January 10, 2021 2021 ECHO Series on Medication for Opioid Use Disorder (MOUD)

Withdrawal Management/Pain Management For Those Going Through Opioid Withdrawals (Buprenorphine And Other Opioids)

presented by:

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Reference: https://www.iqvia.com/en/insights/the-iqvia-institute/reports/prescription-opioid-trends-in-the-united-states

AMA September 21, 2021 Opioid prescriptions **decrease** for the 10th Year: retail pharmacy prescription data, **including buprenorphine for pain and methadone for pain**.

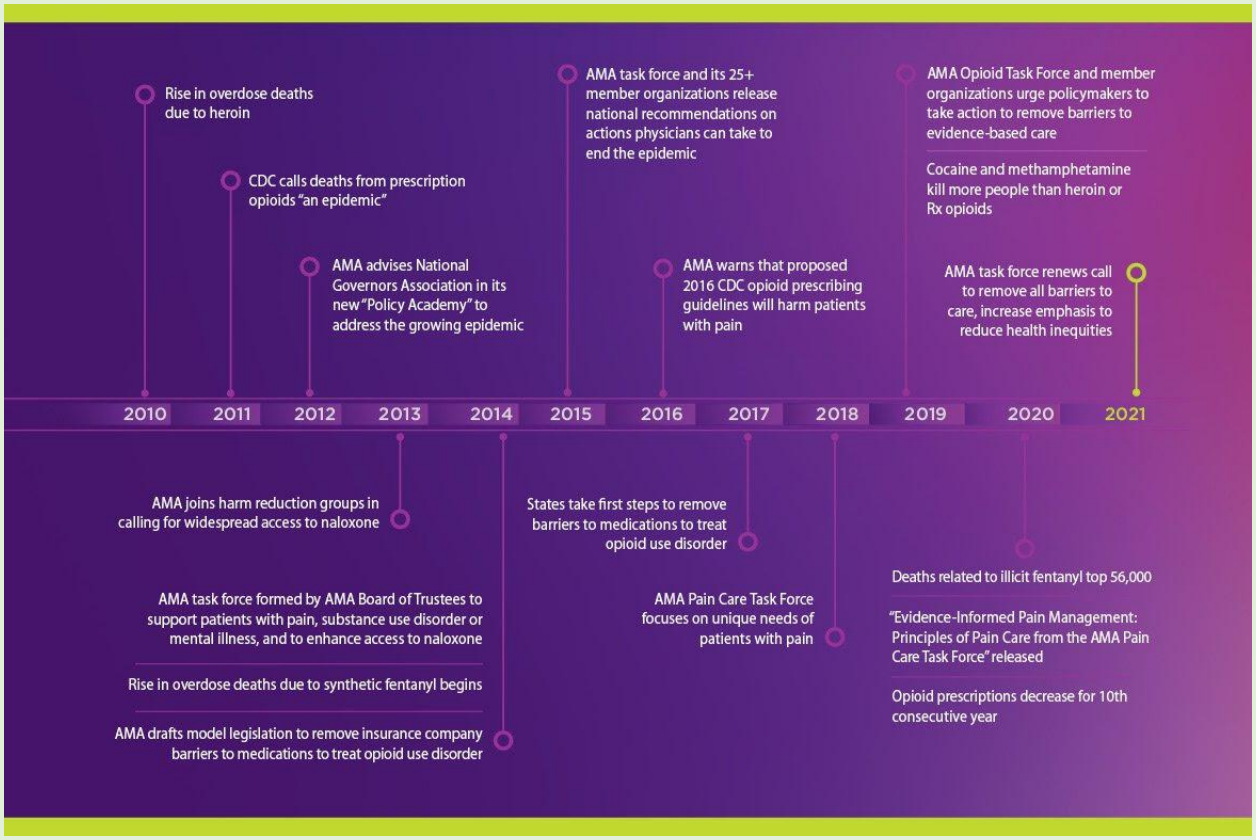
Total opioid prescriptions has decreased by more than 44% between 2011–2020

In Hawaii:
2011 - 2020: -52.1%
2019-2020: -10.7%

Total MME has decreased by more than 55% between 2011–2020

In Hawaii:
2011- 2021: -66.4%
2019- 2020: -14.4%

https://www.ama-assn.org/press-center/press-releases/report-shows-decreases-opioid-prescribing-increase-overdoses



Nasal naloxone = Narcan ®

https://www.hhhrc.org/

677 Ala Moana Blvd Suite 226
Honolulu, Hawai'i 96813

Email: info@hhhrc.org
Tel: (808) 521-2437

Consider assessment tools, such as:

Subjective Opiate Withdrawal Scale

Clinical Opiate Withdrawal Scale (Handelsman, 1987; Wesson, 2003)

VA Opioid Decision Taper Tool (2019).

