OPIOID MANAGER

The Opioid Manager is designed to support health care providers prescribe and manage opioids for patients with chronic non-cancer pain. All information is based on the 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain,¹ unless cited otherwise.

This is an update of the original Opioid Manager, released in 2011.

Section A: Important Considerations for Opioid Therapy Trials

- When considering therapy for patients with chronic non-
- cancer pain, optimize non-opioid pharmacotherapy and nonpharmacological therapy, rather than initiating a trial of opioids.

• For patients starting or continuing an opioid trial, discuss and document patients' goals (SMART goals: Specific, Measurable, Agreed-upon, Realistic, Time-based), on a regular basis.

OVERDOSE RISK

- Fatal and non-fatal overdose risk is significant at doses as low as < 20 mg morphine equivalents daily
- Risk of overdose increases in dose
- Risk of overdose increases in patients with active or prior substance use disorder and current serious mental illness

Dose	e Fatal overdose Non-fatal over				
> 100 mg MED/d	0.23 %/yr	1.8 %/yr			
50 – 99 mg MED/d	0.18 %/yr	0.7 %/yr			
< 20 mg MED/d 0.1 %/yr 0.2 %/yr					
Legend: d = day MED = morphine equivalent dose vr = vear					

CHECKLIST

These are important considerations to discuss and document for patients starting or continuing an opioid trial.

🖤 See Appendix A - Checklist for a fillable version of this checklist that can be inserted into the patient medical record.



Section B: Opioid Therapy Trial

• This section is intended to support providers starting a patient on opioid therapy. For patients continuing opioid therapy, see Section C: Maintenance & Monitoring.

- A reasonable trial of opioid therapy should be accomplished within 3–6 months; opioids provide less pain relief after 3 months, due to tolerance.
- Restrict the prescribed dose to < 90 mg morphine equivalents daily for patients beginning long-term opioid therapy.

Clinical pearls

- Start at lowest available dose of the opioid (remember overdose risk is significant even at low doses)
- In patients with continuous pain including pain at rest, health care providers can prescribe controlled release opioids for both comfort and simplicity of treatment during the day
- Activity related pain might not require sustained release treatment and opioid therapy may be initiated with immediate release alone
- Opioids NOT recommended for initiating a trial of therapy include fentanyl, meperidine, methadone and pentazocine
- Opioids that ARE recommended are listed in the Suggested Initial Dose and Titration table
- Oral preparations are preferred
- Prescriptions for chronic pain should be provided by the primary treating provider only, for no more than 28 days at a time

SUGGESTED INITIAL DOSE AND TITRATION³

This table provides practical guidance regarding optimal dosing when beginning patients on a trial of opioid therapy. For opioids with multiple dosage forms and singular values in subsequent columns, subsequent column values are applicable across all dosage forms.

Note: Brand names are shown if formulations vary from that of the generic. Reference to brand names does not imply endorsement of any of these products.

