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Original Research Article

Patients' Perspectives on Tapering of Chronic Opioid Therapy: A Qualitative Study

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Abstract

Objective. There is inadequate evidence of long-term benefit and growing evidence of the risks of chronic opioid therapy (COT). Opioid dose reduction, or opioid tapering, may reduce these risks but may also worsen pain and quality of life. Our objective was to explore patients' perspectives on opioid tapering.

Design. Qualitative study using in-person, semi-structured interviews.

Setting and Patients. English-speaking, adult primary care patients (N = 24) in three Colorado health care systems.

Methods. Interviews were audio recorded, transcribed, and analyzed in ATLAS.ti. We used a team-based, mixed inductive and deductive approach guided by the Health Belief Model. We iteratively refined emergent themes with input from a multidisciplinary team.

Results. Participants had a mean age of 52 years old, were 46% male and 79% white. Six participants (25%) were on COT and not tapering, 12 (50%) were currently tapering COT, and 6 (25%) had discontinued COT. Emergent themes were organized in four domains: risks, barriers, facilitators, and benefits. Patients perceived a low risk of overdose and prioritized the more immediate risk of increased pain with opioid tapering. Barriers included a perceived lack of effectiveness of nonopioid options and fear

of opioid withdrawal. Among patients with opioid tapering experience, social support and a trusted health care provider facilitated opioid tapering. These patients endorsed improved quality of life following tapering.

Conclusions. Efforts to support opioid tapering should elicit patients' perceived barriers and seek to build on relationships with family, peers, and providers to facilitate tapering. Future work should identify patient-centered, feasible strategies to support tapering of COT.

Key Words. Chronic pain; Opioids; Primary care

Introduction

In the past decade, opioid prescribing has increased more than six-fold in the United States [1]. Roughly 9 million Americans, 3% of the U.S. population, report long-term medical use of opioid medications despite a lack of evidence of their long-term effectiveness [2,3]. Meanwhile, there is growing evidence of opioid-related harms, and risks appear to increase in a dose-dependent manner [4–6]. Prior observational studies have shown a 92–363% increase in risk of opioid-related overdose at doses above 50 mg morphine equivalent dose (MED) [7–9].

In response, health care providers, health systems, and public health officials have sought to identify and intervene on high-risk opioid prescribing to prevent adverse events. Opioid dose may be used as a surrogate for risk, though there is not currently consensus on a definition of high-dose opioid prescribing. In Washington state, an opioid dose threshold of 120 mg MED was established in 2007 as a trigger for additional monitoring by providers [10]. In 2013, the Veterans Health Administration launched the Opioid Safety Initiative, a nationwide effort to promote safe, effective use of opioid medications, which mandates a facility-level review of the treatment plans of patients receiving opioid therapy at a daily dose above 200 mg MED [11]. In addition to opioid dose, use of risk assessment tools such as urine drug testing and prescription drug monitoring program data is increasingly common and will further identify high-risk opioid prescribing [12].

Expert guidelines recommend dose reduction or discontinuation when risks related to opioid medications outweigh benefits, but there is little evidence to guide this recommendation [13,14]. Two systematic reviews have included a total of five studies, and both noted insufficient evidence to draw conclusions [3,15]. A recent narrative review of the evidence on opioid dose reduction, or opioid tapering, identified multiple evidence gaps [16]. In the absence of strong evidence, the authors of this review proposed that patient engagement may be more important than any specific tapering protocol. However, little is known about patients' perspectives on opioid tapering. To advance our understanding of patients' perspectives on opioid tapering, we conducted a qualitative study to explore patients' perspectives on risks, barriers, facilitators, and potential benefits of opioid tapering and to contrast perspectives of patients with and without experience tapering chronic opioid therapy (COT).

Methods

Study Design

We conducted a qualitative study using in-person, in-depth, semistructured interviews with patients on or recently discontinued from COT for chronic, noncancer pain. A qualitative study design was chosen to facilitate a detailed examination of patients' perspectives. The study was approved by the Colorado Multiple Institutional Review Board at the University of Colorado. Written informed consent was obtained from all study participants.

