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Suicide risk identification and mitigation in patients with chronic pain prescribed opioid medication

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Abstract

Managing suicidality in persons with chronic pain is a challenging clinical scenario with no treatment guidelines to inform clinical decision-making related to suicide risk mitigation. Applying appropriate risk mitigation strategies, such as opioid education and naloxone distribution, lethal means safety education, increased frequency of appointments, individualized opioid tapers, consideration of nonopioid pharmacotherapy, nonpharmacological treatment options, and addressing modifiable risk factors, can decrease suicide risk. Recommending a treatment plan for patients with chronic pain experiencing suicidality is explored through 3 patient cases.

Keywords: suicidality, suicide risk, chronic pain, opioid taper, naloxone

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Introduction

Individuals with chronic pain are 2 to 3 times as likely to report suicidal behaviors,[1] and there is evidence that specific pain conditions are an independent risk factor for suicide mortality.[2] Because of the increased risk, the World Health Organization recommends all individuals, 10 years of age or older, who report chronic pain should routinely undergo a comprehensive assessment of suicidal behaviors.[3] Studies have illustrated risk factors specific to suicidality in patients with chronic pain, including the type, intensity, and chronicity of pain. Back pain, fibromyalgia, abdominal pain, and migraine pain may increase the risk for suicidality compared with other types of pain.[2,4,5] Helplessness and hopelessness related to pain, the desire for escape from pain, pain catastrophizing and avoidance, perceived burdensomeness, and problem-solving deficits have all been linked to increased suicidality.[4-6]

Despite the increased risk of suicidality, there are no specific screening tools or treatment guidelines for managing suicidality in individuals with chronic pain. Therefore, assessment and management of suicidality should be based on how chronic pain and subsequent treatment impact the individual's suicide risk and recognizing that suicide risk will fluctuate. Mental health treatment in conjunction with pain management should be encouraged.

According to the National Violent Death Reporting System, the most common means of death among suicide decedents with chronic pain from 2003 to 2014 were firearms (54%) and opioid medication overdose (16%), which highlights the importance of integrating risk mitigation strategies into the chronic pain management treatment plan.[7] Opioid education and naloxone distribution (OEND), medication reconciliation, and lethal means safety education should be considered as suicide risk mitigation strategies for patients with chronic pain who are prescribed opioid medication.[8]

Take Home Points:

1. The risk of significant harm, including suicide or accidental overdose, increases with abrupt discontinuation of opioid medication.
2. Opioid education and naloxone distribution, medication reconciliation, and lethal means safety education should be considered as suicide risk mitigation strategies for patients with chronic pain who are prescribed opioid medication.
3. Modifiable suicide risk factors specific for patients with chronic pain include pain intensity and type, long-term opioid medication, pain catastrophizing, and perceived burdensomeness.

Medication safety measures should include safe disposal of medications no longer prescribed, limiting medication quantities, safety packaging (as available), and locked storage of potentially lethal medications.[8] Routine safe storage of firearms includes storing firearms unloaded in a locked safe, storing ammunition separately from firearms, using locking devices, and storing disassembled.[8] Implementing more frequent follow-up visits for individuals initiating long-acting opioid medication has also been associated with decreased risk of suicide attempts.[9] When appropriate, nonopioid pain medications and nonpharmacological treatments should be considered.

In this article, patient hypothetical cases will be used to explore (1) opioid taper considerations in the context of suicidality, (2) risk mitigation for suicidality in patients with chronic pain who are prescribed opioid pain medication, and (3) addressing modifiable suicide risk factors.

Case 1

A 72-year-old patient, referred by primary care, presents for an initial pain clinic visit. Diagnoses include complex pain syndrome (CPS), panic disorder, obstructive sleep apnea (OSA), and hypertension. Current medications and length of treatment include hydrocodone/acetaminophen 20 mg every 6 hours (5 years), sertraline 150 mg daily (2 years), lorazepam 1 mg daily as needed for panic attacks (1 year), and hydrochlorothiazide 25 mg daily (10 years). Primary care referred the patient to the pain clinic because of safety concerns related to the opioid and benzodiazepine combination. The patient reports panic disorder is well controlled, only requiring lorazepam for panic attacks 3 to 4 times each month. However, they are unable to tolerate a continuous positive airway pressure (CPAP) mask because of feeling claustrophobic and has been taking lorazepam at bedtime for sleep up to 5 times per week. Owing to multiple risk factors, including patient age, concomitant central nervous system (CNS) depressants, and untreated OSA, the pain clinic provider refused to continue prescribing the opioid medication. Despite the risk of opioid withdrawal due to the length of therapy and the absence of aberrant behaviors or adverse effects, the hydrocodone was discontinued.