Opioid	Dosage forms	Initial dose Minimum ti interval for increase		Suggested dose increase	Maximum dose/day	50 MED	90 MED
Codeine CR	• Tab: 50, 100, 150, 200 mg	• 50 mg q 12 h	• 2 days	• 50 mg/d	• 300 mg q 12 h	• 334 mg/d	• 600 mg/d
Codeine IR	 Tab: 15, 30 mg Syrup: 5 mg/mL Elixir: 16 mg/10 mL with Acetaminophen 320 mg Tab: 8, 15, 30, 60 mg with Acetaminophen 300 mg Tab: 15, 30 mg with Acetaminophen 325 mg Tab: 15, 30 mg with Acetylsalicylic acid 375 mg 	• 15–30 mg q 4 h prn	• 7 days	• 15–30 mg/d	• 600 mg/d or acetaminophen 4 g/d	• 334 mg/d	• 600 mg/d
Hydromorphone CR, PR	• CR: 3, 4.5, 6, 12, 18, 24, 30 mg • PR: 4, 8, 16, 32 mg	 3 mg q 12 h, maximum 9 mg/d 4 mg q 24 h, maximum 8 mg/d 	 Minimum 2 days Minimum 4 days, recommended 14 days 	• 3 mg/d • 4 mg/d	• N/A	• 10 mg/d	• 18 mg/d
Hydromorphone IR	• Tab: 1, 2, 4, 8 mg • Syrup: 1 mg/mL	• 1–2 mg q 4–6h prn, maximum 8 mg/d	• 7 days	• 1–2 mg/d	• N/A	• 10 mg/d	• 18 mg/d
Morphine CR, ER	• Tab: 15, 30, 60, 100, 200 mg • Cap (12 h): 10, 15, 30, 60, 100, 200 mg • Cap (24 h): 10, 20, 50, 100 mg	• 10–15 mg q 12 h • 10 mg q 12 h • 10 mg q 24 h	• Minimum 2 days, recommended 14 days	• 5–10 mg/d	• N/A	• 50 mg/d	• 90 mg/d
Morphine IR	Oral solution: 1, 5, 10, 20, 50 mg/mL Tab: 5, 10, 20, 25, 30, 50 mg Cap: 5, 10, 20, 30 mg	• 5–10 mg q 4 h prn, maximum 40 mg/d	• 7 days	• 5–10 mg/d	• N/A	• 50 mg/d	• 90 mg/d
Oxycodone CR with naloxone CR	• Tab: 5/2.5, 10/5, 20/10, 40/20 mg	• 5 mg/2.5 mg q 12 h	• Minimum 1–2 days	• 5/2.5 mg/d	• 80 mg/d oxycodone and 40 mg/d naloxone	• 33 mg/d oxycodone	• 60 mg/d oxycodone
Oxycodone CR	• Tab: 5, 10, 15, 20, 30, 40, 60, 80 mg	• 10 mg q 12 h	• Minimum 2 days, recommended 14 days	• 10 mg/d	• N/A	• 33 mg/d	• 60 mg/d
Oxycodone IR	Tab: 5, 10, 20 mg Tab: 5 mg with acetylsalicylic acid or acetaminophen 325 mg Tab: 2.5 mg with acetaminophen 325 mg	 5–10 mg q 6 h prn, maximum 30 mg/d 1–2 tab q 6 h prn 1–2 tab q 6 h prn 	• 7 days	• 5 mg/d	• N/A • Acetaminophen 4 g/d	• 33 mg/d	• 60 mg/d
Tapentadol ER	• Tab: 50, 100, 150, 200, 250 mg	• 50 mg q 12 h	• 3 days	• 50 mg q 12 h	Not recommended >500 mg/d	• 160 mg/d	• 300 mg/d
Tapentadol IR	• Tab: 50, 75, 100 mg	• 50 mg q 4–6 h prn	• On the first day of dosing, the 2nd dose may be administered 1 hour after the first dose, if adequate pain relief is not attained with the first dose	• 50mg q 4–6 h	Not recommended daily doses > 700 mg on the first day of therapy and 600 mg on subsequent days	• 160 mg/d	• 300 mg/d
Tramadol CR	 Tab (Zytram XL[®]): 75, 100, 150, 200, 300, 400 mg Tab (Tridural[®]): 100, 200, 300 	• 150 mg q 24 h • 100 mg q 24 h	• 7 days • 2 days	• 75–100 mg q 24 h	• 400 mg/d	• 300 mg/d	• 540 mg/d* • Over maximum
	mg • Tab (Ralivia®): 100, 200, 300 mg • Tab (Durela®): 100, 200, 300 mg	• 100 mg q 24 h • 100 mg q 24 h	• 5 days • 5 days		• 300 mg/d		dose
Tramadol IR	Tab: 50 mg Tab: 37.5 mg with acetaminophen 325 mg	• 25 mg once daily** • 1 tablet q 4–6 h prn	• 4 days • Depends on patient's clinical response	• 25 mg/d • 1–2 tablet(s) q 4–6 h prn	• 400 mg/d • 8 tabs/day or acetaminophen 4 g/d	• 300 mg/d	• 540 mg/d* • Over maximum dose

Legend: ~ = approximately equal to, cap = capsule, CR = controlled release, d = day, ER = extended release, g = gram, h = hour, IR = immediate release, MED = morphine equivalent dose, mg = milligram, mL = milliliter, µg = microgram, N/A = not available, PR = prolonged release, prn = as needed, q = every, SL = sublingual, tab = tablet *The maximum recommended daily dose of tramadol is 300 mg – 400 mg depending on the formulation.

