Accepted Manuscript

British Journal of General Practice

Patient perspectives on primary care providers role in long-term opioid therapy

Davies, Lisa; Jansen-Groot Koerkamp, Elsemiek; Koster, Ellen; Dalusong, Kelly-Jo; Koch, Brigitte; Schellekens, Arnt; Heringa, Mette; Bouvy, Marcel

DOI: https://doi.org/10.3399/BJGP.2023.0547

To access the most recent version of this article, please click the DOI URL in the line above.

Received 19 October 2023
Revised 28 February 2024
Accepted 04 March 2024

Patient perspectives on primary care providers role in long-term opioid therapy

Primary carers' role in opioid use: patients' view

Authors

Lisa Eveline Maria Davies[a], MSc.; l.e.m.davies@uu.nl (PhD candidate)

Elsemiek A.W. Jansen-Groot Koerkamp[a,b], MSc. PharmD (PhD candidate/Pharmacist)

Dr. Ellen S. Koster[a,c], PhD; (Associate Professor/Senior Advisor)

Kelly-Jo Dalusong[a], MSc.; (student)

Brigitte Koch[a]; MSc.; (student)

Prof. Dr. Arnt F.A. Schellekens[d,e], PhD MD; (Professor of Addiction and Psychiatry, Scientific Director of NISPA)

Dr. Mette Heringa[b], PhD PharmD; (Pharmacist/Senior Researcher)

Prof. Dr. Marcel L. Bouvy[a], PhD PharmD; (Professor of Pharmaceutical Care)

[a]Division of Pharmacoepidemiology and Clinical Pharmacology, Utrecht Institute for Pharmaceutical Sciences (UIPS), Utrecht University, Universiteitsweg 99, 3584 CG Utrecht, the Netherlands

[b]SIR Institute for Pharmacy Practice and Policy, Theda Mansholtstraat 5B, 2331 JE Leiden, the Netherlands

[c]Dutch Society for Internal Medicine, Mercatorlaan 1200, 3528 BL Utrecht, The Netherlands

[d]Department of Psychiatry, Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Center, Thomas van Aquinostraat 4, 6525 GD Nijmegen, the Netherlands

[e]Nijmegen Institute for Scientist Practitioners in Addiction, Thomas Aquinostraat 4, 6525 GD Nijmegen, the Netherlands

Corresponding Author

Lisa Davies

Utrecht Institute for Pharmaceutical Sciences

Division of Pharmacoepidemiology and Clinical Pharmacology

PO Box 80082, 3508 TB Utrecht,

The Netherlands

+31642983052,

Universiteitsweg 99, 3584 CG Utrecht,

l.e.m.davies@uu.nl

wordcount: 3904

Abstract

Background: Over the past decade, long-term use of prescription opioids for chronic non-cancer pain (CNCP) has risen globally despite the associated risks. The majority of opioid users receive their first prescription in primary care.

Aim: To investigate the perspective of long-term opioid users in primary care regarding the role of healthcare providers (HCP) in their prolonged opioid use.

Design and setting: Semi-structured interviews in Dutch primary care

Methods: We recruited long-term opioid users for CNCP from seven community pharmacies in the Netherlands. In-depth, semi-structured interviews focussed on experiences with long term opioid use, access to opioids, and the guidance of their HCPs. A directed content analysis was conducted on the transcribed interviews using NVivo.

Results: Participants (n=25) mentioned ways HCPs impacted their long-term use of opioids. These encompassed: 1) the initiation of treatment, 2) chronic use of opioids, 3) discontinuation of treatment. Participants stressed the need for risk counselling during initial prescriptions, ongoing medication evaluations including tapering conversations, and more support from their HCP during a tapering attempt.

Conclusion: Patients' perspective illustrates the important role of HCPs across the spectrum of opioid usage – from initiation to tapering. It underscores the importance of clear risk counselling starting at the initial prescription, continuous medication assessments throughout treatment, addressing tapering at regular intervals and strong support during tapering. These insights carry significant implications for clinical practice, emphasising the importance of informed and patient-centred care when it comes to opioid use for chronic non-cancer pain management.

Keywords: Prescription opioids, patient perspective, primary health care, general practice, long-term opioid use, chronic non-cancer pain

How this fits in:

Previous research stressed the pivotal role of primary healthcare providers (HCPs) in managing long-term opioid use for CNCP patients. Our study adds the patient perspective, underscoring the importance of improved communication, medication management, regular assessments, and a patient-centred approach, especially during opioid tapering. Clinicians should prioritise these aspects to enhance patient care and outcomes in CNCP management.

Introduction

Over the past decade there has been a global increase in use of prescription opioids(1-9). While opioids can provide effective short-term pain relief, long-term use is associated with various risks, including physical dependence, overdose and mortality(3, 6, 10, 11). Use of opioids for chronic non-cancer pain (CNCP) is generally discouraged, yet around 30% of patients continue to be prescribed opioids long-term(9, 12). It is, therefore, important to understand the reasons why patients continue to use opioids long-term.

