Prescription Opioid Misuse: Initiation, Sources of Supply, and the Role of Medical Providers

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PRESCRIPTION OPIOID MISUSE: INITIATION, SOURCES OF SUPPLY, AND THE ROLE OF MEDICAL PROVIDERS

by

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ABSTRACT

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Over the past 25 years, opioid analgesic misuse has increased dramatically in the U.S., with concomitant deleterious effects on health. Results from the 2014 National Survey on Drug Use and Health (NSDUH) reported that an estimated 4.3 million people aged 12 or older were current non-medical users of opioid analgesics, representing 1.6 percent of the population (SAMHSA, 2015), and unintentional drug poisoning deaths now surpass motor vehicle accidents as the leading cause of injury death (CDC 2014). Opioid analgesics are produced in the U.S. within a system of tight control and any entity or person manufacturing, distributing, prescribing, or dispensing opioid analgesics can only do so under license from the DEA. However, medication diversion—the transfer of a pharmaceutical product from a medical to non-medical channel of distribution or use—is endemic and has been estimated to be a $25 billion a year industry (U.S. General Accounting Office, 2003).

Although there has been some analysis of the mechanisms of pharmaceutical diversion, much of the literature stems from epidemiologically grounded population-level analysis and few studies to date have examined the socio-cultural factors that may facilitate the movement of opioid analgesics from sanctioned to unsanctioned use. In this dissertation, I investigate the medical and non-medical use of opioid analgesics among a sample of New York City residents
to explore experiences of initiation and the ways in which misuse is situated within a medical context. In particular, I focus on how participants acquire the opioids they use and the sources of pills that are diverted into the illicit market. Finally, I explore the impact of two supply-side interventions that have shaped the opioid market, and end with a discussion of the political and economic landscape that has facilitated opioid analgesic misuse in the U.S.
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INTRODUCTION

An opioid high is the best fucking thing in the world. Like, it’s just like all your guilty feelings, everything like that, anything that bothers you, for that quick moment, everything just goes out the fucking window, and you’re just sitting there, like when you catch a nod, you’re not even thinking about anything in the world . . . When you catch that nod, it’s like there’s not a worry in the world. Like you don’t think about anything, no bills, no nothing. You don’t feel pain, nothing.

Phillip (white, aged 25)

Opioid analgesics such as oxycodone, hydrocodone, and morphine, are central nervous system depressants that bind to opioid receptors in the brain, blocking the perception of pain, and resulting in a general calming and anti-depressant effect (NAABT, 2014). The effect of these medications is similar to that of heroin, and similar to heroin, their misuse can lead to respiratory depression and death. Despite having almost identical pharmacological and physiological properties, the legal status of heroin and opioid analgesics is very different.

The Controlled Substances Act of 1970 (CITE 21 USC § 801) coalesced laws governing the manufacture and distribution of narcotics and other drugs, placing substances in one of five schedules based on their potential for harm, medical value, and abuse. While heroin (or diacetylmorphine) is considered Schedule I, opioid analgesics are categorized as Schedule II.

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1 The definition of a Schedule I drug is: a) The drug or other substance has a high potential for abuse; b) The drug or other substance has no currently accepted medical use in treatment in the United States; c) There is a lack of accepted safety for use of the drug or other substance under medical supervision. (Controlled Substances Act (1970) USC § 801). Substances comprising Schedules II through IV, while controlled, have some identified medicinal purpose and may be administered or prescribed by licensed medical professionals.
Accordingly, although it is recognized that opioid analgesics have a high abuse potential, and that their use may lead to psychological or physical dependence, they also have an accepted medical use. Following, where heroin is only legally available in the U.S. for research purposes, opioid analgesics can be prescribed by licensed medical practitioners under the control of the Drug Enforcement Administration (DEA).

While the efficacy of opioid analgesics for treating end of life pain has long been accepted by the medical establishment (American Academy of Pain Medicine, 1997; Melzack, 1990; Phillips, 2000), there is less evidence showing their effectiveness for chronic non-cancer pain (Furlan et al., 2006; Ballantyne and Shin, 2008). Indeed, the American Academy of Neurology (AAN) advised that the risk of serious adverse effects from opioid analgesics outweighs the benefits when treating chronic non-cancer conditions (Franklin, 2014).

However, research conducted in the 1980s suggesting that opioids could safely be prescribed to individuals on a long-term basis (Porter and Jick, 1980; Portenoy and Foley, 1986), coupled with lobbying from physicians specializing in pain management, as well as the pharmaceutical industry, resulted in the relaxation of government regulation surrounding these drugs and over the past two decades, the prescribing of opioid analgesics in the U.S. has increased dramatically (Paone et al., 2012; Paulozzi et al., 2011; Spiller et al., 2009). Between 1990 and 2009, the annual worldwide consumption of hydrocodone, one of the most commonly prescribed opioid analgesics, rose almost 10-fold from 3628kgs to 35,380kgs, 99 percent of which was consumed by the U.S. During the same period, the worldwide consumption of oxycodone also increased from 2722kgs to 69,853kgs, with the U.S. consuming more than four-fifths of this amount (International Narcotics Control Board, 2010). In 2012, prescribers wrote 82.5 opioid prescriptions for every 100 U.S. citizens (Paulozzi et al., 2014). Further, between
2000 and 2010, the average dose of both oxycodone and hydrocodone prescriptions increased by 69.7 percent and 69.4 percent, respectively, as measured by morphine milligram equivalents (MMEs)² (Kenan et al., 2012).

