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Opioids, Chronic Pain, and Addiction in Primary Care

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Abstract

Research has largely ignored the systematic examination of physicians' attitudes towards providing care for patients with chronic non-cancer pain. The objective of this study was to identify barriers and facilitators to opioid treatment of chronic non-cancer pain patients by officebased medical providers. We used a qualitative study design using individual and group interviews. Participants were twenty-three office-based physicians in New England. Interviews were audiotaped, transcribed, and systematically coded by a multidisciplinary team using the constant comparative method. Physician barriers included lack of expertise in the treatment of chronic pain and co-existing disorders, including addiction; lack of interest in pain management; patients' aberrant behaviors; and physicians' attitudes toward prescribing opioid analgesics. Physician facilitators included promoting continuity of patient care and the use of opioid agreements. Physicians' perceptions of patient-related barriers included lack of physician responsiveness to patients' pain reports, negative attitudes toward opioid analgesics, concerns about cost, and patients' low motivation for pain treatment. Perceived logistical barriers included lack of appropriate pain management and addiction referral options, limited information regarding diagnostic workup, limited insurance coverage for pain management services, limited ancillary support for physicians, and insufficient time. Addressing these barriers to pain treatment will be crucial to improving pain management service delivery.

Keywords

Chronic pain; opioid-related disorders; qualitative research; physicians			

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INTRODUCTION

Chronic pain (i.e., non-cancer related physical pain lasting at least 3 months) is highly prevalent ²⁰,42 and is one of the most common complaints of patients when seeking treatment. Primary care physicians provide the majority of care for patients with chronic pain.11[,]38 Despite the large number of patients with chronic pain that primary care providers manage, physicians report low satisfaction, and are concerned about their pain management training and expertise. ²⁴,41

Research on physicians' experiences treating chronic pain patients has focused on barriers to implementing opioid therapy—one treatment option for addressing chronic pain in office-based settings. While opioid therapy is generally accepted as the treatment of choice for cancer-related pain, its efficacy and safety in treating non-cancer chronic pain is debated.³¹ Physicians express concern about the addiction potential of prescription opioids, illegal diversion, adverse effects, and patient-related problems (e.g., medication adherence, psychiatric comorbidity, and secondary gain).³,23,32,44

Whereas we previously reported on attitudes toward caring for opioid addicted patients and incorporating buprenorphine treatment into office-based practice, we did not report on findings related to perceptions of the treatment of chronic pain among the study sample. The purpose of the current study was to examine physicians' attitudes and experiences about treating chronic non-cancer pain. A qualitative method was used since it facilitates the investigation of complex phenomena and allows for detailed description of participant experiences. To

MATERIALS AND METHODS

Participants

The methods and participants have been described.1 Physicians in New England who provide primary care, medical student education, and/or buprenorphine treatment were contacted through e-mail and postal mailing. As is common in qualitative research, a "purposeful sampling" strategy of recruitment was used to ensure a range of respondent experiences. Thus, we solicited participation from: a) non-academically affiliated community physicians, b) physicians who had no experience providing addiction care for opioid dependent patients, c) physicians with experience providing buprenorphine treatment, and d) physicians who had provided office-based methadone maintenance in a research study. Participants were recruited until thematic saturation was reached (i.e., the point at which no new themes emerged from the interviews). Participants provided informed consent, and the protocol was approved by Yale University.

Interviews

As described elsewhere¹, we conducted face-to-face interviews with 23 participants using a semi-structured interview guide. The interview guide targeted 4 domains: 1) experience, interest, and concerns regarding caring for opioid dependent patients, 2) physician and staff training needs, 3) relationships with addiction treatment programs, and 4) reimbursement. The interview guide contained a series of open-ended questions that targeted each domain followed by specific probes if particular content areas were not covered. For example, regarding prior experience with addiction treatment programs, respondents were asked: "Please describe any prior interactions that you have had with a narcotic treatment program or methadone clinic." This request was followed by specific prompts regarding interactions with nurses, physicians, counselors, and administrative staff at the treatment program. In the course of discussing these four domains, 22 of the 23 providers spontaneously discussed their experience treating patients who have chronic pain with opioid medications. When this

occurred, interviewers followed up with questions that broadened the discussion of the original four domains to include the treatment of patients with chronic pain. Thus, discussion regarding providers' experiences treating patients with chronic pain formed the basis of the current study.

Two investigators with experience in qualitative interviewing conducted the interviews, which lasted approximately 1 hour and were audiotaped and transcribed. Prior to each interview, physicians provided personal demographic data (age, gender, race/ethnicity, area of specialization, employment setting, and years since graduation) and patient demographic data, and proportion of patients (1) with addictive disorders and (2) receiving prescription opioids for: a) chronic pain, b) chronic pain with a history of opioid addiction, and c) chronic pain with current opioid addiction.