**Cut tablet in half to start at 25 mg. Pharmacy can cut tablets in half if required.³

Note: Information on the buprenorphine transdermal patch and buprenorphine/naloxone sublingual tablets is available in Section D: Switching and Section E: Tapering, respectively. Buprenorphine/naloxone sublingual tablets are NOT recommended for an initiation trial of opioid therapy.

Section C: Maintenance & Monitoring

This section is intended to support providers with patients continuing opioid therapy.

Monitor and document a patient's response to the opioid therapy through regularly scheduled appointments.

INITIATION, MAINTENANCE & MONITORING

These are the key elements to document upon initiating a trial of opioid therapy (3–6 month) and on an ongoing basis for monitoring purposes.

See Appendix B - Initiation, Maintenance & Monitoring Chart for a fillable version of this table that can be inserted into the patient medical record.

- Date (patient seen)
- $\hfill\square$ Opioid prescribed
- $\hfill\square$ Daily dose, frequency and timing
- □ Daily morphine equivalent dose
- Date of new dose to be administered
- Status of patient goals
- □ Pain intensity (<u>Brief Pain Inventory</u>^[iv])
- Functional status changes
- Adverse effects (e.g. fatal and non-fatal overdose, motor vehicle accident, addiction, sleep apnea, osteoporosis, drowsiness, constipation, dizziness/ vertigo, hypogonadism/sexual dysfunction, vomiting, nausea, opioid induced hyperalgesia, dry skin/pruritis)
- Presence of clinical features of opioid use disorder (see Clinical Features of Opioid Use Disorder table)
- Date and result of last urine drug screening
- □ Naloxone prescription written
- □ Tapering offered
- Non-pharmacological therapies being used for pain
- Non-opioid pharmacotherapy being used for pain

Clinical pearls



 Opioids increase the risk of gastrointestinal adverse events vs. non-opioid therapy alone (64 more events per 1000 patients treated)

 Identify the lowest effective dose for patients continuing opioid therapy

Section D: Switching

Consider switching opioids if problematic pain and/or adverse effects persist.

- While switching over to the new opioid, it is important to warn the patient (and family, caregivers or friends) about signs of overdose: slurred or drawling speech, emotional lability, ataxia, "nodding off" during conversation or activity.
- Consider a 3-day follow-up to assess withdrawal symptoms and pain; contact the patient 3 days after starting the new opioid to check for signs of over-sedation and to ensure that pain relief is at least comparable to the pre-switch treatment.
- Switching opioids may be done as a way of facilitating a dose reduction.

MORPHINE EQUIVALENCE TABLE O = O Opioid conversion table.

Opioids* Oral preparations (mg/d)	To convert to oral morphine equivalent, multiply by:	To convert from oral morphine, multiply by:		
Buprenorphine ³	• 5 µg/h patch = 9–14 mg MED/d • 10 µg/h patch = 18–28 mg MED/d	• 15 µg/h patch = 27–41 mg MED/d • 20 µg/h patch = 36–55 mg MED/d ^{4,5}		
Buprenorphine/ naloxone SL ³	16 mg SL = 90 mg M	ED		
Codeine	0.15 (0.1–0.2)	6.67		
Hydromorphone	5.0 0.2			
Methadone	Dose equivalents unreliable			
Morphine	1.0	1		
Oxycodone	1.5	0.667		
Tapentadol	0.3-0.4	2.5-3.33		
Tramadol**	0.1-0.2 6			
Fentanyl ^{6***}	60–134 mg morphine = 25 μg/h patch 135–178 mg morphine = 37 μg/h patch 180–224 mg morphine = 50 μg/h patch 225–269 mg morphine = 62 μg/h patch 270–314 mg morphine = 75 μg/h patch 315–359 mg morphine = 87 μg/h patch 360–404 mg morphine = 100 μg/h patch			

When to switch opioids:

- Uncontrolled pain
- Intolerable adverse effects
- Switching route of administration (e.g. oral to transdermal)

How to switch:

The two methods for switching opioids are presented below. There is no evidence that favours one method over another. Careful attention must be taken when swiching an opioid to ensure the patient is seen each week and understands prescription instructions.