Concomitant with these increases, the rate of opioid analgesic misuse has also increased and in the U.S., the non-medical use of these drugs now constitutes the second most common form of illicit drug use after cannabis (SAMHSA, 2012). Results from the 2014 National Survey on Drug Use and Health (NSDUH) reported that an estimated 4.3 million people aged 12 or older, representing 1.6 percent of the population were current non-medical users of opioid analgesics (SAMHSA, 2015). The public health consequences of opioid analgesic misuse have been immense. In 2011, of the 1,244,872 Emergency Department visits involving the nonmedical use of pharmaceutical drugs, 39.2 percent were opioid related (SAMHSA, 2011). Further, the proportion of individuals entering detoxification facilities with opioid analgesic as their primary drug increased from 2.4 percent in 2002 to 9.7 percent in 2012 (SAMHSA, 2014). In 2012, the Centers for Disease Control and Prevention (CDC) estimated that opioid analgesics were involved in 43 percent of unintentional drug poisoning deaths, more fatalities than from heroin and cocaine combined, and, as shown below, drug overdose among 25 to 64 year olds has overtaken motor vehicle traffic crashes as the leading cause of injury death (CDC, 2014). In New York City, between 2000 and 2013, the rate of opioid analgesic involved overdose death increased by 256 percent.

² Different types of opioids have different strengths making it difficult to calculate the accumulated dosage prescribed to patients, especially if they are taking more than one formulation. The Morphine Milligram Equivalent (MME) is used to measure the dose of different types of opioids using a standard conversion table. This is particularly important in light of recent prescribing guidelines from the CDC suggesting that doses at or above 60 MME per day increase the risk for overdose by at least two times (CDC, 2016).
Figure 1: Rates of drug poisoning deaths have now surpassed motor vehicle accidents, United States, 1980-2010

Source: NCHS Data Brief, December, 2011.

Opioid analgesics are produced in the U.S. within a system of tight control and any entity or person manufacturing, distributing, prescribing, or dispensing opioid analgesics can only do so under license from the DEA. However, medication diversion—the transfer of a pharmaceutical product from a medical to non-medical channel of distribution or use—is endemic and has been estimated at a $25 billion a year industry (U.S. General Accounting Office, 2003). Although there has been some analysis of the mechanisms relating to pharmaceutical diversion, much of the literature stems from epidemiologically grounded population-level analysis, and few studies to date have examined the socio-cultural factors facilitating the movement of opioid analgesics from sanctioned to unsanctioned use. Inciardi and
colleagues consider a number of ways that pain medication and other psychotherapeutic drugs\(^3\) might be funneled into the illicit market including: medication theft from manufacturers, distributors and pharmacies; theft from institutional drug supplies; residential burglaries; overprescribing by physicians; prescription forgery; and, “doctor shopping,” through which an individual visits multiple physicians to procure prescriptions (Inciardi et al., 2009a). However, while it is likely that each of these mechanisms play a part in fueling the illicit opioid analgesic market, there is little consensus about the weight that can be attributed to each. For example, while enforcement officials often perceive medical practitioners to be a primary force of diversion, physicians typically highlight the role of “deceptive” patients (Inciardi et al., 2009).

In New York City, law enforcement estimates of diversion or loss of opioid analgesics from manufacturers or distributors are low. For example, between 2012 and 2014 there were 35 pharmacy robberies and 94 pharmacy burglaries involving controlled prescription drugs in NYC\(^4\) (NY/NJ HIDTA, 2015). In addition, data collated from DEA 106 forms,\(^5\) suggest that diversion as a result of robberies or burglaries from doctors’ offices, pharmacies, or hospitals does not constitute a substantial portion of the illicit opioid analgesic market in the city (NY/NJ HIDTA, 2015). While the impact of some types of diversion are difficult to assess, data from the New York State Prescription Drug Monitoring Program (PDMP) provide a comprehensive overview of the number of prescriptions written by prescribers in New York City and filled by New York City residents. Between 2008 and 2010, there were more than 5.5 million opioid analgesic prescriptions filled by New York City residents for opioid analgesics, and in 2010, 722,000 New

\(^3\) Psychotherapeutic medications are those that relieve symptoms of anxiety, depression, or other mental health disorders.

\(^4\) This figure includes attempted burglaries and robberies where controlled prescription drugs appear to have been the intended target.

\(^5\) Persons or entities licensed to manufacture or distribute controlled substances are obliged to notify the DEA of any significant loss or theft by submitting a 106 form.
Yorkers filled more than 2 million opioid analgesic prescriptions (Paone et al., 2012). Figure 2 shows the number of opioid analgesic prescriptions filled, stratified by oxycodone and hydrocodone, constituting the most popular opioid analgesics currently on the market.

**Figure 2: Number of opioid analgesic prescriptions filled by New York City residents 2008-2012**

Prescribing practices, however, differ widely, and a more granular review of these data has shown that nearly half (49%) of all prescribers wrote only one to three opioid analgesic prescriptions per year, accounting for only 2 percent of all opioid analgesic prescriptions; over one-third of prescribers (36%) wrote 15 percent of the total number of opioid prescriptions; 14 percent of prescribers wrote 51 percent of prescriptions, and the remaining 1 percent of prescribers wrote 31 percent of prescriptions. Thus, medical practitioners with the highest rates of prescribing wrote an average of 1,159 prescriptions per year, compared to an average of one
prescription per year for prescribers with the lowest rates (Paone et al., 2012). Figure 3 shows the percentage of patients and prescriptions by prescribing frequency in New York City in 2010.

**Figure 3: Percent of patients and prescriptions by prescribing frequency in New York City, 2010**

![Graph showing percent of patients and prescriptions by prescribing frequency.](image)

**Prescribing frequency**

*Source: NYS Prescription Drug Monitoring Program* (Paone et al., 2012).