Data Analysis

Data analysis followed the principles of grounded theory, using the constant comparative method for systematic inductive analysis.18 Grounded theory comprises a systematic qualitative research methodology that involves coding collected data, which are then grouped into concepts or themes. ¹⁸ In the current study, a multidisciplinary team consisting of four physicians, a sociologist, a medical anthropologist, and a clinical psychologist performed the data coding. All group members reviewed a subset of transcripts to identify broad themes using the "open-coding" or "substantive" technique (i.e., transcripts are reviewed line by line and all of the text is coded in order to better understand the problem area). When consensus on broad thematic codes and their working definitions was reached, the team revisited the data to conceptually group open codes into paradigmatic areas using a combination of inductive and deductive reasoning and further specified sub-themes in each domain—a procedure called systematic inductive analysis. The relevance of the initial themes and subthemes were tested by repeated comparative assessment of succeeding data. Once consensus on the coding scheme and code definitions was reached, each transcript was independently coded by at least 2 team members. Manual coding was then electronically applied to the textual data using N6® QSR (International Pty Ltd, 1991 to 2002, Doncaster, Victoria, Australia) software.

RESULTS

Participant Characteristics

Twenty-three office-based physicians participated, and 20 provided demographic data. The demographic characteristics of these 20 participants in addition to patient-related substance use characteristics are summarized in Table 1. As outlined in Table 1, respondents' clinical areas of expertise were as follows: internal medicine (50%), infectious disease (20%), addiction medicine (15%), psychiatry (10%), and family medicine (5%). Five respondents—three specializing in addiction medicine, one in infectious disease, and one in psychiatry—reported experience with buprenorphine and had the appropriate Drug Enforcement Administration (DEA) registration to prescribe buprenorphine. Of these five providers, four worked in individual practice and one worked in a clinic and had teaching responsibilities.

Main Themes

Physicians described three themes that served as barriers and facilitators to treating patients with chronic pain: physician factors, patient factors (i.e., physicians' perceptions of patient factors), and logistical factors. These themes are further subdivided into specific subthemes (Table 2). As is common in qualitative studies that employ a grounded theory approach, a selection of representative quotes that illustrates these themes and subthemes were selected

by the investigators during and after the systematic coding of the transcripts; ¹⁸ these quotes are provided below.

Physician Factors

Pain assessment—Respondents reported that the absence of objective or physiological measures of pain intensity and pain relief, the frequent lack of medical findings supporting patients' pain reports (e.g., tissue damage, medical diagnosis), and uncertainty regarding the veracity of reported pain in patients with suspected or confirmed addiction impeded their provision of pain management.

I don't know what the pain is like. They really might be in pain ... I don't want to challenge them and have them think that I don't trust them. I don't want to make them any more miserable.

Expertise in pain management—Respondents noted that they and other medical providers lacked expertise in treating chronic pain.

Chronic pain is a huge issue, a huge problem, but there are no experts at this institution who know how to treat pain.

Additionally, respondents cited their dissatisfaction with their inability to alleviate pain.

It's awful, and I think it's demoralizing when you leave people in pain. That's just so disrespectful. I mean you're supposed to be a doctor, you're supposed to relieve pain and suffering, and you ignore the pain.

Expertise in treating co-occurring chronic pain and opioid addiction—

Physicians noted their lack of expertise in treating chronic pain when it occurred in the context of suspected or documented opioid addiction.

Nobody here knows how to treat pain in anybody who has a history [of addiction] and already on something like methadone...nobody knows how to treat them.

Respondents indicated that primary care providers did not have the appropriate training or skill to manage patients with co-occurring chronic pain and opioid addiction.

It's a mistake...promoting doctors like me to [treat pain and addiction]. It would be a societal mistake to have addiction and pain medicine be managed without other support services.... Most of us in primary care end up [doing it] by default...But that's not good. That's not something to be promoted.

Co-existing disorders—Participants noted their lack of expertise in treating medical and psychiatric conditions that co-occur with chronic pain. Examples included the complexity of accurately diagnosing or assessing multiple medical and psychiatric diagnoses, and difficulty distinguishing the contributions of pain, medical and psychiatric conditions, and addiction to the patients' presentation.

I had a patient and I was trying to regulate his pain medication for his headache syndrome, but he now has a neck injury, back injury, and landed in the hospital with a pulmonary embolism for other reasons...his pain seemed out of proportion with his illness; he eventually discharged me from his care. My interpretation is that he was also seeing another doctor who was giving him chronic pain meds.