Previous studies have shown that patients using opioids long-term face challenges while balancing the pros and cons of opioid usage amid persistent pain(13, 14). Patients' awareness of risks, coupled with their underestimation of personal risk, pessimism about alternatives, and concerns about withdrawal, contribute to the complexity of long-term opioid use. Despite the crucial role of healthcare providers (HCPs) in supporting these patients, this aspect remains inadequately investigated in current studies.

In the treatment of CNCP and prescribing opioids especially primary HCPs play a pivotal role as they are at the forefront of patient care(14-19). Management of long-term

opioid use is a complex ongoing process, requiring HCPs to constantly balance their wish to alleviate pain with the potential risks of prolonged opioid consumption. However, problematic prescription patterns may arise when patients experience a lack of pain relief after repeated consultations, leaving HCPs unable to explore alternative treatment routes(18). Extended waiting times for specialist care may further burden primary HCPs, as they are the first point of contact for chronic pain patients, highlighting challenges exacerbated by time constraints during patient visits and limited chronic pain management training(17, 20).

In the Netherlands, general practitioners (GPs) primarily prescribe opioids, including tramadol, oxycodone, morphine, and fentanyl, while codeine is discouraged due to limited effectiveness and side-effects(21, 22). Concerns over rising opioid prescriptions, particularly oxycodone, led to 2021 guideline revisions advocating a more conservative approach in chronic pain management(23). HCPs are advised to educate patients on opioid benefits and risks, discuss tapering options, engage in shared decision-making for goal-setting, and address withdrawal and pain management strategies(24). In addition, community pharmacists are expected to play a proactive role in counselling patients, monitoring usage, and collaborating with GPs on prescribing agreements and individual treatment plans for escalating opioid use.

A gap remains in understanding how patients perceive their primary HCPs and how their guidance influences their opioid use. Gaining insight into these aspects can provide enhances to patient care, and helps develop appropriate pain management strategies for the complexities of long-term opioid use. Therefore, this study aims to investigate the patient's perspective on the role of primary HCPs in their long-term opioid treatment.

Methods

Study design

A qualitive study using in-depth, semi-structured interviews with patients who have been using opioids long-term for non-cancer pain was conducted in primary care.

Setting and Participants

Patients were recruited between February and June 2021 from seven community pharmacies located in different parts of the Netherlands. Pharmacies were affiliated with the Utrecht Pharmacy Practice network for Education and Research (UPPER)(25). Eligibility criteria included being a Dutch speaking resident, aged 18 years or older, opioid indication for CNCP, and having received at least two prescriptions for opioids in the past seven months with a total supply for at least three months, regardless of potency(26).

The pharmacist contacted eligible patients to ask whether they would like to participate in the study. If interested, patients received a patient information letter. After patients' consent, the pharmacist shared patients' contact details with the research team. Thereafter, researchers (either LD or EJ) contacted interested patients via telephone to set an appointment for the interview. Data saturation, was defined as the point where further data collection ceases to provide additional thematic insights and codes, was anticipated to be achieved after conducting 15 to 25 interviews(27). Parallel analysis was conducted alongside the interviews, and if data saturation was reached, three additional interviews were scheduled.

Data collection

An interview guide with open-ended questions, focusing on topics within the prescription process, was reviewed and refined by the research team. The following key questions were presented to the patient: "How did your first opioid prescription conversation take place?" and "Has your GP or pharmacist ever discussed your long-term opioid use?". Thereafter, corresponding sub-questions were discussed to go deeper into specific topics. The interview

guide was iteratively refined after four interviews. The full interview guide can be found in Supplementary Box S1. Before the start of the interview oral informed consent was obtained from all study participants.

A team of four female researchers, LD (MSc.), a PhD-candidate, EJ (MSc. PharmD), a PhD-candidate and pharmacist, both experienced in qualitative research, along with KD and BK (BSc.), both master's students in pharmacy with training in patient communication education, conducted interviews in pairs or triads (referring to the interviewers) via telephone or video-call, accommodating patient preferences. In each interview, one person led, while others observed and addressed any missed questions at the end. Due to COVID restrictions, no in-person interviews were held. All interviews were audio-taped and field notes were made. The researchers had no personal interest in the subject, apart from the fact that this is the subject of their PhD and master's thesis. No relationship was established with participants prior to the study. After the interviews the following patient characteristics were extracted from the patient's medical record: opioids used during the last three months (name, dosage and units), and the use of opioids in the past year (medication name only). All opioid prescriptions used during the three month period were converted into oral morphine equivalent using published conversion factors and divided by 90 days(28).

Data Analysis

Interview audiotapes were transcribed verbatim including field notes. Transcripts were not returned to participants for comment. All collected data was anonymised to protect privacy and confidentiality of individuals and places involved. All audio recordings were deleted after final analysis of the data. Data was analysed using directed content analysis with a pre-defined coding tree based on the processes in pharmacotherapy: initiation of treatment, chronic use of medication, discontinuation of treatment. This method was chosen to capture

patient experiences related to healthcare provider steps, offering a structured and systematic approach, though codes for actual experiences were not predefined(29). Four researchers (LD, KD, BK, EJ) coded all transcripts independently. Coding discrepancies were discussed and reconciled between three researchers (LD, EJ, EK). Agreements were made on how to interpret, sort, summarise and shorten quotes that support a code. Codes were adjusted, added, or removed as needed. Two researchers (LD, EJ) conducted the initial categorisation of the codes. Concept categories and themes were evaluated with the research team. The final coding tree (see Supplementary Table S1) was applied to all transcripts. NVivo, version 12 was used for data management and analysis. The findings were reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ)(30).