- Method 1: Decrease the total daily dose of the current opioid by 25–50% and convert to new opioid equivalent dose.
- Method 2 (Cross Taper Method): Decrease the total daily dose of the current opioid by 10–25% per week while titrating up the total daily dose of the new opioid weekly by 10–20% with a goal of switching over 3–4 weeks (also consider dose formulations available). Consider more regular (e.g. weekly) follow-ups, weekly dispensing and/or dosette/blisterpack if required.

See Appendix C - Switching Opioids for succinct steps and examples on how to switch opioid therapies, and fillable switching templates that can be completed and inserted into the patient medical record.

Legend: $h = hour, MED = morphine equivalent dose, mg = milligram, mL = milliliter, <math>\mu g = microgram$, SL = sublingual

*Conversion ratio for opioids are subject to variations in kinetics governed by genetics and other drugs.

 $^{**}\mathrm{The}$ maximum recommended daily dose of tramadol is 300 mg–400 mg depending on the formulation.

***The information provided can be used to determine the morphine equivalents for a patient on fentanyl. If used for switching opioids the dose conversions are for **unidirectional conversion to fentanyl** in patients for chronic use and not opioid naive patients. The dose conversions were **not intended to convert patients from fentanyl to other opioids**; doing so may result in overdose and toxicity.

SUGGESTED INITIAL DOSE AND TITRATION FOR BUPRENORPHINE TRANSDERMAL PATCH³

The buprenorphine transdermal patch is indicated for the management of pain severe enough to require daily, continuous, long-term opioid treatment and for which alternative options are inadequate. It can be prescribed to opioid naive patients.

Opioid	Dosage forms	Initial dose	Minimum time interval for increase	Suggested dose increase	Maximum dose/day	50 MED	90 MED
• Buprenorphine*	• Patch: 5, 10, 15, 20 µg/h	• 5 µg/h every 7 days	• 7 days	• 5 µg/h every 7 days	• 20 µg/h every 7 days	• 20 µg/h ^{4,5} *	• Not available

Legend: h = hour, MED = morphine equivalent dose, $\mu g = microgram$

*The oral morphine to buprenorphine transdermal patch ratio can range from 75:1 to 115:1, therefore the mid-point of this range (i.e. 95:1) is suggested.

Section E: Tapering

• Consider a discontinuation of the opioid therapy if improvement in pain or function is not achieved.

- Consider tapering opioids to the lowest effective dose for patients with a prescribed dose ≥ 90 mg morphine equivalents daily.
- Opioid withdrawal symptoms are unpleasant, but not life-threatening. What is life-threatening with opioids is overdose. Careful consideration needs
- to be taken with patients who are pregnant; severe, acute opioid withdrawal has been associated with premature labour and spontaneous abortion.
- Careful attention must be taken when tapering an opioid to ensure the patient is seen each week and understands prescription instructions.

WHEN TO CONSIDER TAPERING OPIOIDS

	Examples and consideration (if applicable)
Pain condition	Patient receives definitive treatment for condition
resolved	• A trial of tapering is warranted to determine if the original pain condition has resolved
Risks outweigh	Overdose risk has increased
benefits	Clear evidence of diversion
	Clinical features of opioid use disorder have become apparent (see Clinical Features of Opioid Use Disorder table)
Adverse effects	Adverse effects impairs functioning below baseline level
outweigh benefits	Patient does not tolerate adverse effects
_	Non-adherence to the treatment plan
Patient requests	 Patient requests opioid prescription to be tapered or stopped
Medical complications	Medical complications have arisen (e.g. hypogonadism, sleep apnea, opioid induced hyperalgesia)
Opioid not effective	Opioid effectiveness = improved function or at least 30% reduction in pain intensity
	Opioid being used to regulate mood rather than for pain control
	Pain and function remains unresponsive
	• Periodic dose tapering or cessation of opioid therapy should be considered to confirm opioid therapy effectiveness
	• Consider that tapering can result in withdrawal mediated pain that can present as increased pain for the patient; this should
	not be taken as evidence confirming opioid effectiveness for pain
≥90 Morphine	 For patients with chronic non-cancer pain who are currently using ≥90 mg morphine equivalents daily tapering opioid to the
equivalent dose	lowest effective dose with potential discontinuation is suggested
	• For patients with chronic non-cancer pain who are using opioids and experiencing serious challenges in tapering, referral to a
	formal multidisciplinary program or interprofessional coordinated multidisciplinary collaboration is strongly recommended