Interest in pain management—Physicians reported limited interest in providing pain management, particularly to patients with a suspected or documented opioid addiction.

The patients that I've always kind of suspected as in one way or another abusing or taking too much [prescription opioids] or people that have an opiate addiction that were originally taking it for pain tend to be much more confrontational than the patients who I have no suspicion [sic].

Aberrant behaviors—Participants listed behaviors associated with suspected prescription opioid misuse, abuse, or addiction that they encountered, which they found clinically challenging and frustrating and which interfered with successful pain management, including requests for early refill of opioids, continued requests for dose escalations, seeking opioids from different physicians, opioid diversion, repeated reports of lost or stolen prescriptions, and insistence that only opioid treatment will alleviate pain.

I guess the things that I use are early refills, tox screens that don't make sense, if they're abusing other substances...We actually keep track of numbers of phone calls and the types of problems that are within the phone calls.

Prescribing opioid analgesics—Providers reported ambivalence about prescribing opioids for patients with chronic pain and rising concern among providers in their practice about prescribing opioids for patients with pain.

To help patients avoid transitioning from use to misuse is actually always my concern. I'm not reluctant to treat somebody for pain following a motor vehicle accident. The area that I then enter into is then how long do I continue it, at what dose, which narcotics. I feel very insecure about that.

Specifically, providers noted frustration about providing opioids to patients whom they suspected were abusing or dependent on prescription opioids.

I feel a tremendous amount of dissatisfaction with patients whom I'm writing narcotic scripts for on a monthly basis for pain, but feel they're addicted.

Opioid agreements—In contrast to the several barriers reported above, participants identified fewer facilitators. Many respondents reported that they routinely implemented opioid agreements or contracts. ¹⁶ Common elements included urinalysis to test for illicit drugs and the presence or absence of prescription opioids; specifying physician and patient roles and expectations; and assessing and addressing aberrant behaviors.

I had a patient who was getting oxycodone for six to eight months for a chronic pain issue...because we were concerned about his behavior, we did a urine tox which showed no oxycodone and, instead, showed morphine-could've been heroin or anything he bought. So, we discontinued oxycodone.

Providers noted that these agreements helped them to establish clear, appropriate boundaries.

The contract I really use so that it formalizes our relationship...it makes it easier if you have to take it to the next step and make this referral [to substance use disorder treatment].

Continuity of care—Physicians noted that their treatment of patients with chronic pain facilitated continuity. Examples included avoiding coordination with off-site addiction or pain-management providers, enhanced physician self-efficacy, increased adherence, and increased skill in setting boundaries with patients, especially those suspected of misusing or abusing their opioid analgesics.

I switched him to methadone for pain and we've been able to titrate the methadone for his pain and at the same time I told him I thought he had an addiction ...he got a new job and so far he's been socially stable and so the medication has worked.

Patient Factors

Physician responsiveness to patients' pain—Some providers noted that their patients with chronic pain felt that medical providers had not adequately listened or misunderstood their pain reports.

I am thinking of one gentleman in particular; he feels that doctors have not listened to him in the past. We've managed to hang on with each other for probably eight or nine months; so far, we're doing okay.

Attitudes toward opioid analgesics—Physicians noted that a subset of their patients with chronic and acute pain had concerns about the addiction potential of prescription opioids.

There are people who have expressed an interest to me in not wanting to be on the medication any more. Some have admitted that they're probably at some level of dependence or addiction and we have had open discussions about not wanting to need this medication any more.

Cost of specialty pain management—Some respondents felt their patients were concerned about the costs and coverage of specialty pain management.

There is a really big access issue with the pain clinics right now, for patients with Title 19 [Medicaid], and most of my patients are Title 19. So, while I can refer them, their likelihood of getting an appointment, even with strong advocacy from me, is very low.

Motivation—Participants questioned the motivation of some patients' requests for opioids for pain. Examples included desire to use prescription opioids for euphoric and not analgesic effect, and diversion.

In my first year here, I was very kindly giving benzodiazopenes to a woman for neck spasms and Percocet for her neck pain based on her records and what she told me. And when I found out I was also prescribing for her sister and her mother I realized that single handedly I was probably prescribing for all of New Haven, and immediately got them off.

Logistical Factors

Pain management referrals—Respondents noted the lack of options for pain management referrals. Examples included the dearth of specialty pain management services, especially those that can address co-occurring chronic pain and opioid addiction; frustration at lack of improvement in referred patients' pain status following specialty pain management; and perception that pain management clinics were too aggressive in prescribing opioids.

