MD snapshot Prescribing

MD Snapshot-Prescribing Educational Resource

Opioid Naïve

Why were additional opioid-naive measures added to MD Snapshot-Prescribing?

The evidence base for identifying factors associated with long-term use of opioids has been growing.

Long-term opioid use often begins with treatment of acute pain and is associated with patient risks. Depending on the condition being treated, there may be preferred treatment alternatives for acute pain other than opioids. Refer to this reference for a recent systematic review on treatments for acute pain.

When opioids are the best available treatment option, duration of therapy, dose and choice of opioid are key considerations. Even short-term opioid use can result in tolerance and physical dependence.

The new measures in MD Snapshot-Prescribing offer insight to physicians on their individual prescribing practice for patients who are opioid naïve or have not received an opioid in the past 180 days.

Patients taking opioid agonist treatments are excluded from the definition of opioid naïve.

What are some of the predictors of long-term opioid use?

The highest probabilities of continued opioid use at one and three years were observed among patients who initiated treatment with a long-acting opioid (27.3% at one year, 20.5% at three years), followed by those whose initial treatment was with tramadol (13.7% at one year, 6.8% at three years), or a schedule II short-acting opioid other than hydrocodone or oxycodone (8.9% at one year, 5.3% at three years)*.

The probabilities of continued opioid use at one and three years for those starting on hydrocodone short-acting (5.1% at one year, 2.4% at one years), oxycodone short-acting (4.7% at one year, 2.3% at three years), or schedule III–IV opioids (5.0% at one year, 2.2% at three years) were similar*.

**For US drug schedule information refer to this resource from the U.S. Drug Enforcement Administration.*

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TABLE. One- and 3-year probabilities of continued use, and median time to discontinuation of opioid use, by choice of first opioid prescription*

Choice of first prescription	Number (%) of patients	One-year probability of continued use, %	Three-year probability of continued use, %	Median days to discontinuation
Long Acting Opioids	6,588 (0.5)	27.3	20.5	63
Tramadol	120,781 (9.33)	13.7	6.8	25
Hydrocodone Short Acting	742,112 (57.3)	5.1	2.4	5
Oxcodone Short Acting	219,224 (16.9)	4.7	2.3	6
Schedule II Short Acting	14,877 (1.2)	8.9	5.3	8
Schedule III-IV and Nalbuphine	190,665 (14.7)	5.0	2.2	6

** The first prescription was categorized into six mutually exclusive categories, and in case of multiple prescriptions on the index date, the following hierarchy was used to assign category: Long Acting; Other Schedule II Short Acting; Oxycodone Short Acting; Hydrocodone Short Acting; Schedule III-IV and Nalbuphine; Tramadol*

Source: Centers for Disease Control and Prevention

What does the evidence say about prescribing analgesics for acute pain to opioid-naïve patients?

Only prescribe an opioid if warranted. Consider use of non-opioid, non-pharmacologic treatments. Generally, the indications for use of opioids have narrowed and are limited to:

- Moderate to severe pain following surgery or other invasive procedure
- Moderate to severe pain following an acute injury, such as a bone fracture.

Not all acute pain requires opioids. Information from a recent systematic review highlights the management of pain for select conditions.

- For lower back pain, and pain due to dental surgery or kidney stones, opioid therapy is associated with decreased or similar effectiveness as an NSAID.
- For surgical dental pain and acute musculoskeletal pain, opioids and NSAIDs are more effective than acetaminophen.
- For kidney stone pain, opioids are less effective than acetaminophen.
- For acute conditions, e.g. sprains, strains and overuse injuries, topical NSAID preparations could be trialed.
- For neuropathic pain conditions, e.g. post herpetic neuralgia, serotonin and norepinephrine reuptake inhibitors (SNRIs) and gabapentinoids could be considered. Use gabapentinoids with caution, though, due to contraindications, possible adverse effects and possible misuse. A good summary of gabapentinoids is provided by the B.C. Provincial Academic Detailing Service (see reference below).