Results

A total of 25 participants were interviewed, seven participants were interviewed via video call (28%) and the others by telephone, lasting approximately 25 minutes to one hour each. Data saturation occurred after 20 interviews. However, with five interviews already scheduled across three pharmacies, it was decided to proceed with all five instead of the initially planned three. On average, participants were 61 years old, and most were female (64%). Nearly all participants used opioids for at least one year, with oxycodone being the most frequently used opioid as either monotherapy (44%) or in combination (Table 1 and Supplementary Table S2).

Participants initiated opioid treatment due to persistent pain complaints (n=17), for example, musculoskeletal, neuropathic or unspecified pain (e.g., fibromyalgia), or before or after surgery or trauma (n=8). Nearly all participants reported having a positive relationship with their primary HCP.

Participant characteristics (n=25)	
Female gender, n (%)	16 (64%)
Age, mean (SD)	61 (± 10)
Reason for initial opioid prescription	
Postsurgical and posttraumatic pain	8 (32%)
Musculoskeletal pain	12 (48%)
Neuropathic pain	3 (12%)
Other pain	2 (8%)
Duration of opioid use	
<1 year	3 (12%)
>1-5 years	8 (32%)
>5 years	14 (66%)
Average daily OME*, median (IQR)	33.8 mg [15.8 mg - 97.0 mg]
Used opioids in past <3 months	
Tramadol	7 (28%)
Oxycodone	11 (44%)
Morphine	1 (4%)
Combination (i.e., oxycodone + fentanyl)	6 (24%)

*Oral Morphine Equivalent: calculated based on last 3 months of prescriptions

Table 1. Participant characteristics

We identified three themes in primary care: 1) the role of the HCP in the first opioid prescription, 2) the role of the HCP in repeat prescriptions, 3) the role of the HCP in opioid tapering. See Figure 1. The main themes are discussed below.

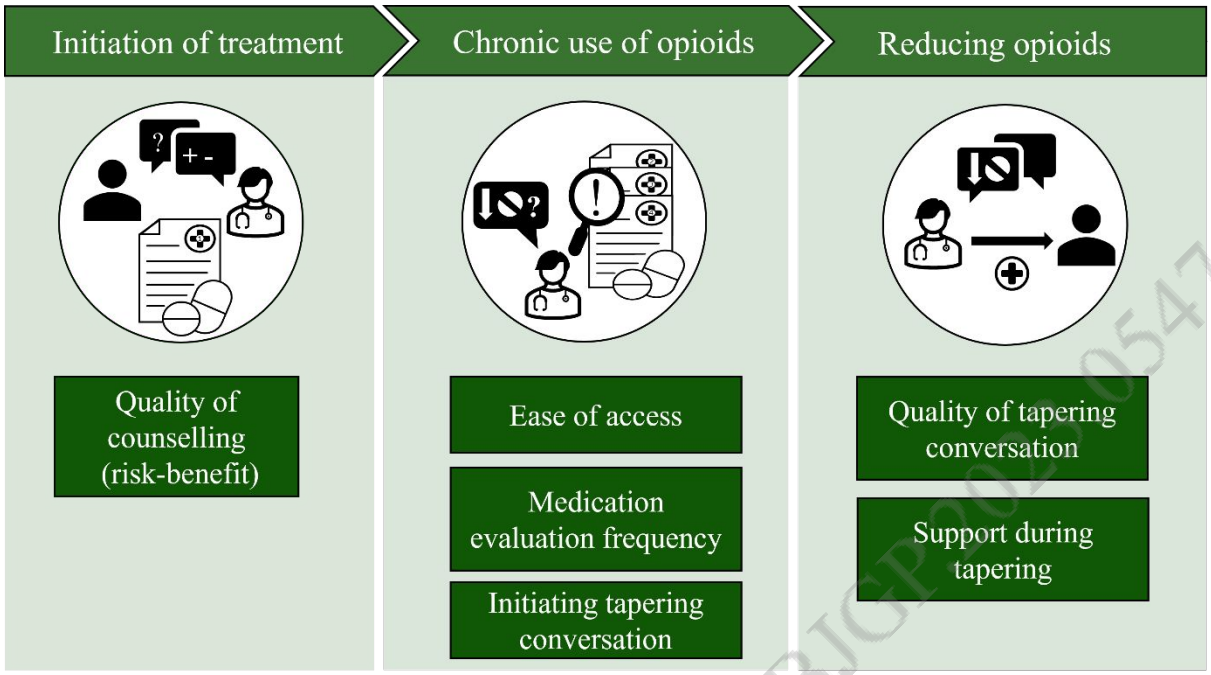

Figure 1. Patient perspectives on the role of the HCP in long-term opioid treatment

1.The initiation of treatment

1.1 Quality of counselling at first prescription

At the beginning of their treatment, most participants were unfamiliar with opioids. While nearly all participants could remember receiving practical information on how to take the medication and a leaflet, many couldn't recall specific details about the risks associated with opioids.