https://www.ama-assn.org/press-center/press-releases/report-shows-decreases-opioid-prescribing-increase-overdoses

"The nation's **drug overdose and death epidemic has never just been about prescription opioids**," said AMA President Gerald E. Harmon, M.D. "Physicians, have become more cautious about prescribing opioids, are trained to treat opioid use disorder and support evidence-based harm reduction strategies. We use PDMPs as a tool, but they are not a panacea. Patients need policymakers, health insurance plans, national pharmacy chains and other stakeholders to change their focus and help us remove barriers to evidence-based care."

https://www.ama-assn.org/press-center/press-releases/report-shows-decreases-opioid-prescribing-increase-overdoses

"**Stop prior authorization for medications to treat opioid use disorder**. Prior authorization is a cost-control process that health insurance companies and other payers use that requires providers to obtain prior approval from the insurer or payer before performing a service or obtaining a prescription. It is used to deny and delay services—including life-saving ones—as physicians are required to fill out burdensome forms and patients are forced to wait for approval.

https://www.ama-assn.org/press-center/press-releases/report-shows-decreases-opioid-prescribing-increase-overdoses

"Ensure access to affordable, evidence-based care for patients with pain, including opioid therapy when indicated. While opioid prescriptions have decreased, the AMA is greatly concerned by **widespread reports of patients with pain being denied care** because of arbitrary restrictions on opioid therapy or a lack of access to affordable non-opioid pain care."

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

In a commentary published in **The New England Journal of Medicine** the guideline's authors say the agency does not support abrupt tapering or discontinuation of opioid medication, and that the guideline's recommendation that daily doses be limited to no more than 90 MME (morphine milligram equivalent) should only be applied to patients who are **starting opioid therapy.**

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

"Unfortunately, some policies and practices purportedly derived from the guideline have in fact been inconsistent with, and often go beyond, its recommendations," wrote Deborah Dowell, MD, Tamara Haegerich, PhD, and Roger Chou, MD. "A consensus panel has highlighted these inconsistencies, which include inflexible application of recommended dosage and duration thresholds and policies that encourage hard limits and abrupt tapering of drug dosages, **resulting in sudden opioid discontinuation or dismissal of patients from a physician's practice**."

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients

April 24, 2019

By Pat Anson, PNN Editor

The guideline "does not address or suggest discontinuation of opioids already prescribed at higher dosages," nor does it seek to deny opioids to patients with cancer, sickle cell disease or recovering from surgical procedures.

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients

April 24, 2019

By Pat Anson, PNN Editor

"…the CDC … clearly defined that its Guideline cannot and should not be invoked to justify the forced reduction or denial of opioid pain medication to patients who use opioids to manage their long-term pain," said Andrea Anderson, a patient advocate with the Alliance for the Treatment of Intractable Pain (ATIP).

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

The CDC's controversial guideline was released in March 2016 as a **voluntary** set of **recommendations** meant to discourage **primary care physicians** from prescribing opioids for chronic non-cancer pain. But the guideline was quickly adopted by states, insurers, pharmacies, practitioners and even law enforcement agencies, who saw it as a mandatory policy that all physicians should follow to reduce rates of opioid addiction and overdose.

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

Reports soon began surfacing of patients being forcibly tapered off opioids or being abandoned by doctors who no longer wanted to treat them. Within months of the guideline's release, CDC was warned by its own public relations consultants that "doctors are following these guidelines as strict law" and that **some patients "are now left with little to no pain management."**

A PNN survey of nearly 6,000 patients, over 85 percent said the guideline has made their pain and quality of life worse. Nearly half say they have **considered suicide** because their pain is poorly treated. Many are **hoarding opioids** because they fear losing access to the drugs and some are turning to other substances – both legal and illegal – for pain relief.

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

CDC acknowledged April 10, 2019 that its guideline was causing patient harm.

CDC Director Dr. Robert Redfield letter, sent the day after the Food and Drug Administration warned doctors **not to abruptly taper or discontinue opioids**. The FDA said it had received reports of "serious harm" to patients, including **withdrawal, uncontrolled pain, psychological distress and suicide**.

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

"It is the CDC guideline that has been used by **law enforcement agencies** to surveil doctors and by major **insurers** and **pharmacies** in ways that **deny pain patients access to opioid analgesia**."

— Kate Nicholson, Civil Rights Attorney

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

"**It's gratifying to see CDC admit that its guideline is being misinterpreted and misapplied**, as many of us have been warning for some time," said Bob Twillman, PhD, former Executive Director of the Association of Integrative Pain Management. "It's a bit puzzling to me why it has taken them three years to do so, when many of us, myself included, told them within days of the guideline's issuance that these things were going to happen.