I give them [pain management doctors] very detailed notes about the problem... however, often I find that they are not accomplishing any more than I was and [patients] are often sent back to me with them [pain specialists] essentially saying, "we did our best." It's very frustrating, because if they were easy patients they wouldn't have been seeing them [pain management doctors], they wouldn't have been referred.

Specifically, some providers reported frustration with the response of anesthesiologists to their patients with chronic pain and the perceived proclivity of these providers to prescribe opioids.

...the anesthesiologists who do pain management don't really understand the difference between chronic pain vs. post operative pain or acute pain and they try to treat everyone as if it was acute pain. And it's like Saturday Night Live, "Cheeseburger, cheeseburger, Pepsi, Pepsi everyone gets narcotics!"

Respondents wished that they could refer patients with chronic pain and a suspected or confirmed opioid addiction to a specialist.

Well, I would love for there to be a separate clinic where I could refer patients for management of their chronic pain and substance abuse simultaneously. Kind of take me out of the picture.

Addiction referrals—Respondents noted that they had referred pain patients with suspected opioid addiction for addiction treatment with limited success. Examples included the absence of addiction treatment settings that specialized in managing pain and the reluctance of patients whom were suspected of having an opioid addiction to seek treatment for addiction.

I emphasize that I still want to be your doctor, we still need to take care of your diabetes or whatever, we will not hold this against you, but we will no longer prescribe this [prescription opioid analgesics] from this clinic.

Diagnostic workup—Some respondents indicated that some of their patients with chronic pain had not received a thorough diagnostic workup.

I'm inheriting a lot of patients that are on high levels of oxycodone or on a methadone program so I have to sort out why they're taking it and it's often very unclear and we don't have a formal screening process here so I basically wing it... probably less than 50% of them are actually worked up for like real physical issues that might be related to the pain.

Ancillary staff—Physicians expressed concern that they had insufficient qualified staff to implement pain management, e.g., absence of support staff who were trained and skilled in setting limits with patients with chronic pain, including those who exhibited aberrant behaviors.

So when I say difficult I mean not just the issues of addiction and pain and all of those things but also time and effort making the staff deal with these patients and also [the staff's] dissatisfaction.

Time—Participants were concerned about the time involved in providing pain management.

Time. They take up an inordinate amount of time...Trying to address what the pain is and the causes for it takes up an inordinate amount of time...Let me show you the paperwork on one, all of the paper work that had to go into this, the consult and everything.

Some providers noted that they restricted the number of pain patients whom they treat.

That is why you have to limit the number, you can't carry a lot of them because there's so much paperwork.

Insurance coverage—Some physicians expressed concerns about the logistics of insurance coverage for pain management services and the difficulty in characterizing patients' pain status because of restrictions from insurance companies.

We sent [a patient] to one but he could only go one time so the specialist wanted to start him on methadone, but we couldn't send him back there, every time we had to get permission [from his insurance company], every time.

DISCUSSION

In this study, practicing physicians identified a set of physician, patient, and logistical factors that intersect to either facilitate or impede the opioid treatment of patients with chronic pain. Several central themes exemplify the complexity of the care of this medical condition.

Physician Factors

Although patients with chronic pain receiving opioid therapy comprised approximately one-third of the study physicians' patient populations, several respondents reported a lack of interest in providing pain treatment, particularly in the context of suspected or documented addiction. The lack of physician interest in pain management was linked to a negative characterization of patients with chronic pain and clinical management difficulties associated with their treatment. This supports previous findings regarding physicians' attitudes on treating patients with chronic pain. 12,21,30,41 Lack of physician interest in treating chronic pain is important to address because it may contribute to the undertreatment of chronic pain19 and physician dissatisfaction. This paucity of interest appears, in part, to result from feeling unprepared to treat chronic pain and supports previous research on physicians' reports regarding their perceived inadequate training in pain management.22,28 Improved training in pain management (including in the context of suspected or confirmed addiction) may address this issue. Enhanced physician training in treating chronic pain is associated with higher levels of comfort in treating these patients.27