At the 4-week follow-up appointment, the patient reports severe pain and increased frequency of panic attacks requiring increased lorazepam use and demands to restart the hydrocodone. Additionally, suicidal ideation is reported, stating, "If you keep doing this to me, I will kill myself." Upon further discussion, the patient states they would rather die than continue to live with pain but denies suicidal intent or plan.

Multiple observational studies have reported that death from suicide or overdose increases after discontinuation of opioid medication.[7,10-12] In 2019, the United States Food and Drug Administration (FDA) acknowledged an increased risk of harm, including suicide, due to abrupt discontinuation of opioid medication and mandated label changes to guide gradual, individualized opioid medication tapers.[11] In 2022, the Department of Veteran Affairs (VA) and Department of Defense (DoD) updated the Clinical Practice Guideline (CPG) for the Use of Opioids in the Management of Chronic Pain, based mostly on expert consensus. The CPG identifies concomitant benzodiazepine use as a factor requiring immediate attention and a possible switch to a safer alternative or discontinuation. However, the CPG also recommends against forced discontinuation and nonstandardized opioid taper strategies.[13]

Owing to significant harm secondary to abrupt discontinuation of opioid medication, the FDA, along with the US Department of Health and Human Services, Center for Disease Control (CDC), and VA/DoD CPG, recommends implementing individualized opioid tapers based on opioid dose, opioid formulation, treatment duration, pain type, and psychiatric and medical comorbidities.[11,13-15] In this case, the pain provider discontinued the opioid medication without including the patient in the decision process or considering patient-specific factors that may predispose the patient to an increased risk of suicidality.[16] Verbalizing suicidal ideation, pain intensity, pain catastrophizing, medication misuse, and insomnia are known suicide risk factors specific to patients with chronic pain, as outlined in Table 1. Although the VA/DoD CPG notes insufficient evidence to recommend 1 specific opioid tapering strategy, a gradual taper (eg, 5%-20% reduction every 4 weeks or longer) allows time for patient adaptations.[13] Tolerance of the opioid taper, along with the ability to participate in nonpharmacologic pain treatments and stability of comorbid conditions, may require adjustment to the taper schedule.[13]

There is a paucity of definitive research to guide clinical practice for suicide risk mitigation in patients with chronic pain.[9] The VA/DoD CPG strongly recommends increasing care frequency and monitoring when initiating, continuing,

TABLE 1: Suicide risk factors[8,17]

General Population	Additional for Chronic Pain Population
Male sex	Insomnia/sleep disturbance[a]
Younger age	Multiple pain conditions[a]
Indigenous culture	Workers' compensation/ pursuit of legal claim[a]
Family history of suicide and/or mental illness	Opioid medication[a]
History of childhood adversity	Pain catastrophizing[a]
Mental illness[a]	Perceived burdensomeness[a]
History of suicide attempts	Pain duration and type (mixed data)
Alcohol and/or substance misuse[a]	
Social isolation (unmarried, unemployed)[a]	
Recent psychosocial stressors[a]	
Suicidal ideation	
Access to lethal means[a]	

