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Shifting blame: Buprenorphine prescribers, addiction treatment, and prescription monitoring in middle-class America

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Abstract

Growing nonmedical prescription opioid analgesic use among suburban and rural Whites has changed the public's perception of the nature of opioid addiction, and of appropriate interventions. Opioid addiction has been recast as a biological disorder in which patients are victims of their neurotransmitters and opioid prescribers are irresponsible purveyors of dangerous substances requiring controls. This framing has led to a different set of policy responses than the "War on Drugs" that has focused on heroin trade in poor urban communities; in response to prescription opioid addiction, prescription drug monitoring programs and tamper-resistant opioid formulations have arisen as primary interventions in place of law enforcement. Through the analysis of preliminary findings from interviews with physicians who are certified to manage opioid addiction with the opioid pharmaceutical buprenorphine, we argue that an increase in prescriber monitoring has shifted the focus from addicted people to prescribers as a threat, paradoxically driving users to illicit markets and constricting their access to pharmaceutical treatment for opioid addiction. Prescriber monitoring is also altering clinical cultures of care, as general physicians respond to heightened surveillance and the psychosocial complexities of treating addiction with either rejection of opioid dependent patients, or with resourceful attempts to create support systems for their treatment where none exists.

Keywords

buprenorphine; opioid maintenance treatment; prescription monitoring programs

Introduction

The prescription opioid abuse epidemic of the late 1990s–2000s came on the heels of President George H. W. Bush's "Decade of the Brain," during which the National Institutes on Drug Abuse (NIDA) devoted its research agenda to biotechnological treatments for addiction, locating the cause of addiction in the brain and biology of individuals (Vocci, Acri, & Elkashef, 2005). In 1997, Alan Leshner, then Director of NIDA, published a landmark article entitled, "Addiction is a Brain Disease, and It Matters." His focus on

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psychotropic treatments and the neurophysiology of addiction, as well as his silence about the social conditions of drug use, reflected an aspiration to universal, pharmaceutical answers to the problem of addiction (Chou & Narasimhan, 2005; Leshner, 1997; Volkow & Li, 2005).

In the same period, new long-acting opioid pain relievers such as OxyContin were approved for the treatment of moderate pain as "minimally addictive" based on their manufacture in time-release capsules. Pharmaceutical representatives promoted their use among primary care physicians largely in suburban and rural community practices (van Zee, 2009). Opioid users soon discovered that the time-release capsule could be broken and its contents snorted or injected for the rapid onset of oxycodone's effect, a sensation reported to be similar to that of heroin. Between 2001 and 2010, opioid prescriptions nearly *doubled* in U.S. emergency departments, and drug overdose deaths have more than tripled since 1990 (Centers for Disease Control and Prevention, 2011), while the rate of pain-related complaints increased by only 4% (Mazer-Amirshahi, Mullins, Rasooly, van den Anker, & Pines, 2014).

At the same time, the federal government's emphasis on the biology of addiction as a physiological disease paved the way for FDA approval of buprenorphine, commercially known as Suboxone, for long-term pharmaceutical maintenance of opioid dependent people in the privacy of doctors' offices. Buprenorphine is an opioid with pharmacological properties similar to methadone, but it differs from methadone in two significant ways: it carries a lower risk of overdose death due to a "ceiling effect" on its ability to suppress respiration, and it is manufactured in combination with naloxone, an opiate antagonist, which causes withdrawal symptoms if injected but is imperceptible if taken orally (Aalto, Halme, Visapaa, & Salaspuro, 2007; Davis, 2012; Raisch, Fye, Boardman, & Sather, 2002). With these molecular safeguards against overdose and misuse, buprenorphine was billed as uniquely suited for safe treatment of opiate dependence. Federal law was changed from prohibiting the use of opioids to treat addiction outside of DEA-regulated methadone clinics, to enabling general physicians to prescribe buprenorphine from their offices, reversing a prohibition that had been in place since the 1914 Harrison Act.

There is evidence that office-based buprenorphine was promoted as a treatment primarily for middle-class, White prescription opioid dependent patients seeing private practice physicians. First, during congressional hearings of the late 1990s on the rising use of opioids in suburban and rural areas, committee members emphasized that for "suburban youth" and "citizens who are not usually associated with the term addiction," buprenorphine was a desirable alternative to methadone. Since its dissemination in the 1970s, methadone maintenance has been stigmatized (Harris & McElrath, 2012), marginal to mainstream clinical practice, and associated with poor and/or ethnic minority heroin injectors (Hansen & Roberts, 2012). According to congressional testimony, the new opioid users of the suburbs were "not the hard core users" for whom the methadone clinic with its daily observed dosing requirement was designed (Netherland, 2010). Second, the manufacturer's marketing strategies relied on web-based advertising, with images of White affluent patients on sponsored websites. In addition, in an agreement designed to address the concerns of the DEA about potential illicit use (or "diversion" from prescribed use) of buprenorphine,

federal regulators required physicians who wanted to prescribe buprenorphine to complete an 8-hour training course for certification. This meant that prescribers tended to be those in private practice whose clientele could pay additional fees out of pocket or from private insurance, rather than public sector prescribers with no incentive to expand their already heavy caseload (Hansen & Skinner, 2012).