> "The doctors prescribed that (opioids) and said: 'This will make you sleep well', and I did. There was no further explanation. … It's prescribed and the doctor said: 'If there are any side-effects, let me know'."(P24, female, 56 years)

> "They also mentioned some things about it, but I don't remember exactly. They tell you about it, and I did read the patient information leaflet, but then you don't really think about it anymore. I know what it is, and I know that you can't just take it across the border without proper authorisation." (P4, female, 63 years)

Participants placed significant trust in their HCPs, often disregarding supplementary information (e.g., leaflets) about risks if not underlined by their HCP. In hindsight, roughly half of participants stated that they received insufficient counselling regarding the risks from their HCPs.

> When I received the opioids there was a package leaflet. (…) But I never read those as it is useless. (…) I go to the doctor for my backpain, and I get medicines and I take those. I could read everything, but (…) I trust the doctor and the pharmacy."(P17, male, 60 years)

Only a few participants mentioned receiving a clear risk-benefit explanation from their healthcare providers, which also included the potential risks of opioid addiction.

> "When I received a prescription from the GP, they told me that there was a possible risk of addiction and that I had to be careful with my use, which I still am to this day. I only use opioids when I'm in pain. I don't use it every day."(P7, female, 67 years)

In addition, a few participants who did not receive adequate counselling reported becoming aware of opioid risks by reading package leaflets, conducting online research, or learning from news sources, family, or friends. For instance, one participant stated:

> "I was informed that morphine is a stronger form of pain relief, stronger than paracetamol or ibuprofen. For additional information, I read the package leaflet and looked up information online." (P12, male, 89 years)

2. Chronic use of opioids

2.1 Ease of access to opioids

Participants described easily obtaining repeat prescriptions from multiple prescribers by a single phone call. They reported a lack of follow-up questions or comments from their GP or pharmacist, with about two-thirds experiencing no discussion about their repeat prescriptions during appointments.

> "I only had to call them (HCP), and they will throw it (opioids) through my letterbox." (P19, male, 46 years)

> "I receive 90 units. So, I always have enough at home. (…) I made sure that if I had only 2 boxes left, (…) that I would already order, so I never actually ran out." (P9, female, 43 years)

However, some participants mentioned that their HCPs stressed the necessity of having a conversation before repeating the prescription.

> "I only need to call, and they will write the prescription for me. Every three months, I have to visit the GP. He asks how things are going, and I always get just thirty (pills)." (P25, male, 60 years)

On the other hand, there were those who reported that their HCPs seemed hesitant or displeased when asked for a prescription refill, leading them to avoid regular visits to the HCP. Nonetheless, all participants were eventually able to have their prescriptions refilled.

> "I do not visit the GP regularly to be honest. Cause they do not really cooperate. (…) They do not like the oxycodone and want to stay in control of everything." (P18, female, 47 years)

2.2 Medication evaluation frequency

The majority of the participants stated that their GP had never initiated a discussion on their chronic use of opioids and the potential risks thereof. In hindsight some patients realised that

this gave them a false sense of safety resulting in them never evaluating the necessity of opioid treatment.

> "The last time I had a consultation at the doctor was about nine months ago. That's not good. There is no guidance at all! (…) They should have told me that it can be addictive. It is advisable to have an evaluation every 2 months, as the doctor can't always keep an eye on it. That way you share the responsibility. However, that didn't happen"(P19, male, 46 years)

Participants who received regular medication evaluations reported being more aware of the risks of their long-term opioid use.

> "I believe it is good (to inform people about the risk of addiction), because then people know what they take are taking and understand that depending on the amount you take, there will be a time where you cannot be without anymore. I can (go without opioids), but there are others (who cannot), so it is good they mention it" (P25, male, 60 years)

In addition, most of the participants mentioned their pharmacist had rarely commented on their prolonged use of opioids and mostly only in case of potential overuse.

> "I had called the pharmacy about the medications (opioids), and they referred back to the doctors who prescribed it. They do check if I do not order too many. They ask how many I am supposed to have, because I sometimes used too many, and then I would be without." (P8, female, 62 years)

Only one participant mentioned receiving comments from the pharmacy that made them re-evaluate their prolonged opioid use.

"They make you think. I mean if you prescribe something and no one says something then …, but the pharmacy was vigilant and said: 'Hey, you've been using this for a long time. Do you still need it?'. I find that a good thing about the pharmacy."(P24, female, 56 years)

2.3 Initiating tapering conversations

The vast majority of participants indicated that they had never discussed the possibility of tapering with their HCP during their long-term opioid use. A few did raise concerns about their opioid treatment duration, but were reassured by their HCPs to continue using.

"I once asked the GP: 'How long am I able to use (opioids)?', and they said: 'In principle your whole life', so then I'm not worried about it." (P4, female, 63 years)

3. Discontinuation of treatment

3.1 Quality of tapering conversations

In a few instances, discussions regarding tapering were instigated by either GPs or participants who were insistent on pursuing tapering measures. Paradoxically, despite these conversations, long-term opioid use often persisted without substantial intervention.