"Unfortunately, we've spent the past three years watching three dozen states violate CDC's stated intent that the guideline not be legislated, not to mention the untold numbers of insurance companies, health care systems, private practices, and pharmacy chains that have created a whole population of **opioid refugees** by misusing the guideline. Serious harms, including patient **deaths**, have resulted, and there is **virtually no evidence that the intended effect of reducing prescription opioid overdose deaths has occurred, while overall opioid overdose deaths continue to climb rapidly**."

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients

April 24, 2019

By Pat Anson, PNN Editor

In 2019, federal prosecutors in Wisconsin and several other states sent letters to hundreds of physicians warning them that their opioid prescribing practices exceed those recommended by the CDC. The doctors were identified through data-mining of **prescription drug monitoring programs** (PDMPs), which have been **weaponized to target physicians (prescribers).**

Why not simply use the CDC Guidelines?

CDC: Opioid Guideline Should Not Be Used to Taper Patients
April 24, 2019
By Pat Anson, PNN Editor

Can the CDC undo all the harm its “user-friendly materials” have caused over the last three years?

Will states be advised to rollback their laws and regulations?

Will insurers and pharmacies be told to stop limiting the dose of opioid prescriptions?

And what about the patients who committed suicide?

NY Post

CVS, other pharmacy chains lose Ohio suit in first opioid epidemic trial

By

Reuters

November 23, 2021 3:36pm

A federal jury on Tuesday found that pharmacy chain operators CVS, Walgreens Boots Alliance and Wal-Mart helped fuel an opioid epidemic in two Ohio counties, in the first trial the companies have faced over the US drug crisis.

Reference:
CDC Advises Against Misapplication of the *Guideline for Prescribing Opioids for Chronic Pain*
Some policies, practices attributed to the Guideline are inconsistent with its recommendations
Media Statement
Embargoed Until: Wednesday, April 24, 2019, 5 PM, EDT
Contact: Media Relations
(404) 639-3286

- **Misapplication of recommendations to populations outside of the Guideline's scope:**
    - not for cancer pain
    - not for buprenorphine or methadone for opioid use disorder
    - not for post-surgical pain.

- **Misapplication of the Guideline's dosage recommendation of upward titration, to be applied to downward titration:**

    The Guideline states, "When opioids are started, clinicians should prescribe the lowest effective dosage. Clinicians should…
    avoid increasing dosage to ≥90 MME/day or carefully justify a decision to titrate dosage to ≥90 MME/day." This recommendation statement does not suggest discontinuation of opioids already prescribed at higher dosages.

- **The Guideline does not support abrupt tapering or sudden discontinuation of opioids**.

    Rapid opioid tapers can result in severe opioid withdrawal symptoms including pain and psychological distress, and some patients will become desperate enough to attempt to find opioids from other **non-prescribed sources** (Fentanyl, heroin, non-prescribed "real or counterfeit" opioid pills, or Kratom) or to use other, mostly sedating, non-opioid substances (benzodiazepines, barbiturates, zolpidem, Imodium AD ®, alcohol, marijuana, antihistamines, anti-seizure medications, high-dose NSAIDs/acetaminophen).

- The Guideline was developed to ensure that **primary care clinicians** work with their patients to consider all safe and effective treatment options for pain management. CDC encourages clinicians to:
    - continue to use their clinical judgment
    - base treatment on what they know about their patients
    - maximize use of safe and effective non-opioid treatments
    - consider the use of opioids only if their benefits are likely to outweigh their risks

- CDC developed the Guideline to be practical and created clinical tools to help **primary care providers** help patients manage pain more effectively and safely, while mitigating the potential risks of prescription opioids when needed.

The Guideline includes guidance on management of opioids in patients already receiving them long-term at high dosages, including advice to providers to:

- maximize **non-opioid pain treatment**.
  These might be too expensive, too time-consuming, medically contra-indicated, or not available to patients. Example COVID-exposure risk with P.T.

- regularly **review risks** associated with continuing high-dose opioids

- **collaborate** with patients who agree to taper their dose

- if tapering, taper slowly enough to minimize withdrawal symptoms.

- Consider pharmacology, such as change from full mu opioids to buprenorphine for withdrawals and for pain. The ine's" : clonidine (alpha-2 agonist), tizanidine, cyclobenzaprine, benzodiazepines (with caution).

- **individualize the pace of tapering**

- closely monitor and reduce the overdose risk for patients who continue to take high-dose opioids

Reference #2:https://www.mayoclinic.org/diseases-conditions/prescription-drug-abuse/in-depth/tapering-off-opioids-when-and-how/art-20386036

Tapering off opioids: When and how

When it's time to stop using the opioid medication

- **less than two weeks**, simply stop the medication when your pills run out, if not before
- **Common signs** that it's time to get off opioids include serious side effects, reduced pain relief from the same dose of medications over time (tolerance), or behaviors that raise concerns about misuse, abuse or addiction.
- **Don't go cold turkey**.
    - **Gradually reduce** the amount of medication.
    - **Timeline**: weeks, months or years to safely reduce opioids.
    - Tapering opioids needs to be **individualized**, regularly re-evaluated with the patient, and should minimize health risks.
    - **What is the eventual goal?**

- Regularly monitor **pulse** and **blood pressure**. Why?