Due to concerns regarding the quality of pain treatment and prescribing practices in the U.S., the federal government is now considering mandating education in this area.⁴⁰ Proposed content areas include education about the use of methadone in pain management and addiction treatment, including the pharmacological properties of methadone that make it different from other opioids, and promoting the use of the physician clinical support system for methadone (pcssmentor.org) to offer providers information about recommended dosing guidelines and to address provider questions. Potentially important components of this education for office-based physicians include: (1) an overview of the 2001 Joint Commission on Accreditation of Healthcare Organizations (JCAHO) guidelines concerning the regular assessment of pain, and policies and procedures that support the appropriate use of pain medications; (2) a review of the range of treatment options for addressing chronic pain such as non-opioid (e.g., acetaminophen, non-steroidal anti-inflammatory medications) as well as opioid medications, and non-pharmacologic analgesic interventions (e.g., cognitive-behavioral therapy, physical therapy). Even when opioid medications are used in the office-based treatment of chronic pain, they should constitute a component of a multidisciplinary approach;25 (3) medical decision-making algorithms for selecting specific treatments to address chronic pain (e.g., see 25); (4) U.S. state regulations for managing chronic pain that emphasize the need for providers to balance pain relief with opioid medication abuse. Some states have adopted guidelines established by the Federation of State Medical Boards (http://www.fsmb.org), which emphasize (a) documenting patient evaluation and treatment plans, (b) reviewing treatment risk-benefit assessment with patients, (c) performing a periodic review, and (d) seeking consultation when appropriate.

Implicit in these guidelines is the recognition that the procedures should be followed for all patients irrespective of whether non-medical use of prescription opioid medications is judged likely; (5) setting appropriate boundaries with patients regarding the expectations for treatment; (6) use of opioid agreements and urine toxicology testing in opioid treatments for chronic pain. Studies to date suggest that opioid agreements and urine toxicology testing in office-based opioid treatment for chronic pain have not been widely adopted in the U.S.;3·7 and (7) importance of pain-related functioning as a treatment outcome and not solely attending to pain intensity.

Physicians estimated that 24% of their patients with chronic pain on opioid therapy were addicted to or currently abusing opioids. Physicians reported a variety of aberrant drug behaviors among their patients with chronic pain receiving opioid therapy. Debate exists concerning the prevalence of opioid addiction and aberrant drug behaviors in patients with chronic pain receiving opioids. Recent studies on long-term opioid therapy in primary care settings reported variable prevalence estimates of opioid use disorders: 2.8%, 3.8%, and 32%5,9,13 and a recent meta-analysis reported that the rate of aberrant medication behaviors in 5 studies ranged from 5% to 34%.26 While respondents in the current study attributed aberrant behaviors to suspected addiction or criminal intent, none discussed alternative explanations for these patient behaviors, such as pseudoaddiction (i.e., inadequate pain relief due to under-dosing of opioid analgesics that results in behaviors that mimic addiction) or untreated psychiatric conditions.29.43 Helping providers to (a) recognize pseudoaddiction, (b) distinguish between physical dependence, (i.e., expected neurobiological adaptation to the presence of a drug that results in a drug specific withdrawal profile following abrupt cessation of the drug) and addiction, which involves uncontrolled use of opioids (with or without physical dependence), (c) adopt the joint American Society of Addiction Medicine, the American Pain Society, and the American Academy of Pain Medicine 2001 joint guidelines regarding the definition of addiction to prescription opioids, in the context of pain management, 35 (d) specify pain patients' underlying motivation for suspected non-medical use of prescription opioids (e.g., pain relief, euphoria, relief of psychiatric symptoms),36 and (e) familiarize themselves with a patient-centered paradigm that clearly addresses the risks and benefits of prescription opioids or any other suggested pain treatment may benefit physicians in their treatment of chronic pain patients.6 Incorporating these interventions into medical and graduate medical education may improve providers' knowledge, skill set, and comfort levels in treating patients with chronic pain.

Some physicians reported success in treating patients with chronic pain. Ingredients of reported success typically involved good physician-patient communication and a focus on function instead of pain severity. Conversely, many of the management difficulties reported by physicians involved setting boundaries. Although some physicians seemed reluctant to use agreements, those who did use them reported benefits in setting boundaries and expectations. These findings support those previously reported on the importance of open provider-patient communication in the treatment of chronic pain and the importance of agreements. §

Patient Factors

Some physicians reported that a subset of their patients with chronic pain believed that primary care providers had not adequately listened to their pain reports or that their providers feared they would become addicted. These findings support previous research indicating that patients with chronic pain sometimes express fears about the perceived addiction risk associated with opioid therapy and experience physicians as being dismissive of their pain reports, ^{2,4} and highlights the importance of open patient-provider communication. ³⁹ Some physicians reported satisfaction and improved self-efficacy

following open communication with their patients with pain and the setting of boundaries, which typically involved the utilization of an agreement.

Logistical Factors

Respondents' concerns about the lack of adequately-trained support staff, time involved in treating pain patients and completing associated activities (e.g., referrals, paperwork), and insurance coverage have been noted previously as barriers to effective pain management. ¹⁷,33 The dearth of appropriate referrals for patients with co-occurring chronic pain and addiction was a major barrier to treatment.

