Published in final edited form as:

*Subst Abus*. 2016 ; 37(1): 148–153. doi:10.1080/08897077.2015.1129391.

# When HIV treatment goals conflict with guideline-based opioid prescribing: A qualitative study of HIV providers

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## Abstract

**Background—**HIV-infected patients have high prevalence of chronic pain and opioid use, making HIV care a critical setting for improving the safety of opioid prescribing. Little is known about HIV treatment providers' perspectives about opioid prescribing to patients with chronic pain.

**Methods—**We administered a questionnaire and conducted semi-structured telephone interviews with 18 HIV treatment providers (infectious disease specialists, general internists, family practitioners, nurse practitioners, and physician assistants) in Bronx, NY. Open-ended interview questions focused on providers' experiences, beliefs, and attitudes about opioid prescribing and about use of guideline-based opioid prescribing practices (conservative prescribing, and monitoring for and responding to misuse). Transcripts were thematically analyzed using a modified grounded theory approach.

**Results—**Eighteen HIV treatment providers included 13 physicians, 4 nurse practitioners, and 3 physician assistants. They were 62% female, 56% white, and practiced as HIV providers for a mean of 14.6 years. Most reported always or almost always using opioid treatment agreements (56%) and urine drug testing (61%) with their patients on long-term opioid therapy. HIV treatment providers tended to view opioid prescribing for chronic pain within the "HIV paradigm," a set of priorities and principles defined by three key themes: 1) primacy of HIV goals, 2) familiarity with substance use, and 3) the clinician as ally. The HIV paradigm sometimes supported, and sometimes conflicted with guideline-based opioid prescribing practices. For HIV treatment providers, perceived alignment with the HIV paradigm determined whether and how guideline-based opioid prescribing practices were adopted. For example, the primacy of HIV goals

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Findings from this study were presented at the Association of Medical Education and Research in Substance Abuse (AMERSA) 37th Annual Conference in Bethesda, MD on November 8, 2013.

Author contributions: Each of the authors contributed significantly to this work. Research conception and study design was primarily by Joanna Starrels and Chinazo Cunningham, with contributions from Aaron Fox and Julia Arnsten. Data collection was led by Joanna Starrels and conducted by Deena Peyser, and coding was conducted by Deena Peyser and Lorlette Haughton. All authors contributed to data analysis, interpretation of the results, and preparation of the manuscript for submission.

superseded conservative opioid prescribing when providers prescribed opioids with the goal of retaining patients in HIV care.

**Conclusion—**Our findings highlight unique factors in HIV care that influence adoption of guideline-based opioid prescribing practices. These factors should be considered in future research and initiatives to address opioid prescribing in HIV care.

## Introduction

Opioid analgesic use, addiction, and overdose have skyrocketed in the past decade,[1–5] alongside increased prescribing to patients with chronic pain. In response, clinical practice guidelines have emerged to promote safety when opioids are prescribed for patients with chronic pain.[6–9] Currently, guideline-based opioid prescribing includes two key principles: 1) conservative prescribing of opioids (e.g., avoiding opioids, limiting the opioid dose); and 2) monitoring for and responding to misuse (e.g., using treatment agreements, urine drug testing, and tapering opioids if the risks are excessive).

HIV care is a critical but understudied setting for initiatives to improve the safety of opioid prescribing. Chronic pain is very common in HIV-infected adults, occurring in 30–90%,[10–22] and up to 30% of HIV-infected patients are prescribed opioids.[1,19,23] Further, substance use and mental health disorders are prevalent among HIV-infected patients, and increase the risk for opioid misuse and addiction.[11,19,24–28] Though not well studied, about half of HIV-infected patients with prescribed opioid analgesic use have misuse.[14,29–32]

Despite the high burden and risks of opioid prescribing in HIV care, little is known about HIV treatment providers' adoption of guideline-based opioid prescribing practices. In one study, only 4% of HIV-infected patients on long-term opioids had any urine drug test in one year,[33] and in another, only 8% of HIV treatment providers routinely ordered urine drug tests.[34] In addition, little is known about providers' attitudes about adopting guideline-based opioid prescribing practices. Two studies found that primary care providers were concerned that monitoring patients for opioid misuse would negatively impact the physician-patient relationship.[35,36] However, to our knowledge, no studies have examined attitudes about opioid prescribing among HIV providers, who face particular challenges of balancing goals of HIV treatment and opioid management among a marginalized and stigmatized population that is at risk for opioid misuse and addiction. To guide development of interventions to improve the safety of opioid prescribing in HIV treatment settings, we conducted a qualitative study to understand HIV treatment providers' perspectives (experiences, beliefs, and attitudes) regarding opioid prescribing, and use of guideline-based opioid prescribing practices, for HIV-infected patients with chronic pain.

