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It Made My Life a Little Easier: Primary Care Providers' Beliefs and Attitudes about Using Opioid Treatment Agreements

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Abstract

Objective—To understand primary care providers' experiences, beliefs and attitudes about using opioid treatment agreements (OTAs) for patients with chronic pain.

Design—Qualitative research study

Participants—28 internists and family medicine physicians

Approach—Semi-structured telephone interviews, informed by the Integrative Model of Behavioral Prediction. Themes were analyzed using a Grounded Theory approach, and similarities and differences in themes were examined among OTA adopters, non-adopters, and selective adopters.

Results—Participants were 64% female and 68% white, and practiced for a mean of 9.5 years. Adoption of OTAs varied: 7 were adopters, 5 were non-adopters, and 16 were selective adopters. OTA adoption reflected PCPs' beliefs and attitudes in three thematic categories: (1) perceived effect of OTA use on the therapeutic alliance, (2) beliefs about the utility of OTAs for patients or providers, and (3) perception of patients' risk for opioid misuse. PCPs commonly believed that OTAs were useful for physician self-protection, but few believed that they prevent opioid misuse. Selective adopters expressed ambivalent beliefs and made decisions about OTA use for individual patients based on both observed data and a subjective sense of each patient's risk for misuse.

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Conclusions—Substantial variability in PCP use of OTAs reflects differences in PCP beliefs and attitudes. Research to understand the impact of OTA use on providers, patients, and the therapeutic alliance is urgently needed to guide best practices.

Introduction

In response to skyrocketing rates of prescription opioid misuse, addiction, and overdose,[1] recent guidelines suggest that physicians who prescribe opioids for patients with chronic non-malignant pain adopt strategies to mitigate the risk.[2–4] One recommended strategy is to use a written opioid treatment agreement (OTA), sometimes considered a contract, to define the patient and provider responsibilities and conditions upon which opioids may be discontinued. Currently, there is a lack of evidence that OTAs improve clinical outcomes for patients, but the existing literature suggests that OTAs may reduce behaviors indicative of misuse, such as obtaining opioids from multiple providers,[5] and that OTA use is associated with improved provider confidence and satisfaction.[6, 7]

Adoption of OTAs in primary care has been variable; 23–42% of primary care providers (PCPs) use OTAs, and only 11–39% of patients on long-term opioids had an OTA in their chart.[8–11] This variation in use is not understood and previous studies have not investigated the factors underlying PCPs' decisions about adopting OTAs, including their beliefs and attitudes about OTA use. Therefore, we conducted a qualitative study to understand PCPs' reasons for adopting, not adopting, or selectively adopting OTAs. A goal of this study was to guide development of a primary-care based intervention to improve safety in opioid prescribing for patients with chronic non-malignant pain.

Methods

Setting

We recruited primary care physicians who practiced at two outpatient health centers in Bronx, New York. Both health centers are teaching clinics for *[institution blinded]* Medical Center's training programs and serve predominantly low-income Latino and African-American patients. At the time of data collection (May 2011 to April 2012), each of the health centers had its own OTA document available on-site (not in the electronic medical record), which was endorsed by clinic leadership, but its use was not enforced or standardized and decisions about OTA use rested with individual PCPs. This study was reviewed by *[institution blinded]* Institutional Review Board and considered exempt.

Participants

Participants were recruited through announcements at faculty meetings, visits to the two health centers, and via email. Eligible participants were: (1) primary care physicians practicing at either of the health centers, (2) trained in internal medicine or family medicine, and (3) currently in at least their fourth post-graduate year of medical training (i.e., chief resident, fellow, or attending physician). Interns and residents were not included because their clinical decision-making occurs under supervision by other physicians and our goal was to understand decisions made my independent clinicians. Nurse practitioners and physicians' assistants were not included because none was practicing at the health centers at the time of recruitment. Recruitment continued until thematic saturation was achieved.