Our study has several potential limitations. The qualitative design and analytic strategy were not intended to provide quantitative data on frequency of responses, or to determine whether attitudes towards barriers and facilitators of pain management differed by provider type, thereby limiting our ability to draw conclusions about the relative importance of the themes to different types of providers. Physicians' perceptions of patients' barriers and facilitators may not match actual patient perceptions; consequently, further research is needed to determine the extent to which physicians' perceptions accurately reflect those of their patients. We recruited physicians practicing in New England; therefore our findings may not be representative of all office-based physicians in the U.S. Although in comparison to quantitative studies, the number of participants recruited for the current study was relatively small, in comparison with other qualitative studies, the sample size was relatively large. In contrast to quantitative studies where sample size contributes, in part, to the generalizability of study findings, in qualitative studies using a Grounded Theory approach, the sample size is not a determining factor; instead, the focus is on recruiting selected participants until thematic saturation is reached, as was done in the current study. Study strengths include the use of a multidisciplinary team and the use of standard qualitative methods garnering candid statements.

Overall, our findings provide a rich depiction of the barriers and facilitators pertaining to office-based chronic pain treatment that may have important implications for program development and physician training. For example, increased training around pain management principles of assessment and treatment, including familiarizing providers with evolving guidelines regarding appropriate opioid therapy implementation (see e.g., 6·15·37) might noticeably increase office-based physicians' comfort and satisfaction treating chronic pain, including those with suspected or documented addiction.

Perspective

This article demonstrates that perceived barriers to treating patients with chronic non-cancer pain are common among office-based physicians. Addressing these barriers in physician training and in existing office-based programs might benefit both non-cancer pain patients and their medical providers.

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REFERENCES

 Barry DT, Irwin KS, Jones ES, Becker WC, Tetrault JM, Sullivan LE, Hansen H, O'Connor PG, Schottenfeld RS, Fiellin DA. Integrating buprenorphine treatment into office-based practice: A qualitative study. J Gen Intern Med 2009;24:218–225. [PubMed: 19089500]

- 2. Bennett DS, Carr DB. Opiophobia as a barrier to the treatment of pain. J Pain Palliat Care Pharmacother 2002;16:105–110. [PubMed: 14650454]
- 3. Bhamb B, Brown D, Hariharan J, Anderson J, Balousek S, Fleming MF. Survey of select practice behaviors by primary care physicians on the use of opioids for chronic pain. J Pain 2007;8:573–582. [PubMed: 17499555]
- 4. Breivik H, Collett B, Ventafridda V, Cohen R, Gallacher D. Survey of chronic pain in Europe: prevalence, impact on daily life, and treatment. Eur J Pain 2006;10:287–333. [PubMed: 16095934]
- 5. Chelminski PR, Ives TJ, Felix KM, Prakken SD, Miller TM, Perhac JS, Malone RM, Bryant ME, DeWalt DA, Pignone MP. A primary care, multi-disciplinary disease management program for opioid-treated patients with chronic non-cancer pain and a high burden of psychiatric comorbidity. BMC Health Serv Res 2005;5:3. [PubMed: 15649331]
- 6. Chou R, Fanciullo GJ, Fine PG, Adler JA, Ballantyne JC, Davies P, Donovan MI, Fishbain DA, Foley KM, Fudin J, Gilson AM, Kelter A, Mauskop A, O'Connor PG, Passik SD, Pasternak GW, Portenoy RK, Rich BA, Roberts RG, Todd KH, Miaskowski C, American Pain Society-American Academy of Pain Medicine Opioids Guidelines Panel. Clinical guidelines for the use of chronic opioid therapy in chronic noncancer pain. J Pain 2009;10:113–130. [PubMed: 19187889]
- Clark JD. Chronic pain prevalence and analgesic prescribing in a general medical population. J Pain Symptom Manage 2002;23:131–137. [PubMed: 11844633]
- 8. Clark LG, Upshur CC. Family medicine physicians' views of how to improve chronic pain management. J Am Board Fam Med 2007;20:479–482. [PubMed: 17823465]
- Cowan DT, Wilson-Barnett J, Griffiths P, Allan LG. A survey of chronic noncancer pain patients prescribed opioid analgesics. Pain Med 2003;4:340–351. [PubMed: 14750910]
- 10. Curry LA, Nembhard IM, Bradley EH. Qualitative and mixed methods provide unique contributions to outcomes research. Circulation 2009;119:1442–1452. [PubMed: 19289649]
- 11. Deyo RA, Weinstein JN. Low back pain. New Engl J Med 2001;344:363–370. [PubMed: 11172169]
- 12. Eccleston C, De C Williams AC, Rogers WS. Patients' and professionals' understandings of the causes of chronic pain: Blame, responsibility and identity protection. Social Science and Medicine 1997;45:699–709. [PubMed: 9226793]
- 13. Fleming MF, Balousek SL, Klessig CL, Mundt MP, Brown DD. Substance use disorders in a primary care sample receiving daily opioid therapy. J Pain 2007;8:573–582. [PubMed: 17499555]
- Fiellin DA, O'Connor PG, Chawarski M, Pakes JP, Pantalon MV, Schottenfeld RS. Methadone maintenance in primary care: A randomized controlled trial. JAMA 2001;286:1724–1731.
 [PubMed: 11594897]
- 15. Fine PG, Mahajan G, McPherson ML. Long-acting opioids and short-acting opioids: Appropriate use in chronic pain management. Pain Med 2009;10:113–130.
- 16. Fishman SM, Mahajan G, Jung SW, Wilsey BL. The trilateral opioid contract bridging the pain clinic and the primary care physician through the opioid contract. J Pain Symptom Manage 2002;24:335–344. [PubMed: 12458115]
- 17. Glajchen M. Chronic pain: Treatment barriers and strategies for clinical practice. J Am Board Fam Med 2001;14:211–218.
- 18. Glaser, BG.; Strauss, AL. Strategies for Qualitative Research. Aldine Publishing Co.; Chicago: 1967. The Discovery of Grounded Theory.
- 19. Green CR, Wheeler JRC, Marchant B, LaPorte F, Guerrero E. Analysis of the physician variable in pain management. Pain Med 2001;2:317–327. [PubMed: 15102236]
- 20. Gureje O, Von Korff M, Simon GE, Gater R. Persistent pain and well-being: A World Health Organization study in primary care. JAMA 1998;280:147–151. [PubMed: 9669787]
- 21. Hahn SR. Physical symptoms and physician-experienced difficulty in the physician-patient relationship. Ann Intern Med 2001;134:897–904. [PubMed: 11346326]