"I asked: 'Is there a possibility that I will be able to get rid of that oxycodone?' and then the GP said: 'Let's try. Try doing this and that and if you experience any symptoms, come back and we will see.' (P3, male, 72 years)

"The GP always asks: 'How are you doing? Could you manage with one pill per day?'. Then I am very honest about it, and say: 'Sometimes yes, it depends on the day (…) then I will need two pills.' If I explain it to him then he (GP) is fine with it, and we continue the prescription." (P25, male, 60)

Furthermore, discussions regarding long-term opioid use were considered sensitive. Some participants were confident they could quit opioids, if necessary, while others, due to their chronic pain, saw tapering as impractical, discouraging tapering conversations. Some also had negative experiences with GPs critical of opioids, leading them to avoid discussing their use and tapering, with one patient even avoiding GP visits for this reason.

> "I avoid seeing the GP because he always starts talking about tapering off and how bad it (the oxycodone) is. So yeah, then you start avoiding the GP." (P6, female, 65 years)

3.2 Support during tapering

A small group of participants had experience with tapering opioids. Some attempted tapering without consulting their GP, with some initially succeeding but resuming opioids due to new pain complaints, while others faced difficulties and lack of support, leading to increased pain and fear for future attempts.

Participants who attempted to taper their opioid intake under the guidance of their GP, also found it challenging to completely reduce their opioid usage due to ongoing pain complaints, although no severe cases were reported. While participants acknowledged that their GP could only provide advice and not perform the tapering process for them, some questioned the level of guidance they received.

> "I tapered gradually, and it went smoothly. (…) The GP helped me and warned me not to do it alone, so I ensured he was involved." (P3, male, 72 years)

One complaint was that participants had to take the initiative to reach out to their HCPs for support and guidance during their tapering attempt.

"Well, I had to take the initiative to call them: 'It's not working, the tapering is not working'. I require more guidance on their initiative as well. A more intensive guidance during tapering." (P11, male, 57 years)

Furthermore, participants emphasised the importance of their HCPs sharing more detailed information about the steps involved in the tapering process, offering more frequent counselling during the tapering phase, especially concerning the pace of tapering, and providing more shared experiences of successful tapering.

"I needed more advice. So, the advice to talk with the GP or pharmacy on how to best taper. (…) But also, more sharing of experience of other people. How to best taper, the consequences and what I might experience. (…) If I know what to expect I think I can persevere more." (P24, female, 56 years)

Discussion

Summary

Our study provides valuable insights into the perspective of individuals with chronic pain complaints and their primary HCPs guidance regarding their long-term opioid treatment. Participants highlighted the lack of risk education during the initiation of treatment. Regarding repeat opioid prescriptions, participants emphasised easy access to opioids, inadequate medication evaluation by HCPs, and a lack of initiation of tapering conversations. When discussions about tapering were initiated, patients often felt restricted and tended to avoid the prescriber. Additionally, when the tapering process began, the guidance provided frequently fell short of meeting their needs.

Strengths and limitations

This study expands knowledge on experiences of opioid use in primary care settings and the impact of HCPs. The study achieved data saturation with a diverse sample from multiple community pharmacies with geographical representation in the Netherlands and encompassing various opioid medications and dosages.

However, recall bias among long-term opioid users is a notable limitation. Despite these limitations, the study's significance in grasping broader issues related to opioid use remains. This study lacks data on the total candidates approached by pharmacists; feedback indicating around half were willing to participate, though unverifiable, potentially introducing bias favouring those open to discussing opioids. The impact is likely minimal, as it does not significantly alter perspectives on HCP interactions. If any influence exists, those affected are likely to discuss opioid use less compared to surveyed participants. High dose opioid users may have been less inclined to participate, and our study does not include insights from previous users who successfully tapered off, limiting experience range. Additionally, the updated opioid prescribing guidelines from November 2021, had minimal impact as they were not yet integrated into general practice during the interviews(23). Lastly, the study predominantly focussed on the patient's perspective, potentially overlooking the perspectives of professionals and the role patients themselves play in this process.

Comparison with existing literature

Prior research shows that the duration of opioid use and dose in the first month strongly influences prolonged use(31, 32). After 12 days, the risk of long-term use increases to 24%, a figure that rises to 43% after 31 days. Exceeding cumulative doses of 120 oral morphine equivalents within the first month doubles the risk of long-term use. Patients often underestimate their personal risk during chronic opioid therapy, especially when experiencing significant pain, necessitating counselling at onset of treatment(14). Although patients and

HCPs find discussing potential opioid risks challenging, our findings reveal that patients desire information at onset about the non-long-term use in CNCP, and that dose escalation increases dependence risk(33). At treatment initiation, patients could also be informed that opioids have comparable effectiveness to other pain relievers like acetaminophen and NSAIDs(34).