Setting and Participants

We recruited participants from primary care clinics affiliated with three health systems in Denver, Colorado: 1) an academic medical center, 2) an urban, safety-net medical center, and 3) a Veterans Affairs medical center. At the time of recruitment, all three health care systems were in the process of implementing programs to support panel management and promote opioid risk assessment by providers, but none had instituted system-level mandatory opioid tapering programs. We used a purposive sampling strategy to recruit patients representing three distinct phases of COT: 1) Currently on opioid medications without tapering, 2) currently tapering COT, and 3) discontinued COT within the past 3 years. We defined COT as a self-reported duration of opioid therapy of $\geq$ 6 months consistent with prior qualitative work in this content area [17] and defined opioid tapering status by self-report. This purposive sampling strategy also sought to achieve a diverse sample according to gender and age. Patients were included if they were $\geq$ 18 years old, English-speaking, and able to provide informed consent. Patients were excluded if they had a primary pain complaint related to a cancer diagnosis.

Patients were recruited using flyers posted in patient waiting areas at each study site and through provider referral. The study coordinator screened the eligibility of patients by phone. Recruitment continued until thematic saturation was reached, meaning additional interviews yielded no substantial new information about themes [18].

Data Collection

We developed and iteratively refined the interview guide to optimize the clarity of interview questions. Consistent with study objectives and established qualitative research methods, the interview guide was composed of broad, open-ended questions to elicit personal thoughts and

experiences regarding chronic pain management generally and tapering or discontinuation of COT specifically. The interview guide explored constructs from several theoretical frameworks, including the Health Belief Model, a commonly used framework in health education and health behavior change, social cognitive theory, and the transtheoretical model [19]. The Health Belief Model includes constructs such as perceived risk, perceived barriers, and perceived benefits of behavior change (Table 1). The interview guide also prompted discussion of concepts including self-efficacy (social cognitive theory) and readiness to change (transtheoretical model) [19].

Two experienced qualitative interviewers conducted in-person, semistructured interviews in private settings lasting 30–90 minutes from August 2014 through April 2015. Interviews were digitally recorded, professionally transcribed verbatim, and entered into ATLAS.ti, version 7, for coding (ATLAS.ti GmbH, Berlin, Germany). Participants also completed a short survey with demographic questions and questions regarding current opioid medication use. We calculated daily opioid dose in morphine equivalents using an accepted algorithm [20]. Participants were provided a $25 incentive in the form of a grocery gift card.

Qualitative Analysis

Data were analyzed using a mixed deductive and inductive approach [21]. A deductive, or "top down," approach was used to interpret data in the context of our theoretical frameworks, existing literature on related topics such as COT and pain self-management, and on the study team's prior knowledge [17,22–25]. We used an inductive, or "bottom up," approach to identify new themes that emerged from the data, including unanticipated relevant findings. To develop an initial codebook, two study authors (JWF, SRM) and an analyst coded a subset of three overlapping interviews. Using an iterative, multidisciplinary team-based approach throughout the study, we reviewed the codes to ensure their completeness and contextual validity. Open coding, concurrent with study team discussion and data reimmersion, was followed by axial coding and integration to establish emergent themes [26]. We coded data for both manifest content meaning (surface content; i.e., patients explicitly identified barriers) and latent content meaning (underlying meaning; i.e., patients described experiences that served as barriers) [21]. The study team determined thematic saturation was reached once additional interview data prompted no changes to the codebook and no new themes emerged. In this manuscript, we present emergent themes organized within domains of the Health Belief Model (i.e., perceived risk, barriers, facilitators, and benefits).