22. Karam-Hage M, Nerenberg L, Brower KJ. Modifying residents' professional attitudes about substance abuse treatment and training. Am J Addict 2001;10:40–47. [PubMed: 11268827]

- 23. Lin JJ, Alfandre D, Moore C. Physician attitudes toward opioid prescribing for patients with persistent noncancer pain. Clin J Pain 2007;23:799–803. [PubMed: 18075408]
- 24. Lister BA. Dilemmas in the treatment of chronic pain. Am J Med 1996;101:2-5.
- 25. Marcus, D. Risk management in chronic pain practice. In: Marcus, D., editor. Chronic pain: A primary care guide to practical management. Humana Press; Totawa: 2009. p. 15-34.
- Martell BA, O'Connor PG, Kerns RD, Becker WC, Morales KH, Kosten TR, Fiellin DA. Systematic review: opioid treatment for chronic back pain: Prevalence, efficacy, and association with addiction. Ann Intern Med 2007;146:116–127. [PubMed: 17227935]
- 27. O'Rorke JE, Chen I, Genao I, Panda M, Cykert S. Physicians' comfort in caring for patients with chronic nonmalignant pain. Am J Med Sci 2007;333:93–100. [PubMed: 17301587]
- Parish SJ, Ramaswamy M, Stein MR, Kachur EK, Arnsten JH. Teaching about substance abuse with objective structured clinical exams. J Gen Intern Med 2006;21:453