## Methods

### Setting

We recruited HIV treatment providers who practiced in the Bronx, NY at a Ryan White funded comprehensive HIV Clinic or in an HIV primary care network comprised of 10 clinics. The Ryan White clinic and the primary care network clinics are all affiliated with [BLINDED] College of Medicine and [BLINDED] Medical Center and serve predominantly

low-income Latino/a and African-American patients. Both settings provide comprehensive services including medical care, social work, and on-site psychiatry. At the time of the study, treatment agreements and urine drug testing were recommended but not required in either setting, and their use was inconsistent. This study was reviewed by the [BLINDED] Institutional Review Board and considered exempt.

## Participants

Eligible HIV treatment providers were infectious disease specialists, general internists, family medicine physicians, nurse practitioners, or physician assistants who provided primary care services for HIV-infected patients. Providers were eligible if they: 1) provided care in the Ryan White HIV clinic or HIV primary care network, 2) provided HIV care for at least 10 unique patients according to medical record data in 2012, and 3) self-reported prescribing long-term opioids (for more than 3 months) to any HIV-infected patients with chronic pain. Providers were recruited through announcements at faculty meetings and via email and follow-up telephone calls. Recruitment continued until thematic saturation was achieved (i.e., additional interviews did not yield new themes).

## Data Collection

After providing oral informed consent, participants completed a single telephone interview with the study coordinator ([BLINDED]), which lasted between 45 and 60 minutes. Interviews were conducted from September 2012 to April 2013. The interview included a 20-item questionnaire about provider characteristics and use of treatment agreements and urine drug testing, followed by an open-ended semi-structured qualitative interview. Interview questions were open-ended and inquired about participants' experiences, beliefs, and attitudes about opioid prescribing, and use of guideline-based opioid prescribing practices for HIV-infected patients with chronic pain. Sample questions included, "Please describe your experience managing HIV-infected patients on long-term opioids," "Is there anything about caring for HIV-infected patients in particularly that influences pain or opioid management?," and, "How do you think your approach differs from that of your colleagues?" Interviews were audio-recorded and professionally transcribed and expunged of identifiers. Participants received a $50 gift certificate as remuneration following completion of the interview.

## Analysis

We analyzed interview data using a modified grounded theory approach which included iterative review of the data and inductive thematic analysis.[37] First, two authors ([BLINDED]) reviewed audio-files and transcripts of the first five interviews to identify the general topics and concepts, and discussed these with the study team to develop an initial coding scheme. Next, using NVivo 10 software (QSR International Pty Ltd. Version 10), we independently coded transcripts using the initial coding scheme, which was iteratively revised to accommodate and combine themes that emerged through sequential reading of the transcripts and discussion with the study team. The final coding scheme included concepts that characterized providers' principles and priorities of HIV care as well as their experiences, attitudes, and beliefs about opioid prescribing and using guideline-based opioid prescribing practices. All transcripts were independently recoded by two authors

([BLINDED]) using the final coding scheme. We used the matrix coding query function in NVivo 10 to cross-tabulate the data to understand how the key principles of HIV care were related to experiences, attitudes, and beliefs about opioid prescribing.

## Results

Eighteen HIV treatment providers participated in the study. Of these, most were female (13) and white (10) (See Table 1). Their mean age was 48 and they had practiced as an HIV treatment provider for a mean of 14.6 years (median 16). Clinical specialties were: infectious disease physician (6), nurse practitioner (4) or physician assistant (1), general internist (5) and family medicine physician (2). Four of the physicians were waivered and had prescribed buprenorphine for treatment of opioid dependence. On average, the 18 providers estimated that about one-quarter of their patients had chronic pain and that about one-quarter of those with chronic pain were prescribed opioids. The majority reported routinely using opioid treatment agreements (10) and urine drug testing (11) for patients prescribed long-term opioid therapy.

We found that HIV providers in this study tended to view opioid prescribing for patients with chronic pain within the framework of HIV care. This framework, which we refer to as the “HIV paradigm” comprises a set of priorities and principles that have their foundation in treatment of HIV but were also applied to opioid management. Three key themes defined the HIV paradigm: 1) primacy of HIV goals, 2) familiarity with substance use, and 3) the clinician as ally. For participants in this study, the HIV paradigm either supported or conflicted with guideline-based opioid prescribing practices, and this determined whether or how guideline-based opioid prescribing practices were adopted. Below, we describe each of the three features of the HIV paradigm and how they support or conflict with guideline-based opioid prescribing, using exemplary quotes.