We used several strategies to assure qualitative rigor and the trustworthiness of study findings [27,28]. To ensure credibility, we employed iterative questioning during interviews, debriefed interviewers frequently during data collection, and identified disconfirming cases for focused analysis. To optimize transferability, we performed a detailed literature review to inform our interview guide. We interviewed participants both during and after COT and across three health care systems to ensure we represented a broad range of perspectives. To ensure dependability, an audit trail was kept throughout the analytic process. Finally, to ensure confirmability, we regularly triangulated our findings across a multidisciplinary study team consisting of a primary care physician, an addiction medicine physician, two palliative care physicians, and a medical anthropologist.

Results

We interviewed 24 patients with experience with COT for chronic, noncancer pain. Participants had a mean age of 52 and ranged from 31–73 years old. They were 46% male and 79% white (Table 2). Six patients were taking opioid medications on an ongoing basis, 12 patients reported current opioid tapering, and six had discontinued COT. From this range of perspectives, we identified emergent themes in four domains: perceived risks, barriers, facilitators, and benefits. All participants described their perceptions of the risks and barriers to opioid tapering, while data on perceived facilitators and benefits of opioid tapering were collected from patients with opioid tapering experience.

Perceived Risks of Opioid Medications and of Opioid Tapering

Low Perceived Risk of Overdose

When asked about specific concerns related to opioid medications, patients were generally aware of opioid

Table 1 Sample questions from interview guide, organized by domains from the Health Belief Model

Domain of interest	Sample questions
Perceived risk	Tell me about the decision to start taking these medications. What factors were most important to you?
Perceived barriers and facilitators	What would need to change before you would consider decreasing your opioid dose? How confident are you that you would be able to decrease your dose? Why?
	Tell us about the time when you first discussed decreasing your opioid dose with your doctor? How did this go? How could it have gone better?
Perceived benefits	How has your life been different since you began decreasing your opioid dose?

overdose as a potential complication but did not perceive themselves to be at risk. The majority of patients described a long history of opioid medication use without prior overdose and cited this as evidence of their ability to safely take opioid medications. Patients attributed overdoses to others using opioids in risky ways or overdosing intentionally rather than accidentally.

> 52-year-old male, on opioid medication without tapering: *"Absolutely not. Overdose? No. I'm very mature, very conscious, very intelligent as far as adhering."*

> 53-year-old male, on opioid medication without tapering: *"The concern is that if they increase my opioid dosage, I could stop breathing. It's ridiculous."*

Among patients who were currently tapering or who had discontinued opioid medications, none described overdose risk as a primary motivation for opioid tapering.

Table 2 Characteristics of participants

Age (years), mean (SD)	52 (10)
Male sex, n (%)	11 (46%)
White race, n (%)	19 (79%)
Status of opioid therapy, n (%)	
Ongoing	6 (25%)
Tapering	12 (50%)
Discontinued	6 (25%)
Study site, n (%)	
Academic medical center	10 (42%)
Safety net hospital	7 (29%)
Veterans Affairs medical center	7 (29%)
Education, n (%)	
High school or GED	5 (21%)
Some college	7 (29%)
College graduate	12 (50%)
Primary pain complaint, n (%)	
Back or neck pain	15 (63%)
Other musculoskeletal pain	3 (13%)
Fibromyalgia	4 (17%)
Other	2 (8%)
Duration of pain (years)	
Mean (SD)	11.3 (7.9)
Range	1–30
Duration of opioid therapy (years)	
Mean (SD)	7.7 (5.9)
Range	0.5–21
Opioid dose (mg MED)*	
Median (IQR)	70 (30–165)
Range	15–1845

MED = Morphine equivalent dose. *Patients on opioid medications reported daily dose at time of interview, and patients who had discontinued opioid medications reported daily dose prior to opioid tapering.