- Request urine, blood or saliva **toxicology testing**. Why? How often?

- **Involve others**, including health care providers, pharmacists or family members.

- check **prescription drug monitor programs**? Why? How often?
    - Methadone treatment clinics, emergency departments and urgent-care clinics that administer medication directly, **will not show** on the prescription monitor program.

- Introduce **other pain therapies** as needed. Some of these non-opioid treatments might be **too expensive, too time-consuming, medically contra-indicated, or not available** to patients. **Example: COVID-exposure risk with P.T.**
    - **physical** therapies, massage therapy, acupuncture, **counseling**-CBT, mindfulness
    - various **injections**, such xylocaine, PRP, steroids, stem cells, trigger point injections, joint injections, nerve block injections, neurolysis,…

- non-opioid medications

  AEDs, SSNRIs, tricyclic antidepressants, NSAIDs, APAP, muscle relaxers that are not cardisoprodol, migraine treatments (see below), Lidocaine patches (topical), Sonolpas, other topical OTC

    - cannabinoids- CBD vs. THC, topical, oral inhaled vs. swallowed

- supplements/foods:

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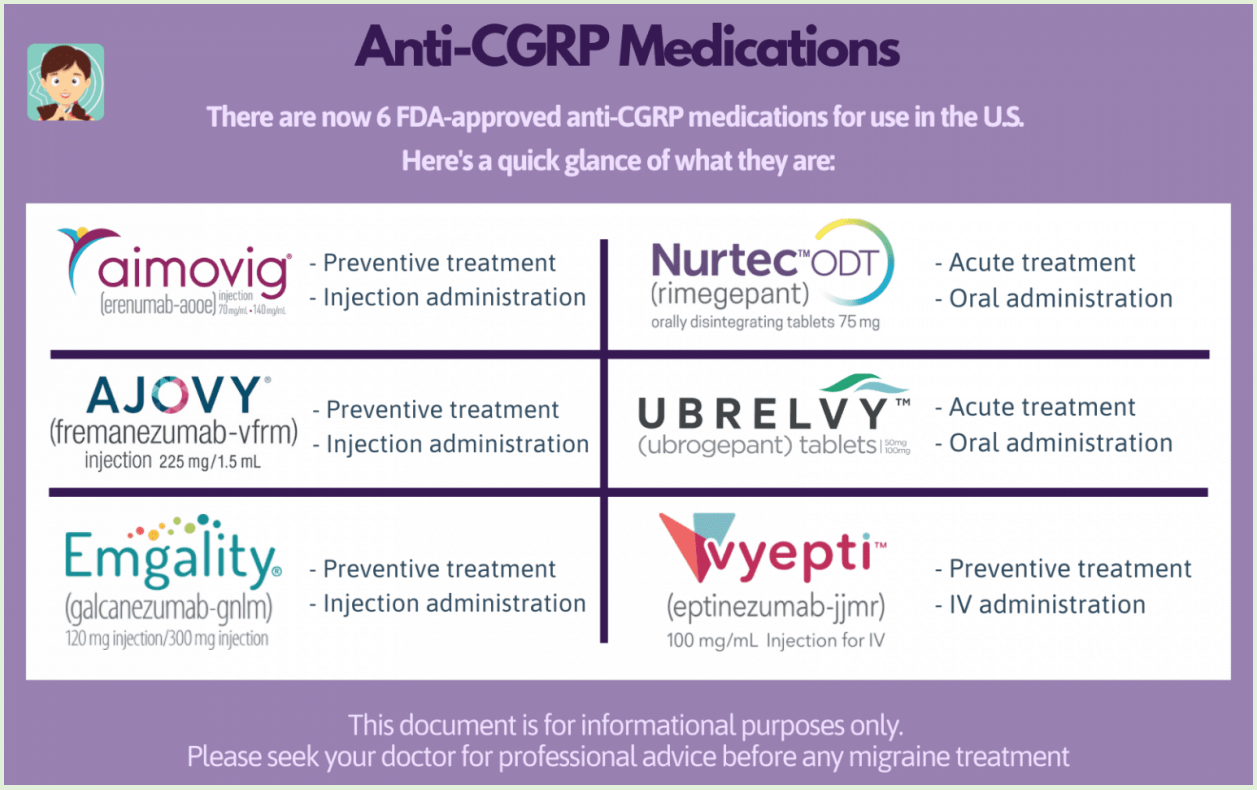
http://www.practicalpainmanagement.com/sites/default/files/imagecache/lightbox-large/ppm/0701%20supplement%20keifer/0701-table-1.jpg