### Primacy of HIV goals

The most prominent and consistent theme was that HIV treatment providers’ main priority when managing HIV-infected patients was to engage and retain patients in care, to treat them with antiretroviral therapy (ART) and achieve or maintain HIV viral suppression. For example, one provider said, “When somebody is HIV positive, I'm very hell-bent on getting them enrolled in care and keeping them in care.” Further, some HIV treatment providers felt that, in addition to HIV being the focus, pain and opioid management were outside of their scope of care. For example, “I am not trained in [pain management] and I’ve been kind of forced by circumstance to be the pain management provider.” And, “I feel like it [opioid management] is for somebody who’s really in the specialty of pain management.”

The primacy of HIV goals sometimes supported guideline-based opioid prescribing, specifically when providers perceived opioid adherence as associated with ART adherence. For example, providers’ focus on identifying and managing poor ART adherence called attention to opioid adherence as well, and could lead to identification of opioid misuse. One provider said, “When somebody is not virally suppressed … it increases my suspicion that there is medication diversion for both [opioids and ART].” Another said, “You have to do it [prescribe opioids] within a structure… Patients have to be compliant. They have to be

adherent to their HAART [highly active ART], they have to come to their appointments, they have to actually be taking the narcotics that you are giving them, they can't be using drugs."

However, more prominently, the primacy of HIV goals conflicted with guideline-based opioid prescribing. Specifically, providers' focus on retaining patients in HIV care conflicted with and superseded conservative opioid prescribing. First, a prominent finding was that providers believed that prescribing opioids could enhance their ability to engage and retain patients in care. One provider stated, "It's different from general medicine… In the HIV population, sometimes I feel like the opioids are used as a way to bring them in, to have them come back to each session so you can build their trust and eventually get them onto their HAART… [it is] a different mindset." Another said, "By prescribing opiates… you may be increasing your chances of having them remain in your care so that they could benefit from actually having their HIV treated." Another said, "We make a deal that, you know, 'I will continue to write these medications for you, and I will do it reliability once a month, but I have to see you and we have to talk about your ART.' I think many patients have gotten improvement in their HIV control because of that frequent interaction with the medical system."

Further, prioritization of retention in HIV care could lead providers to overlook opioid misuse out of concern that discontinuing opioids would lead to termination of care. For example, "I'm probably a little bit more permissive with the HIV positive folks… Is it more harmful overall for somebody to be misusing opiates, if in fact, while they're misusing they remain engaged for HIV care and have their viral load undetectable? Or is it more harmful to terminate their opiate prescription because of fear of misuse … but that ends up resulting in the person having uncontrolled viral loads? … So it leads back to this question of what's really the goal of care. What is the greater good?"

### Familiarity with substance use

Providers described a familiarity with caring for patients with substance use problems, and considered substance use to be commonplace in HIV care. For example, "I think people who take care of patients with HIV are different… you see many things you would never see in a non-HIV/substance-using population… You have patients still using, or not using… it's a different mindset." Many providers were accustomed to patients using drugs and some expressed acceptance of drug use among their patients. For example, "She doesn't have a significant substance abuse history, except for being a daily marijuana smoker."

In some ways, providers' familiarity treating patients with substance use supported guideline-based opioid prescribing. For example, providers recognized that their patients who had substance use histories would be at increased risk for developing prescription opioid misuse or addiction. Therefore, they prescribed opioids more conservatively or monitored for misuse more carefully in these patients than in patients without substance use histories. One provider stated, "Some of my HIV patients have issues with addiction… I try never to use any kind of addictive medicine with them… I don't want to move them back into that." Providers' familiarity with substance use also increased their comfort using guideline-based opioid strategies such as urine drug testing and treatment agreements with patients. Indeed, questionnaire data revealed that use of these strategies was common among

the participants [Table 1]. One provider said, “I've worked in drug treatment … everybody got [urine drug] tested … We've got such a problem with substance abuse. I think that that overshadows any kind of negative [aspect of drug testing].” Another said, “I really try not to let people go without one [a treatment agreement] because it [substance use] is just so prevalent in our community.”

In other circumstances, HIV providers’ familiarity with substance use conflicted with guideline-based opioid prescribing principles. Specifically, some providers indicated that they accepted or tolerated substance use among patients prescribed opioids when other providers might choose to discontinue opioids. For example, “I have a patient… with very advanced [HIV] disease, a history of drug addiction … who also is cocaine addicted …I have not stopped prescribing the pain medicine because … I don’t want her to suffer more than she’s already suffering. So despite the fact that her urines are … always positive for cocaine, I’ve continued giving her the oxycodone.” Other providers described examples where they would not change the course in response to potential opioid misuse. For example, “[Urine drug testing] is helpful to at least know what's going on, and certainly you can address it with the patient if they are …using something they're not supposed to be using. But at the same time, I don't know how much it ultimately changes your management.”

