

OPIOID TAPERING

Safely Discontinuing Opioid Analgesics

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Introduction

Severe hurricanes in the Gulf Coast during 2005 caused many hardships for patients and healthcare providers alike. An important concern coming to light during this time of crisis was the inability to obtain prescription medications, including opioid analgesics. Patients with chronic pain and their healthcare providers faced the daunting task of either somehow procuring the opioids or, if this was not possible, tapering the medications to prevent onset of opioid withdrawal.

In response to the crisis in the Gulf Coast, a multi-organization Working Group published "Recommendations to Physicians Caring for Katrina Disaster Victims on Chronic Opioids" (AAPM et al. 2005). The National Pain Foundation also published information for patients regarding withdrawing from medications (NPF 2005). Safely discontinuing, or tapering opioid analgesics is not only a concern in times of natural disaster, but an issue that pain services and primary care providers confront daily as they try to balance the benefits and adverse effects of analgesics.

Safely discontinuing, or tapering, opioid analgesics is an ongoing concern, both in times of crisis and on a daily basis.

Reasons for Tapering

There are many reasons for considering opioid tapering, both from healthcare provider and patient perspectives. Patients may decide that they wish to stop their opioid therapy if they experience adverse effects. Opioid rotation is an option; however, patients may be wary to try another agent or may experience intolerable adverse effects with certain chemical classes of opioids. Their pain may not be opioid-responsive, their underlying disease process may have improved as a result of surgery or other interventions, or despite increasing their dose at regular intervals an adequate pain response was not realized. Patients may be reluctant to continue opioids because of a negative social stigma attached to this therapy. In some cases the opioid may be discontinued due to the cost associated with obtaining the prescription or because a newly assigned medical clinician refuses to provide such therapy chronically.

There are many reasons for considering opioid tapering, such as adverse effects, inadequate pain relief, and medication costs.

Providers may engage in tapering an opioid due to safety concerns. One of the controversies in chronic opioid management is the phenomenon of opioid-induced hyperalgesia (Chu et al. 2006; Doverty et al. 2001; White 2004), which suggests that in certain patients chronic exposure to opioids results in an increased sensitivity to pain. This may occur as early as one month after initiating opioid therapy.

Other potential consequences of long-term opioid use include hypogonadism and resultant osteoporosis (Daniell 2002; Abs et al. 2000). Serum testosterone levels have been shown to fall within hours after ingestion of a single dose, and low serum levels of testosterone and estradiol are associated with an increased risk of osteoporosis (Daniell 2002; Moyad 2003).

Providers also may have concerns about efficacy. If they do not see an improvement in patient function and quality of life, they may feel that the risks of the therapy (as mentioned above) outweigh a questionable benefit. Finally, providers may consider tapering opioids due to patient non-compliance with the medication regimen or violation of the patient's opioid agreement with the pain management team.

Guidance for starting medications is fairly easily obtained from product package inserts and reference books; however, it is more difficult to find information about switching or stopping opioid medications. Many practitioners, particularly specialists, tend to have their own formulas for managing conversions and tapers; although, there is no single strategy that can be applied to all patients, and each situation must be handled on an individual basis. The most important factor to consider is how acutely the taper or conversion is needed.

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Detoxification Settings

Tapering off opioids (often called detoxification or “detox”) may be done within a chemical-dependency treatment setting, specialty clinic, or primary care practice. Protocols vary between institutions and outpatient centers and, depending on how acutely the taper is needed, several options are available:

Several options are available, depending on how acutely the taper is needed.

Ultra-rapid detoxification is performed in the inpatient setting under general anesthesia.

The usefulness of this method is controversial and is inappropriate for agents that have a long biological half-life (e.g., methadone).

Inpatient detoxification usually employs a fairly rapid tapering protocol in conjunction with behavioral therapy. This setting is considered for those patients who: a) are medically unstable, b) fail outpatient programs, c) are non-compliant, d) have comorbid psychiatric illness, or e) require polysubstance detoxification. Due to the financial burden of inpatient programs, many facilities have shifted to partial hospitalizations or intensive outpatient programs.

Outpatient detoxification commonly employs a slower tapering protocol. While it is common practice to replace short-acting opioids with extended release products (e.g., MS Contin® or Oxycontin®) or one with a long half-life, such as methadone, a taper using the prescribed short-acting opioid is frequently employed. There is no single protocol that has been proven more efficacious than another and, regardless of the strategy used, the provider needs to be involved in the process and remain supportive of the patient and his/her family.

Duration of Taper

The duration of the taper depends on its complexity and the patient’s needs. The universal goal is to taper as quickly as the patient’s physiologic and psychological status allows. The presence of multiple comorbidities, polysubstance abuse, female gender, and older age are among factors increasing the difficulty of tapering and tend to lengthen its duration. Patients with a long history of taking chronic opioids, or any centrally acting medication involving receptor pharmacology (e.g., dopamine agonists, SSRIs) are more likely to experience withdrawal from a taper that is too rapid, and therefore may require a longer taper period to avoid such symptoms. Some patients may have a great deal of anxiety about the potential for increased pain or experiencing withdrawal symptoms. In all cases, it is important to make decisions about tapering therapy on an individual basis.