While it is likely that these variations are attributable in part to prescriber specialty and practice setting (Paone et al., 2012), it is also suggestive of widely differing prescribing practices and oversight. Overprescribing of opioid analgesics has been noted from so-called “pill mills,” pain clinics that distribute large quantities of opioid analgesics with minimal medical care. For example, a 2014 indictment of a network of Astramed clinics based in the Bronx, NY, alleged that doctors working for the company had unlawfully distributed five million oxycodone tablets over a period of three years (U.S. AO, Southern District, 2014). However, to date, most of the literature regarding prescription diversion has tended to focus on the role of the patient rather than that of the prescriber as a driver for opioid analgesic misuse (Cepeda et al., 2012; McDonald and Carlson, 2013; Wilsey et al., 2010). Further, given that much of the extant literature has been
generated using data from large-scale surveys, less is known about the sociocultural factors that may influence the misuse of and access to prescription medication (Quintero et al., 2006), or how diversion “connects the doctor’s office or the pharmacy with networks of drug users who can diffuse the product and knowledge about it” (Lovell, 2006: 156).

The purpose of this study was to analyze the accounts of opioid analgesic misuse among a sample of New York City residents to understand: (1) the circumstances under which individuals begin to misuse opioid analgesics; and (2) the sources of the pills they misuse. Using data from semi-structured, in-depth interviews conducted with New York City residents with a history of opioid misuse, the study investigated four interrelated questions:

1. Under what circumstances do individuals begin misusing opioid analgesics and what is the relationship between opioid misuse and warranted medical treatment?
2. How do individuals acquire the opioid analgesics they misuse? How do these sources vary in relation to patterns of use? How do external factors influence pill acquisition?
3. What role do prescribers play in the illicit opioid analgesic market?
4. How can an understanding of the initiation and acquisition of opioid analgesics inform public health and criminal justice initiatives to reduce the harms related to opioid analgesic misuse?

The current situation with opioids in the U.S. has been classified as an “epidemic” by the Centers for Disease Control and Prevention (CDC, 2012); however, this is not the first time this country has experienced an opioid crisis. In Chapter 1, I present an historical overview of opioids and the waxing and waning of their use for medical and non-medical purposes. This chapter also
explores the social and legislative controls enacted as a result of concerns about opioids in the early twentieth century, which has governed their use in the medical sphere for most of the previous century. I also provide a brief history of the pharmaceutical industry as the current opioid crisis cannot be understood in isolation of this industry’s practices. Chapter 2 offers an account of events in the late 1980s and early 1990s that contributed to a sea change in the use of opioids in the U.S., with particular attention to the reconceptualization of pain as the fifth vital sign and the concurrent release to the market of a new long-acting opioid formula, OxyContin®. Chapter 3 provides a discussion of the research design and methods utilized for the data presented in this dissertation.

In Chapter 4, I discuss the pathways into opioid analgesic misuse as reported by participants in this study and argue that both motivation of use, as well as the source from which the pills were obtained are important factors to consider in determining the etiology of opioid analgesic misuse. Focusing on the context of initiation into opioid misuse, I highlight the current reluctance within the medical community to acknowledge the extent of the iatrogenic consequences of opioid prescribing, and additionally, explore the definitional ambiguity surrounding the terminology used to describe the use and misuse of opioid analgesics. Chapter 5 examines sources of opioid analgesics among members of two different groups of study participants, those who reported opioid dependence and those who did not. The chapter includes participants’ accounts of their trajectories toward opioid dependence and I consider how, for many entrenched users, pills were easily obtained from community insiders and ongoing misuse facilitated by close social networks. I also discuss the strategies that some participants employed

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6 An iatrogenic consequence is defined as one in which the patient experiences an adverse health condition “induced inadvertently by a physician or surgeon or by medical treatment or diagnostic procedures.” (NIH MedLine Plus)
to obtain opioid analgesics, differentiating between medical providers who were complicit in prescribing beyond the scope of professional practice, and those who were not.

In Chapter 6, I present a typology of prescriber oversight to describe the continuum of prescribing practices as reported by participants in this study. Ranging from flagrant, to loose, to routine, to judicious, these typologies describe the nuances of prescribing practices and explore how different initiatives to curb the overprescribing of opioids are likely to affect each group. Chapter 7 continues by describing the impact of two recent supply-side interventions including the reformulation of OxyContin® into an abuse-deterrent formulation, and the implementation of a New York State bill mandating that prescribers look up their patients in the prescription drug monitoring program registry prior to writing a prescription for a controlled substance. Finally, in conclusion, I reflect on the political and economic structures that have facilitated the misuse of opioid analgesics in the U.S.
Definition of terms

Throughout this dissertation, I have employed the term “opioid” to denote any drug derived from the opium poppy, as well as synthetic, or semi-synthetic substances. Examples of opioids include: opium alkaloids such as morphine and codeine, semi-synthetic opioids such as oxycodone, hydrocodone, and heroin, and fully synthetic opioids such as methadone. Brand names under which prescription opioids are sold include: Vicodin®, OxyContin®, Percodan®, and Percocet®. The term “misuse” refers to taking opioid analgesics for the experience or feeling, or in any manner other than prescribed by a doctor, including: taking opioids without a prescription; taking medication beyond the cessation of pain; self-medication for a different injury/health condition; and mixing medication with other substances for euphoric effect. Although broad, this definition has been widely utilized in the literature to describe the nontherapeutic use of opioid analgesics in the U.S.

The medical literature describes several processes of opioid dependence distinguishing between tolerance, physical dependence, and psychological dependence (often termed “addiction”). According to the American Academy of Pain Medicine, the American Pain Society, and the American Society of Addiction Medicine (2001), the definitions of each of these concepts are as follows: “tolerance” is a state of adaptation in which exposure to a drug induces changes that result in a diminution of one or more of the drug’s effects over time; “physical dependence” is a state of adaptation that is manifested by a drug class-specific withdrawal syndrome that can be produced by abrupt cessation, rapid dose reduction, decreasing blood level of the drug, and/or administration of an antagonist;⁷ and, “addiction” is a primary chronic,  

⁷ An antagonist is a chemical that binds to a receptor (in this case the mu receptor) but does not activate a biological response and can block the effect of other agonists. For example, opioids are an agonist and naloxone, the medication that reverses overdoses is an antagonist.
neurobiologic disease, with genetic, psychosocial, and environmental factors influencing its development and manifestations and characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving.