Table 1: Dietary Supplements for Various Types of Pain Conditions

Condition	Dietary Supplements	
Fibromyalgia	5-hydroxytryptophan (5-HTP) *S*-adenosylmethionine (SAMe)	
Headache	Butterbur (*Petasites hybridus*) Coenzyme Q10 Feverfew (*Tanacetum parthenium*) Magnesium Riboflavin (vitamin B_2)	
Joint Pain	Avocado-soybean unsaponifiables Baikal skullcap (*Scuttelaria baicalensis/barbata*) Boswellia (*Boswellia serrata*) Cat's claw (*Uncaria tomentosa* and *U. guianensis*) Chondroitin Devil's claw (*Harpagophytum procumbens*) Ginger (*Zingiber officinale*)	Glucosamine Methylsulfoylmethane (MSM) Omega-3 fatty acids SAMe Turmeric (*Curcuma longa*) White Willow bark (*Salix alba*)

Newer migraine treatments: https://external-content.duckduckgo.com/iu/?u=https%3A%2F%2Ftse3.mm.bing.net%2Fth%3Fid%3DOIP.q7vwJLkXm9AfySrHk7mDfwHaEo%26pid%3DApi&f=1



- Prescribe other types of medications to help you **manage withdrawal** signs and symptoms
    - Clinical Opioid Withdrawal Scale (COWS) needed? (see next section of this presentation)
    - "The ine's" : clonidine, tizanidine, cyclobenzaprine, benzodiazepine (with caution)
    - Which is better? clonidine oral tablets vs. patch

- step-by-step reductions reduces discomfort and allows time for adjustment and trials of other treatments

Withdrawal signs and symptoms

Signs and symptoms of withdrawal (the taper is likely too rapid) include:

- headaches with or without blood pressure changes, so check blood pressure properly. https://external-content.duckduckgo.com/iu/?u=https%3A%2F%2Ftse1.mm.bing.net%2Fth%3Fid%3DOIP.sENaSBcaFjISKt7VIZsU2wHaE8%26pid%3DApi&f=1

- Runny nose, watery eyes and yawning
- Restlessness or anxiety
- Irritability or mood disturbances (hallucinations)
- Increased pain
- Goose bumps on the skin, chills or sweating
- Stomach cramps
- Nausea, vomiting or diarrhea
- Muscle cramping or aches and joint pain

- Tremors or muscle twitching
- Rapid heart rate
- Trouble sleeping but fatigue
- Thoughts of suicide

Patient education should include:

- Eat regularly and choose healthy meals
- Stay active with moderate exercise, including walking, stretching and deep-breathing exercises
- Use relaxation techniques, which can include breathing exercises, music therapy, guided imagery, mindfulness meditation, cognitive behavioral therapy, and reading
- Keep a positive outlook and surround yourself with people to keep your mood positive.
- Do not substitute alcohol or "other substances" to help with tapering down
- Stay hydrated by drinking plenty of water
- Sleep hygiene

Patient motivation to taper

PALLIATIVE CARE NETWORK OF WISCONSIN

Tapering Opioids in Patients with Serious Illness: Who to Taper

Wesley Jones DO
Scott Junkins MD
Drew A Rosielle MD

Some patients do not want to continue chronic opioid treatment

Others are fearful about tapering, but are willing to try it with encouragement, education, and support.

Patients who participate in the tapering plan using shared decision making have better outcomes than those who are forced to taper

Recent Federal tapering guidelines discourage forcing most patients on chronic opioid treatment to taper without patient cooperation.

For patients for whom clinicians believe tapering is indicated, but who are reluctant to taper, motivational interviewing techniques can be useful to assess perceived barriers, provide education about potential benefits of tapering, and continue the discussion over subsequent clinic visits. This is often the best approach for patients who continue to demonstrate overall safe opioid use and there is time over several visits to build up motivation to taper. **"Expectation management"**

Other times it is necessary to taper a patient even without their agreement. Typically, this is because the prescribing clinician judges ongoing opioid exposure is unsafe (e.g., co morbid active alcohol use disorder, a patient who has suffered an inadvertent overdose). See next page….

WHO- Indicators for a risk benefit assessment

- Increasing pain in the absence of any degradation of the underlying pathophysiology associated with the pain;
- Falls at home;
- Recent pneumonia, worsening chronic obstructive pulmonary disease (COPD) status, worsening obstructive sleep apnea (OSA);
- Observed or reported somnolence or over sedation;
- Change in renal or liver function;
- Episodes of bowel obstruction or significant constipation;
- Additional new medications (anti-cholinergics, benzodiazepines) causing interactions with opioids, such as sedation or delirium, in the patient;
- Accidental, non-fatal overdose;
- Suicidal intent or action;
- Urine toxicology indicative of other substance use not prescribed to the patient;
- Ongoing use despite resolution or healing of a painful condition;
- The condition being treated is contraindicated for opioid therapy, e.g. migraine or fibromyalgia;
- Adverse effects of opioid therapy are not tolerated or are unmanageable;
- Unwillingness to pursue therapies that have a reasonable chance of benefit to the patient; or
- Development of the belief that it is impossible to manage pain well without opioids.