[a]Modifiable risk factors have the potential to be changed (eg, reduced by certain interventions, such as pharmacological and nonpharmacologic treatment, engaging in lethal means safety counseling, strengthening protective factors, and providing support).[18]

changing, or discontinuing long-term opioid therapy to minimize suicide risk.[13] Although there is no validated tool to predict who will attempt or lose their life to suicide, it is important to stratify acute and chronic suicide risk to inform clinical care. The Therapeutic Risk Management Risk Stratification tool for patients at risk for suicide created by Rocky Mountain Mental Illness Research, Education, and Clinical Center (MIRECC) is a medically and legally informed suicide risk assessment and management model describing high, intermediate, and low acute and chronic suicide risk.[19] Owing to the patient's intermediate acute risk for suicide based on situational suicidal ideation without intent or plan,[19] the opioid should be reinitiated, and the frequency of follow-up should be increased to evaluate for resolution of suicidal ideation. The VA/DoD CPG, in alignment with the CDC, recommends follow-up to evaluate within 4 weeks of initiating opioid treatment or at any dose adjustment and at least every 3 months thereafter.[13,14] This case illustrates the following dilemma often encountered when treating patients with chronic pain: balancing optimal care, the patient's well-being, and medical-legal consequences.[20] Ideally, the provider would have collaborated with the patient and mental health provider to discuss preference and appropriateness of tapering off either the opioid medication or benzodiazepine, taking into consideration the duration of treatment, alternative medications to treat residual symptoms and appropriate complementary treatments (ie, physical therapy, acupuncture, chiropractic care). The patient should be offered a referral for cognitive behavioral therapy for panic disorder and to the sleep clinic for adjustment of CPAP treatment. The patient would also benefit from participating in Acceptance and Commitment Therapy for chronic pain as it addresses many of the risk factors identified for suicide risk.[21]

Modifiable suicide risk factors, as outlined in Table 1, including opioid medication and comorbid mental illness, should be addressed to ensure patient safety while continuing opioid treatment. This includes providing OEND, as well as consideration of nonopioid medications and nonpharmacologic treatment for panic disorder and OSA. Consider collaborating with a mental health provider to change from sertraline to a dual serotonin and norepinephrine reuptake inhibitor (SNRI), such as duloxetine or venlafaxine XR, for a nonopioid medication option to treat comorbid CPS and panic disorder (Table 2). Avoid tricyclic antidepressants (TCA) because of the patient's age and mortality risk with overdose (Table 3). If the patient requires pharmacologic treatment for insomnia once OSA is adequately treated, a trial of low-dose hydroxyzine or gabapentin as needed for sleep and panic is recommended instead of the benzodiazepine because of a more favorable safety profile (Table 2). Once the patient's suicidal ideation has resolved and alternative treatments have been initiated, an individualized opioid medication or benzodiazepine taper can be trialed. Given the complications experienced with the initial opioid taper, this author recommends follow-up every 2 weeks after a dose adjustment to evaluate pain and mental health status. Although discontinuing the opioid medication or benzodiazepine is preferred, it is important to acknowledge that using the lowest effective dose of the non-preferred medication may be a more immediate attainable goal.

Case 2

A 45-year-old patient, diagnosed with chronic low back pain, opioid use disorder (OUD) in sustained remission, and major depressive disorder presented for a follow-up appointment with the mental health clinical pharmacist practitioner (CPP). Current medications include duloxetine 60 mg daily (3 years), gabapentin 300 mg 3 times daily (1 year), tramadol 50 mg every 6 hours as needed for pain (1 year), and tizanidine 4 mg daily at bedtime (1 year). At today's visit, the patient reported an episode of severe low mood after an argument with their spouse and a subsequent suicide attempt by "taking the rest of my pills," which occurred 2 weeks ago. The patient did not seek emergency assistance and did not have a naloxone kit available. Significant sedation for 2 days, followed by headache and nausea, was experienced. The patient reports increased depression and pain in the context of being off medication for 2 weeks; however, the pain had been well controlled on the current regimen for the past year. The patient denies current suicidal ideation, but this was the patient's second suicide attempt by overdose in the past 2 years.