> Interviewer: *"Did those other things like risk of overdose influence your decision to taper at all?"*
> 54-year-old female, tapering opioid medications:
>
> *"No, not at all. I was so isolated … I've lost all my friends. I've a very small life now. With my beliefs and everything, dying isn't such a bad thing, you know?"*

Pain in the Present Trumps Opioid Risks in the Future

Patients interpreted the potential risks of opioid medications in the context of more immediate risks of pain itself. Patients were aware of potential adverse effects, and many had experienced one or more side effects such as constipation or drowsiness. Potential future adverse effects were described as less salient than the risk of increased pain with decreased opioid medication. This trade-off was voiced by patients both with and without tapering experience, and was most evident in descriptions of initiating COT.

> 53-year-old female, discontinued opioid medications: *"I like to research everything, but the pain was so severe I didn't care about anything else … I don't think that people actually consider the side effects and what not when it comes to something like that. I think that they just want the pain to go away."*

> 46-year-old female, tapering opioid medications: *"I don't think people in chronic pain think about long term. We are basically, how do I get through today? I just gotta get through today."*

> 54-year-old female, tapering opioid medications: *"[My provider] said you could die any time, and my husband and I said, well, we realize that, but because of the pain, you know, we were willing to take that risk that I would die from the narcotic medication."*

Perceived Barriers to Opioid Tapering

Pessimism About Nonopioid Options to Manage Pain

Patients described extensive experience with both opioid and nonopioid pain therapies. Patients identified suboptimal effectiveness with previous trials of alternative methods for pain control such as nonopioid medications, injections, and surgery. This led to pessimism about their ability to adequately manage pain without opioid medications.

> 73-year-old female, tapering opioid medications: *"I needed help desperately by the time [hydrocodone] was prescribed for me … I had taken ibuprofen, Aleve, everything over the counter, and it did nothing to help me at all. So I knew I needed more help, stronger help."*

> 58-year-old male, on opioid medication without tapering: *"Throughout my life, the doctors have done*

everything, trying to get me to exercise, to stretch, things that shocked my muscles … In the '70s, they put some kind of body cast on me that I wore for months … Gosh, I've had everything. I've went through all the minor ones like Tylenols and aspirins and stuff, you know … I've went through a few years on Morphine. I've went to a time on Oxycodone and OxyContin, Vicodin, Tramadol. Now I'm on Fentanyl patches."

Patients who were tapering or had discontinued opioid medications described similar experiences with nonopioid modalities, but still viewed them as essential to their ability to undertake opioid tapering.

51-year-old male, tapering opioid medications: *"I have a tremendous fear in a doctor saying I want you to taper off the methadone and get totally off the methadone with no alternative whatsoever. I think that would be an irrational decision by a doctor, and I probably wouldn't take that advice."*

Fear of Opioid Withdrawal

Past experiences of opioid withdrawal produced fear and anxiety about future opioid tapering or discontinuation. Of note, there were several disconfirming cases in patients who described little or no opioid withdrawal symptoms during tapering.

58-year-old male, on opioid medication without tapering: *"I don't think they're aware of how bad withdrawals are. I mean there's vomiting bile. There's stomach cramps, there's the cold shakes and fever … I mean it's pretty bad."*

53-year-old female, tapering opioid medications: *"I also had lots of fears about let's say there was an apocalypse in our society, what would happen to me? Where would I get my medication from? What was going to happen, you know? I would get so sick not having those drugs 'cause I was physically dependent on these drugs, you know. It's a very insecure feeling."*

In contrast, there were several patients who described little or no opioid withdrawal symptoms during tapering.

60-year-old male, discontinued opioid medications: *"I didn't stop under doctor's orders or discussion or anything. I just got up one day and I'm done. Instead of taking four, I took three and I did that for a couple of weeks and then I took two and then I took one. I never felt any discomfort or anxiety or anything so … it worked for me."*

Perceived Facilitators of Opioid Tapering

The Importance of Social Support

Among patients who were currently tapering or had discontinued opioid medications, social support was described as critical for initiating and sustaining a long, difficult process. One woman described her husband's important role in helping her identify symptoms such as poor self-care as side effects of her opioid medications.