In short, buprenorphine was subject to a different regulatory structure and patterns of dissemination. In the first few years after its approval, 91% of buprenorphine patients were White, over half employed and college educated, the majority prescription opioid dependent, while methadone patients were much more likely to be non-White, the majority unemployed and heroin dependent, with no college education (Stanton, McLeod, Luckey, Kissin, & Sonnefeld, 2006). In New York City, buprenorphine is most frequently used in neighborhoods with the highest percentage of White and high-income residents (Hansen et al., 2013). This pattern is replicated by other studies finding income and ethnic/racial disparities in buprenorphine treatment (Baxter, Clark, Samnaliev, Leung, & Hashemi, 2011; Knudsen, Ducharme, & Roman, 2006) and that a majority of buprenorphine patients are treated in private physician practices (Stein et al., 2012). Buprenorphine in the US, with some regional exceptions such as Baltimore, where the municipal government promoted its public sector dissemination (Schwartz et al., 2013), has served as a specific intervention for prescription opioid dependent people who are more likely to be affluent, educated, and White than urban heroin users. Access to buprenorphine treatment is especially salient in light of rising overdose deaths; buprenorphine is an effective overdose prevention tool, having reduced opioid overdose deaths in countries such as France by 80% in the first 7 years after its national adoption by general practitioners (Emmanuelli & Desenclos, 2005).

The criminalization of prescribers

The latest chapter in the story of rising prescription opioid misuse in the US involves prescription drug monitoring laws that were passed in response to the growing number of opioid overdose deaths. Such deaths occurred primarily among White males, ages 18 to 25 (Mazer-Amirshahi et al., 2014; New York City Department of Health and Mental Hygiene [NYC DOHMH], 2014), who have historically used social privilege to invoke “medical need” for powerful prescription narcotics (Herzberg, 2009). Indeed, portrayals of prescription opioid users in popular media have been sympathetic descriptions of White, 20-something suburban youth, full of potential, who play cello, are high school hockey stars, or simply young men with a strong work ethic who fell victim to their doctor’s prescription or suburban boredom (Goodman & Wilson, 2014; Sontag, 2013). A 10-page *Rolling Stone Magazine* article told the story of a young woman whose prescription opioid abuse began after her grandfather passed away from brain cancer. She felt compelled to take his unused OxyContin in order to “make pain go away,” as it had for her grandfather (Amsden, 2014). These images of middle-class, suburban prescription opioid users contrasted sharply with prior criminalized images of dangerous, heroin-addicted, inner city Black and Latino youth.

Policy makers were called upon to intervene in this national crisis of opioid misuse and overdose among middle-class Whites. Their response contrasted with the wide-scale arrests of urban ethnic minorities that characterized the U.S. “War on Drugs” in the 1980s. Rather

than criminalizing prescription opioid users, a move that would presumably have been politically unpopular among middleclass voters, policy makers instead focused on the prescribers who were thought to be the gateway to endless supplies of abusable opioids.

The popular media has been an important force in shaping public opinion that the current crisis is one perpetuated by "drug-pushing doctors." Expose´s featured crackdowns on physicians who dispensed opioids in large quantities. For example, one account that gained traction was the interception of a $550 million prescription oxycodone trafficking scheme in the Bronx that led to the arrest of several clinicians (Weiser, 2014). Prescription opioid manufacturers have responded by developing tamper-resistant formulations of their leading analgesics, including OxyContin, that make them more difficult to crush and snort or inject (Cicero, Ellis, & Surratt, 2012). Simply put, large-scale interventions have targeted prescribers and drug manufacturers, rather than the drug users as in the "War on Drugs."

Sociocultural research on the evolving circulation of pharmaceuticals has shown how medications have profound social effects, reaching into realms far removed from the clinic, serving as a pervasive metaphor in daily life as the popular culture is infused with "the pharmaceutical imaginary" (Oldani, Ecks, & Basu, 2014; see also Jenkins, 2010). Opioid maintenance for opioid dependence has been particularly engaging for ethnographers, as these drugs (primarily methadone and buprenorphine) call attention to the narrow boundary between poison and cure, and the intensive clinical-cultural work that goes into defining them as medications as opposed to drugs of abuse (Bourgois, 2000; Garcia, 2010; Lovell, 2006; Meyers, 2013). Ethnographers of pharmaceuticals have also shown how pharmaceutical development and dissemination increasingly stand in as primary public health interventions for conditions that are rooted in economic inequalities, political disempowerment, and social exclusions, including HIV infection, psychiatric diagnoses, and narcotic addiction (Beihl, 2007; Campbell & Lovell, 2012; Ecks, 2014; Kalofonos, 2010). The role of physician-prescribers in fostering this shift— under the influence of direct-to-prescriber marketing and industrial ghostwriting of clinical journals, as well as an audit culture and reward structure that privilege prescription writing as evidence of clinical performance—has come under increasing public scrutiny and social scholarly critique (Angell, 2008; Elliott, 2010; Fugh-Berman & Ahari, 2007; Healy, 2012; Lewis, 2012; Matheson, 2008; Oldani, 2004). There have been recent anthropological contributions on addiction and the conceptualization of its treatment (Raikhel & Garriott, 2013; Singer, 2012), with a need for more analysis of the role of the prescriber within the continuum of care. Prescribers' own navigations of conflicting regulatory, professional, and patient/consumer demands have been less examined. These are important areas of inquiry; in the case of opioid prescribing, the nuances of these conflicts and how they are resolved have life-and-death consequences.