Moreover, participants reported ease of access to opioids, often facilitated without direct physician-patient interaction during prescription refills. Despite guidelines advocating regular consultations, a concerning pattern emerged with repetitive opioid prescriptions lacking proper evaluation. This may stem from time constraints, with HCPs assuming patients on chronic opioid therapy are doing well unless they express concerns(17, 35). However, over time, benefits of opioids may diminish, while hidden harms persist. Recognising these issues and responding to patients' consistent need for more regular consultation underscores the importance of allocating additional time to address concerns, evaluate conditions, and explore alternatives to opioids. Ensuring patients can make informed decisions fosters shared responsibility, reducing potential harm(36).

Participants noted a lack of tapering conversations and personalised guidance concerning their long-term opioid use, possibly due to barriers recognised HCPs, such as time constraints, limited resources, inadequate training, emotional complexities, trust issues, fear of harming the patient-provider relationship, and limited access to non-opioid treatments (18, 24, 37-41). Interestingly, their needs align with HCP-proposed strategies to facilitate opioid tapering, emphasising intrinsic patient motivation and tailored tapering plans, incorporating motivational interviewing, timing and pace adjustments, and counselling on potential pain and withdrawal symptoms during dose reduction(40-42). Conversely, some patients disengaged during negative discussions about long-term opioid use. To mitigate this, HCPs advise acknowledging chronic pain experiences, expressing empathy, and linking pain

concerns with safety(40, 41). Sensitivity and understanding are crucial when approaching opioid tapering discussions.

Creating a supportive environment with open communication and empathy is crucial for successful tapering, ensuring patients' feelings of being heard and understood, and intrinsically motivating them, supports success from both perspectives. To address time constraints and waiting lists for pain specialists, a more prominent role for pharmacists or nurses could be beneficial. Recent initiatives such as a pharmacist-assisted program, have demonstrated promising outcomes in the management of chronic non-cancer pain (CNMP) and the reduction of opioid prescribing. These interventions encompassed patient notifications, proactive outreach by pharmacists, and the establishment of a patient registry with regularly updated clinical data (43). Additionally, a nurse-led telephone follow-up intervention for titrating or tapering opioids showed positive results (44). Future research should focus on developing conversation tools to support CNCP patients, aligning treatment plans with patient perspectives, and promoting safe opioid use in long-term pain management. Additionally, exploring solutions to reduce HCP burden could enhance CNMP management while minimising opioid prescribing.

Implications for research and practice

Our results emphasise the urgency of better communication between HCPs and patients about the risks associated with opioid therapy right from the initial prescription and to maintain these conversations throughout subsequent prescriptions. It highlights the need for improved medication management and regular patient assessments. We advocate for a shift from a purely pain-focused approach to one that considers the patient's perspective, ensuring a balanced assessment of risks and benefits. Such a transformation necessitates routine evaluations of pain levels and opioid effectiveness, with close monitoring by both GPs and

pharmacists. Additionally, our study promotes a more compassionate and supportive approach to opioid tapering, acknowledging the challenges and potential stigma patients may face during this process. The healthcare system should extend empathy and guidance to support patients effectively throughout their tapering journey.

In conclusion, our research, grounded in the patient perspective, provides substantial recommendations for improving current care practices within opioid management in chronic non-cancer pain.

Funding

This work is part of the research project Tackling and Preventing The Opioid Epidemic (TAPTOE). This research received funding from the Dutch Research Council (NWO) in the framework of the NWA-ORC Call (NWA.1160.18.300). The views expressed in this paper are those of the authors and do not necessarily reflect the views or policies of the NWO. The NWO is not liable for any use that may be made of the information presented.

Ethical approval

The research proposal was approved by the Utrecht University Institutional Review Board (division of Pharmacoepidemiology & Clinical Pharmacology) (UPF2018).

Competing interests

All authors declare no conflict of interest.

Acknowledgements

We would like to thank all community pharmacists for their time and their effort in recruiting eligible patients.

Data availability

Due to the confidentiality agreements and the sensitivity of the topic for research participants, supporting data are not publicly available. Data are however available upon reasonable request to the corresponding author (MB). It should be noted that raw data is only available in Dutch.