The Katrina Disaster Working Group’s recommended tapering schedules are found in **Table 1** (AAPM 2005). The VA Clinical Practice Guideline on chronic opioid therapy also contains suggested tapering regimens for several different opioids, as presented in **Tables 2 and 3** (USVA 2003). The VA regimens are quite rapid and are not tolerated by many patients. Unless there is a pressing need for a rapid taper, a slower taper is tolerated much better.

Agents Used to Taper

Depending on the situation, several options for tapering agents are available. The same opioid medication the patient has been taking may be used. This can be accomplished even with short-acting agents, as mentioned previously. The average daily dose should be spaced evenly throughout the day (and “prn” doses eliminated), usually with a frequency of every 4 or 6 hours. Once the patient has been stabilized on a scheduled dosing frequency, the tapering regimen may be implemented (**Table 2**).

Short-acting agents may be replaced with another medication with a long half-life, such as methadone, or an extended release product such as MS Contin® or OxyContin® [already mentioned above]. Many programs use methadone, as it is less likely to produce euphoria and is inexpensive compared with the other long-acting agents. It must be made clear however that the methadone is being used to treat pain, and that the taper is being done for medical reasons, not for substance abuse rehabilitation.

Usually after a dosing conversion has been completed, a “test dose” or “test regimen” will be given with close monitoring. If the dose of the long-acting agent is too low, the patient may develop withdrawal symptoms; however, if the dose is too high, the patient may develop sedation. During the first week, the dose of the long-acting agent should be adjusted to control

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Table 1. Katrina Disaster Working Group Suggested Tapering Regimens [AAPM 2005]

- Reduction of daily dose by 10% each day, or...
- Reduction of daily dose by 20% every 3-5 days, or...
- Reduction of daily dose by 25% each week.

Table 2. VA Suggested Tapering Regimens for Short-Acting Opioids [USVA 2003]

- Decrease dose by 10% every 3-7 days, or...
- Decrease dose by 20%-50% per day until lowest available dosage form is reached (e.g., 5 mg of oxycodone)
- Then increase the dosing interval, eliminating one dose every 2-5 days.

Table 3. VA Suggested Tapering Regimens for Long-Acting Agents [USVA 2003]

Methadone

- Decrease dose by 20%-50% per day to 30 mg/day, then...
- Decrease by 5 mg/day every 3-5 days to 10 mg/day, then...
- Decrease by 2.5 mg/day every 3-5 days.

Morphine CR (controlled-release)

- Decrease dose by 20%-50% per day to 45 mg/day, then...
- Decrease by 15 mg/day every 2-5 days.

Oxycodone CR (controlled-release)

- Decrease by 20%-50% per day to 30 mg/day, then...
- Decrease by 10 mg/day every 2-5 days.

Fentanyl – first rotate to another opioid, such as morphine CR or methadone.

any withdrawal symptoms. After the patient has been stabilized, the tapering regimen may be implemented (**Table 3**).

Author’s Comment:

When rotating opioids in a patient with cancer or with escalating pain needs, I suggest a more *aggressive* conversion, using a short-acting agent for breakthrough pain. For chronic nonmalignant pain, I recommend a more *conservative* conversion and allow patients a small supply of short-acting opioid for breakthrough pain during the time of dosing adjustment. This is particularly helpful when switching from a short-acting agent to a long-acting agent, or when switching to methadone, as it takes several days to reach steady state blood levels. The ability to use a short-acting agent for a week or two allows flexibility and gives the patient some sense of control. It also prevents the risk of overdosing, particularly with methadone.

Adjusting Tapering Regimens

Individual patients may have differing responses to the tapering regimen chosen. For those who have been on long-term opioid therapy, there may be fear and anxiety about reducing and/or eliminating their opioid(s). Patients may be concerned about the recurrence or worsening of pain. They also may be concerned about developing withdrawal symptoms. Typically, the last stage of tapering is the most difficult. The body adapts fairly well to the proportional dosage reduction to a point and then (less than 30-45 mg of opioid/day) the body cannot adapt as well to the changes in concentration and receptor activity, which precipitates withdrawal if the tapering regimen is not slowed.

Adjustments in tapering schedules are shown above in **Tables 2 and 3**. Patients may also not be emotionally ready for the next stage of dose reduction. If the patient has been making a reasonable effort and has followed through with the tapering plan, slowing the taper may be the most reasonable adjustment.

Author’s Example 1:

A patient who has been taking methadone for back pain has required escalating doses during the last 3 months without any noted pain relief. Since her pain is not opioid-responsive, you would like to taper her off methadone and try another approach. She is currently taking methadone 40 mg TID and there is no acute need to taper her rapidly, so a slow taper as follows is reasonable.

Proposed regimen starting with 10 mg methadone tablets:

- Week 1: 30 mg TID
- Week 2: 20 mg TID
- Week 3: 15 mg TID
- Week 4: 10 mg TID
- Week 5: 10 mg qam, 5 mg qnoon, 10 mg qpm
- Week 6: 5 mg qam, 5 mg qnoon, 5 mg qpm
- Week 7: 5 mg qam, 5 mg qnoon, 5 mg qpm

Switch to 5mg methadone tablets...