Emerging data indicate that licit sources of prescription opioids are shrinking, as prescribers are subject to intensified monitoring and new formulations of prescribed opioids are proving difficult to misuse (Deyo et al., 2013; Gugelmann & Perrone, 2011). Currently, 49 states and one U.S. territory have prescription drug monitoring programs (PDMPs; Prescription Drug Monitoring Program Training and Technical Assistance Center, 2015). As of August, 2013, New York became the first U.S. state among four to mandate PDMP use by physicians prior

to their prescription of Schedule II, III, or IV medications (McNeely et al., 2012), implementing the Internet System for Tracking Over-Prescribing, or I-STOP. While shrinking supplies of licit opioids may indicate a successful intervention to policy makers (Katz et al., 2008; Reifler et al., 2012), media reports have also described opioid dependent people, cut off from their licit supplies, as turning to illicit drug markets for opioid pills and, increasingly, to heroin as a cheaper, more accessible substitute for prescription opioids (Argoff, Kahan, & Sellers, 2014). An additional layer to this surveillance has been the DEA's initiative to make unannounced site visits to buprenorphine prescribers for inspection in response to reports of growing diversion and illicit markets of buprenorphine (Moran, 2010). In short, policy makers and regulators have continued to constrict access to prescription opioids, on the implicit assumption that addiction and overdose are being driven by careless prescribing, and driven by the pharmacological properties of the drug, leaving unexamined the impact of these measures on physicians and their opioid dependent patients.

These trends in opioid treatment and prescription regulation raise key questions with regard to clinical cultures of physician practices surrounding addiction. How are prescribers responding to growing restrictions on their practice? What impact has this had on their interaction with patients, and on their adoption of medical interventions for those who are opioid dependent? We asked these questions of community-based and public clinic-based buprenorphine certified prescribers in New York City, the U.S. city with the largest number of opioid and opiate dependent people, in order to illuminate the end effects of changes in U.S. drug policy on clinical cultures of medication. These physicians are in a key structural position as gatekeepers of both prescription opioids for treatment of pain, such as oxycodone, and of buprenorphine as a treatment for dependence on heroin and prescription opioids. We argue that physicians caught between the dual pressures of heightened government surveillance on one hand and the psychosocial complexities of treating addiction on the other, are responding with either rejection of opioid dependent patients, or with resourceful attempts to create support systems for their treatment where none exists.

Methods

In order to investigate the impact of state and federal regulations on prescribers of opioid maintenance treatment, from 2013 to 2014, we recruited buprenorphine prescribers during site visits to the nine municipal hospitals and three Veterans' Affairs Medical Centers in New York City that offered outpatient methadone and/or buprenorphine treatment. We also recruited community-based private prescribers from a list of New York City buprenorphine-certified physicians from the Substance Abuse and Mental Health Services Administration's (SAMHSA) website. A targeted subset of interviews with community-based physicians in Staten Island was conducted in order to examine the effect of prescription monitoring programs on private practice addiction treatment. Index participants were asked to identify additional public sector buprenorphine prescribers for inclusion in the study, using a modified snowball sampling technique in which new participants were solicited until no new names were offered. Snowball sampling was used in order to map professional networks of buprenorphine prescribers for elucidation of dissemination patterns, and also in order to saturate the regional network of prescribers with our participant recruitment.

Of the 89 public and private sector buprenorphine/Suboxone prescribers contacted for participation in the study, 36 declined to participate, most of which did not reply to voicemail or written messages. Fifty-three interviews were completed between January of 2013 and November of 2014. Personal demographic information about providers was not collected, as it was not part of our initial research question.

Trained graduate-level interviewers, including the authors, conducted in-person, semistructured interviews with opioid maintenance prescribers. Interview answers were transcribed to electronic Word files during the interviews, which lasted 30–60 minutes each. The interviews sought provider views with respect to regulation-based barriers and facilitators of methadone and/or buprenorphine, as well as on diversion and barriers to treatment.

The research team, which consisted of social science graduate students and medical doctors, also conducted participant observation in the clinical sites from which interview participants were recruited. The research team collected weekly field notes on clinical care team meetings in two major public clinics that provide buprenorphine treatment, as well as on activities occurring outside clinic consultation rooms and in surrounding neighborhoods of community-based buprenorphine prescribers over a 2-year period (2012–2014).

Interview transcripts and field notes were analyzed with NVIVO 9 using iterative thematic coding techniques, including continuous comparison and pragmatic adaptation of grounded theory in order to develop relevant coding categories (Corbin & Strauss, 1997; Emerson, Fretz, & Shaw, 2011; Lingard, Albert, & Levinson, 2008; Reeves, Kuper, & Hodges, 2008). Multiple coders, including the authors, were used for all transcripts to check intercoder reliability. Discrepancies between coders were resolved through team discussion and consensus.

