The inherited patient with chronic pain on opioids

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Conflict of Interest Disclosures

Opioid Manager App for phyisicans (US$9.99)

My Opioid Manager App and iBook for patients (FREE)

My Opioid Manager print copy ($20)

Both Apps are owned by University Health Network (UHN)

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Learning objectives

At the end of this presentation participants will be able to:

1. List 3 characteristics of rational polypharmacy
2. Describe the mechanism of opioid induced hyperalgesia
3. Remember the questions to use when approached by an inherited patient on opioid

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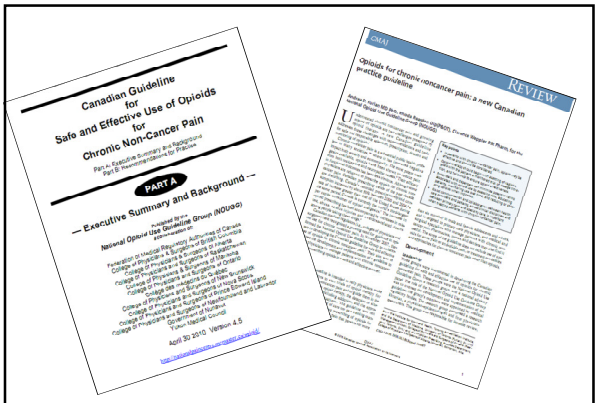

http://nationalpaincentre.mcmaster.ca/opioid/ CMAJ June 15, 2010 4

Guideline's recommendations

1. Deciding to initiate opioid therapy
2. Conducting an opioid trial
3. Monitoring long-term opioid therapy
4. Specific populations
   - Elderly
   - Adolescents
   - Pregnant
   - Psychiatric
5. Managing opioid misuse and addiction
   - Addiction treatment options
   - Prescription fraud
   - Patient unacceptable behaviour
   - Opioid prescribing policy in acute care

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Canadian Guideline – Key Messages

Actions that should always be done when prescribing opioids for CNCP:

Start with a comprehensive assessment to ensure opioids are a reasonable choice and to identify risk/benefit balance for the patient.

Set effectiveness goals with the patient and inform patient of their role in safe use and monitoring effectiveness.

Initiate with a low dose, increase gradually and track dose in morphine equivalents per day – use 'watchful dose', 200mg meq as a flag to re-assess.

Watch for any emerging risks/complications to prevent unwanted outcomes including misuse and addiction.

Stop opioid therapy if it is not effective or risks outweigh benefits.

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Guideline: Rec #15

"For patients receiving opioids for a prolonged period who may not have had an appropriate trial of therapy, take steps to ensure that long-term therapy is warranted and dose is optimal" (Grade C).

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First visit

Mark, 55 year old

Pain diagnosis
- 10 year chronic low-back pain, bilateral knee osteoarthritis

Co-morbidities
- Obesity
- Sleep apnea

Substance use history
- Cigarretes 1 pack/day
- THC 1g/month
- No alcohol or drugs

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First visit

Mark, 55 year old

Past treatments for pain:
- Physiotherapy, yoga, aquatherapy, acupuncture, self-hypnosis

Average Pain Ratings:
- Worst: 10/10
- Best: 8/10 (after hydromorphone)

Function:
- Brief Pain Inventory: 85% pain interference with life

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First visit

Mark, 55 year old

Current prescriptions

- Oxycodone CR 40mg q.8.h.
- Hydromorphone IR 4mg as needed, 5 per day
- Transdermal fentanyl patch 50mcg/h q.3.d.
- Diclofenac drops for knees
- Escitalopram 20 mg daily
- Docusate sodium for constipation
- Dimenhydrinate for nausea

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First visit

Mark, 55 year old

Physical exam

- Pain behaviours, depressed mood
- Very limited lumbar ROM
- SLR 30 degrees bilaterally
- DTR symetric bilaterally
- Sensory to LT and PP: hyperesthesia midline L5-S1
- Tender points medial thighs and legs bilaterally

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First visit

Mark, 55 year old

Doctor, my pain medications will finish tomorrow. Will you prescribe them to me?

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First visit

Mark, 55 year old

I've been taking these medications for years, they work for my pain. I am afraid of any change. You are not going to change, are you?