53-year-old female, tapering opioid medications: *"The pills turned out horribly for me … I wasn't caring for myself. I wasn't bathing. I was sleeping all the time … Everything in my life was such a mess, and my husband was, you know, really worried about me … My husband [told me] that this is bad. This is really bad. You're not doing well."*

Another patient described the support she received from her family to manage the day-to-day decision-making while tapering high-dose opioid therapy.

53-year-old female, discontinued opioid medications: *"It was very helpful 'cause there were times when I said I really wanted to go down, you know, like 2 mg, and my husband would say, 'No, that's not a good idea … You're at 10 mg. Let's not bump it to 8 after just 2 days. Let's wait and see what happens'. I knew I wasn't making good decisions [while on opioid medications] so my family was instrumental [during opioid tapering]. So, it wasn't just, you know, me being a strong woman and doing this. It was partnering with my provider, and my family being involved."*

Several patients identified the potential benefits of support from other patients who could share their experiences with opioid tapering. One participant with experience with a chronic pain support group noted:

62-year-old male, tapering opioid medications: *"You have to get people to people. On paper, [patients] don't care. They really don't. They have to have some one-on-one quality time with a real person who talks about real issues … It's almost like me or you watching TV. You don't know if that's a real person doing that or acting. You know, it's gotta be real. The doctors have got to really want to do this with these people, and you have to really find other patients that are willing to talk."*

Another patient described her interest in sharing her experience of an improved quality of life with other patients.

54-year-old female, tapering opioid medications: *"Like when a doctor tells them, get off these drugs, taper off these drugs, they might think the doctor just wants to do it to save money or save insurance costs … Somebody who has been through it can say it really, really is true. It really happened to me. And maybe if I said, you know, I had these problems, maybe it would get them to open up. Maybe they would say, 'Yes, I had that problem too'."*

The Role of a Trusted Health Care Provider

Many patients who had experienced opioid tapering identified a positive relationship with a trusted provider as a key to their willingness to initiate and their ability to

sustain opioid tapering. Providers were praised for attributes such as being supportive, nonjudgmental, flexible, and accessible. Of note, no patients who were currently tapering or had discontinued opioid therapy described changing providers in relation to a recommendation to taper opioid medications.

> 53-year-old female, discontinued opioid medications: *"The best thing about it was that nobody acted like I was a bad person because I was on these medications and was having to be going through this really slow process of coming down off of them."*

> 59-year-old female, discontinued opioid medications: *"I did want to get off of them. I just didn't want to feel attacked with 'Hey, this is going to happen.' I wanted to go down. I didn't want to get off of it, but I was willing to go down, and I just felt [my health care provider] was there to help me, not to take something from me and bite me."*

> 73-year-old female, tapering opioid medications: *"My doctor is very conscientious, and I respect her very much … It wasn't her idea to take me off OxyContin. I just quit cold turkey, which was difficult … She was overjoyed. She thought it was just great that I didn't need [OxyContin] anymore and that the steroid shots had helped me that much, so she was glad and so was I. We both high-fived over it!"*

Perceived Benefits of Opioid Tapering

Improved Quality of Life After Tapering

Among patients who had tapered or discontinued opioid medications, many reported a meaningful improvement in their quality of life. Patients often attributed this to the resolution of problematic side effects with opioid tapering. Several stressed that their pain level was largely unchanged compared to before opioid tapering.

> 61-year-old female, discontinued opioid medications: *"It's not much worse without the medication as it is with it. After you've taken it for a while, it doesn't do any good. That's what I've found. But that's hard to convince people of it. They look at me like I'm nuts, but it's true … I mean my pain is not any more severe than it was when I was taking all that stuff."*

> 72-year-old female, discontinued opioid medications: *"I am more alert since I stopped taking [OxyContin], and I need less sleep, which is a blessing. So I'm able to do more things with my life."*

> 53-year-old female, tapering opioid medications: *"My family is really pleased too. Like, I'm more alert now. They say I'm engaged more again and talking to them. I don't just sit there and zone out."*

These long-term positive outcomes contrast with the short-term experience of opioid withdrawal described above. Additionally, among patients who were not currently tapering, patients did not view an improved quality of life without opioid medications as a realistic outcome.