In this study, the term “opioid dependence” is based on participants’ self-report of withdrawal symptoms related to prolonged opioid use. Because of the physiologic effect that opioids have on the body, regular use over a period of days or weeks results in tolerance, and if a dose is missed, or if use of opioids is ceased abruptly, the body becomes biochemically dysregulated, and a person is likely to feel withdrawal symptoms, including but not limited to: nausea, vomiting, diarrhea, night sweats, insomnia, anxiety, irritability, and restless leg syndrome. While participants in this study did not undergo a formal clinical assessment for substance use disorder, self-reported opioid dependence is considered an indication of problematic opioid use.

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8 In the fifth and most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), previously defined categories of ‘substance abuse’ and ‘substance dependence’ were combined into a single diagnosis of ‘substance use disorder’ measured on a continuum from mild to severe (DSM-V, 2013). Diagnosis is based on an 11-point scale and includes: (1) Taking the substance in larger amounts or for longer than the you meant to; (2) Wanting to cut down or stop using the substance but not managing to; (3) Spending a lot of time getting, using, or recovering from use of the substance; (4) Cravings and urges to use the substance; (5) Not managing to do what you should at work, home or school, because of substance use; (6) Continuing to use, even when it causes problems in relationships; (7) Giving up important social, occupational or recreational activities because of substance use; (8) Using substances again and again, even when it puts the you in danger; (9) Continuing to use, even when the you know you have a physical or psychological problem that could have been caused or made worse by the substance; (10) Needing more of the substance to get the effect you want (tolerance); (11) Development of withdrawal symptoms, which can be relieved by taking more of the substance. Accordingly, two of three of these listed symptoms are indicative of a mild substance use disorder, four or five symptoms indicate a moderate substance use disorder, and six or more symptoms indicate a severe substance use disorder.
CHAPTER ONE:

OPIOIDS AND THE INDUSTRY THAT SELLS THEM: A BRIEF HISTORY

“Into the bowl in which their wine was mixed, she slipped a drug that had the power of robbing grief and anger of their sting and banishing all painful memories. No one who swallowed this dissolved in their wine could shed a single tear that day, even for the death of his mother or father, or if they put his brother or his own son to the sword and were there to see it done…”

Homer’s Odyssey.

The history of opioid use stretches back to ancient Mesopotamia, and it is generally accepted among scholars that opium from seed pods of the *Papaver somniferum* poppy was first cultivated by the Sumerians at the end of the third millennium BCE (Schiff, 2002). Known as *hulgil*, or “joy plant” (Booth, 1996), opium was initially used by priests for ritualistic purposes. However, its medicinal qualities were soon recognized and references to preparations derived from opium can be found in several early medical texts including the Egyptian Ebers Papyrus (c.1550 BCE), and Dioscorides’ *De Materia Medica* (c.50 CE), where the preparation of raw opium is discussed for medicinal use (Riddle, 1985). Archaeological evidence from Cyprus suggests that *Papaver somniferum* was grown commercially as early as 1500 BCE (Gerritsen, 2000) and by the time of the Roman Empire, “theriak,” a preparation of opium mixed with a combination of other ingredients, was a common household elixir utilized as an antidote against a wide variety of ailments (Schiff, 2002).

As the influence of the Romans waned, the availability of opium declined in Europe but its use and cultivation continued throughout the Arab empire and by the eighth century had spread to India and China by way of ancient trade routes (Brownstein, 1993). Historical records
and artefacts suggest that during this period, opium remained largely confined to ritualistic and therapeutic use (Gerritsen, 2000). However, as it was cultivated and traded more widely, the social context in which opium was used began to change. By the late 1400s in China, other properties of the drug had been recognized and in the lexicon of the Ming court, opium came to be known as *chun yao*, meaning “spring drug” or aphrodisiac (Zheng, 2005). During this era, opium use was still largely restricted to the elite and ingested by mouth. The introduction of tobacco to the Chinese marketplace by Portuguese sailors in the seventeenth century presented a new route of administration via the pipe, facilitating its spread to the broader population (Agnew, 2014).

By the late eighteenth century, opium use was widespread in China. Predominantly produced in India, opium was exported by the British who were keen to balance a substantial trade deficit accrued through the importation of Chinese tea (Booth, 1996). Recognizing opium use as a growing problem, in 1839, the opium trade was severely restricted by Emperor Tao Kuang (Rowe, 2006); however, its value was too great to the British and, after a series of battles known as the First Opium War (1839-1842), the Chinese were forced to open up five ports to international trade, essentially dismantling the Canton system\(^9\) which had previously restricted the flow of foreign goods into the country. This, followed by the Treaty of Tientsin signed in June 1858, effectively legalized the opium market resulting in a massive increase in the volume of the drug imported into China, and research suggests that throughout the nineteenth century, rates of opium dependence in China were higher than anywhere else in the world (Courtwright, 2001a).

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\(^9\) A method for the Chinese to control and regulate foreign trade, the Canton System was in operation for almost 200 years from 1757 until 1842. By limiting trade to a small southern port (Guangzhou), the Chinese were able to restrict contact between foreign merchants and the local population and tightly control the flow of goods in and out of the country. (Van Dyke, 2005).
In Europe, after an initial hiatus following the collapse of the Roman Empire, opium once again found its way into the annals of medicine, albeit via a different route of administration than the pipe favored by the Chinese. The discovery of laudanum—credited to Paracelsus (d. 1541) and pioneered a century later by the English physician Thomas Sydenham (d. 1689)—led to the wide availability of a palliative tincture made by dissolving opium in alcohol. Popularized by preparations such as Dover’s Powder—a solution of opium dissolved in alcohol combined with ipecac, an emetic added to limit the amount consumed thereby reducing the risk of overdose—laudanum, and a less potent camphorated tincture, paregoric, was used extensively in the West for the next 200 years.