 –459. [PubMed: 16704387]
- 29. Passik SD, Kirsh KL. Assessing aberrant drug-taking behaviors in the patient with chronic pain. Curr Pain Headache Rep 2004:8289–294.
- 30. Ponte CD, Johnson-Tribino J. Attitudes and knowledge about pain: An assessment of West Virginia family physicians. Fam Med 2005;37:477–480. [PubMed: 15988631]
- 31. Portenoy, RK. Opioids for chronic pain: Historical notes. In: Smith, HS.; Passik, SD., editors. Pain and Chemical Dependency. Oxford University Press; New York: 2008. p. 15-18.
- 32. Potter M, Schafer S, Gonzalez-Mendez E, Gjeltema K, Lopez A, Wu J, Pedrin R, Cozen M, Wilson R, Thom D. Opioids for chronic nonmalignant pain. J Fam Pract 2001;50:145–151. [PubMed: 11219563]
- 33. Remster EN, Marx TL. Barriers to managing chronic pain: A pilot of prescriber perceptions in rural Appalachia. J Pain Symptom Manage 2008;36:1–2. [PubMed: 18358691]
- 34. Sandelowski M. Sample size in qualitative research. Res Nurs Health 1995;18:179–183. [PubMed: 7899572]
- 35. Savage, S.; Covington, E.; Heit, HA.; Hunt, J.; Joranson, D.; Schnoll, S. Definitions related to the use of opioids for the treatment of pain: A consensus document from the American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine. [Accessed April 5, 2010]. Available at: http://www.ampainsoc.org/advocacy/opioids2.htm
- 36. Savage, SR. The language of pain and addiction. In: Smith, HS.; Passik, SD., editors. Pain and chemical dependency. Oxford university press; New York: 2008. p. 9-14.
- 37. Savage SR. Management of opioid medications in patients with chronic pain and risk of substance misuse. Curr Psychiatry Rep 2009;11:377–384. [PubMed: 19785979]
- 38. Stannard C, Johnson M. Chronic pain management-can we do better? An interview-based survey in primary care. Curr Med Res Opin 2003;19:703–706. [PubMed: 14687440]
- 39. Tait RC, Chibnall JT, Kalauokalani D. Provider judgments of patients in pain: Seeking symptom certainty. Pain Med 2008;10:11–34. [PubMed: 18992039]
- 40. U.S. Government Accountability Office. Methadone-Associated Overdose Deaths: Factors Contributing to Increased Deaths and Efforts to Prevent Them. [Accessed July 15, 2009]. Available at http://www.gao.gov/products/GAO-09-341
- 41. Upshur CC, Luckmann RS, Savageau JA. Primary care provider concerns about management of chronic pain in community clinic populations. J Gen Intern Med 2006;21:652–655. [PubMed: 16808752]
- 42. Verhaak PF, Kerssens JJ, Dekker J, Sorbi MJ, Bensing JM. Prevalence of chronic benign pain disorder among adults: A review of the literature. Pain 1998;77:231–239. [PubMed: 9808348]
- 43. Waisman D, Haddox JD. Opioid pseudo addiction: An iatrogenic syndrome. J Pain Symptom Manage 2000;19:274–286. [PubMed: 10799794]
- 44. Weinstein SM, Laux LF, Thornby JI, Lorimor RJ, Hill CS, Thorpe DM, Merrill JM. Attitudes toward pain and the use of opioid analgesics: Results of a survey from the Texas Cancer Pain Initiative. South Med J 2000;93:479–487. [PubMed: 10832945]

Table 1Participant and Substance-Related Patient Characteristics*

Participant Characteristics				
Women, %				
White, %	80			
Years Since Medical School Graduation, mean (SD) $\!$				
Clinical Specialization				
Internal medicine, %	50			
Infectious disease, %	20			
Addiction medicine, %	15			
Psychiatry, %	10			
Family medicine, %	5			
Location of Practice				
Small to medium city, %	80			
Suburban area, %	20			
Type of Practice				
Clinic affiliated with teaching hospital, %	55			
Individual practice, %				
Hospital clinic, %	5			
Staff model HMO, %	5			
Single specialty group, %	5			
Community clinic, %	5			
Participants' Work Activities during Average Month				
Patient treatment, %	70			
Administration, %	13			
Research, %				
Other activities, %				
Drug Enforcement Administration Registration to Provide Buprenorphine	25			
Substance-Related Patient Characteristics				
Patients on prescription opioids (PO) for chronic pain (CP), %				
% of patients on PO for CP with history of opioid addiction				
% of patients on PO for CP currently abusing or addicted to opioids				

^{*} Based on the reports of 20 physician participants.

 $^{^{\}dagger}$ SD, Standard Deviation

 Table 2

 Barriers and Facilitators to Implementing Office-based Pain Management

Themes	Subthemes	Examples
Physician factors	Pain assessment Expertise in pain management Expertise in POA* Co-existing disorders Interest in pain management Aberrant behaviors Prescribing opioid analgesics Opioid agreements† Continuity of care†	Absence of physiological measures of pain intensity Absence of formal training in pain management Difficulty broaching topic of medication abuse Difficulty managing co-occurring psychiatric conditions Absence of interest in treating pain patients Patients' exclusive focus on opioid analgesics Reluctance to "over-prescribe" opioids for pain relief Specifying expectations about patient behaviors Enhanced patient compliance
Physicians' perceptions of patient factors	Physicians' response Attitudes to prescription opioids Cost Motivation	Physicians not listening to patients' pain reports Concern about addiction potential Concern about covering pain management costs Patient diversion of prescription opioid medication
Logistical and systemic factors	Pain management referrals Addiction referrals Diagnostic workup Ancillary staff Time Insurance coverage	Lack of appropriate pain management referrals Low patient compliance with referrals Absence of sufficient diagnostic data Lack of confidence in ancillary staff's skills Time spent completing paperwork Concern about pain management reimbursement

^{*}POA = Pain and opioid addiction.

 $^{^{\}dagger}\text{Facilitators}.$