Data Collection

Participants completed a single telephone interview with one of two study coordinators lasting between 45 and 90 minutes. The interview included a 20-item questionnaire about PCP socio-demographic and practice characteristics, followed by an open-ended semi-

structured qualitative interview about experiences, beliefs, and attitudes about using long-term opioids for managing chronic pain. The interview focused on OTA use, and a sample OTA was emailed to participants during the interview to prompt discussion. The interview questions were based on the Integrative Model of Behavioral Prediction, which posits that behavior (in this case, PCP use of OTAs) is determined by intent to do the behavior, which is in turn determined by attitudes, norms, and beliefs about efficacy.[12, 13] Interviews were audio-recorded and professionally transcribed. Participants received a $50 gift certificate as remuneration.

Analysis

We analyzed interview data using a grounded theory approach to allow themes to emerge.[14] Two authors *[initials blinded]* reviewed audio-files and transcripts of the first eleven interviews in order to identify the general topics and concepts, and discussed these with the study team to develop an initial coding scheme. Using NVivo 10 software (QSR International Pty Ltd. Version 10), the same two authors independently coded transcripts using the initial coding scheme, which was iteratively revised throughout the process to accommodate and combine themes that emerged. Coding discrepancies and thematic analysis were discussed with the full study team and resolved through consensus. All transcripts were independently recoded by two authors *[initials blinded]* using the final coding scheme.

To understand PCPs' decisions about whether and how they use OTAs, we first classified each PCP as an adopter, non-adopter, or selective adopter of OTAs. This classification was based on response to the multiple-choice item on the questionnaire, "How often do you use written opioid treatment agreements (or contracts) with patients to whom you prescribe long-term opioids for chronic pain?" with response options of "never," "almost never," sometimes," "almost every time," and "every time." PCPs were classified as adopters if they responded "every time" to the questionnaire item, or if they responded "almost every time" to the questionnaire item but in the interview described using OTAs for "every patient" or "always" for patients on opioids. PCPs were classified as non-adopters if they responded "never" or "almost never" to the questionnaire item. Remaining PCPs were considered selective adopters because they used OTAs for some patients but not others. We used the query function in NVivo 10 to sort the qualitative data by these classifications and identify similarities and differences in the major themes by the PCPs' adoption status.

Results

Of the 28 participating PCPs, most were female (64%), white (68%), attending physicians (82%), trained in general internal medicine (64%), and had practiced as a PCP for a mean of 9.5 years (Table 1). PCPs' estimated, on average, that 20% of their primary care patients suffered from chronic non-malignant pain and that 28% of these patients were prescribed opioids. Adoption of OTAs varied widely: 7 were adopters, 5 were non-adopters, and 16 were selective adopters. Though not statistically significant, adopters and selective adopters tended to be younger (mean age 37 and 39, respectively) than non-adopters (mean age 51).

PCPs' general views on OTAs were diverse, ranging from "a really powerful tool" to "the most mistrusting thing ever." The prominent beliefs and attitudes that determined or justified PCPs' decisions whether or not to use OTAs fell into three thematic categories: 1) perceived effect of OTA use on the therapeutic alliance between providers and patients; 2) beliefs about the utility of OTAs; and 3) perception of patients' risk for opioid misuse. In this cohort, adoption or non-adoption of OTAs was largely determined by PCPs' perceptions about the effect of OTA use on the therapeutic alliance and beliefs about the utility of using OTAs (the first 2 thematic categories); while selective adopters expressed ambivalence

about the first 2 thematic categories and made decisions about OTA use for individual patients largely based on their perception of the patient's risk of opioid misuse. Most PCPs described managing chronic pain in general, and using OTAs in particular, as time-consuming, but concerns about time did not differ by or explain adoption status. Below, we describe the themes within each category and provide exemplary quotes, identifying quoted participants by a unique identifier and their OTA adoption status ("A" for adopters, "NA" for non-adopters, and "SA" for selective adopters).