> 58-year-old male, on opioid medication without tapering: *"I've been on opiates, you know, for most of my adult life now, and I'm probably going to be on them for the rest of my life. I mean you're not going to cure what's wrong with me … so I'm always going to need something."*

Discussion

In this qualitative study of patients with a range of experiences with tapering of COT, we identified important themes around patients' perceptions of the risks, benefits, barriers to, and facilitators of opioid tapering and discontinuation. Overall, most patients described a difficult and often anxiety-provoking process to initiate and sustain opioid tapering, consistent with a prior survey on patients' views on opioid discontinuation [29]. Patients perceived a low risk of overdose and prioritized the more immediate risk of increased pain with opioid tapering. Barriers to opioid tapering included a perceived lack of effectiveness of nonopioid options and fear of opioid withdrawal. Among patients with opioid tapering experience, social support and a trusted health care provider facilitated opioid tapering. These patients endorsed improved quality of life following tapering. These study findings can illuminate important next steps for clinicians and researchers (Table 3).

Patients' prioritization of the risks of COT should inform future efforts to improve the safety of opioid medications. In response to rising rates of opioid-related overdose, health systems and public health officials have taken action aimed at preventing overdose [10,30–32]. However, for patients who experienced a poor quality of life and ability to function due to pain before initiating COT, overdose may be perceived as a secondary concern. Efforts to prevent overdose by tapering COT may therefore be viewed as misguided or even offensive. Such potential pitfalls in communication around chronic pain have been documented previously [22,23]. In order to better engage patients, patient educational materials related to opioid safety should describe not only overdose but also more common adverse effects such as functional or cognitive impairment that may negatively affect patients' quality of life [33].

In contrast to a low perceived risk of overdose, patients on COT placed high importance on the more immediate, more tangible risk of worsened pain with opioid tapering. In contrast, participants who had successfully tapered opioid medications described an improved quality of life. The latter finding is consistent with a recent narrative review, which included 8 studies of tapering of COT involving more than 1500 patients. This review reported stable or improved pain following opioid tapering in these studies but noted the low quality of these data [16]. Additional evidence is needed to help providers predict patient outcomes in opioid tapering;

Table 3 Themes and potential implications for providers caring for patients on chronic opioid therapy

Domain	Themes	Potential implications for providers
Perceived risk	Low perceived personal risk of opioid overdose	• Educate patients about the risk of overdose even when medication is taken as prescribed • Identify and emphasize outcomes that patients care about
	Risks of opioids trumped by immediate risk of pain	• Acknowledge a commitment to manage pain during and after opioid tapering
Perceived barriers	Pessimism about nonopioid pain care after tapering	• Assess prior nonopioid modalities and barriers to re-engagement
	Past opioid withdrawal symptoms creates anxiety	• Assess patients' experience with opioid withdrawal symptoms • Offer strategies to minimize symptoms
Perceived facilitators	Social support critical to initiating and sustaining opioid tapering	• Identify social supports and facilitate engagement with these individuals • Encourage identification of potential peer mentors to support opioid tapering
	A trusted, accessible physician integral to tapering success	• Advise patients of long-term goal to manage pain at lowest opioid dose possible • Assess patients' readiness to taper opioid medications • Provide detailed instructions during opioid tapering
Perceived benefits	Improved quality of life after opioid tapering	• Emphasize goal of improved function and quality of life with opioid tapering

such evidence will require prospective studies of opioid tapering in real-world clinical settings among diverse patient populations [34]. In the meantime, providers can discuss potential positive outcomes of opioid tapering such as improved pain and function while acknowledging the limitations of current evidence. In these same discussions, providers must emphasize an ongoing commitment to patient-centered, multimodal, nonopioid pain care during opioid tapering and should be prepared to address patient concerns about modalities that have not been effective previously [24].