- Week 8: 5 mg qam, 2.5 mg qnoon, 5 mg qpm
- Week 9: 2.5 mg qpm, 2.5 mg qnoon, 5 mg qpm
- Week 10: 2.5 mg TID
- Week 11: 2.5 mg BID
- Week 12: 2.5 mg Daily
- Then discontinue



Author’s Example 2:

A patient is having intolerable constipation with controlled release morphine, and you have tried every option for a bowel regimen without success. The patient has had to go to the ER for bowel impaction twice. You feel that an opioid rotation and/or taper off of the morphine is the most reasonable option. The patient is currently taking 120 mg morphine BID (total 240 mg daily).

Option A: Convert to methadone, approx. 20 mg daily (split 10 mg BID)
 Begin a taper off of this (see above), as the patient tolerates

Option B: Taper starting with 30 mg morphine tablets

Week 1: 90 mg BID

Week 2: 60 mg BID

Week 3: 30 mg BID

Switch to 15 mg tabs

Week 4: 15 mg qam, 30 mg qpm

Week 5: 15 mg BID

Week 6: 15 mg Daily

Then discontinue

Author’s Example 3:

A patient is about 8 weeks out from orthopedic surgery and is ready to taper off her regular schedule of hydrocodone/acetaminophen. She is currently taking 2 tabs every 6 hours (8 tablets per day).

Option A: Rapid taper (duration 10 days)
 1 tab every 6 hrs x 1 day (4/day), then...
 1 tab every 8 hrs x 3 days (3/day), then...
 1 tab every 12 hrs x 3 days (2/day), then...
 1 tab every daily x 3 days (1/day), then...
 Discontinue

Option B: Slow taper (duration 3 weeks)
 Reduce by 1 tablet/day every 3 days until off

Adjunctive Therapy

Patients should always be made aware of the signs and symptoms of opioid withdrawal – see **Table 4** – so that they may contact the provider to adjust the taper. Opioid withdrawal is typically not dangerous, but it may cause considerable discomfort. Some providers will add clonidine to attenuate the autonomic symptoms such as hypertension, nausea, cramps, diaphoresis (perspiring), and/or tachycardia. Antihistamines or trazodone may be used to help with insomnia and restlessness. Nonsteroidal anti-inflammatory agents may be used for muscle aches, dicyclomine for abdominal cramps, and Pepto-Bismol® for diarrhea.

Table 4. Opioid Withdrawal Signs/Symptoms

● Abdominal cramps	● Insomnia
● Anxiety	● Lacrimation
● Diaphoresis	● Muscle twitching
● Diarrhea	● Rhinorrhea
● Dilated pupils	● Tachycardia
● Goose bumps	● Tachypnea
● Hypertension	

Advising Patients on Emergency Tapering

Following the Katrina Hurricane, the National Pain Foundation (NPF 2005) offered some recommendations for what patients can do when all access to continuing pain medications is cut off, as during an emergency or other crisis. These are adapted here and a version of this might be provided to patients whenever chronic opioid analgesics are prescribed.

Stopping Opioid Painkillers in an Emergency

If you are unable to refill or get your opioid medications, symptoms of withdrawal will vary depending on how long you were on the opioid medication and what type you were taking. People taking morphine, hydromorphone, or oxycodone may experience withdrawal symptoms within 6 to 12 hours of the last dose while those taking methadone or controlled-release opioids will experience symptoms 1 to 4 days after the last dose. Typically, withdrawal from morphine takes 5 to 10 days while withdrawal from methadone or other long-acting opioids takes longer.

Ideally, discontinuing the medication would be a slow tapering process under the care of a physician or other appropriate medical provider. If this cannot be accomplished, it is important to make an effort to taper the dose on your own as slowly as possible.

The best way to avoid serious withdrawal symptoms is to reduce the amount of medication you are taking or how often you are taking it before you run out. Reducing the amount by 25% per day, or by 25% every other day, may result in some withdrawal symptoms, but it is better than having to suddenly stop the medication when you run out.

If you are taking any of the extended release versions of opioids, such as OxyContin® or Kadian®, or fentanyl patches, do not tamper with them in any way. Breaking or opening these capsules, or cutting patches, can release the entire dose at once, causing overdose and possible death. Instead, take the whole tablet or capsule or use the whole patch, but take or use the medication less often to reduce the dosage.

Drink a lot of fluid, try to stay calm, and keep reassuring yourself that the withdrawal reaction will pass and you will eventually feel better. One of the symptoms during opioid withdrawal is a state of sensitized pain, meaning your pain may feel more intense or severe. This also will pass with time.

Remember: Always seek professional healthcare assistance as soon as you can — if possible, before running out of medication.

Summary

Currently there is no standard protocol for tapering opioids; however, there are now some suggested guidelines. Regardless of the reason for tapering opioids, the plan must be individualized to each patient's needs. Close follow-up and psychosocial support are essential.

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References

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