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First visit

What should the doctor do?

a) Prescribe the same medications
b) Prescribe the same non-opioids, but refuse to prescribe any opioids on the first visit
c) Prescribe the same non-opioids, reduce the dose of all opioids by half
d) Prescribe the same non-opioids, switch all opioids to morphine once daily and reduce total dose by half
e) Do not prescribe any medication

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Managing an inherited patient on opioids for chronic pain

1. Is this rational polypharmacy?

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Polypharmacy

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Polypharmacy for pain

Good (rational)	Bad	Ugly
Evidence-based multimodal therapy	Multiple opioids	Multiple anti-inflammatories (steroids, NSAIDs)
Type of pain → selection of appropriate agent	Add-on drugs to manage adverse effects: laxatives, androgens, methylphenidate for drowsiness, or diphenydrinate for itching.	Multiple CNS depressants
Opioid sparing or Below watchful dose	Drugs contra-indicated: e.g. duloxetine and kidney failure; NSAIDs and previous MI	Opioids and benzos
Fewer adverse effects Minimal risks No complications	Additive side effects: e.g. SNRI + SSRI + TCA → serotonin syndrome	Opioids and methadone

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Managing an inherited patient on opioids for chronic pain

1. Is this rational?
2. Can I confirm that the drugs and doses are correct?

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Confirm the current regimen

- Prescription monitoring program
- Phone the previous prescriber
- Phone the dispensing pharmacist
- Review the previous chart
- Check the labels on the bottles, pill count
- Urine drug testing

PharmaNet

Mandatory in ER and Walk-in settings.

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Managing an inherited patient on opioids for chronic pain

1. Is this rational?
2. Can I confirm?
3. What is your comfort level with that regimen and dose?

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What is the patient's daily morphine equivalent?

- Oxycodone CR 40mg q.8.h.
- Hydromorphone IR 4mg as needed, 5/day
- Transdermal fentanyl patch 50mcg/h q.3.d.

a) 80 MEQ
b) 180 MEQ
c) 280 MEQ
d) 380 MEQ
e) 480 MEQ

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What is the patient's daily morphine equivalent per day?

- Oxycodone CR 40mg q.8.h.
- 120mg oxy → 180mg MEQ per day
- Hydromorphone IR 4mg, 5/day
- 20mg hydromorphone → 100mg MEQ
- Transdermal fentanyl patch 50mcg/h q.3.d.
- 200mg MEQ per day

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Watchful dose (Rec #10)

- Daily dose exceeding **200** mg or morphine or equivalent (40 mg hydromorphone, 140 mg oxycodone)
- Considerations before dose exceeds the watchful dose:
  - Reassess the pain problem
  - Reassess patient's response to opioids
  - Reassess risk of misuse
- Monitoring more frequently
- Standard of care: documented rationale for exceeding the watchful dose.

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Managing an inherited patient on opioids for chronic pain

1. Is this rational?
2. Can I confirm?
3. Your comfort level?
4. Is the pain and function better with the opioid?

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Not all chronic pains are the same

The good chronic pain

The bad chronic pain

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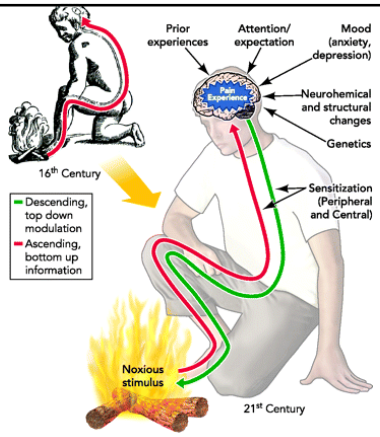

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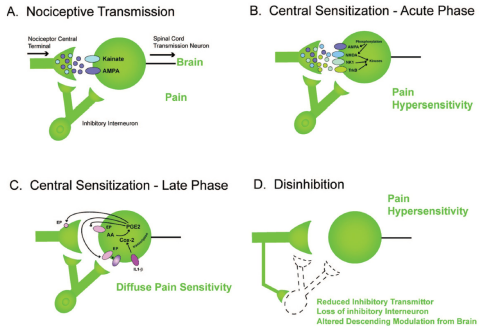
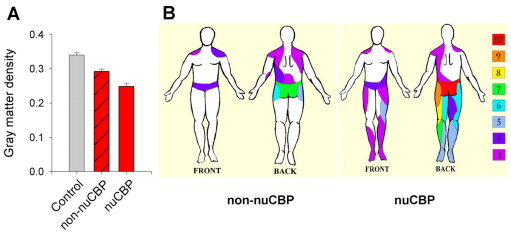
CS at the spinal cord level



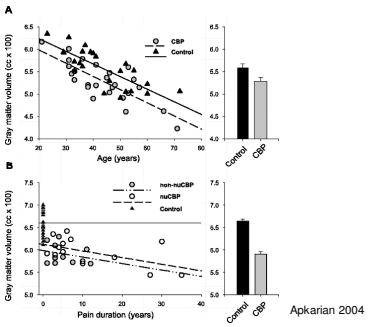
Gray matter density in chronic back pain (dorsolateral prefrontal cortex)



Dorsolateral prefrontal cortex

Apkarian 2004

Decreased whole-brain cortical gray matter volume in CBP subjects.