This research was conducted with informed consent procedures and safeguards of confidentiality approved by the New York University's Human Subjects Institutional Review Board.

Results

Four key themes emerged from our interviews regarding both private and public sector prescribers' incorporation of buprenorphine into the treatment of addiction: (a) deficiencies in addictions medicine training and the certification process that led to lack of knowledge or confidence in treating opioid dependent patients; (b) provider perceptions of patients as wavering between deceitful and free of fault, hinging on their ability to identify with patients; (c) provider perceptions of regulatory agencies as either working with or against providers to curb overdose and diversion rates; and (d) changing clinical practice in response to prescriber monitoring, polarized between increased screening and discharging of patients who are deemed risky, or alternately, extending services to accommodate patient needs.

Deficiencies in training and integrated services

> Addiction medicine is a really challenging field and I'm not sure one all-day session prepares you for dealing with this type of population. (Buprenorphine prescriber)

Fully 67% of physicians interviewed felt that the 8 hours of training required for buprenorphine certification worked against providers becoming buprenorphine certified, either because they felt it was insufficient or because it was too burdensome given physicians' busy schedules. Others had heard of delays in certification that discouraged colleagues from following through with obtaining the certification, especially for those who experienced months of delay before their buprenorphine certification was finalized. Providers without addiction medicine training backgrounds cited the inadequacy of the 8-hour training, especially when treating patients at facilities without ancillary psychiatric services. This was especially evident with patients who had mental health comorbidities; as one prescriber said, "the lack of psychiatric services precludes some providers from accepting patients with comorbid mental health problems." Moreover, buprenorphine is not subject to the same regulation as methadone, and prescribers are not mandated to provide psychosocial treatment. Even prescribers who could offer psychiatric services, those in public hospital clinics attached to mental health services, were frustrated by patient resistance: "Patients come into the outpatient clinic and want buprenorphine and don't want to enroll in [the rest of the program] … for actual treatment, buprenorphine alone is not the answer."

Many prescribers felt a lack of institutional and provider network support in addition to perceived inadequate training, particularly community-based private practice physicians who had been trained in general medicine. Despite their lack of formal addictions training, more than half reported that they do not collaborate or refer to other buprenorphine prescribers for counseling or advice in treating opiate dependent patients. Most community-based private physicians echoed the sentiment of one physician with regard to providing buprenorphine maintenance treatment: "I am an island by myself."

Insufficient training, lack of established provider network support, and a patient population with high rates of comorbidities has increased the burden on providers who already feel as though they are ill-prepared to deal with at-risk populations; this meant that providers felt a higher burden when treating opioid dependent patients, both interpersonally and institutionally, as discussed in the following two sections.

Perceptions of patients

Physicians were ambivalent about the types of patients buprenorphine certification would attract. A majority of the community-based private practitioners reported that most of their patients were from within their neighborhood and did not fit the stereotype of "user." For example, one prescriber asserted that people who came to his clinic for buprenorphine maintenance were "not criminals; they're teachers, nurses, policemen, CEOs." Despite this, prescribers also expressed that other physicians were hesitant about becoming certified or providing buprenorphine maintenance treatment because of the stigmatized nature of the opioid dependent patient. Overall, 75% of physician participants identified negative attitudes

towards substance abuse patients or addiction treatment as dissuading doctors from prescribing buprenorphine. One physician noted, “providers generally are not interested in treating opiate addicted patients because they are problematic in general. It’s a little more difficult type of patient to deal with.” These concerns were reflected in the opinion expressed by 88% of buprenorphine prescribers who reported that they or their colleagues suspected that their patients may have shared and/or sold buprenorphine. Prescribers often recalled times when patients attempted to circumvent treatment or diverted on their opiate regiment; “they say that the dog ate [their prescribed opioids] or that grandma flushed them down the toilet,” and attempted to get prescription refills sooner than scheduled. However, often prescribers “gave [patients] a chance to be honest” and modified clinical services to accommodate them despite signs of tampering with urine toxicologies or finding that their patient had gone to additional physicians for opioids through prescription monitoring programs. Many prescribers expressed that their patients were not “criminals,” but rather, physiologically dependent on opioids and were therefore worthy of added support in most circumstances. One provider stated,

> These are smart, Irish American, kids. They’re smart and know right from wrong and they didn’t think they were doing anything wrong. The substance affects judgment and suddenly they start lying, cheating, stealing, even within family, and without having had a criminal background.

Community-based physicians in Staten Island (as a small and homogenous borough), often conveyed narratives of personal identification with relapsing patients. During one of our interviews, a provider described a young male buprenorphine patient who had relapsed and died of an overdose due to preexisting cardiovascular disease. She described how this patient reminded her of her son, and how his death motivated her to continue treating opioid dependent patients despite her negative experiences with relapsed patients:

> We had a patient who never filled up [her buprenorphine prescription], she had no motivation. Soon her sister got married and I told her that if she wanted to follow her sister’s footsteps and get married, she would have to be clean. Years later, she brought her husband and pictures of her family, she said she wants to get clean and have children now [*starts crying*]. We didn’t really do anything for 3 days when we found out the other patient I told you about died. It was painful when he died. I have a 37-year-old [son]. It’s a happy thing when you see someone move on.