Perceived effect of OTA Use on the therapeutic alliance

Most PCPs in our study expressed wanting to have a collaborative, trusting therapeutic alliance with their patients. Beliefs about the effect of OTA use on the integrity of the therapeutic alliance were mixed, and varied among adopters and non-adopters. Adopters tended to believe that having an OTA strengthened the alliance by improving communication and collaboration. One PCP stated, "I think it improves the care, because you are able to then have more open and frank discussions around their pain… and [about] other things going on in their life" (PCP 1-A). Another PCP said, "In the best of circumstances it actually will make for a deeper more trusting relationship" (PCP 14-A). Others said that introducing an OTA provides a "wonderful opportunity" to clarify "what our individual responsibilities are for the relationship" (PCP 13-A) and that the OTA "demonstrates my commitment to [the patient's] care" (PCP 19-SA).

Non-adopters believed that rather than improve the therapeutic alliance, introducing an OTA could negatively impact it by conveying mistrust or reinforcing the power differential. Regarding mistrust, one non-adopter felt that ""it can really strike a major blow to trust in the doctor patient relationship when you ask someone to sign a piece of paper" and " There is an assumption in here that you're going to go off the rails and we've got to corral you" (PCP 15-NA). Regarding the power differential, non-adopters saw described an OTA as "just something to punish the patient" (PCP 23-NA), "a huge power play on the part of the doctor," (PCP 15-NA), and noted that the OTA "puts the patient in a defensive position" (PCP 25-NA). One PCP described evolving thoughts on this, "

PCPs in this cohort, particularly selective adopters, expressed ambivalence about whether OTA use helps or harms the therapeutic alliance. For example, a selective adopter said, "I think it forces both the provider and the patient to acknowledge that they're in it together to treat the person's pain… but … if there is already mistrust between the patient and the doctor, it could heighten that mistrust" (PCP 7-SA). Some PCPs recognized that the effect of using an OTA on the therapeutic alliance could be positive or negative, depending on either the effort or approach used when initiating the agreement. For example, "If I tried to do it in a 15-minute visit, I think it probably would do more harm than good" (PCP 14-A), and "It takes work on the provider's part, to make it an alliance-building instrument instead of a punitive contract" (PCP 7-SA).

Beliefs about the Utility of OTAs

PCPs' beliefs about the utility of OTAs were focused on their utility for achieving three main goals: 1) diagnosis of opioid misuse [including abuse, addiction, and diversion]; 2) prevention of opioid misuse; and 3) physician self-protection. The main utility of OTAs for adopters and selective adopters was physician self-protection, and they also found them useful as a diagnostic tool. Non-adopters and selective adopters tended to doubt that OTAs would be useful for preventing misuse.

Diagnosis—OTA adopters and selective adopters reported that using an OTA could improve diagnosis of opioid misuse, addiction, or diversion. In particular, when patients

reacted defensively to the introduction of an OTA, this was interpreted as a sign of problematic use. For example, “It’s the patients who are kind of gaming the system and just looking to get free drugs that object to it, I find… when they don’t agree to that, I think they have other motivations” (PCP 16-A). Another said, “The patients that are not abusing these prescriptions are fine with signing a contract and sticking to it” (PCP 17-SA). Following through with the monitoring plan also helped to diagnose problematic opioid use. For example, “Putting her on the agreement just really increased her own awareness of just how dependent she is on the medicine’” (PCP 26-SA).

Prevention—In this cohort, only a few PCPs believed that OTAs can effectively prevent or deter opioid misuse, and endorsed this view somewhat tepidly. For example, “it kind of changed her behavior when I pointed out that she wasn’t following the agreement” (PCP 3-A), and “I think that using the pain contract makes the patient feel a little more uncomfortable sometimes to go and misuse the medication” (PCP 23-NA). The predominant sentiment among non-adopters and selective adopters was doubt that using the OTA would deter patients from misusing prescribed opioids. “I don’t know that it affects whether or not a patient is going to misuse the medication” (PCP 7-SA). Others stated, “Do I think that they actually change behavior? … I’m very skeptical. I would say no” (PCP 12-SA), and “Patients just find a way around them” (PCP-SA).