- For acute lower back pain or postoperative pain, use of opioids increased the likelihood of longer-term use (observational studies).
- Opioids were associated with more adverse effects (e.g. nausea, dizziness, tiredness) than NSAIDs or acetaminophen.
- Non-pharmacologic therapies such as heat therapy, spinal manipulation, massage, acupuncture, acupressure, a cervical collar, music therapy, transcutaneous electrical nerve stimulation (TENS) and exercise may be helpful for specific acute pain conditions.
- Depending on the site of the pain, regional anesthesia or peripheral nerve blocks may be helpful for certain traumatic injuries.

Condition	**Treatment Options**	**Comments**
Lower back pain	Opioids < NSAIDS	For lower back and postoperative pain, use of opioids increased the likelihood of longer-term use. Opioids are generally not recommended.
Dental surgery pain	Opioids < NSAIDs Opioids and NSAIDS > acetaminophen	The use of opioids is not recommended for general dental pain.
Kidney stones	Opioids < NSAIDs Acetaminophen > opioids	
Musculoskeletal pain (acute)	Opioids and NSAIDS > acetaminophen	For acute sprains, strains and overuse, topical NSAIDS can be tried. Opioids should only be used for moderate to severe pain following an acute injury

		(e.g., bone fracture) when other options are not effective or appropriate. Opioids should generally not be used for most MSK disorders, e.g. arthritis.
Neuropathic pain	SNRIs or gabapentinoids	Use gabapentinoids with caution due to contraindications, adverse effects and possible misuse.

If the prescribing of an opioid is appropriate:

- The higher the total opioid dose and the longer the prescription duration, the greater the risks of misuse, overdose and long-term use.
- Risk factors for ongoing opioid use after surgery include: medical comorbidities, use of benzodiazepines, depression/use of antidepressants, history of drug, alcohol and tobacco use, lower socio-economic status and preoperative pain.
    - Total duration of opioid prescription is the strongest predictor of misuse. When writing a new prescription take into account previous analgesic use.
    - While the risk of persistent opioid use and misuse after surgery are low, the number of people affected is high due to the large number of surgeries completed.
- Prescribing more opioids than necessary can result in:
    - Over-consumption (with risks of very high doses and overdose).
    - Unused doses which are then available for possibly inappropriate use by others (most people save their remaining prescription drugs).
- There is little clinical evidence to support the use of one opioid over another in terms of efficacy, tolerability or misuse potential. However:
    - The use of codeine and tramadol should generally be avoided due to patient variability in metabolism, unreliable analgesia, adverse events and drug interactions (particularly with tramadol as it acts like a serotonin and norepinephrine reuptake inhibitor (SNRI)).

    - Tramadol was associated with a higher risk of prolonged opioid use, compared with other short-acting opioids (according to a US insurance database study involving 350,000 post-surgery patients).

- Prescribing fewer opioids is **not** associated with requests for refills or reduced patient satisfaction.

So if prescribing an opioid for acute pain, what should the dose be?

The dose must be modified based on patient factors. Use of an opioid should always be started as a treatment trial with careful and gradual dose increases, based on patient response.

A short-acting opioid product should be used. Generally, it's preferable not to use a combination product, e.g., opioid plus acetaminophen, to avoid excess doses of either the opioid or acetaminophen.

Non-opioid drug products could be used in conjunction with the opioid analgesic with the direction to use the opioid only when needed.

With respect to morphine equivalent calculations, its best to underestimate the opioid dose.

For post-operative care, a starting oral adult dose of five-to-10 mg of morphine or one-to-two mg of hydromorphone may be considered.

How many days of treatment should be provided?

According to a patient education document on opioids for short-term treatment of pain, "Opioids should be prescribed in no greater quantity than that required for the expected duration of pain severe enough to require opioids. For most painful conditions *unrelated to major surgery or trauma*, a three-day supply should suffice. A reasonable approach for pain *after surgery or trauma* is to prescribe enough opioid for expected pain or until a follow-up appointment is scheduled." Again, a three-day prescription could be the starting point.