References

1. Verhamme KM, Bohnen AM. Are we facing an opioid crisis in Europe? Lancet Public Health. 2019;4(10):e483-e4. https://doi.org/10.1016/S2468-2667(19)30156-2
2. Hamunen K, Paakkari P, Kalso E. Trends in opioid consumption in the Nordic countries 2002–2006. Eur J Pain. 2009;13(9):954-62. https://doi.org/10.1016/j.ejpain.2008.11.006
3. Kalkman GA, Kramers C, van Dongen RT, et al. Trends in use and misuse of opioids in the Netherlands: a retrospective, multi-source database study. Lancet Public Health. 2019;4(10):e498-e505. https://doi.org/10.1016/S2468-2667(19)30128-8
4. van Amsterdam J, Pierce M, van den Brink W. Is Europe facing an emerging opioid crisis comparable to the US? Ther Drug Monit. 2021;43(1):42-51. https://doi.org/10.1097/FTD.0000000000000789
5. Celentano D. The worldwide opioid pandemic: epidemiologic perspectives. Epidemiol Rev. 2020;42(1):1-3. https://doi.org/10.1093/epirev/mxaa012
6. Bedene A, Lijfering WM, Niesters M, et al. Opioid prescription patterns and risk factors associated with opioid use in the Netherlands. JAMA Netw Open. 2019;2(8):e1910223-e. https://doi.org/10.1001/jamanetworkopen.2019.10223
7. Ashburn MA, Fleisher LA. Increasing evidence for the limited role of opioids to treat chronic noncancer pain. JAMA. 2018;320(23):2427-8. https://doi.org/10.1001/jama.2018.19327
8. Schepens MH, Leusink M, de Vries SE, et al. Toename in extramuraal opioïdgebruik in Nederland [Increase in opioid prescribing in extramural care in the Netherlands: assessment of use and prescription behaviour, based on claims data]. Ned Tijdschr Geneeskd. 2019;163(D3854).
9. Weesie Y, Dijk CEMJ, Flinterman LE, et al. Voorschrijven van opioïden in de huisartsenpraktijk [Prescribing opioids in general practice]. NIVEL Utrecht; 2016. Report No.: 9461224303. Available from: https://www.nivel.nl/sites/default/files/bestanden/Rapport_voorschrijven_opioiden.pdf.
10. Bedene A, van Dorp EL, Faquih T, et al. Causes and consequences of the opioid epidemic in the Netherlands: a population-based cohort study. Sci Rep. 2020;10(1):1-9. https://doi.org/10.1038/s41598-020-72084-6
11. Bedson J, Chen Y, Ashworth J, et al. Risk of adverse events in patients prescribed long-term opioids: a cohort study in the UK clinical practice research Datalink. Eur J Pain. 2019;23(5):908-22. https://doi.org/10.1002/ejp.1357

12. Weesie YM, Hek K, Schermer TR, et al. Use of opioids increases with age in older adults: An observational study (2005–2017). Front Pharmacol. 2020;11:648. https://doi.org/10.3389/fphar.2020.00648
13. Nichols VP, Toye F, Eldabe S, et al. Experiences of people taking opioid medication for chronic non-malignant pain: a qualitative evidence synthesis using meta-ethnography. BMJ open. 2020;10(2). https://doi.org/10.1136/bmjopen-2019-032988
14. Frank JW, Levy C, Matlock DD, et al. Patients' perspectives on tapering of chronic opioid therapy: a qualitative study. Pain Med. 2016;17(10):1838-47. https://doi.org/10.1093/pm/pnw078
15. Harle CA, Bauer SE, Hoang HQ, et al. Decision support for chronic pain care: how do primary care physicians decide when to prescribe opioids? a qualitative study. BMC Fam Pract. 2015;16(1):48. https://doi.org/10.1186/s12875-015-0264-3
16. De Sola H, Maquibar A, Failde I, et al. Living with opioids: a qualitative study with patients with chronic low back pain. Health Expect. 2020;23(5):1118-28. https://doi.org/10.1111/hex.13089
17. Keller MS, Jusufagic A, Nuckols TK, et al. Understanding Clinicians' Decisions to Assume Prescriptions for Inherited Patients on Long-term Opioid Therapy: A Qualitative Study. Pain Med. 2020;21(11):3187-98. https://doi.org/10.1093/pm/pnaa045
18. McCrorie C, Closs SJ, House A, et al. Understanding long-term opioid prescribing for non-cancer pain in primary care: a qualitative study. BMC Fam Pract. 2015;16(1):121. https://doi.org/10.1186/s12875-015-0335-5
19. Henry SG, Paterniti DA, Feng B, et al. Patients' experience with opioid tapering: A conceptual model with recommendations for clinicians. J Pain. 2019;20(2):181-91. https://doi.org/10.1016/j.jpain.2018.09.001
20. Pagé MG, Ziemianski D, Shir Y. Triage processes at multidisciplinary chronic pain clinics: An international review of current procedures. Can J Pain. 2017;1(1):94-105. https://doi.org/10.1080/24740527.2017.1331115
21. Weesie YM, Dijk Lv, Hek K. Voorschrijven van opioïden in Nederland: toedieningsvorm, voorschrijfduur en indicatie [Prescription of opioids in the Netherlands: administration form, prescription duration, and indication]. NIVEL Utrecht; 2020 03-12-2020. Available from: https://www.nivel.nl/nl/publicatie/voorschrijven-van-opioiden-nederland-toedieningsvorm-voorschrijfduur-en-indicatie.
22. Zorginstituut. Geneesmiddelenoverzicht Opioïden Farmacotherapeutisch Kompas: Zorginsitituut Nederland; 2023 [Available from: https://www.farmacotherapeutischkompas.nl/bladeren/groepsteksten/opioiden.
23. Van den Donk M, Van Walraven A, Damen Z. Meer aandacht voor chronische pijn en verantwoord gebruik van opioïden in NHG-Standaard Pijn. Huisarts Wet. 2021;12:49-50. https://doi.org/10.1007/s12445-021-1332-7
24. Damen Z, Kadir-Klevering F, D K, et al. NHG-standaard Pijn 2021 [Available from: https://richtlijnen.nhg.org/standaarden/pijn.
25. Koster ES, Blom L, Philbert D, et al. The Utrecht Pharmacy Practice network for Education and Research: a network of community and hospital pharmacies in the Netherlands. Int J Clin Pharm. 2014;36:669-74. https://doi.org/10.1007/s11096-014-9954-5
26. Karmali RN, Bush C, Raman SR, et al. Long-term opioid therapy definitions and predictors: A systematic review. Pharmacoepidemiol Drug Saf. 2020;29(3):252-69. https://doi.org/10.1002/pds.4929
27. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field methods. 2006;18(1):59-82. https://doi.org/10.1177/1525822X05279903