PALLIATIVE CARE NETWORK OF WISCONSIN

Tapering Opioids in Patients with Serious Illness: How to Taper

Wesley Jones DO
Scott Junkins MD
Drew A Rosielle MD

Collaborate with the patient on a tapering plan

Tapering is more likely to be successful when patients and clinicians **collaborate** in the plan. Discuss all anticipated aspects of the plan. Educate patients that tapering is sometimes painful, but that many patients find that after a period of adjustment (which can be many months) pain returns to baseline or is even improved.

Maximize pain and mood support

1. Social workers, physical therapists, pain specialists, etc.

2. It may take weeks to months to adopt new behavioral techniques so be patient with changes.

3. Carefully review medications and maximize non-opioid adjuvant.

4. Assess and treat psychiatric conditions with behavioral health clinicians and/or medications.

Decide a rate to taper, but be willing to adjust the rate

The taper should be slow enough to minimize symptoms of withdrawal.

Expect a successful taper to take longer, if the opioids have been taking longer or if on stronger doses. "As long as the patient is making progress, the taper is considered successful. In some cases, it may take years".

For a "slow" taper, a good starting point is a **10% reduction of the original dose each month**, but not more than 20%.

"Fast" or "rapid" tapers generally a 10% dose reduction of the original dose per **week**. Fast tapering will usually cause severe withdrawal symptoms, which will last for a short period. Most physicians typically recommend close monitoring and/or supervised centers for patients considering a fast tapering program.

One method to slow the rate, such as when there is significant withdrawals, is to **re-calculate the 10% of the current dose** (not using the original dose for your 10% calculation)

At times the taper may need to be paused and restarted when the patient is ready. Reasons to pause a taper, include severely uncontrolled pain, significant emotional distress or severe physical withdrawals, other medical and non-medical reasons (pregnancy, new diagnosis of a stroke, renal stone, fracture or cancer, pending or S/P new surgery, final examinations, travel, death in the family).

A note about pregnant women- opioid withdrawal during pregnancy may lead to spontaneous abortion or premature labor (CDC, 2016).

Opioids- hold taper. Make progress with b**Benzodiazepines, nicotine, alcohol.**

Treat withdrawal symptoms

1. Anxiety, restlessness, sweating, yawning, muscle aches, diarrhea, cramping resolve 5-10 days after the latest dose reduction.

2. dysphoria, insomnia, irritability can take weeks to months to resolve. Educate and provide encouragement that dysphoria and irritability will improve with time are essential skills in helping patients taper successfully.

3. Alpha-2 agonists, like clonidine, can be given for sweating and tachycardia. Other medications for diarrhea, muscle aches, insomnia, nausea, and abdominal cramping may be appropriate.

Troubleshooting 'unsuccessful' tapers

1. **Reconsider the tapering goal/endpoint**

2. **Temporarily, re-focus the treatment goal** to address any significant uncontrolled insomnia, irritability, depression or anxiety.

3. Was an **opioid use disorder** uncovered?

4. **Complex persistent dependence** (CPD)?
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6129223/

Complex persistent dependence (CPD), the grey area between simple dependence and addiction, can lead to escalating and labile opioid need, often generating aberrant behaviors. Opioid tapering, which appears to be logical intervention for CPD, may actually lead to worsening of pain, function and psychiatric symptoms due to development of protracted abstinence syndrome. "CPD" is a novel term used to describe patients with **severe pain and poor function despite chronic opioid treatment who cannot successfully taper, but who do not meet diagnostic criteria for opioid use disorder**. There is no clear standard for how to help patients with CPD, although interdisciplinary pain care which addresses mood, coping, and physical function is recommended by experts. **Buprenorphine**-based therapies, are significantly safer for patients than full-opioid agonists, are one possible treatment

Why patients need to taper opioid use (Part 1 of 2)

reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6390846/
JAMA. Author manuscript; available in PMC 2019 Feb 26.
Published in final edited form as:
JAMA. 2016 Apr 19; 315(15): 1624–1645.
doi: 10.1001/jama.2016.1464
PMCID: PMC6390846
NIHMSID: NIHMS1008876
PMID: 26977696

Overdose risk- fatal and non-fatal/accidental/purposeful

CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016
Deborah Dowell, MD, MPH, Tamara M. Haegerich, PhD, and Roger Chou, MD

Table 2.

Relationship Between Dose and Overdose

The higher the daily morphine milligram equivalent (MME), and with concurrent use of benzodiazepines, the greater the risk of opioid overdose.