In nineteenth century Britain, fueled by ready availability and an open market, opium was widely used by a diverse population irrespective of class or social standing (Harding, 1988). Taken to alleviate common symptoms such as diarrhea, toothache, sleeplessness and “nervous” conditions, the majority of the opium consumed during this period was self-prescribed and scholars have suggested that “the corner shop, and not the doctor’s surgery, was the center of popular opium use” (Berridge and Edwards, 1987:30). As Berridge and Edwards point out, the working class, often without the resources to seek medical care, relied on opioids for palliative care, as well as to deal with the ennui and depression of their everyday lives. In the middle and upper classes, self-medication was also the most common reason for use, although the line between medical and non-medical (i.e., “social”) use may often have been blurred (Berridge and Edwards, 1987).
Morphine and heroin

Until the beginning of the 1800s, raw opium was the purest form of morphine available, with an average morphine content of around 10 percent (Gerritson, 2000). However, advances in chemistry at the turn of the century led to the first isolation of a natural plant alkaloid and in 1805, Friedrich Sertürner succeeded in extracting morphine from opium (Brownstein, 1993). The resulting increase in purity had important consequences for the medical and pharmaceutical professions, including the potential for production on a large-scale (Gerritson, 2000), and in the years that followed, processes were discovered for isolating several more opium alkaloids, including codeine and thebaine, a precursor to the synthetic opioid oxycodone (Schiff, 2002). For medical practitioners, morphine was an invaluable addition to their medicine chest. Whereas opium differed in potency and was often adulterated, morphine could be more accurately dosed to produce a predictable therapeutic response (Courtwright, 2001a), and in 1927, a German pharmacist named Friedrich Jacob Merck, began manufacturing morphine on a commercial basis. A second important development that had a significant impact on the use of morphine was the perfection of the hypodermic syringe in the 1850s (Schiff, 2002). Morphine comes in the form of a crystallized salt, soluble in water, which can then be administered as a liquid through a hypodermic syringe. Subcutaneous and intravenous injection enabled anesthesia to be administered with almost immediate effect and cemented the reputation of morphine as a rapid and effective pain reliever.

Although morphine had distinct advantages over raw opium in terms of efficiency and dosing accuracy, its purity also resulted in more severe consequences for the habitual user and, by the late 1800s, the dangers of physical opioid dependence had been recognized (Courtwright, 2001a). Instructed by his supervisor at Bayer, a chemical and pharmaceutical company, to find a
less potent opioid with reduced potential for addiction, a German chemist named Hoffman combined morphine with acetic anhydride to make diacetylmorphine.\textsuperscript{10} The resulting compound was, ironically, even more potent than morphine, but for the next decade it was aggressively marketed on an international scale under the trade name “heroin” as a non-addictive alternative to morphine, suitable for alleviating respiratory ailments. This is not the only time that an opioid has been erroneously marketed as non-addictive and in Chapter 2, I will examine the case of OxyContin\textsuperscript{®}, a synthetic extended-release opioid analgesic, the sales and marketing of which had an important influence on the current resurgence of opioid prescribing in the U.S.

\textit{Opioids in the United States}

Opioid use in the U.S. was influenced by both Europe and China. Initially used for predominantly medicinal purposes, by the time of the Civil War (1861 to 1865) opium and morphine were prescribed on a large scale for a range of afflictions, including dysentery, insomnia, and injuries sustained in combat (Agnew, 2014). Indeed, the use of opioids was so widespread among the troops on both sides that the term “army disease” was coined to describe soldiers who had become physically dependent on opioids as a result of prolonged exposure to the drug (Madsen, 2012).

A second important factor that stimulated opioid use during this period was the proliferation of patent medications during the latter half of the nineteenth century. Brought over from England by the first settlers, patent medicines were originally manufactured under patents of royal favor bestowed on their makers by members of the royal family (Cook, 1976). Although the ingredients were usually a well-guarded secret, these nostrums were not typically patented

\textsuperscript{10} Diacetylmorphine was first discovered in 1874 by C. Alder Wright, but was not developed further because of its extreme potency.
and were widely distributed by quacks as well as physicians. As in England, opioid-based remedies were extremely popular among Americans, alleviating the symptoms of people who were unable to afford a doctor’s ministration (Dykstra, 1955), and when trade was interrupted by the American War of Independence, the patent medicine industry in the US quickly burgeoned (Inciardi and McElrath, 2011). As literacy improved and the number of publications increased, products were widely advertised both in the popular press (Healy, 2012) and professional medical journals, and messaging around patent medicines was ubiquitous (Young, 1961).

In his insightful book *Phammeddon* (2012) Healy provides an early example of how advertising serves to stimulate sales of medical preparations, even when there are competing products on the market. In Connecticut in the 1830s, two Patent medicine companies produced a similar remedy known as “Bilious Pills.” Rather than saturate the market, the competition between the two companies, whose battleground consisted predominantly of newspaper advertising, resulted in increased sales for both products and similar preparations subsequently brought on to the market by other proprietors did equally well (Healy, 2012).