Physician self-protection—Most PCPs believed that using an OTA with a patient would protect him or herself, or that other PCPs use them to protect themselves. In particular, PCPs believed that OTAs would protect the PCP from future conflicts and serve to reassure the PCP that he or she is doing something to prevent opioid misuse. Only two PCPs said that OTAs would protect them from medico-legal challenges. Most PCPs felt that using an OTA would protect them from future conflicts by establishing a roadmap for monitoring and treatment that would make it easier or less contentious to respond to problematic opioid use. “[An agreement] lays the ground work. If there are problems that arise in the future… we can refer back to the agreement” (PCP 1-A). Another PCP said “It gives me leverage or comfort in discontinuing the medication if the patient violates the agreement, because we’ve kind of laid it out from the beginning that those behaviors were not okay” (PCP 27-SA). The belief that OTA use provided reassurance to the physician was common, for example, “it’s something that we say that we’ve done to make ourselves feel better” (PCP 4-SA). Selective adopters expressed ambivalence, for example, “It made my life a little easier, but I’m not sure it did the patients a giant service” (PCP 9-SA).

Perception of Patients’ Risk of Misuse

This theme was more important for selective adopters, who described making decisions about when to use an OTA based on their perception of a patient’s risk of misuse. For example, one PCP described using an OTA “if my pre-test probability is moderate or high for risky use” (PCP 2-SA). Another described the OTA as a tool “to be used when I feel like I need it… when I’m uncomfortable [because of] concerns about misuse and diversion (PCP 21-SA).” Perceptions about a patients’ risk of misuse were based predominantly on two things: 1) known or observed data about a patient’s opioid or substance use behaviors, and 2) the PCPs’ subjective sense or “hunch” that a patient may misuse their opioids or be difficult to manage in the future.

PCPs’ assessment of a patient’s risk for misuse and therefore OTA use was based on historical data (i.e., history of substance abuse), and on observed behaviors that raised their concern. For example, PCPs reported that they would use an OTA “after some behavior has happened” (PCP 10-SA) or “when we feel the patient is abusing the system” (PCP 23-NA). One said, “it never occurred to me [to use an OTA] for somebody that was basically stable

and where I wasn't concerned about the behavior" (PCP 27-SA). Examples of behaviors that raise concern enough to prompt OTA use included running out of pills early or precisely on time, reporting lost prescriptions, requesting a specific number of pills, and being aggressive with staff.

Selective adopters' subjective sense of how likely a patient was to misuse their medications factored into decisions about OTA use. Their descriptions about the subjective sense of risk tended to be vague, or influenced by interpersonal impressions or social cues. "I've used them in the patients that I perceive as… interpersonally or psychosocially more challenging" (PCP 9-SA), or "in patients who I was either sensing I was going to have difficulty or I was already having difficulty" (PCP 28-SA). One PCP described not using OTAs with some patients, "[about whom] I feel very strongly with regards to the whole picture of them, that they don't really need [have an OTA]… I'm talking about my little old ladies that have really terrible, terrible arthritis" (PCP 26-SA). PCPs acknowledged that basing clinical decisions on their subjective sense of a patient might not be fair or accurate. "Honestly, it's probably my suspicion of their risk of diverting [that determines whether or not I use an OTA], but I think it shouldn't be that way… it probably should become part of the standardized protocol" (PCP 17-SA). Another PCP noted that "there's a disconnect," saying, "my brain wants to say…what we teach the residents… [that] anybody on narcotics [should have an OTA], even if it's the sweetest little 85-year-old woman who looks like your grandmother, versus, you know, some guy from the ghetto wearing his pants down at his knees… it shouldn't really matter" (PCP 21-SA).