This case illustrates the importance of proactively identifying patients who may be at an increased risk for suicide or overdose to provide risk mitigation before an adverse outcome.[8] The VA created a Stratification Tool for Opioid Risk Mitigation (STORM) to assist providers with opioid risk evaluations and provide risk mitigation strategies based

TABLE 2: Relevant comorbidities for medication use

Medication Class	Comorbidities Favoring Use	Comorbidities Favoring Avoidance
Serotonin-norepinephrine reuptake inhibitors	Anxiety Depression Diabetic neuropathy Fibromyalgia Headache Musculoskeletal pain Osteoarthritis Post-traumatic stress disorder Stress urinary incontinence	Angle-closure glaucoma Restless legs syndrome Sexual dysfunction
Tricyclic antidepressants	Anxiety Depression Diabetic neuropathy Fibromyalgia Headache Insomnia Irritable-bowel syndrome pain Myofascial pain syndrome Neuropathic pain Postherpetic neuralgia	Angle-closure glaucoma Cardiac disease Orthostatic hypotension Prolonged QTc Suicidality Urinary retention
Gabapentinoid medications	Alcohol use disorder Anxiety Diabetic neuropathy Essential tremor Fibromyalgia Insomnia Postherpetic neuralgia Restless legs syndrome Seizure disorder Neuropathy due to spinal cord injury	Peripheral edema Substance abuse

on an individualized risk score. This predictive modeling tool helps to identify patients at an elevated risk for adverse outcomes, including suicide.[22] The VA STORM database predicts patients' risk scores for a suicide-related event or overdose based on mental health and substance use disorders (SUD), relevant medications, and recent adverse events. Patients are categorized as being at very high ($> 94^{th}$ percentile), high ($\geq 90^{th}$ percentile), medium ($> 66^{th}$ percentile), or low risk based on the distribution of all patients' risk scores, with the goal of using individualized scores to guide risk mitigation.[22] Individualized risk mitigation strategies may include consideration of nonopioid and/or nonpharmacologic treatment options, OEND, and coordination of care. The mental health CPP should complete a medication reconciliation to determine the current medication inventory and advise for proper medication disposal as appropriate. In addition to limiting the medication supply to coincide with the lethality of the medication and/or follow-up appointments, medication blister packs can be suggested as a form of lethal means safety.[8] Taking into consideration previous medication trials, potential drug–drug interactions (DDI), and patient preference, safer medication alternatives to opioid medication treatment should be considered. For example, a trial of a nonsteroidal anti-inflammatory, optimizing duloxetine, gabapentin, and/or tizanidine dose(s), or considering an alternative medication within their class (Table 2). In addition to opioid-specific safety concerns, reevaluating the continuation of tramadol because of the DDI with duloxetine, which increases the risk of serotonin syndrome, decreases the analgesic effect of tramadol, and increases the risk for seizures via CYP2D6 moderate inhibition.[18] The patient should also be provided OEND and lethal means safety education and referred to SUD care for OUD as appropriate. The VA/DoD CPG notes that despite the increased risk of suicide, SUD cannot be considered a contraindication to long-term opioid use. It includes a weak for recommendation suggesting the use of buprenorphine for patients receiving daily opioid medication for the treatment of chronic pain instead of a full agonist opioid medication due to the lower risk of overdose and misuse.[13] As in Case 1, this patient should also be offered complimentary and integrative treatment options specific to patients with chronic pain.

Case 3

A 32-year-old cisgender female diagnosed with fibromyalgia, premenstrual dysphoric disorder, post-traumatic stress disorder