Healy further notes that “the proprietary medicines industry was the first to market lifestyles rather than the compounds per se” (2012: 21), a paradox given the opposition to cure-alls shown by the newly emerging medical profession in the late nineteenth and early twentieth centuries. This trend continues today with pharmaceutical companies making concerted efforts to tie their products to images depicting successful, happy people leading enviable lives as a result of taking their medication. An excellent example of this is illustrated by Hertzberg (2009), who cites the “super-mom” advertisement depicting a fulfilled, hardworking, yet nurturing woman who, we are told, has been taking medication to treat her depression for the past five years:
“Prozac-powered supermoms thus could have it all: white-collar careers, families, good marriages, even a good night’s sleep.” (Hertzberg, 2009: 182).

In addition to the medicinal use of opioids, the practice of smoking opium was brought to the U.S. by Chinese immigrants who had come to California to work in the mines and on the transport infrastructure. It is worth noting here the clear moral distinction that emerged between smoking opium and self-administering opioid-based nostrums for medical or quasi-medical reasons. As Courtwright suggests, although the safety of opioids for medical use had started to be debated among both physicians and the general populous, smoking opium was seen to have “no legitimate therapeutic purpose; it was a ruinous vice, practiced by the irresponsible and the wicked” (Courtwright, 2001a: 61). By the beginning of the 1900s, the distinction between the medical and non-medical use of substances with similar psychoactive properties, as well as the profile of the individuals who were inclined to use them, influenced the passage of several regulatory and control measures delineating the use of narcotics for recreational and medical use, and structuring the pharmaceutical and illicit drug market as it is today.

In addition to forming the basis of drug control policy, the distinction between “good” and “bad” substances has formed the basis of existing drug control policy perpetuating a racially bias system whereby substances are often demonized through their association with people of color (Hart, 2013). A similar pattern can be seen in the comparison between opioid analgesics and heroin which, while pharmacologically similar, are portrayed vastly differently in the media, largely due to their use being yoked to white and black or brown people. A recent analysis by Netherland and Hanson (2016) reveals consistent differences in the ways in which blacks and Latinos who use heroin are depicted in media reports compared with whites who use opioid analgesics. The authors suggest that rather than proving that “anyone can become an addict,”
white opioid use is instead “resetting the terms of drugs and race in popular culture in ways that insidiously further distinguish white from black (and brown) suffering” (2016: 665).

**Legislative controls**

The first prohibitive drug policies in the U.S. were enacted at the municipal level, and in 1875, the city of San Francisco passed an ordinance prohibiting opium smoking, a law clearly directed at the Chinese population (Harvey Brown, 2002). State followed city, and in 1881, the California legislature passed a law against operating or patronizing an “opium den” (Courtright, 2001a). Rather than the result of heightened concern over actual drug effect, the legislation against opium dens was directed against Chinese immigrants who had become economically superfluous following the end of the gold rush and the completion of the rail-road (Reinarman, 1994). Fueled by racism, other cities and states with high numbers of Chinese-born residents followed suit, and by 1909, the importation of opium for non-medical use, and following, opium that was prepared specifically for smoking was prohibited (Harvey Brown, 2002).

Another important legislative change was the push for manufacturers of consumable products to be transparent about their ingredients. The impetus for greater transparency came about as a result of new techniques for food preservation introduced at the time of the Civil War which signified the beginning of the food processing industry. Chemicals enabled manufacturers to enhance their food by modifying texture, color, and flavor, and to prolong shelf life (Young, 1961), and often were added to foods without the knowledge of the consumer. Driven by Harvey Wiley, a chemist working for the U.S. Department of Agriculture under President Roosevelt, the Pure Food and Drug Act was passed in 1906 requiring that active ingredients be labelled clearly

on any product designed for consumption, including all medications. While the bill did not ban the use of any particular substance, the assumption was that, providing the consumer was furnished with an accurate description of the product, they could make an informed choice whether or not to use it, and so avoid the risk of unintentionally consuming potentially toxic substances (Young, 1961). Thus, as the debate regarding the safety of opioids continued, the potent ingredients of the elixirs and nostrums that had been widely sold by quacks were now revealed. Within a year of the bill’s passage, estimates suggest that the sale of patent medications containing narcotics dropped by around 30 percent (Musto, 1999). Further, with the professionalization of the medical and pharmaceutical industries, it was increasingly in a physician’s self-interest to quash the practice of self-medication in favor of a paid consultation following which an appropriate medication could be prescribed (Reinarman, 1994).

The first decade of the twentieth century saw a slew of activity related to the control of narcotics culminating in the 1914 Harrison Anti-Narcotic Act the full title of which was: “An Act to provide for the registration of, with collectors of internal revenue, and to impose a special tax upon all persons who produce, import, manufacture, compound, deal in, dispense, distribute, or give away opium or coca leaves, their salts, derivatives, or preparations, and for other purposes” (Public Law No. 223, 63rd Cong., 3rd sess., December 17). Although in essence the purpose of the legislation was to regulate and tax the narcotics trade, the result of the Harrison Act was to solidify the division between medical and non-medical drug use. Several scholars have suggested that the distinction between “medicine” and “dope” was in response to a growing concern about addiction and a shift in the demography of a typical opioid user who, up to this point, was likely to be a white, middle-class, female whose opioid dependence was iatrogenic (Herzberg, 2009; Rowe, 2006). Indeed, there was a strong racial element to narcotics regulation
as illustrated by a statement made by Hamilton Wright, named to the International Opium Commission who suggested that: “One of the most unfortunate phases of the habit of smoking opium in this country [was] the large number of women who have become involved and were living as common-law wives or cohabitating with Chinese in the Chinatowns of our various cities” (Wright, 1910:44 cited in Kandell, 1998: 43).