### The clinician as ally

HIV treatment providers viewed themselves as patients’ allies, were committed to acting in their patients’ interests, and described trusting their patients’ word. A common sentiment was, “I need to make sure that I do right by my patient.” One provider said, “The paradigm of general medical care and HIV care is one of permissiveness and trust.” One way that providers expressed trust in patients was through their acknowledgement that HIV infection causes “real pain” that should be treated. One provider said, “HIV itself lends to the degeneration, even in younger people, of joints and backs… a lot of them have valid pain… so, I don’t disbelieve [my patients].” Another said, “In people with long-term HIV infection, the virus itself has infected bones and the nerves… the pain that they have really is chronic.”

HIV providers’ perceived role as an ally committed the patient’s best interest sometimes supported guideline-based opioid prescribing, specifically when providers were concerned that opioids were unsafe. For example, “If I’m prescribing you a narcotic, I have every right to know, for your safety, what other drugs you are taking… I’m giving you a drug and if you mix the cocaine and the oxycodone you could hurt yourself, and … my belief is that I am not going to do harm to patients. So I feel no ambivalence about doing it [urine drug testing] whatsoever.”

However, providers’ perceived role as an ally sometimes conflicted with and superseded guideline-based opioid prescribing. First, some providers viewed monitoring HIV-infected patients for misuse of opioids or illicit drugs as demonstrating mistrust and further stigmatizing an already marginalized population. For example, one provider said, “We’re trained to be advocates for our patients and not adversaries. So any time that you’re doing something where you’re surveilling your patient’s behaviors, I think casts you in the role of an adversary rather than an advocate.” Another said, “In the early days of the AIDS

epidemic, everybody was dying, everyone came in for care and there was a lot of issues around who's selling their meds etc., and I decided that I'm not the police, I'm the doctor, and I go by what the patient tells me."

Further, providers' perceived role as a patient ally was sometimes in conflict with conservative opioid prescribing principles. One provider described, "The healthcare system… tries to push us to act as if the patient is a liar … instead of performing our appropriate role of being the patient's advocate and working for the patient's best interest… In fact it's fairly well documented that we undertreat pain … and that mostly we err on the side of not giving enough pain relief rather than giving too much pain relief." Another provider said, "I don't understand the mentality that you would cut them off from getting their Percocet or their MS Contin … because they have cocaine in their system. Because then you're making a declaration that cocaine users can't have pain, or cocaine users aren't entitled to analgesia… I think that that's probably contrary to good medical practice."

## Discussion

In this qualitative study, we found that HIV treatment providers viewed opioid management for HIV-infected patients with chronic pain through the lens of HIV care. Specifically, we identified an HIV paradigm with three key features: primacy of HIV goals, familiarity with substance use, and the clinician as ally. These features of the HIV paradigm sometimes supported but sometimes conflicted with principles of guideline-based opioid prescribing. Providers' perception of how the HIV paradigm was aligned with guideline-based opioid prescribing principles appeared to determine, or at least justify, whether these practices were implemented. Importantly, we found that the HIV paradigm that emphasizes above all else retention in care to achieve viral suppression could contribute to provider resistance to conservative opioid prescribing principles and to low monitoring for or response to misuse. Our findings highlight unique factors in HIV care that influence adoption of guideline-based opioid prescribing practices.

Our findings raise concern that the HIV paradigm could negatively impact the safety of opioid prescribing and have unintended negative consequences for HIV-infected patients with chronic pain. Specifically, HIV providers' primary concern to retain patients in care to achieve HIV viral suppression, being accustomed to treating patients with substance use, and their perception of themselves as patient allies, could each contribute to liberal opioid prescribing with the intent to ally themselves with the patient and retain them in care. Though evidence is limited, some studies have found high opioid prescribing[1,19,27,38] or low use of monitoring in HIV care.[33,34] This could lead to addiction, overdose, or diversion. HIV-infected patients may be at particular risk for addiction or overdose, because of the high prevalence of substance use disorders and mental health problems.[39–42] Prior substance abuse is associated with a 2- to 6-fold increase in odds of opioid analgesic misuse in patients prescribed opioids for chronic pain.[43–45] Though further research is needed to characterize the trade-offs of prioritizing HIV goals over opioid safety goals, caution is warranted.