Participants identified opioid withdrawal symptoms as a source of significant anxiety and a barrier to opioid tapering. Opioid withdrawal symptoms are a well-characterized consequence of detoxification during opioid use disorder treatment [35,36]. By comparison, the prevalence and optimal management of opioid withdrawal symptoms during tapering of COT is not well known [16]. Additionally, to our knowledge, patients' experience of opioid withdrawal during tapering of COT has not previously been described. Our findings suggest that providers should assess patients' prior opioid withdrawal symptoms and educate patients on available strategies to minimize these symptoms. Such strategies might include individualizing taper speed and prescribing medications for symptomatic treatment of withdrawal symptoms. As there is currently insufficient data to guide these strategies in the context of tapering COT, additional study is needed.

Participants emphasized the critical role of support from family, friends, and health care providers in promoting successful opioid tapering, similar to findings from previous studies of patients' experiences in chronic pain management more broadly. Support from family members has previously been identified as an important facilitator of successful self-management of pain [24,25]. Patient–provider interactions have been identified as barriers but also as facilitators of positive patient outcomes once trust is established [37,38]. These facilitators highlight the importance of patient-centered tapering plans that may include close follow-up with providers, detailed instructions on medication changes, and engagement with other psychosocial support. However, provider accessibility and flexibility, though endorsed by participants, may be challenging given time and resource constraints in primary care [17]. Further study is needed to identify feasible and effective strategies to provide opioid tapering support in primary care. Additionally, patients' descriptions of the important role of a trusted health care provider suggests an opportunity for physicians to build on this trust by assessing and enhancing motivation to initiate a trial of opioid tapering among patients on COT. Such efforts could leverage trust between patients and providers and employ provider skills (i.e., motivational enhancement) that are already used in primary care in the context of other substances such as tobacco or alcohol [39,40].

Finally, participants identified a potential role for peer support to support individuals considering or undertaking opioid tapering, a role often referred to as "patient navigation" [41]. The feasibility of a peer support

intervention has recently been demonstrated in pain self-management [42]. Similar approaches to facilitating opioid tapering warrant further study.

Our findings should be interpreted in the context of the potential limitations of our study. First, our qualitative approach provides depth to our understanding of this problem but may not be generalizable to all patients and all clinical settings. We recruited patients from primary care settings in three unique health care systems in a single metropolitan area. A majority of patients were white and reported some college experience. Further work should explore how these experiences vary across racial/ethnic and socioeconomic groups. Second, all patients with experience tapering remained engaged with their tapering provider or clinic. A risk of opioid tapering is patient dropout [16]. Our sample therefore may not be representative of patients who have undergone opioid tapering that is nonelective (e.g., urgent discontinuation in the setting of illicit substance use) or that results in a change of provider. Third, in all qualitative studies, findings may be influenced by the perspectives of the investigators. We assembled a multidisciplinary team and employed a team-based, iterative process to promote a rigorous, reflexive approach to our study question [43]. Finally, participants provided retrospective accounts of their experiences. Recall and social desirability bias cannot be excluded.

Patient perspectives of dose reduction in COT, or opioid tapering, describe a challenging experience requiring substantial support, but also a process with the potential to positively impact pain, function, quality of life, and patient–provider relationships. As providers increasingly employ risk assessment strategies to identify high-risk opioid prescribing and health systems increasingly scrutinize high-dose opioid prescribing, opioid tapering may become an increasingly common patient experience. In the absence of evidence on the risks and benefits of opioid tapering, patient engagement, psychosocial support, and patient-centered care will be critical to achieving positive outcomes. Future work should seek to understand how to optimize patient engagement and feasibly support tapering of COT in primary care settings.

Authors' Contributions

Study concept and design: all authors; data collection: JWF, SRM; data analysis and interpretation: all authors; drafting of the manuscript: JWF; critical revision of the manuscript for important intellectual content: all authors; approval of the final version to be published: all authors.

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