Following the passage of the Harrison Act, the use and supply of specific drug types (e.g., heroin) was criminalized and brought under the control of the Federal Bureau of Narcotics (later the Drug Enforcement Administration). At the same time, the Food and Drug Administration (FDA) was established to ensure that “medical” drugs (e.g., morphine) were correctly labelled and regulated in order that patients and doctors could make better decisions about medical care. Herzberg (2009) suggests these two events resulted in a schism between “medical” and “non-medical” substances: medicating with pharmaceutical drugs was seen as a rational choice, while illicit drug use became associated with a pathological compulsion to “get high.” Similarly, Lovell suggests that movement or “leakage” from the licit to illicit market transposes an object that is legitimized (i.e., as a medicine or treatment), to a “dirty commodity” with “a radically different rationality and symbolic nature” (Lovell, 2006: 138). This transformation may also occur within the licit market place when prescribed medication results in unintended euphoria for the patient. Thus, as with all things considered deviant, it is the social characterization of a thing rather than the thing itself that defines it as either licit or illicit. Alongside this, the perception of a “typical” drug user also shifted and Herzberg suggests “the antidrug coalition … helped make it seem a logical absurdity for an ordinary, respectable (i.e., white, middle-class) American to become addicted unless they had been “infected” by someone from the dangerous classes” (Hertzberg, 2009: 89).
Although the Harrison Act was not designed to prohibit the use of opioids, one particular paragraph stating that: “Nothing in this section shall apply to the dispensing or distribution of any of the aforesaid drugs to a patient by a physician, dentist, or veterinary surgeon registered under this Act in the course of his professional practice only” (emphasis added: Harrison Narcotic Act, 1914, Section 2a), became a legal point of contention between the medical community and law enforcement (Musto, 1999). If opioid dependence was recognized as a medical condition, prescribing opioids could be considered within the realms of professional practice. If, on the other hand, “addiction” was seen as a moral aberration, prescribing opioids to patients who were opioid dependent would be construed as a criminal act (Booth, 1996). In 1919, *Webb et al. v. United States* was brought before the US Supreme Court involving a physician from Tennessee who had been prescribing opioids to patients, “not after consideration of the applicant’s individual case, and in such quantities and with such direction as, in his judgment, would tend to cure the habit, or as might be necessary or helpful in an attempt to break the habit, but with such consideration and rather in such quantities as the applicant desired for the sake of continuing his accustomed use” (Emphasis added. Webb, et al. v. United States, 249 U.S. 96). Critically, the decision went against Webb, and during the next 25 years, tens of thousands of doctors were prosecuted for prescribing opioids to dependent patients (Booth, 1996; Hohenstein, 2001). As a result of the Harrison Act and other legislative changes introduced in the early 1900s, the number of physicians prescribing opioids to their patients substantially decreased and cases of iatrogenic opioid dependence, as well as opioid dependence as a consequence of self-medication, dwindled to almost nothing (Courtwright, 2001a).

Repealed in 1970, the Harrison Act was replaced by the Drug Abuse Prevention and Control Act (DAPCA) Title II of which is the Controlled Substances Act legislating the
regulation of prescription drugs (Musto, 1999), and in 1975, *United States v. Moore* (423 U.S. 122, 124) reiterated the earlier *Webb* ruling that physicians could be prosecuted for prescribing beyond the scope of professional practice including “diverting” medication (Libby, 2006). In the U.S., semi-synthetic opioids such as oxycodone and hydrocodone, in addition to morphine, continued to be prescribed on a limited basis by doctors for pain relief, but until the end of the twentieth century, the source of most opioid dependence resulted from the illicit use of heroin, the domestic use and production of which was criminalized in 1924. For example, in 2003 only 3 percent of substance use treatment admissions reported a primary drug of opioid analgesics; however, by 2013 this number had increased to 9 percent (SAMHSA, 2015). Figure 3 shows the relationship between sales of opioid analgesics and rates of opioid drug treatment admissions over a decade period.

**Figure 4: Rates of opioid treatment admissions, and kilograms sold in the US 1999-2010**

The modern pharmaceutical industry

The Harrison Act effectively changed the culture of opioid prescribing and for most of the twentieth century, physicians limited the use of these drugs to treating cancer and end-life-pain. How then, did we end up in the current situation? To fully understand the proliferation of opioid use during the previous two decades, it is necessary to examine the role of the pharmaceutical industry and its relationship to the medical profession, as it is the interplay between these entities that has had perhaps the greatest influence on healthcare in the U.S. today.

The modern pharmaceutical industry had its origins in two distinct strands of business, wholesale drug manufacturers and science-based chemical companies (Chandler, 2009). In the mid-nineteenth century, the ability to isolate compounds from plant-based alkaloids resulted in the development of a number of new drugs, including morphine and codeine, which could be manufactured in precisely specified doses on a wholesale basis leading to the rapid growth of small apothecary businesses such as Eli Lilly and SmithKline (now GlaxoSmithKline). In tandem, chemical manufacturers, (e.g., Merck and Pfizer), many of whom were producing dyes and other chemical compounds, turned their attention to how their products could be utilized within a medical context (Healy, 2012), and with the advent of hematological staining—utilizing dyes to stain tissues for microscopic study—advances in synthetic organic chemistry swiftly translated to advances in synthetic organic drugs (Chandler, 2009).

The first half of the twentieth century is considered the golden age of the pharmaceutical industry. In addition to offering a means of protection against potentially life-threatening pathogens through the development of new vaccines, the isolation of therapeutic agents such as sulfanilamide and other antibiotics gave physicians the capacity to cure a range of infectious diseases.

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11 Sulfanilamide is the active ingredient of prontosil that protects against bacterial infections including streptococcus.
diseases rather than simply alleviate their symptoms (Tobbell, 2011). The outbreak of World War II accelerated the need for newly developed drugs such as penicillin to be produced on a massive scale. Mergers between fine chemical companies and wholesale drug manufacturers effectively consolidated the pharmaceutical process by combining access to the raw ingredients with the means for mass production. This structural shift served to solidify and increase the value of brand name drugs as corporations cut out the broker and took over the drug manufacturing process in its entirety, resulting in an increasing emphasis on marketing and sales (Hertzberg, 2009). As pharmaceutical companies continued to isolate new antibiotic agents, novel therapeutic products were followed by “me too” drugs—those with very similar chemical structures and similar effects to existing medications—which, in order to sell, required sophisticated sales techniques to differentiate them from similar drugs produced by competitors (Tobbell, 2011).