TABLE 3: Nonopioid medications for acute and chronic musculoskeletal pain

Generic Name	Usual Adult Dose	Comments
Acetaminophen	650-1000 mg q4-6h prn	No anti-inflammatory effect Adjust dose in alcoholic or hepatic disease Potentially lethal in overdose
Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)		
Diclofenac Etodolac Ibuprofen Meloxicam Naproxen Salsalate Sulindac	50-75 mg q8-12h prn 200-400 mg q6-8h prn 200-400 mg q4-6h prn 7.5-15 mg once daily prn 250-500 mg q6-12h prn 500-1000 mg q8-12h prn 150-200 mg q12h prn	Caution in renal and hepatic impairment, gastrointestinal disease, or concurrent anticoagulant medications or lithium
Nonbenzodiazepine Skeletal Muscle Relaxants		
Baclofen	5-20 mg TID prn	Recommend limited duration (≤ 7 d)
Cyclobenzaprine	5-10 mg TID prn	Drowsiness is common
Methocarbamol	500-1500 mg q6-12h prn	
Tizanidine	2-4 mg q8h prn	
Antidepressants[a]		
Amitriptyline	10-150 mg daily	Caution in elderly and cardiac patients
Desipramine	10-150 mg daily	Amitriptyline and imipramine are most anticholinergic
Imipramine	10-150 mg daily	May cause QTc prolongation
Nortriptyline	10-150 mg daily	Potentially lethal in overdose/suicide attempt
Desvenlafaxine	50-100 mg daily	Renal dose adjustment
Duloxetine	30-120 mg daily	Avoid in hepatic insufficiency Renal dose adjustment Adjunct for patients with an inadequate response to nonpharmacologic and NSAID therapy for musculoskeletal pain
Venlafaxine	IR: 75-150 mg BID XR: 75-225 mg daily	Doses ≥ 150 mg may be more beneficial for pain Renal dose adjustment
Antiseizure Medications		
Carbamazepine	100-200 mg q6-12h	Primarily indicated for trigeminal neuralgia
Oxcarbazepine	300-600 mg BID	Avoid in hepatic disease Caution with drug–drug interactions
Gabapentin Pregabalin	300-900 mg q8-12h 50-150 mg q8-12h	Renal dose adjustment

BID = 2 times daily; IR = immediate release; prn = as needed; TID = 3 times daily; XR = extended release.
[a]Increased risk (vs placebo) of suicidal thinking and behavior in children, adolescents, and young adults.

(PTSD), and migraine headaches presents to the emergency room reporting exacerbation of PTSD symptoms and suicidal ideation with a plan to overdose in the context of the anniversary of a sexual assault. The patient's primary care provider is prescribing sertraline 200 mg daily (4 years), oxycodone 5 mg every 6 hours as needed for severe menstrual cramping (2 years), gabapentin 600 mg 3 times a day (4 years), and cyclobenzaprine 5 mg 3 times a day as needed (1 year). She reports severe headaches, diffuse pain, and insomnia, for which she has been taking oxycodone 5 mg and cyclobenzaprine 15 mg at bedtime for 2 weeks without benefit. Before worsening symptoms, she was taking oxycodone 1 to 2 times per day as prescribed 5 to 7 days out of the month. Per the MIRECC therapeutic risk management stratification tool, high acute risk for suicide core features include suicidal ideation with intent to die by suicide and inability to maintain safety independently.[19] Owing to the high acute suicide risk, hospitalization is recommended to ensure safety and immediately address modifiable risk factors for intervention (Table 1), including evaluating need for an opioid taper, consideration of nonopioid pain medications and adjuvant analgesics, avoiding CNS depressant medications in combination with opioid medication, medication reconciliation, OEND, and lethal means safety education.[8,9]

To better manage co-occurring PTSD, fibromyalgia, and migraine headaches, and potentially decrease polypharmacy, recommend cross-tapering sertraline 200 mg daily to an SNRI, such as venlafaxine XR or duloxetine (Table 3), as well as evaluating need for an opioid medication taper versus discontinuation and referral to an obstetrician-gynecologist for further assessment and management of menstrual cramps. Given alternative first-line treatments are available, acetaminophen and TCAs should be avoided because of potential lethality in overdose. This author would also recommend completing a suicide safety plan and referral for outpatient mental health treatment for her PTSD and insomnia, with an emphasis that mental health treatment should be in conjunction with her pain management treatment. If headaches and diffuse pain are not better controlled

with a change to an SNRI, recommend follow-up with neurology.

Conclusion

Despite the identification of pain-specific risk factors and increased incidence of suicidality, there are no specific treatment guidelines for managing suicidality in patients with chronic pain prescribed opioid medication. Most opioid-prescribing tools assist with identifying risks related to misuse or diversion, but it is also imperative to evaluate suicide risk before adverse outcomes occur. Chronic pain is complex and distressing and negatively impacts functioning and quality of life. Therefore, it is important to validate the patient's pain and foster reasons for living despite the pain.[17] The phrase "never worry alone" was coined to emphasize the importance of the collaborative care approach to suicide.[23] Suicide prevention is a collaborative effort in which pharmacists can play a vital role, including identifying modifiable risk factors for intervention, implementing individualized risk mitigation strategies, and incorporating suicide prevention best practices into chronic pain management treatment.

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