Apkarian 2004

Not all chronic pains are the same

CP without CS

- Ascending Pain pathways are intact
- Descending inhibitory pathways are intact
- Underlying chronic pathology → pain
- No signs of central sensitization
- Expected (normal) psychological response
- Its function is to alert the individual to seek treatment
- For example: hip osteoarthritis

CP with CS

- Malfunction of pain system
- No underlying pathology
- Many signs of central sensitization
- Abnormal psychological response to pain
- Difficulty to concentrate, sleep, relationships, work
- Chronic fatigue (physical and mental)
- It has no function to the individual
- For example: fibromyalgia

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Central Sensitization: symptoms and signs

Symptoms

- Hypersensitivity to bright light, noise, touch, pesticides, mechanical pressure, medication, temperature, weather
- Pain all over
- Fatigue (physical and mental)
- Sleep disturbance
- Numbness
- Swelling sensations
- Low libido
- Low mood

Signs

- Non-dermatomal somatosensory deficits or gains
- Hyperestesia to light touch, mechanical touch, pressure, vibration, heat and cold
- Hyperesthesia with movement
- Dermographism

Nijs 2010

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Central sensitization

Central sensitization is amplification within the CNS resulting in more intense perception of pain, thereby acting in the maintenance of chronic pain (McAllister 2012; Woolf 2011)

Ignorance of central sensitization leads to wild goose chases and patients riding a merry-go-round of expensive and ineffective therapies. (Paul Ingraham, Vancouver) https://www.painscience.com/articles/central-sensitization.php

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Opioid induced hyperalgesia

- Larger pain area, hyperalgesia
- Opioid → NMDA receptor agonist → influx of calcium → enhances excitability of the neuron → can transmit painful impulses initiated by circulating substance P or other noxius stimuli.
- NMDA receptor antagonist (ketamine, methadone) → relieve OIH

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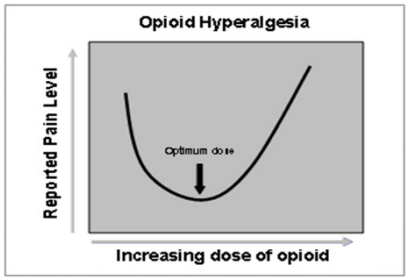
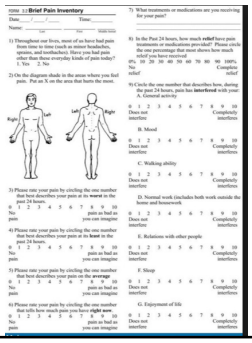


Ballantyne & Mao
Opioid therapy for chronic pain. NEJM, Nov. 13 (2003); 349: 1943-1953

Use validated instruments to assess pain and function


Brief Pain Inventory

- Pain diagram
- Pain scores (now, worse, least)
- Effects of analgesics
- Pain interference with activities

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Managing an inherited patient on opioids for chronic pain

1. Rational?
2. Confirm?
3. Your comfort level?
4. Patient's pain and function?
5. Is the patient at risk if I maintain the same prescription?

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Adverse effects, complications and risks

Adverse effects (weighted mean)
-Nausea (38 RCTs): 28%
-Constipation (37 RCTs): 26%
-Somnolence (30 RCTs): 24%
-Dizziness (33 RCTs): 18%
-Pruritus (25 RCTs): 15%
-Vomiting (23 RCTs): 15%
(Furlan et al, 2012)

Complications:
-Hypogonadism
-Sleep Apnea
-Opioid Induced Hyperalgeia
- ? Sensory hearing loss
- ? Maternal use and birth defects
- ? Increased fracture risk
- ? Impaired immunity

Risks:
-Overdose and death
-Misuse
-Abuse
-Diversion
-Addiction

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Opioid overdose is fatal

Opioid withdrawal is horrible but it is NOT fatal

(except: miscarriage or premature labour)

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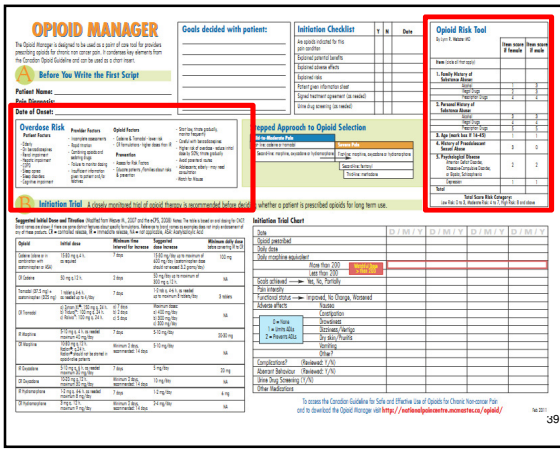

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Managing an inherited patient on opioids for chronic pain

1. Is this **rational** polipharmacy?
2. Can I **confirm** that drugs and doses are correct?
3. What is your **comfort** level with that regimen and dose?
4. Is the pain and **function** better with the opioid?
5. Is this patient at **risk** if I maintain the same prescription?