How to taper - the essentials

How do I stop? The opioid should be gradually tapered rather than abruptly discontinued. Patients should be actively engaged in a discussion about the merits of gradual dose reduction, including the potential for better pain control and quality of life. See <u>Opioid Tapering - Information for Patients</u>.^[v]

How long will it take to taper the opioid? Tapers can usually be completed between 2 weeks and 4 months. For some patients on very long-term, high dose opioid therapy, it may take longer.

When do I need to be more cautious when tapering? In patients who are pregnant; severe acute opioid withdrawal has been associated with premature labour and spontaneous abortion. Also in patients with acute coronary disease, or severe/unstable psychiatric disorder(s) or mental illness.

How do I taper the dose? Example tapering approaches are presented below. There is no evidence that favours one approach over another. For additional details and a template please see the <u>Opioid Tapering Template</u>.^[vi]

- Gradually reduce dose by 5–10% of morphine equivalent dose every 2–4 weeks with frequent follow-up. Switching from immediate release to controlled release opioids on a fixed dosing schedule may assist some patients in adhering to the withdrawal plan.
- Switch opioid to methadone or buprenorphine/naloxone preparations and then gradually taper (see Morphine Equivalence table and Suggested Initial Dose and Titration for Buprenorphine/Naloxone Sublingual Tablets table).

• Reduce the opioid dose rapidly over a few days/weeks or immediately. This method must be carried out in a medically supervised withdrawal centre as it may result in severe withdrawal symptoms.

Tips for tapering fentanyl transdermal patch

- Converting fentanyl to other opioids is not recommended as conversions are unreliable, and doing so may result in overdose and toxicity
- Consider reducing fentanyl by 12–25 µg/h patches every 2–4 weeks
- Consider adding immediate release oral opioid for pain relief (e.g. morphine IR 5 mg qid prn up to a maximum dose of 20 mg/d, may be required at lower doses of fentanyl for breakthrough pain)
 Once fentanyl is at the lowest available dose (e.g. 12 µg/h every 72 hours), stop the fentanyl
- Once rentary is at the lowest available dose (e.g. 12 µg/n every 72 hours), stop the re transdermal patch and only use the immediate release oral opioid for pain relief
- Note: It takes 17 hours or more for the fentanyl serum concentration to decrease by 50% after patch is removed

Legend: d = day, h = hour, IR = immediate release, mg = milligram, µg = microgram, prn = as needed, qid = 4 times a day Recommendations in the above table have been developed in part from a consensus of expert opinion.

Clinical features of opioid use disorder⁷ (see full table^[ii])

- Altering the route of delivery*
- Accessing opioids from other sources*
- Unsanctioned use
- Drug seeking
- Repeated withdrawal symptoms
- Accompanying conditions
- Social features
- Views on the opioid medication

*Behaviours more indicative of addiction than the others.

SUGGESTED INITIAL DOSE AND TITRATION FOR BUPRENORPHINE/ NALOXONE SUBLINGUAL TABLETS³

Buprenorphine/naloxone sublingual tablets are indicated for substitution treatment in patients with problematic opioid drug dependence. It is also used to taper opioids.

Opioid	Dosage forms	Initial dose	Minimum time interval for increase	Suggested dose increase	Maximum dose/day	50 MED	90 MED
• Buprenorphine/ naloxone SL*	• SL: 2/0.5, 8/2 mg	• 4–12 mg on day 1, maintenance dose of 12–16 mg	• Daily	 Guided by clinical and psychological status of the patient 	• 24 mg/d	• 9 mg SL	• 16 mg SL

Legend: d = day, MED = morphine equivalent dose, mg = milligram, SL = sublingual

*Health care providers do not require an exemption to prescribe buprenorphine. Providers who wish to use buprenorphine for substitution treatment in patients with problematic opioid drug dependence should obtain knowledge regarding its intended impacts, side effects and role in addiction treatment.^[vii]