Discussion

In this cohort of PCPs, there was substantial variation in adoption of OTAs for patients who are prescribed opioids for chronic pain, as has been seen in the general population of PCPs.[8–11] This is the first study to identify the beliefs and attitudes that underlie PCPs' decisions whether and when to adopt OTAs. Decisions were based on the PCPs' perception of whether OTAs inhibit or promote the therapeutic alliance, and on PCPs' beliefs about the utility of using OTAs for patients and providers. Selective adopters expressed ambivalence and used OTAs with patients whom they perceived to have elevated risk for opioid misuse, based on observed behaviors and a subjective sense of risk. Taken together, these findings indicate that PCPs' decisions about OTA use are complicated, and are not based solely on how effective they perceive OTAs to be in deterring opioid misuse, but importantly, on how they perceive OTA use to impact their own experience managing chronic pain and their therapeutic alliance with patients.

Given the importance of a strong therapeutic alliance in primary care based management of chronic illnesses, it is not surprising that PCPs' perceptions of how OTA use impacts the therapeutic alliance is a critical determinant in their decisions about whether to use them. Specifically, PCPs who felt that an OTA would negatively impact that alliance by conveying mistrust or reinforcing the power differential between patients and providers tended to use them rarely if ever, and those who perceived a positive impact on the therapeutic alliance tended to adopt them more routinely. Unfortunately, there is currently little data to support either view about the effect of OTAs on the therapeutic alliance. We are not aware of studies reporting patient satisfaction with OTAs, patient perceptions about the effect of OTA use on the therapeutic alliance, or how OTA use impacts surrogate outcome measures for the therapeutic alliance, such as retention in care; though broader studies of patient perspectives on pain and opioid management reveal tension with providers.[15, 16]

In the absence of data, opinion leaders have disagreed about the impact of OTAs on the therapeutic alliance, particularly about whether OTAs inhibit or promote shared decision-

making, a key component of the therapeutic alliance. Some experts posit that OTAs inhibit shared decision-making because patients might feel coerced into signing them, may not be able to control the terms of the agreement, and might not even understand what they are "agreeing" to.[17, 18] Indeed, many OTAs are written at high literacy levels[19, 20] and in one study, 40% of patients whose PCP reported that they signed an OTA did not endorse having one.[21] Others propose that OTAs can enhance shared decision-making by involving patients in goal-setting, and improving communication about the intended treatment and monitoring plan so patients and provider can make more informed decisions about care.[22–24] We believe that both are plausible outcomes and we agree with Fishman and colleagues that an OTA is "a clinical tool that can be used or abused."[24]

PCPs' beliefs about the utility of OTAs varied, and hinged upon the question of, "who benefits—the patient or the provider?" PCPs in this study tended to doubt that OTA use would affect patient outcomes by preventing misuse or changing patients' behavior, but they did believe that OTA use provided self-protection. Indeed, there is limited evidence about the effectiveness of agreements for reducing or preventing misuse,[5, 6, 25, 26] but several studies have found that OTA use is associated with greater physician self-efficacy, preparedness, and satisfaction managing patients with chronic pain.[6, 7, 27, 28] Although benefit to the physician is not commonly accepted as the main goal for introducing a clinical intervention with patients, there may be value to it in this setting. Management of opioids for patients with chronic pain is one of the PCPs' greatest challenges, causing them substantial discomfort and frustration,[29–33] and their discomfort might lead to under- or over-treatment of pain or negative attitudes towards patients with pain.[34] Therefore, we believe that "it made my life easier" could be an important outcome, but its value must be interpreted alongside the risks to patients and providers, which are not yet understood.