Providers held nuanced and often personal perceptions of their patients that reflected biological and social causes and expressions of their opioid dependence. These nuanced perceptions would later influence the extent to which prescribers felt it was worthwhile to accommodate DEA and other regulatory guidelines as described in the next section.

Perceptions of regulatory surveillance

Regulatory agencies also influenced physicians’ willingness to prescribe once certified; in fact, prescribers also felt that an increase in DEA surveillance might be a barrier for providing buprenorphine for those who are not yet certified. More than half of participants considered the DEA a deterrent from offering buprenorphine treatment. The two following

quotes exemplify the types of experiences or concerns prescribers had with DEA surveillance:

> [DEA] came into our clinic and treated us like we were criminals. They didn't care. Patients and everyone were there, but they didn't care, the patients had to wait to be seen.

> The federal government, DEA … they come in, and they check your records, they check your charting. Who wants to have a big brother watching over their shoulder? That's for sure why people don't want to prescribe it.

Our interviewees felt that buprenorphine-certified prescribers were subject to greater scrutiny than other physicians. Community-based private doctors felt that the DEA was wrongfully targeting their practices and that doctors who primarily prescribed opioid analgesics for pain (rather than addiction treatment) should be the ones subjected to that intensity. Similarly, providers noted that the DEA's approach often seemed "threatening" and that they felt "harassed" by the regulatory agency. Due to the perception that the DEA was investigating buprenorphine- certified physicians as if they were "criminals," some physicians considered not offering buprenorphine at all.

> [The DEA] come in and they are threatening … they should go audit the ones who prescribe opiates [for pain]. There are some [doctors] out there who have hundreds of people. [Buprenorphine] is a small part of the practice; worst-case scenario I just won't [prescribe it].

For providers who only had a few buprenorphine patients, DEA audits increased the difficulty of providing care for opiate maintenance patients in their practice, compromising other patients who were not on buprenorphine treatment. News reports confirm that the DEA selectively targeted buprenorphine prescribers for audit (Moran, 2010); ironically the prescription of OxyContin and other opioids used for pain does not require special certification and these prescribers have never been targeted for systemic DEA audits despite their higher risk of overdose deaths.

The increase in scrutiny and surveillance, along with past negative experiences with surveillance agencies have deterred some providers from practicing, and have been an inconvenience or discouraged others who continue to practice. They suspected that targeted surveillance discouraged new buprenorphine providers and, more importantly for them, that providing buprenorphine could compromise their practices.

Prescribers' response to monitoring

Public clinic buprenorphine prescribers tended to have had specialized training in addiction medicine and a philosophical commitment to serving narcotic dependent patients: the fact that in general, public physicians' pay was independent of the hours that they spent on patient care, and that they generally had large caseloads of patients, meant that there were few financial or institutional incentives for them to get entangled with complex opioid dependent patients and to take time away from patient care to receive buprenorphine training. Given that 36 out of the 89 prescribers approached declined to participate in our interviews, those who decided to participate may have had stronger viewpoints regarding

their buprenorphine treatment experiences; thus, the public clinic buprenorphine prescribers that we interviewed were self-described advocates for addiction treatment, and represented a small subgroup of physicians. They went well above the requirements of their position to ensure continuity of care for their buprenorphine patients, giving patients their personal cell phone numbers and accepting calls in the evening and over weekends, logging complaints against pharmacies resistant to stocking buprenorphine, escorting patients to mental health clinics when necessary, and helping patients to create backup plans to guard against running out of buprenorphine supplies. Most of these public clinic buprenorphine prescribers saw heightened surveillance as simply one more bureaucratic hurdle for them to creatively confront in caring for underserved patients, a hurdle that would discourage their less committed colleagues from doing so. While buprenorphine access is certainly more limited among publicly insured patients than among private sector patients, due to the small number of public clinic buprenorphine prescribers, state surveillance did not dissuade those public physicians who were already buprenorphine certified from prescribing buprenorphine.

The motivations and responses to surveillance of private practice buprenorphine prescribers were less clear-cut. To begin to examine the impact of prescription monitoring programs on community-based private physicians, we conducted a targeted subset of interviews with physicians in Staten Island, the borough with the highest rate of patients filling opioid prescriptions from 2008 to 2012 (NYC DOHMH, 2014). Unintentional opioid overdose among Staten Island residents has increased 169% since 2000; it is now four times the opioid overdose rate of any other borough of New York City (NYC DOHMH, 2014).

While Staten Island's land mass is twice as large as Manhattan's, according to the latest census data, its population consists of slightly over 470,000 residents compared to Manhattan's over 1.5 million inhabitants, and is primarily White and suburban (U.S. Census Bureau, 2014a, 2014b). Staten Island's strip malls interspersed with single-family homes and tree-lined streets distinguish this borough from the other more urban boroughs of New York City. While the north shore of the island is more ethnically diverse with some Hispanic and African American residents in low-income housing, the south shore is predominantly White, with neo-colonial two-storey homes in neighborhoods without pedestrian sidewalks and separated by arboretums.