Supporting Material

- [i] Management of Chronic Non Cancer Pain Appendices cep.health/cncp
- [ii] Management of Chronic Non Cancer Pain cep.health/cncp
- [iii] Opioid Medication Treatment Agreement http://nationalpaincentre.mcmaster.ca/opioid/cgop_b_app_b05.html
- [iv] Brief Pain Inventory (BPI) http://nationalpaincentre.mcmaster.ca/documents/brief_pain_inventory.pdf
- [v] Opioid Tapering Information for Patients http://nationalpaincentre.mcmaster.ca/documents/Opioid%20Tapering%20Patient%20Information%20(english).pdf
- [vi] Opioid Tapering Template https://cep.health/clinical-products/opioid-tapering-template/
- [vii] FAQ About Prescribing Buprenorphine https://www.cpso.on.ca/CPSO/media/documents/Methadone/FAQs-Prescribing-Buprenorphine.pdf

References

- [1] Michael G. DeGroote National Pain Centre, McMaster University. The 2017 Canadian guideline for opioids for chronic non-cancer pain. [cited Sept 5, 2017]. Available from: <u>http://nationalpaincentre.mcma ster.ca/opioid/</u>
- [2] Centre for Effective Practice. Management of chronic non cancer pain (Appendix). 2017; [cited Sept 27, 2017]. Available from: <u>cep.health/cncp</u>
- [3] Canadian Pharmacists Association. Compendium of pharmaceuticals and specialties. 2017; [cited Sept 5, 2017]. Available from: https://www.pharmacists.ca
- [4] Mercadante S, Porzio G, Fulfaro F, Aielli F, Verna L, Ficorella C, et al. Switching from transdermal drugs: an observational "N of 1" study of fentanyl and buprenorphine. J Pain Symptom Manage 2007;34:5328.
- [5] Sittl R, Likar R, Nautrup BP. Equipotent doses of transdermal fentanyl and transdermal buprenorphine in patients with cancer and noncancer pain: results of a prospective cohort study. Clin Ther. 2005;27:225–37.
- [6] Canadian Pharmacists Association. Compendium of pharmaceuticals and specialties. 2008; [cited Sept 21, 2017].
- [7] Passik SD, Kirsh KL, Whitcomb L, Dickerson PK, Theobald DE. Pain clinicians' rankings of aberrant drugtaking behaviors. J Pain Palliat Care Pharmacother. 2002;16(4):39–49.

The Opioid Manager was developed by the Centre for Effective Practice ("CEP") with clinical leadership from Drs. Andrea Furlan, Arun Radhakrishnan and Jose Silveira. In addition, the Opioid Manager was informed by advice from target end-users engaged throughout the development process. The development of the Opioid Manager was funded by Toronto Rehabilitation Institute, University Health Network.

The Opioid Manager was developed for licensed health care professionals in Canada as a guide only and does not constitute medical or other professional advice. Health care providers and other health care professionals are required to exercise their own clinical judgment in using the Opioid Manager. Neither the CEP, the contributors to the Opioid Manager, nor any of their respective agents, appointees, directors, officers, employees, contractors, members or volunteers: (i) are providing medical, diagnostic or treatment services through the Opioid Manager; (iii) to the extent permitted by applicable law, accept any responsibility for the use or misuse of the Opioid Manager by any individual including, but not limited to, health care providers or entity, including for any loss, damage or injury (including death) arising from or in connection with the use of the Opioid Manager, in whole or in part; or (iii) give or make any representation, warranty or endorsement of any external sources referenced in the Opioid Manager (whether specifically named or not) that are owned or operated by third parties, including any information or advice contained therein.



The Opioid Manager is a product of the CEP under copyright protection with all rights reserved to the CEP. Permission to use, copy, and distribute this material for all noncommercial and research purposes is granted, provided the above disclaimer, this paragraph and appropriate citations appear in all copies, modifications, and distributions. Use of the Opioid Manager for commercial purposes or any modifications of the Opioid Manager are subject to charge and use must be negotiated with the CEP (Email: info@cep.health).

For statistical and bibliographic purposes, please notify the CEP (info@cep.health) of any use or reprinting of the Opioid Manager. Please use the below citation when referencing the Opioid Manager:

Reprinted with Permission from the Centre for Effective Practice (September 2017). Opioid Manager. Toronto. Centre for Effective Practice.

Developed by:



In collaboration with:

