Tapering Opioids in the Trauma Patient

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Disclosures

No financial disclosures

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Opioids and the post-op trauma patient

A recent study evaluated the most common issues reported following discharge from trauma surgery in 2021

- The three main themes were as follows
  - Questions about the injury and expectations
  - Concerns about exposure to opioids
    - Tapering plan and expectations for use/recovery
  - Lack of follow up after surgery

Discharge from the trauma centre: exposure to opioids, unmet information needs and lack of follow up—a qualitative study among physical trauma survivors. Jeanette Finstad1,2* , Olav Røise2,3, Leiv Arne Rosseland, Thomas Clausen and Ingrid Amalia Havnes. Scand J Trauma Resusc Emerg Med (2021) 29:121

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Physiology of opioid use

Physical dependence -normal adaptations to exposure of drug creating a physiological reliance on the drug

Addiction -a primary, chronic and relapsing brain disease characterized by an individual pathologically pursuing reward

Overdose by respiratory depression (slowed breathing) which may cause death

Tolerance -need for higher doses to achieve pain relief or euphoric response, or continuation of the same dose no longer has a similar response

Withdrawal – wide range of symptoms that occur after stopping or reducing opioids

Opioid induced hyperalgesia (OIH) – paradoxical worsening of pain despite aggressive opioid therapy

Long term changes to the brain in decision making and behavior regulation

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Opioid Use Disorder

Problematic pattern of opioid use leading to clinically significant impairment or distress, manifested by at least 2 of the following, occurring within a 12-month period:

1. Taking opioids in larger amounts or more frequently than prescribed.
2. Repeated attempts to cut down have been unsuccessful
3. Spending significant time trying to obtain or use opioids
4. Craving or urge to use opioids.
5. Failure to fulfill obligations at work, school, or home due to opioid use
6. Continued opioid use despite having recurrent social or interpersonal problems caused by effects of opioids.
7. Social, occupational, or recreational activities are given up because of use.
8. Recurrent opioid use in situations in which it is physically hazardous.
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is due to opioids.
10. Tolerance, as defined by either (a) need for markedly increased amounts of opioids to achieve desired effect or (b) diminished effect with continued use of the same amount of opioid.
11. Withdrawal, as manifested by either (a) opioid withdrawal syndrome or (b) opioids taken to relieve withdrawal symptoms.

Severity: Mild: 2-3 symptoms. Moderate: 4-5 symptoms. Severe: 6 or more symptoms

Criteria from American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,. Washington, DC, American Psychiatric Association page 541.

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Opioid treatment risk stratification

What to worry about before starting an opioid

- Irregularities seen in prescription drug monitoring program
- Benzodiazepine use
- Use of two or more psychoactive drugs
- Methadone use
- Buprenorphine use
- MED ≥ 90 (oral morphine equivalent)
- History of prior non-fatal overdose
- History of current or active opioid or substance abuse
- Active alcohol misuse
- Patients with severe depression (PHQ-9 ≥15), anxiety (GAD-7 ≥12), or PTSD (PC-PTSD >2)
- Patients with a listed diagnosis in the medical record of bipolar disorder, personality disorder, or schizophrenia
- Prior Opioid Use

Pain Management Opioid Taper Decision Tool. https://www.pbm.va.gov/PBM/AcademicDetailingService/Documents/Pain_Opioid_Taper_Tool_IB_10_939_P96820.pdf
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Surgeries most at risk for chronic opioid use post operatively

Post-operative pain independently increases the risk of chronic opioid use

- 0.4% of non-operative patients on opioids versus 5.6% of post operative patients

The surgeries most associated with development of chronic use were

- Total knee arthroplasty
- Open cholecystectomy
- Total hip arthroplasty
- Simple mastectomy
- Laparoscopic cholecystectomy
- Open appendectomy
- Cesarean delivery

Risks of development of chronic post operative use were similar to those seen for development of opioid use disorder

Hah JM, Bateman BT, Ratliff J, Curtin C, Sun E. Chronic Opioid Use After Surgery: Implications for Perioperative Management in the Face of the Opioid Epidemic. Anesth Analg. 2017 Nov;125(5):1733-1740. doi: 10.1213/ANE.0000000000002458. PMID: 29049117; PMCID: PMC6119469.

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Reasons to reevaluate opioid use

- No pain reduction, no improvement in function or patient requests to discontinue therapy
- Severe unmanageable adverse effects (e.g., drowsiness, constipation, cognitive impairment)
- Dosage indicates high risk of adverse events (e.g., doses of 90 MEDD* and higher)
- Non-adherence to the treatment plan or unsafe behaviors (e.g., early refills, lost/stolen prescription, buying or borrowing opioids, failure to obtain or aberrant UDT)
- Concerns related to an increased risk of SUD (e.g., behaviors, age < 30, family history, personal history of SUD†)
- Overdose event involving opioids
- Medical comorbidities that can increase risk (e.g., lung disease, sleep apnea, liver disease, renal disease, fall risk, advanced age)
- Concomitant use of medications that increase risk (e.g., benzodiazepines)
- Mental health comorbidities that can worsen with opioid therapy (e.g., PTSD, depression, anxiety)

Pain Management Opioid Taper Decision Tool. https://www.pbm.va.gov/PBM/AcademicDetailingService/Documents/Pain_Opioid_Taper_Tool_IB_10_939_P96820.pdf

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The four As of opioid tapering

Analgesia.

- Is the opioid leading to a meaningful reduction in the pain reported by the patient?

Adverse Effect:

- Is the patient experiencing adverse effects at a dose required to reduce the pain?

Activity:

- Is there a measurable or meaningful increase in the patient's ability to perform activities of daily living?

Aberrant Behaviors:

- Demonstration of an accumulation of aberrant behaviors is evidence that the patient is losing control over the use of the medications. This can become evidence of development of substance use disorder.

Nebraska Pain Management Guidance Document https://dhhs.ne.gov/DOP%20document%20library/Pain%20Management%20Pain%20Guidance.pdf

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Response to aberrant opioid use

First consider if continued prescribing puts the patient or others at risk

- If yes it may be reasonable to stop immediately, and the patient may need to seek more structured care

Increased scrutiny of the prescribing may be necessary.

- Institution or increased frequency of UDS
- Start pill counts or call backs where patient must be seen within a certain time frame
- Frequent evaluation of the PDMP
- Decrease the amount per prescription/increase the frequency of evaluation.

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Tapering

Existing evidence on the most effective tapering speed for chronic opioid patients is limited

- If the patient has been on continuous opioids for more than 30 days, they typically fall in this category

The 2019 HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics states that a decrease of 10% or less of a patient's original dose per week or slower is less likely to trigger withdrawal symptoms and is often better tolerated than more rapid tapers

- Slower tapers are thought to result in better long-term patient outcomes
- The higher the initial opioid dosage, the slower the tapering speed should be for a successful taper
- Slower tapers may be indicated for complex patients (someone on a daily opioid dose greater than 90 MME, who presents with comorbidities, or who presents with other complications)
- Tapers can be slowed or paused if patient experiences adverse side effects, but generally should not be reversed
- Reversal of an opioid taper should be carefully considered and include analysis of the risks and benefits in a shared decision-making process
- Short term increases in pain are to be expected as the dose decreases.
- The last part of the taper is typically the most difficult and most likely to see withdrawal symptoms

Nebraska Pain Management Guidance Document https://dhhs.ne.gov/DOP%20document%20library/Pain%20Management%20Pain%20Guidance.pdf
Best Practices, Research Gaps, and Future Priorities to Support Tapering Patients on Longterm Opioid Therapy for Chronic Non-cancer Pain in Outpatient Settings https://nam.edu/wp-content/uploads/2020/08/Tapering-Paper-Two-Pager_FINAL.pdf

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Tapering

Slow tapering

- Long acting, 5-10% per week
- Short acting, 5-15% per week
- Will likely need to slow down toward the last portion, typically 25-30% remaining
- May need to decrease to 5% per week or pause taper if withdrawal symptoms start
- Only taper one drug type at a time i.e. not benzodiazepines and opioids simultaneously

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Managing an opioid taper

- Non-opioid medications and non-pharmacologic therapies can help manage pain during a taper
- Co-prescription of naloxone at initial patient assessment and throughout the tapering process is recommended to decrease the risk of fatal opioid overdose
- Providers should consider slowing or pausing a taper if the patient experiences serious withdrawal symptoms
- Providers should consistently monitor patients undergoing opioid withdrawal and adapt withdrawal symptom treatment accordingly as needed
- If the patient re-escalates their dose of opioids, the provider should reassess the patient for behavioral health disorders and/or substance use disorder and facilitate treatment before attempting another taper
- Behavioral health comorbidities may impact the success of efforts to taper and/or discontinue opioid therapy
- Patients who are co-prescribed opioid analgesics, benzodiazepines, or other central nervous system depressants are at a higher risk for overdose and should be given special consideration

Nebraska Pain Management Guidance Document https://dhhs.ne.gov/DOP%20document%20library/Pain%20Management%20Pain%20Guidance.pdf

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Provide behavioral health support

Make sure patients receive appropriate psychosocial support.

- Ask the patient how best to support them.
- Acknowledge patient fears about tapering.
- Many patients fear stigma, withdrawal symptoms, pain, and/or abandonment.
- Make yourself or a team member available to the patient to provide support, if needed. Encouragement is key to success.
- Let patients know that while pain might get worse at first, many people have improved function without worse pain after tapering opioids.
- Follow up frequently.
- Watch closely for signs of anxiety, depression, suicidal ideation, and opioid use disorder and offer support or referral as needed.
- Collaborate with mental health providers and with other specialists as needed to optimize psychosocial support for anxiety related to the taper.

HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics. https://www.hhs.gov/opioids/sites/default/files/2019-10/Dosage_Reduction_Discontinuation.pdf

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Symptoms of Opioid Withdrawal

Early Symptoms
- Agitation
- Anxiety
- Muscle aches
- Increased tearing
- Insomnia Runny nose
- Sweating
- Yawning

Late Symptoms
- Abdominal cramping
- Diarrhea
- Dilated pupils
- Goose bumps
- Nausea
- Vomiting

Prolonged Symptoms
- Irritability
- Fatigue
- Bradycardia
- Decreased body temperature
- Craving
- Insomnia

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Treating Withdrawal

Medications to consider
- Antidepressants for mood and sleep disturbance (trazadone, TCA, SNRI)
- Hydroxyzine for anxiety and insomnia
  - 25 to 50 mg three times a day as needed, diphenhydramine as an alternative
- Antidiarrheal medication (Imodium)
  - Loperamide 4 mg orally initially, then 2 mg with each loose stool, not to exceed 16 mg daily
- NSAIDs/Tylenol
- Antiepileptics(gabapentin, pregabalin, topiramate)
- Clonidine for withdrawal (hypertension, tachycardia, runny nose, diarrhea)
  - Also has some centrally acting pain suppression
  - 0.1 to 0.2 mg oral every 6 to 8 hours; hold dose if blood pressure <90/60 mmHg (0.1 to 0.2 mg 2 to 4 times daily is commonly used in the outpatient setting)
  - Tizanidine and Gabapentin Can be alternatives

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