Despite the almost bucolic setting, the general practice clinics found on the first floor of wooden houses lining the margins of the main road showed signs of facing new problems. The notice posted on one, for example, read: "Doctor No Longer Replaces Stolen Scripts." When field researchers approached one receptionist and described the research, she stated, "What do you want to find out? Why everyone is so addicted?" Opiate abuse has become such a prevalent issue that Staten Islanders are speaking about it in public. Our team overheard a group of young men on the street sharing their concern about a friend who had begun using heroin and abused "oxy"—"I thought he was just into pills, but he straight up told me he was doing heroin too."

Local narratives of the increase in opioid use commonly focus on "pill mill" doctors who unscrupulously prescribe narcotics. One popular account involved an elderly physician who wrote thousands of prescriptions for painkillers out of his home-based private practice.

Neighbors had begun to complain about the doctor's practice and the *New York Times* reported that the FBI had assembled a 25-page complaint against him (Wilson, 2010). But 3 years after the doctor's arrest, his name and home office address are still listed in SAMHSA's buprenorphine provider roster. Unaware of his arrest, we had approached his home office in the quiet and manicured suburban neighborhood. The home office was dilapidated and stood out from other well-kept homes. Its front door had ax marks that (we later learned) had been made by a relative of a patient who had overdosed under the doctor's care (Wilson, 2010). The same news account stated that neighbors had complained about the increasing number of people seeking prescriptions at the house at odd hours and had often found empty oxycodone bottles littering grounds by the house.

In this atmosphere of widespread patient demand for prescription opioids, a number of physicians interviewed told us that they used I-STOP to exclude patients from their practice if they suspect diversion. Some physicians admitted to a sizeable number of discharges:

> It's the reason I have to discharge a lot of patients from my practice. You find that they go to different doctors and are not honest. They've taken more medicine than they're supposed to … 20% [of patients] were discharged from my practice.

Similarly, one physician reported that I-STOP helped him be more selective when considering at-risk patients: "I screen [patients] first … if he's doing doctor shopping, then he's not going to be a good candidate." Physicians have also reported using I-STOP in order to differentiate between "legitimate" and "deviant" patients: "To be honest, it helped me with people not looking for help and realizing when they are someone looking for narcotics." Notably, the physicians we interviewed were all buprenorphine-certified, meaning that they had additional training and techniques available to treat opioid dependence itself, so their decision not to engage patients with suspected opioid dependence represents a missed opportunity for these patients to receive addiction treatment.

Because there are no clear guidelines on prescription monitoring programs regarding patients who are on buprenorphine maintenance treatment (Hoefer & Petrakis, 2014), buprenorphine providers have begun to approach buprenorphine treatment in disparate manners. For example, physicians highlighted the subjective nature of continuing with treatment; they alternate between zero-tolerance and context-dependent, and therefore tolerable diversion. One participant stated: "You have to tease out some of [the patients] and you have to have a judgment call for some silly situations [that led to diversion]. I mostly practice zero tolerance, but I give [patients] the benefit of the doubt."

Even those patients with proper prescriptions could be turned away at the pharmacy if the pharmacists suspected the patient to be drug dependent. During one of our clinic visits, a patient approached the receptionists complaining that the pharmacy would not fill out his prescription despite having all the proper documentation. The receptionist replied: "The pharmacists have to follow the DEA guidelines and if they don't want to give it to you, it doesn't matter what the doctor told you." In other accounts, doctors used any history of addiction treatment as a reason not to accept patients whom they believed, on that evidence, to be opioid dependent. Other physicians reportedly only offered care if patients paid out of pocket for consultations with large price mark-ups.

However, an equal number of physicians expressed concern and a sense of responsibility to address growing opioid dependence on the island. Most community private doctors interviewed in Staten Island stated that they had not been interested in offering buprenorphine maintenance treatment until requested by an established patient. This meant that providers had to be open to accommodating new treatment for patients and becoming certified despite not being initially familiar with buprenorphine.

> Two of my patients were addicted to opioids and they wouldn't go to clinic for it. They had careers and were in their mid-40s and early 50s. This was 7 to 8 years ago. They wanted to get pain prescriptions and I counseled them that they were probably addicted. They didn't know there was treatment and they didn't want to be seen at the clinic with other drug addicts. I heard of Suboxone from one my colleagues; I read general Suboxone articles and went for training. I offered it to them and they agreed. Now, one is clean and the other is on 2mg [of buprenorphine]."