Rational?
Confirmation?
Comfort?
Function?
Risk?

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First visit

What should the doctor do?

Rational?
Confirmation?
Comfort?
Function?
Risk?

a) Prescribe the same medications
b) Prescribe the same non-opioids, but refuse to prescribe any opioids on the first visit
c) Prescribe the same non-opioids, reduce the dose of all opioids by half
d) Prescribe the same non-opioids, switch all opioids to morphine once daily and reduce total dose by half
e) Do not prescribe any medication

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Universal precautions revisited: managing the inherited pain patient

"Patient care strategies must be **defensible**, **rational** and **compassionate**" (Gourlay and Heit, 2009)

- Baseline risk assessment
- Urine drug testing
- Informed consent and treatment agreement
- Opioid rotation
- Pill load and interval dispensing
- Dose limit (watchful dose)
- Using regulations to assist with challenging patients

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How to taper and stop opioids – the essentials

- Opioid should be tapered rather than abruptly discontinued
- Taper can usually be completed between 2 weeks to 4 months
- Severe, acute opioid withdrawal has been associated with premature labour and spontaneous abortion
- Decrease the dose by no more than 10% of the total daily dose every 1-2 weeks
- Once the 1/3 of the original dose is reached, decrease by 5% every 2-4 weeks
- Avoid sedative-hypnotic drugs, especially benzodiazepines during the taper

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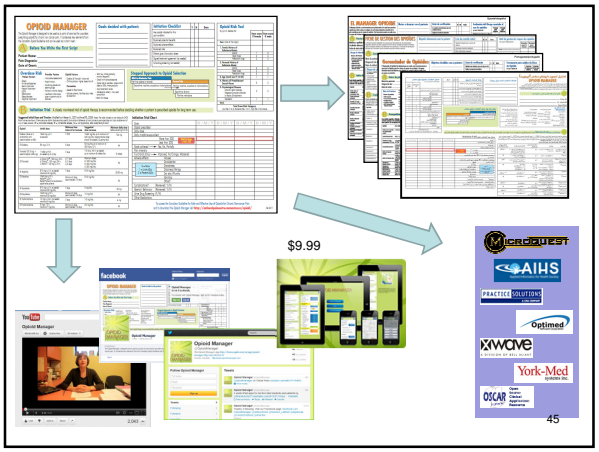
Eight *Prescribing Principles* for Healers (Galt Wilson, CPSBC)

1. Don't turn patients away.
2. Your prescribing is your responsibility
3. Be clear about what you are treating
4. Patient selection is (probably) key
5. Realistic expectations: modest potential benefit and significant risk.
6. Modest dose/dispense size; **No combinations**
7. Make prescribing contingent on basic lifestyle expectations—activity, sleep, nutrition, no smoking or alcohol.
8. Review *PharmaNet* every time you prescribe.



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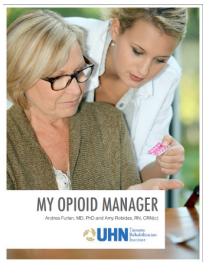
MY OPIOID MANAGER



iBook

App for iOS and Android

Free

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Opioid for chronic pain Self-Assessment Program

Online accredited course
Self-assessment program
3-hour program (MainPro M1, Section 3)

www.OpioidManager.com

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References

Apkarian et al. J. Neurosci. 2004;24:10410-10415

Boston University Online course
http://www.opioidprescribing.com/module_5-video_1a

Furlan A, Chaparro LE, Irvin E, Mailis-Gagnon A. A comparison between enriched and nonenriched enrollment randomized withdrawal trials of opioids for chronic noncancer pain. Pain Res Manag. 2011 Sep-Oct;16(5):337-51.

Gourlay DL, Heit HA. Universal precautions revisited: managing the inherited pain patient. Pain Med. 2009 Jul;10 Suppl 2:S115-23.

Holiday et al. Opioid Use in Chronic Non-cancer pain. 2013.
http://www.racgp.org.au/download/Documents/AFP/2013/March/201303holiday2.pdf

McAllister M. Understanding Chronic Pain. Central Sensitization: Institute for chronic pain. http://www.instituteforchronicpain.org/understanding-chronic-pain/what-is-chronic-pain/central-sensitization. Published April 27 2012, Assessed June 9, 2014.

Nijs J, Meeus M, Danneels L, et al. A Modern Neuroscience Approach to Chronic Spinal Pain: Combining Pain Neuroscience Education With Cognition-Targeted Motor Control Training. *Physical Therapy* [serial online]. May 2014;94(5):730-738.

Woolf, C. Central sensitization: Implications for the diagnosis and treatment of pain. *Pain* 2011. 152:s2-s15

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