Selective adoption of OTAs, based on the providers' perception of a patient's risk for opioid misuse or how "difficult" it would be to manage the patient, warrants additional concern. Studies have shown that physicians are poor at discerning which patients are likely to have problems.[35–37] The application of stereotypes (e.g., "the guy whose pants are sagging" and "little old ladies") raise concern that implicit biases may impact decisions about OTA use, and is consistent with findings that providers overestimate risk and more closely monitor sub-groups of patients based on social cues like race rather than actual risk.[36–39] Some PCPs in the current study acknowledge these biases in OTA use decisions, and to avoid that, experts have called for a standardized or universal approach for all patients.[3, 24, 40]

This study has several limitations. The sample size was small, and participants were recruited as a convenience sample of PCPs in a single urban and academic health system, limiting generalizability. Despite this, participants demonstrated a range of behaviors, beliefs, and attitudes that likely reflect those of PCPs in other settings. PCPs in this study were not restricted by clinic policies, which was an advantage in understanding individual PCPs' decisions, but we were not able to evaluate the impact of clinic or regulatory policies on OTA adoption. We relied on PCP self-report about OTA use behaviors, which is subject to recall bias, and it is possible that some beliefs or attitudes that PCPs expressed reflected rationalization of their past decisions rather than determinants of those decisions.

The current epidemic of opioid analgesic addiction and overdose has outpaced the state of the evidence about best practices in opioid prescribing.[41] Our findings indicate that, within this context, variability in use of clinical tools aiming to reduce opioid misuse reflects providers' beliefs and attitudes rather than evidence about their utility, and for PCPs, decisions are guided by perceived impact on the therapeutic alliance. To be acceptable to PCPs, initiatives to improve the safety of opioid prescribing in primary care settings should aim to enhance collaboration with patients, for example, through discussions focused on

optimizing the benefits and minimizing the harms of opioids and using an OTA document that is low-literacy and includes both patient and provider responsibilities for safe and effective use.[20, 22, 23] Rigorous evaluation of such initiatives is necessary to determine outcomes for patients, providers, and the therapeutic alliance.

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Table 1

Characteristics of Primary Care Physician Participants (n=28)

	n (%)
Age, mean (SD)	40.7 (9.5)
Female, n (%)	18 (64.3%)
Race/ethnicity, n (%)*	
African American/Black	3 (10.7%)
Hispanic/Latino	4 (14.3%)
Asian/Pacific Islander	3 (10.7%)
White	19 (67.9%)
Specialty, n (%)	
General Internal Medicine	18 (64.3%)
Family Medicine	9 (32.1%)
Internal Medicine Subspecialty	1 (3.6%)
Training Level	
Chief Resident	4 (14.3%)
Fellow	1 (3.6%)
Attending	23 (82.1%)
Years as a PCP, mean (range)	9.5 (0.5 to 29)
Clinical time	
Percent of time providing direct primary care, mean (SD)	33.8 (17.9)
Percent of time precepting residents, mean (SD)	16.4 (11.3)
Chronic pain panel	
Percent of patient panel with chronic pain, mean (SD)	19.6 (14.3)
Percent of chronic pain patients prescribed opioids, mean (SD)	27.5 (29.0)

*One respondent identified as African American and Hispanic/Latino

Table 2

Major Themes Explaining Adoption, Non-adoption, and Selective Adoption of Opioid Treatment Agreements by Primary Care Physicians

Adoption was characterized by:
Perceived positive effect of OTAs on the therapeutic alliance: OTAs enhance collaboration
Belief about the utility of OTAs: OTAs protect or reassure the provider
Non-adoption was characterized by:
Perceived negative effect of OTAs on the therapeutic alliance: OTAs convey mistrust and reinforce power differential
Belief about the utility of OTAs: Doubt that OTAs deter opioid misuse
Selective adoption was characterized by:
Ambivalence about the effect on the therapeutic alliance
Ambivalence about the utility of OTAs
Decision to use OTA based on provider's perception of individual patient's risk of misuse