The increase in patients requesting opioid maintenance treatment is not surprising; according to the latest data, not only does Staten Island have the highest opioid analgesic death rates, but also the highest rate of unintentional heroin poisoning death (NYC DOHMH, 2014). Prescribers were aware of the tightening of regulation on opioid analgesics and "doctor shoppers" and the simultaneous rise of heroin use and dependence in Staten Island. Many prescribers were aware that the implementation of the prescription monitoring program, I-STOP, may have influenced this trend, and some were sure of it; "they've turned a pill problem into a heroin problem." Due to their sense of responsibility for the rise in overdoses, some prescribers expressed a moral obligation to extend services and spend more time with opioid dependent patients, despite having no addiction psychiatry training. One prescriber, a general practitioner with no specific addiction medicine training, stated:

> I spend about 30 minutes per patient, but I think it's worthwhile especially if they're young. If I fix them at 23, then they're good. If I don't spend the time with them and counsel them, if they don't get treatment, they all go to heroin eventually.

Commitment to providing buprenorphine maintenance also meant that physicians and their clinic staff would also have to accommodate their services to demanding insurance companies and to increased DEA regulation and surveillance. Physicians found their clinic staff on the telephone with insurance companies for extended periods of time, up to hours, to approve a buprenorphine script. Prescribers who stated that they increased services or referrals were most likely to require urine toxicology screenings for buprenorphine, refer patients to addiction psychiatrists and mental health counseling, as well as increase consultation times and scheduling. For example, one prescriber noted:

> Anybody under the age of 30, I try to get a responsible adult or parent as their monitor. If they get that, if they're helpful, then they might get with the program. If mother and father come in with them and talk to the patient all the time or if [the patient is] married and the spouse is clean, then they're more likely to be compliant.

Most of the private practice physicians we interviewed, however, refused engagement with opiate dependent patients and provided no referrals to more intensive substance abuse

programs; few introduced harm reduction tools such as naloxone kits for home reversal of opioid overdose.

The minority of buprenorphine certified physicians who not only treat opiate dependent patients, but also extend their services to accommodate this vulnerable population despite their lack of addiction medicine training, lack of institutional support and mental health services, and despite the increase surveillance and threat to their clinical practices from regulatory agencies, are an important and instructive subset deserving of attention.

Discussion

Our investigation suggests that increases in physician surveillance in the form of prescription monitoring and unannounced audits have had a profound impact on cultures of clinical care and on the prescriber–patient relationship. In settings of minimal addictions training or guidance for prescribers, these policies have led to a number of unintended consequences as well as innovative adaptive strategies from providers. With the biomedicalization of addictions, physicians are taught pharmacotherapy, without corresponding investments in psychosocial interventions such as psychotherapy or integrated social work. While prescription monitoring and a lack of psychosocial resources have dissuaded some physicians who have shown preliminary interest in treating opioid dependent patients—as indicated by their completion of buprenorphine certification—a subset of community physicians have become resourceful, adapting their office practice and repertoire of techniques and ancillary supports (such as family involvement) as needed in order to optimize their patients' chances for success.

Those prescribers who discontinue or refuse treatment of "problematic" patients upon signs of noncompliance or diversion, and others who demand cash payments, leave opioid dependent patients to their own devices, to self-medicate by turning to the gray and black markets. With a 30mg OxyContin pill costing as much as $30.00 in illegal markets, heroin has become a cheaper alternative at $5.00 to $10.00 per glassine (Goodman & Wilson, 2014; Grau et al., 2007). Heroin poisoning deaths in New York City increased again in 2014 after a long negative trend (NYC DOHMH, 2014). Nationwide heroin use has been on the rise as well (SAMHSA News Release, 2013). The Obama administration Director of the Office of National Drug Control Policy, Gil Kerlikowske, stated that "there is no question we are seeing a resurgence of heroin" and that the increased regulation and cost of prescription opioids will increase heroin use ("Why more Americans," 2014). New York State's Department of Health found that 79.5% of heroin users had used opioid analgesics before beginning heroin, compared to only 1% of users who initiated heroin before using opioid analgesics (NYC DOHMH, 2014). Therefore, punitive consequences brought on by increased regulation and prescriber choice to discontinue care may be leading to an unintended rise in heroin use and overdose.

Private practice community physicians have come up with a variety of ways to ensure compliance with treatment, engaging in a form of clinical ingenuity. Weekly urine toxicology exams, referrals to psychiatric and psychosocial services (such as therapy groups, counseling, and rehabilitation programs), family involvement in treatment, and longer

consultations are some of the ways physicians are reinventing their usually pharmaco-specific practice. These responses are most prevalent among private practice doctors in middle-class neighborhoods of Staten Island who identify socially with patients through community and familial connections, and therefore feel accountable and committed to them. Whether physicians are creating wrap-around psychosocial services or punitive measures to ensure the safety of their private practice, these responses are unscripted, in that policy makers and regulators have not provided guidance for prescribers, and heightened surveillance has not accounted for the additional resources or education that prescribers may need in order to interact with a growing population of opioid dependent patients in a clinically effective manner. Lacking guidance regarding the issues that arise from regulatory monitoring programs, the culture of clinical care has shifted into a “wild west” scenario in which doctors under community, state, and federal pressures, are forced to pragmatically adapt their clinical practices. Public policy has neglected this terrain and the mechanisms at play between the doctor and patient, which in turn, is leading to punitive responses (such as early discharge), further marginalizing patients and widening disparities in care as evidenced by the dearth of public sector buprenorphine-certified prescribers.