Anatomic location and type of surgery factor into the degree of expected postoperative pain. In general, procedures and injuries that involve bones and joints are more painful than those that involve soft tissue. For sever pain, e.g., compound fractures, total joint replacement, maxillofacial and non-laparoscopic surgeries, a seven-day course of treatment may be required.

For post-surgery patients prescribed an opioid, each prescription refill was associated with a 44 per cent increase in the rate of misuse, and each additional week of opioid use increased the risk of misuse by 20 per cent.

What you can do?

- Patient assessment and discussions:
    - The goal for acute pain management should not be zero pain, but rather a **tolerable level** of pain that allows optimal physical and emotional function.
    - Consider and discuss risks and adverse effects of therapy, as well as the patient's unique circumstances and needs. Screen for risk factors using screening tools.
        - In addition to substance use history, contributors to risk also include: concomitant drugs (e.g., benzodiazepines, hypnotics, muscle relaxants, cannabis) and comorbidities (e.g., sleep apnea, renal or hepatic dysfunction, heart disease, etc.).
    - Consider a multi-modal treatment plan.
    - Refer the patient to other healthcare providers as appropriate, e.g., psychiatry, addiction medicine, pain specialist, etc.
- Refer to references for treatment options that include non-drug therapies:
    - If prescribing acetaminophen alone or in combination with other drugs (e.g., oxycontin, muscle relaxants or in cold preparations), do not prescribe more than 4,000 mg/day (from all sources). Note that some medical conditions warrant a lower total dose.
- For moderate to severe pain, if an opioid is appropriate:
    - Use a low dose of a short-acting product for a short period of time, e.g. three days to start (a longer duration may be required for patients with severe pain
    - Avoid prescribing long-acting opioids to opioid-naïve patients with acute pain as unintentional overdose may be more likely, and the risk of long-term use is higher with long-acting opioids.
    - Carefully consider the prescribing of products containing codeine and tramadol.
    - Determine whether dose reductions in concurrent drug therapies are required.

  - Consider prescribing a naloxone kit at the time the opioid is prescribed (particularly if the dose is equal to or greater than 50 morphine equivalents/day).
  - Set up a follow-up with the patient to discuss adequacy of pain control as well as a tapering and discontinuation plan.

- Regardless of the drug prescribed:
  - Use medications with caution, especially for patients with advanced age, reduced renal, hepatic, cardiac function or lean body mass (i.e., increased fat concentration), malnourishment (e.g., reduced albumin), comorbidities and multiple medications. Consult product monographs for specific drug information.
  - Counsel the patient on safe use, storage and disposal.
  - Use patient handouts or provide information on patient references from reputable sites, as appropriate:
    - The Institute for Safe Medication Practices Canada (ISMP) offers a one-pager about opioid pain medicines.
    - Choosing Wisely Canada has a pamphlet about opioids.
    - The Centers for Disease Control and Prevention (CDC) has some great patient-directed information on opioids and pain, along with a patient handout.
    - Those with an UpToDate subscription can access a patient education document on opioids for short-term treatment of pain.
  - Monitor the patient closely for response, adverse effects, etc. and document treatment decisions.
  - Coordinate care with the patient's family members and other healthcare providers.

Resources/References

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10. Centre for Disease Control: https://www.cdc.gov/drugoverdose/pdf/patients/Opioids-for-Acute-Pain-a.pdf

11. UpToDate Pathways (must be a subscriber): https://pathways.uptodate.com/pathway/120683?usage_type=panel&rank=8~150&dl_node=5c90d6be7d17ca001028e44f&saRedirect=%2Fpathway%2F120683&display_rank=1&rid=63cff15ca9b4cc4ab810ad3b&source=panel_search_result&search=opioid%20antagonist

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