doses in 24 h.

1. Add up the amount of opioid taken in 24 h: 2 x 60 mg of long-acting morphine plus 4 x 20 mg of breakthrough is 200 mg of morphine in 24 h
2. Divide this total by 6 to obtain the equivalent q4h dosing: 200 divided by 6 is approximately 33 mg PO q4h
3. Divide this q4h dose by 2 for the breakthrough dose 33 mg divided by 2 is 16.5 mg
4. If the patient had reasonable symptom control with the previous regimen, then a reasonable order would be: 30 mg PO q4h and 15 mg q1 - 2h PO PRN

Edmonton Symptom Assessment System (ESAS)

Edmonton Symptom Assessment System (ESAS)

Please circle the number that best describes:

No pain	0	1	2	3	4	5	6	7	8	9	10	Worst possible pain
Not tired	0	1	2	3	4	5	6	7	8	9	10	Worst possible tiredness
Not nauseated	0	1	2	3	4	5	6	7	8	9	10	Worst possible nausea
Not depressed	0	1	2	3	4	5	6	7	8	9	10	Worst possible depression
Not anxious	0	1	2	3	4	5	6	7	8	9	10	Worst possible anxiety
Not drowsy	0	1	2	3	4	5	6	7	8	9	10	Worst possible drowsiness
Best appetite	0	1	2	3	4	5	6	7	8	9	10	Worst possible appetite
Best feeling of wellbeing	0	1	2	3	4	5	6	7	8	9	10	Worst possible feeling of wellbeing
No shortness of breath	0	1	2	3	4	5	6	7	8	9	10	Worst possible shortness of breath
Other problem	0	1	2	3	4	5	6	7	8	9	10	

Patient's Name _____

Date _____ Time _____

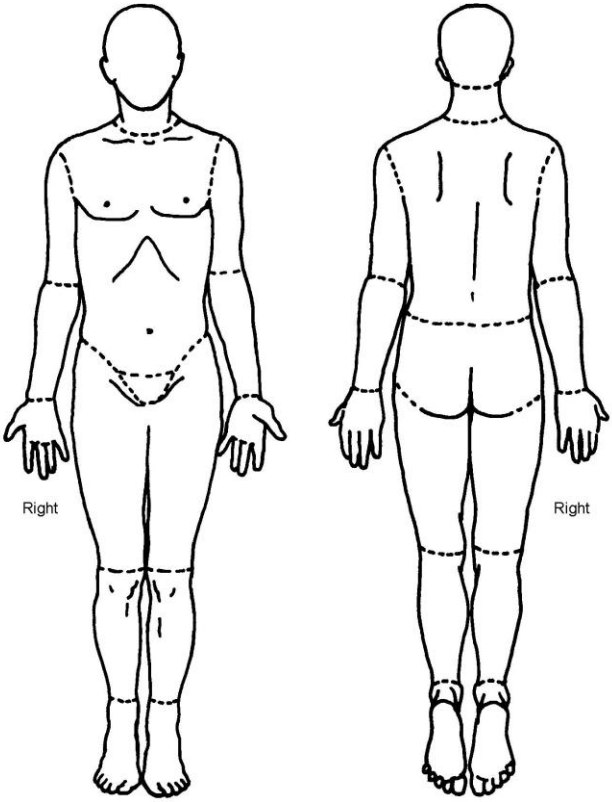
Complete by *(check one)*

- ☐ Patient
- ☐ Caregiver
- ☐ Caregiver assisted

BODY DIAGRAM ON REVERSE SIDE

August, 2006

Please mark on these pictures where it is you hurt.



Body Diagram

Selected References:

1. Scottish Intercollegiate Guidelines Network SIGN 106, 'Control of Cancer Pain in Adults with Cancer: A National Clinical Guideline' November 2008.

For full references and more information please refer to CCO's Symptom Management Guide-to-Practice: Pain document.

Disclaimer:

Care has been taken by Cancer Care Ontario's Symptom Management Group in the preparation of the information contained in this pocket guide.

Nonetheless, any person seeking to apply or consult the guide to practice is expected to use independent clinical judgment and skills in the context of individual clinical circumstances or seek out the supervision of a qualified specialist clinician.

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