Paradoxically, a tightened regulatory structure designed to reduce opioid overdose deaths may in fact be increasing the risk of opioid overdose, as well as related risks of arrest, HIV, and other opioid related infections, as patients are forced out of clinical spaces. However, the adaptive solutions demonstrated by community practitioners in Staten Island provide windows on the ways that prescribers can remain patient-centered and expand their techniques to better serve the population. What these exceptional efforts by a minority of community practitioners also point to is the neglect of psychosocial intervention in the midst of overriding pharmaceutical management of everything from pain to addiction to pharmaceuticals themselves. Treating opioid dependent people involves mental health interventions such as psychotherapy, bolstering social and family supports, and often assistance with employment and housing, even among those who started off with more resources, since addiction itself often leads to financial and social instability. As the training and institutional infrastructures for clinical practice become increasingly centered on pharmaceutical management, the skill set and resources for practitioners to address the psychosocial needs of their patients is thinning. The consequences of this thinning process become visible during crises such as the prescription opioid epidemic, in which only a handful of practitioners who take it upon themselves to build their own skills and resources for psychosocial intervention are able to manage opioid dependent patients.

Although private practice addiction treatment is structured to isolate practitioners, there are recent movements towards challenging this model of clinical individualism. Prescriber support networks that partner experienced prescribers and novice prescribers for consultations have been linked with a high rate of buprenorphine utilization in public clinics that have participated in federally funded clinical trials (Kunins, Sohler, Giovanniello, Thompson, & Cunningham, 2013; Ling et al., 2010; Netherland et al., 2009). Given that New York State has one of the largest numbers of buprenorphine prescribers, it has the potential to benefit greatly from implementation of prescriber networks and interprofessional networking. Currently there are interprofessional fellowships in addiction medicine,

indicating a demand for supportive professional networks in addressing the complexities of addictions treatment (U.S. Department of Veteran Affairs, 2015).

Overall, the descriptions of prescribers here speak to a debate among sociologists and anthropologists about how biomedical reframings of addiction, and other behaviors previously thought of as socially or morally deviant, influence the social experience of addicted people. Such reframings have been referred to as medicalization (Conrad, 2005), biomedicalization (Clarke, Shim, Mamo, Fosket, & Fishman, 2003), and more recently—as pharmaceutical consumption has become the focal endpoint of these processes—pharmaceuticalization (Abraham, 2010; van der Geest, Whyte, & Hardon, 1996). Some argue that neurobiological reframings of addiction de-pathologize it, attributing compulsive behavior to environmentally malleable neurocircuitry, outside of the conscious control of the sufferer (Schull, 2012), albeit sufferers are expected to manage neurocircuitry using available techniques (Rose & Abi-Rached, 2013). Others argue that the stigma of addiction persists or is even intensified under the new biomedical regime, as behaviors that are defined as biologically inscribed are also seen as simultaneously immutable and menacing (Link & Phelan, 2010; Pescosolido et al., 2010; Phelan & Link, 2012), and as clinical practitioners continue to express mistrust and disdain toward addicted patients (Merrill, Rhodes, Deyo, Marlatt, & Bradley, 2002). Scholars on both sides of the debate point to physicians as mediators of stigma and marginalization of addicted people. Their mediation proves to be a dynamic process with unanticipated effects: our study participants' reports on prescription monitoring programs and DEA audits suggest that the stigma and criminalization of addiction is heightened for patients who are pushed from clinical spaces into illegal economies by prescribers who fear their own criminalization.

In this article, we have described how a shifting culture of clinical care—from one focused on individual misuse to one regulating prescriber practices—enables us to understand the paradoxical outcomes of biomedicalized opioid treatment. The "Decade of the Brain" led to an emphasis on the addictive properties of substances rather than the social conditions fostering addiction. This focus on the properties of prescription opioids has led to prohibitionist policy regulations that may be leaving other physicians without the tools to practice harm reduction measures or addiction treatment. Drug policies that unilaterally curb access to prescription opioids can have unintended consequences, exacerbating the very problems (overdose and increases in illicit drug use) that they purport to solve.

This initial investigation of the impact of drug policies on physicians calls for further research that links cultural constructions of addictions and changes in policy to clinical practice. This topic is particularly timely given the public resources being devoted to U.S. drug policy and the international and national costs of drug-related homicides, incarceration, and fatalities that are influenced by drug policy (Ajzenman, Galiani, & Seira, 2014; Tiger, 2012). While our study is limited in scope to buprenorphine prescribers in New York City and cannot be generalized to other regions or to physicians who do not prescribe buprenorphine, it does raise questions about what would be necessary on the level of policy and clinical practice to engage a broad, diverse patient population in addiction treatment in a way that reduces inequalities and reduces the harms of law enforcement around narcotic use. Efforts to biomedicalize addiction that do not attend to the structural conditions of clinical

care, in particular the racialization of care “through prescribing” (Oldani, 2009; Wolf-Meyer, 2015), will by definition be incomplete. Future studies must continue to address the factors that contribute to the persistent social stigma of addiction and the ways drug policy and reforms, based on biomedical models, can (re)produce social inequalities that negatively impact care.

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