28. Nielsen S, Degenhardt L, Hoban B, et al. A synthesis of oral morphine equivalents (OME) for opioid utilisation studies. Pharmacoepidemiol Drug Saf. 2016;25(6):733-7. https://doi.org/10.1002/pds.3945
29. Hsieh H-F, Shannon SE. Three Approaches to Qualitative Content Analysis. Qual Health Res. 2005;15(9):1277-88. https://doi.org/10.1177/1049732305276687
30. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care. 2007;19(6):349-57. https://doi.org/10.1093/intqhc/mzm042
31. Shah A, Hayes CJ, Martin BC. Characteristics of initial prescription episodes and likelihood of long-term opioid use—United States, 2006–2015. MMWR Morb Mortal Wkly Rep. 2017;66(10):265. https://doi.org/10.15585/mmwr.mm6610a1
32. Deyo RA, Hallvik SE, Hildebran C, et al. Association between initial opioid prescribing patterns and subsequent long-term use among opioid-naïve patients: a statewide retrospective cohort study. J Gen Intern Med. 2017;32:21-7. https://doi.org/10.1007/s11606-016-3810-3
33. Hooker SA, Essien IJ, Borgert-Spaniol CM, et al. Patient Perspectives on Opioid Risk Discussions in Primary Care. J Patient Cent Res Rev. 2022;9(4):253. https://doi.org/10.17294/2330-0698.1941
34. Chou R, Turner JA, Devine EB, et al. The effectiveness and risks of long-term opioid therapy for chronic pain: a systematic review for a National Institutes of Health Pathways to Prevention Workshop. Ann Intern Med. 2015;162(4):276-86. https://doi.org/10.7326/M14-2559
35. Juurlink DN. Rethinking "doing well" on chronic opioid therapy. CMAJ. 2017;189(39):E1222-E3. https://doi.org/10.1503/cmaj.170628
36. Joachim OH, Caitlin M, John B, et al. Discussing Opioid Risks With Patients to Reduce Misuse and Abuse: Evidence From 2 Surveys. Ann Fam Med. 2016;14(6):575. https://doi.org/10.1370/afm.1994
37. Matthias MS, Johnson NL, Shields CG, et al. "I'm not gonna pull the rug out from under you": Patient-provider communication about opioid tapering. J Pain. 2017;18(11):1365-73. https://doi.org/10.1016/j.jpain.2017.06.008
38. Punwasi R, De Kleijn L, Rijkels-Otters J, et al. General practitioners' attitudes towards opioids for non-cancer pain: a qualitative systematic review. BMJ open. 2022;12(2):e054945. https://doi.org/10.1136/bmjopen-2021-054945
39. Kramers K, Veldman S, Vroon L, et al. Afbouwen van opioïden in de eerste lijn [Tapering opioids in primary care]. Nijmeegs Expertisecentrum voor Complexe Farmacotherapie; 2021. Available from: http://www.necf.nl/afbouwprotocol_opioiden_eerstelijn_20210610.pdf.
40. Kennedy LC, Binswanger IA, Mueller SR, et al. "Those Conversations in My Experience Don't Go Well": A Qualitative Study of Primary Care Provider Experiences Tapering Long-term Opioid Medications. Pain Med. 2017;19(11):2201-11. https://doi.org/10.1093/pm/pnx276
41. de Kleijn L, Jansen-Groot Koerkamp EAW, van der Kooij I, et al. Exploring the facilitators and barriers in opioid deprescribing for non-cancer pain treatment experienced by general practitioners: A qualitative study. Eur J Pain. 2024. https://doi.org/10.1002/ejp.2243
42. Wyse JJ, Ganzini L, Dobscha SK, et al. Setting Expectations, Following Orders, Safety, and Standardization: Clinicians' Strategies to Guide Difficult Conversations About Opioid Prescribing. J Gen Intern Med. 2019;34(7):1200-6. https://doi.org/10.1007/s11606-019-04983-y

596 43. Perry K, Ferron S, Norquist N, et al. A Pharmacist-Assisted Initiative to Improve
597 Chronic Pain Management and Reduce Opioid Use in Primary Care. Innov Pharm.
598 2023;14(1). https://doi.org/10.24926/iip.v14i1.5265
599 44. Halvorsen U, Bjørnnes AK, Ljosaa TM. Nurse-Led Telephone Follow-Up
600 Intervention for Titrating and Tapering Opioids in Chronic Pain Patients - A Feasibility
601 Study. J Pain Res. 2023;16:1285-300. https://doi.org/10.2147/jpr.S394878

602