*Some of these studies might be outdated.

Concomitant opioids and benzodiazepines

Taper the opioids first

The 2016 CDC Chronic Pain Prescribing Guidelines suggest tapering the opioid first, given the greater risks of benzodiazepine withdrawal relative to opioid withdrawal and the possibility of increased anxiety related to the opioid taper (CDC, 2016).

OR

Taper the benzodiazepines first

However, concurrent use of benzodiazepines and opioids multiplies the risk of opioid-related harm. Given that benzodiazepines are risk multipliers, tapering the benzodiazepine first may be appropriate. Patients receiving high daily MME and intermittent benzodiazepines may be able to successfully taper the benzodiazepine first.

Why patients need to taper opioid use (Part 2 of 2)

https://www.hss.edu/conditions_patient-guide-opioid-tapering.asp

Posted: 5/21/2018

Authors

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There are many effects linked to long-term opioid use which patients should consider:

- Opioid-induced hyperalgesia (opioids causing increased pain over the long term).*
- Physical dependence
- Constipation and nausea
- Drowsiness and fatigue which can lead to increased falls and broken bones
- Depressed mood, which can lead to low energy and decreased activity. *
- Sleep apnea, which can lead to increased daytime fatigue and other health complications. *
- Lowered testosterone in men, which can lead to lower libido, osteoporosis, depressed mood and muscle atrophy. *
- Low estrogen in women, which can lead to osteoporosis, low energy, and change in menstruation. *
- Respiratory health issues. *
- Poor post-operative pain control. *

* = less likely with buprenorphine

Change dose, then interval

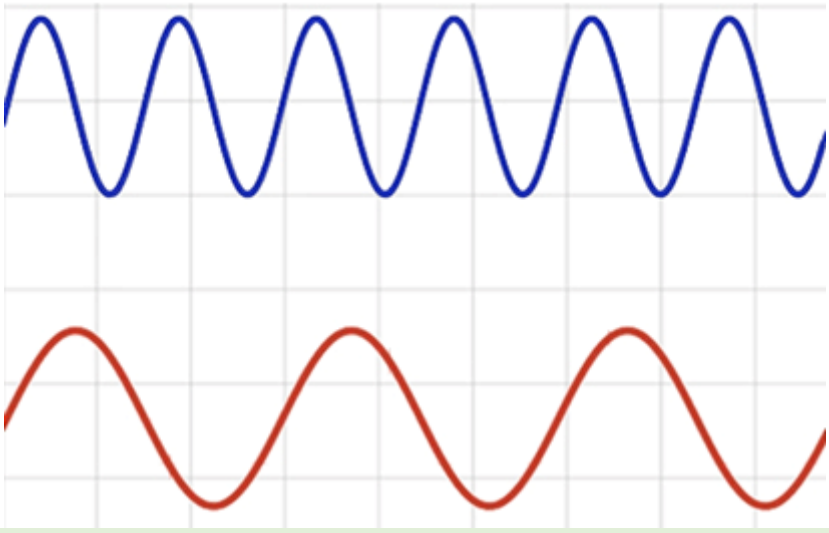
Change the dose (strength) first and the interval second

This is to maintain consistent levels of medication in the body.

This reduces the chance of increased withdrawal symptoms, which make tapering much more difficult

For this reason, the interval between doses should, when possible, remain the same, as one lowers the dose (strength). That is, until the strength of the medication cannot be lowered any further.

Once that final lowered dose is implemented, it becomes appropriate to start increasing the interval between doses.



"Two tablets for breakfast, two tablets for lunch, two tablets for dinner and two tablets at bedtime"

Although, ideally, "two tablets every 6 hours"

The chart below shows an example of a tapering regimen. Here, a patient who is taking eight tablets per day (2 every 6 hours) reduces use by lowering one tablet every "INTERVAL" until they are down to four doses per day (one tablet every six hours).

	6AM	Noon	6PM	midnight
<u>Baseline (before taper starts):</u> Taking **8** tablets per day	2	2	2	2
<u>Start taper</u> Taking **7** tablets per day	2	**1**	2	2
<u>Next Interval</u> Taking **6** tablets per day (keep 2 QAM and 2 QPM)	2	**1**	**1**	2
<u>Next Interval</u> Taking **5** tablets per day (keep 2 QPM)	**1**	**1**	**1**	2
<u>Next Interval</u> Taking **4** tablets per day	**1**	**1**	**1**	**1**

Total daily dose of IR oxycodone	Daily starting dose of OxyContin
 10 mg 1 tablet every 6 hours **(40 mg oxycodone)**	 **20 mg 1 tablet every 12 hours**
 20 mg 1 tablet every 6 hours **(80 mg oxycodone)**	 **40 mg 1 tablet every 12 hours**
 30 mg 1 tablet every 6 hours **(120 mg oxycodone)**	 **60 mg 1 tablet every 12 hours**