Some HIV providers believed that opioid prescribing could improve retention in care and HIV outcomes, but importantly, the impact of opioid prescribing practices on HIV outcomes

is unknown. One retrospective study found that HIV-infected patients with pain had better retention in care (fewer missed visits) than those without pain.[46] A few observational studies have found an association between opioid prescription and being prescribed ART, but not with viral suppression.[1,19,24] Further, implementing guideline-based opioid prescribing practices, particularly when it leads to discontinuing opioids, could negatively impact the provider-patient relationship and lead to termination of care. Qualitative studies of HIV-infected patients with chronic pain and primary care providers who are not focused on HIV also raised concerns that guideline-based opioid prescribing practices negatively impacted the doctor-patient relationship,[35,36,47] but we are not aware of studies that have quantified this risk. Thus, there is a real but undetermined risk that HIV-infected patients could fall out of care and suffer negative HIV-related outcomes. To guide care for HIV-infected patients with chronic pain, further research is needed to understand the actual impact of opioid prescribing and guideline-based opioid prescribing practices on HIV outcomes.

Though many health care providers likely strive to be patient allies, several factors might make this a particular focus in the HIV paradigm of care. As was raised in this study, HIV was until recently a terminal illness, and it still largely affects marginalized populations such as drug users, and sexual or racial minorities. Thus, the field has attracted providers who are committed to caring for marginalized populations. However, providers' perception that prescribing opioids for chronic pain was the logical response to believing in the verity of patients' pain raises concerns that providers overestimated the benefits or underestimated the risks of opioids. Particularly as HIV shifts towards being a chronic non-fatal disease, other competing risks need further attention.

There are limitations to this study. Though HIV providers in this study practiced at several clinics in different neighborhoods in the Bronx, the 18 providers in the study all worked within a single health system in the same urban area, so our findings may not be representative of HIV providers in other settings. For example, substance use problems are prevalent in the Bronx, and in other settings HIV providers may not have the same familiarity with substance use. As with other qualitative studies, our results highlight important themes but we are not able to quantify or compare the frequency, intensity, or impact of the themes we identified; we hope this will be a topic for future research.

In sum, this qualitative study of HIV providers highlights ways in which the paradigm of HIV care can either support or conflict with guideline-based opioid prescribing practices. Optimally, initiatives to improve the safety of opioid prescribing in HIV care should address the ways in which they conflict. In addition to research to support guideline recommendations, studies are needed to examine how guideline-based opioid prescribing practices actually impact important patient outcomes such as retention in care and HIV viral load suppression. Such studies, together with our findings, will guide future initiatives aiming to improve the safety of opioid prescribing among HIV-infected patients with chronic pain.

## Acknowledgments

We are grateful to the Einstein-Montefiore Division of General Internal Medicine Qualitative Research Group for guidance and critical feedback.

Funding: This study was supported by the Society of General Internal Medicine Lawrence Linn Award (Starrels), the Einstein-Montefiore Center for AIDS Research (NIH AI-51519), the National Institute on Drug Abuse (K23DA027719 [Starrels], K24DA036955 [Cunningham], K23DA034541 [Fox], R25DA023021 [Arnsten]) and the National Institute on Mental Health (K23MH104073 [Merlin]).

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**Table 1**

Characteristics of HIV Treatment Providers (n=18)

| | n (%) |
|---|---|
| **Demographic characteristics** | |
| Female | 13 (62) |
| Race | |
| White/Caucasian | 10 (56) |
| African American/Black | 3 (17) |
| Asian/Pacific Islander | 2 (11) |
| Hispanic/Latino | 1 (6) |
| Other or refused | 2 (11) |
| Age, mean (SD) | 47.8 (11.6) |
| Years as HIV Treatment Provider, mean (SD) | 14.6 (9.8) |
| Specialty | |
| Infectious disease (ID) physician | 6 (33) |
| Nurse practitioner or physician assistant | 5 (28) |
| General internal medicine physician | 5 (28) |
| Family medicine physician | 2 (11) |
| Buprenorphine prescriber | 4 (22) |
| **Opioid prescribing practices (by self-report)** | |
| Percent of patient panel with chronic pain | 28.3 (15.9) |
| Percent of chronic pain patients prescribed opioids | 27.5 (26.1) |
| Use of treatment agreements with patients on opioids | |
| Never or almost never | 2 (11) |
| Sometimes | 6 (33) |
| Every time or almost every time | 10 (56) |
| Use of urine drug testing with patients on opioids | |
| Almost Never | 2 (11) |
| Sometimes | 5 (27) |
| Every time or almost every time | 11 (61) |