Table 1

Comparison of Opioid Withdrawal Profiles

Drug	Dose Equivalent to Methadone 1 mg	Time for Effects to Wear off	Onset of Withdrawal	Peak of Withdrawal	End of Withdrawal
Fentanyl	0.01 mg	1 h	3-5 h	8-12 h	4-5 days
Meperidine	20 mg	2-3 h	4-6 h	8-12 h	4-5 days
Oxycodone	1.5 mg	3-6 h	8-12 h	36-72 h	≈7-10 days
Hydromorphone	0.5 mg	4-5 h	4-5 h	36-72 h	≈7-10 days
Heroin	1-2 mg	4 h	8-12 h	36-72 h	7-10 days
Morphine	3-4 mg	4-5 h	8-12 h	36-72 h	7-10 days
Codeine	30 mg	4 h	8-12 h	36-72 h	≈7-10 days
Hydrocodone	0.5 mg	4-8 h	8-12 h	36-72 h	≈7-10 days
Methadone	NA	8-12 h	36-72 h	96-144 h	14-21 days

NA: not applicable.
Source: Reference 6.

Opioid Conversion Table Methadone | Brokeasshome.com

Some patients that have been on high-dose opioids may experience generalized tiredness or feel unwell for a few weeks (post-acute withdrawal syndrome = **PAWS**).

Guideline resources: CDC Opioid Guideline Mobile App	
Methadone daily dose (mg)	**Morphine milligram equivalent (mg)**
20	80
21	168
40	320
41	410

Methadone mg =
$X/21\ \{5.7 - 3*\sin[90/((110/x)^5 + 1)] - \sin[90/((320/x)^7 + 1)]\}$

Figure 3. The Methadone Fudin Factor. The sine function above assumes the variable is in degress, no radians.

Developed by Jeffrey Fudin, BS, PharmD, FCCP, and Jason Andrew Fudin, BA, MS.

Oral morphine dose (mg)	MS: methadone ratio
30–90	4:1
90–300	8:1
300–800	12:1
800–1,000	15:1
>1,000	20:1

Ripamonti et al. [52]

https://www.researchgate.net/profile/Andrea_Trescot/publication/312854612/figure/download/tbl1/AS:667647037411341@1536190866866/1-Oral-morphine-to-methadone-conversion.png

https://journals.lww.com/journaladdictionmedicine/abstract/9000/synergistic_effect_of_ketamine_and_buprenorphine.98971.aspx

Synergistic Effect of Ketamine and Buprenorphine Observed in the Treatment of Buprenorphine Precipitated Opioid Withdrawal in a Patient With Fentanyl Use

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Abstract

Background:
Optimal treatment of buprenorphine precipitated opioid withdrawal (BPOW) is unclear. Full agonist treatment of BPOW is limited by buprenorphine's high-affinity blockade at mu-opioid receptors (μORs). Buprenorphine's partial agonism (low intrinsic efficacy) at μORs can limit the effectiveness of even massive doses once BPOW has begun. Adjunct medications, such as clonidine, are rarely effective in severe BPOW. Ketamine is an N-methyl-D-aspartate receptor antagonist with a potentially ideal pharmacologic profile for treatment of BPOW. Ketamine reduces opioid withdrawal symptoms independently of direct μOR binding, synergistically potentiates the effectiveness of buprenorphine μOR signaling, reverses (resensitizes) fentanyl induced μOR receptor desensitization, and inhibits descending pathways of hyperalgesia and central sensitization. Ketamine's rapid antidepressant effects potentially address depressive symptoms and subjective distress that often accompanies BPOW. Ketamine is inexpensive, safe, and available in emergency departments. To date, neither ketamine as treatment for BPOW nor to support uncomplicated buprenorphine induction has been described.

Case Description:
We report a case of an illicit fentanyl-using OUD patient who experienced severe BPOW during an outpatient low-dose cross taper buprenorphine induction (ie, “microdose”). The BPOW was successfully treated in the emergency department with a combination of ketamine (0.6 mg/kg intravenous over 1 hour) combined with high-dose buprenorphine (16 mg sublingual single dose); 3 days later he was administered a month-long dose of extended-release subcutaneous buprenorphine which was repeated monthly (300 mg). At 90 days the patient remained in treatment and reported continuous abstinence from fentanyl use.

Conclusions:
This single case observation raises important questions about the potential therapeutic role of ketamine as a treatment for BPOW. BPOW is an important clinical problem for which there is currently only limited guidance and no universally accepted approach. Prospective study comparing the effectiveness of differing pharmacologic approaches to treat BPOW is urgently needed.

January 10, 2021 2021 ECHO Series on Medication for Opioid Use Disorder (MOUD)

Withdrawal Management/Pain Management For Those Going Through Opioid Withdrawals (Buprenorphine And Other Opioids)

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