In tandem with these changes, the Food, Drug, and Cosmetic Act (FFDCA) was signed into law by President Roosevelt in June 1938. Although it had been recognized by congress that the existing Food and Drug Act (1906) did not offer adequate consumer protections, the new bill was only finalized following a tragedy in which more than 100 people, many of them children, were poisoned after imbibing Elixir Sulfanilamide. Responding to a request for sulfanilamide in liquid form, Harold Watkins, chief chemist of the S.E. Massengill Company produced a new compound dissolved in ethylene glycol, a toxic substance similar to antifreeze. With no provision in the existing law requiring that all components of a drug compound be certified as safe for human consumption, the preparation was tested only with regard to how it looked, how it smelled, and how it tasted, and not for its potential toxicity (Wax, 1995). However, despite the
scope of the tragedy, under the existing legislation, the FDA had no latitude for prosecution and was able only to level a minor charge against the company related to misbranding.\textsuperscript{12}

Enacted the following year, the FFDCA provided much improved protections for consumers against potentially dangerous substances including a requirement that all new drug components should be tested for proof of safety prior to release, with findings submitted to the FDA as part of each new drug application. In addition, all the active ingredients were to be listed, and false or misleading labelling was prohibited (FFDCA, 1938). Aside from providing better protection for consumers, perhaps the most significant consequence of the FFDCA was to increase the proportion of drugs that required a prescription. An amendment to the bill sponsored by Senator Hubert Humphrey and U.S. Representative Carl Durham in 1951 further served to cement the division between over-the-counter and prescription-only drugs, resulting in a shift that would have a profound effect on doctor-patient relationships (Wax, 1995). Faced with increasing monopoly within the pharmaceutical industry, patients became progressively more reliant on their doctors to remain immune to the sophisticated marketing techniques employed by drug companies to encourage use of their product (Healy, 2012).

Healy (2012) suggests that, despite the growing proliferation of prescription-only drugs and the increase in marketing and advertising, until the late 1950s the medical profession was largely able to maintain an adequate level of neutrality against the onslaught of branding and marketing from the pharmaceutical industry. The American Medical Association (AMA) operated its own laboratories to test new drugs, and only those products that had received the AMA’s seal of approval were permitted advertising space in the association’s journal. Further

\textsuperscript{12} The company was charged with misbranding as the lethal product, labelled an “elixir” did not actually contain any alcohol with the FDA contended the term implied.
the AMA tended to favor generic formulations over brand name products, protecting patients from the high price of many branded prescription medications.

Regardless of the increasing press interest in new, potentially life-saving drugs, the medical profession also disapproved of direct-to-consumer advertising, and viewed such marketing tactics as a throwback to the bygone days of patent medicines when quacks touted worthless remedies to an unsuspecting public. Pharmaceutical executives too, were of the mind that the industry should distance itself from direct contact with consumers and instead establish relationships only with health care providers such as physicians and pharmacists (Tobbell, 2012). However, as the publicity around new drugs intensified, the AMA began to view these popular news articles as a surreptitious way for drug companies to promote new products by creating consumer-led demand, shifting the balance of power between doctors and patients. In the summer of 1952, a report by the AMA Research Committee included a scathing assessment of pharmaceutical marketing practices, which they suggested were “to avoid the long but necessary period of evaluation for a new method of treatment” (AMA Research Committee Report, 1952, cited in Tobbell, 2012: 63). However, despite their initially strong stance against direct-to-consumer advertising, the AMA gradually conceded their position and, by the end of the 1950s, developments in the wider political sphere, most notably the introduction of the Medicaid bill to Congress, had the AMA scrambling for funds to fight the proposed bill. As the AMA sought increased revenue from advertising, the standards required for a product to win the seal of approval were relaxed and pharmaceutical advertising sales doubled (Healy, 2012). Indeed, by 1961, an editorial in the journal Science estimated that more than half the AMA’s annual budget came from the pharmaceutical industry, which had produced 3,790,908,000 pages of paid journal advertising (Harris, 1964, cited in Healy, 2010: 40).
By the end of the 1950s, partly as a result of healthcare reform, drug companies were under intense scrutiny from the government for their pricing and marketing strategies, and in 1959, a Senate subcommittee on antitrust and monopoly investigation led by Senator Estes Kefauver was established to investigate the industry. Kefauver’s interest in the pharmaceutical industry was piqued when his staffers discovered that several different brands of the same antibiotic were being sold for exactly the same price, at a 1000 percent markup from the manufacturer’s price, suggesting that pharmaceutical companies were conspiring to keep prices high and bribing doctors to prescribe more costly, patented drugs (Healy, 2010). As described in Tobbell, Kefauver and his team identified three mechanisms that permitted pharmaceutical companies to monopolize the market: (1) the granting of patents with 17 years of market exclusivity for new drugs; (2) the advertising and sales of products to physicians; (3) the ability of companies through these marketing strategies to encourage use of brand name rather than generic drugs (Tobbell, 2012: 92). The resulting bill, S. 1552, proposed a number of amendments to the existing patent laws, including reducing the period of time new drugs could be exclusively marketed to three years, and limiting patents to only those drugs that were significantly different in terms of their molecular structure, and therapeutic effect, to other products already available for sale. In addition, new safety standards were proposed that would expand the government’s reach over the drug manufacturing and distribution process, including a provision that required evidence not only that a drug was safe, but also that it was effective to treat a particular ailment.

The main objections to Kefauver’s proposed bill were largely centered on his proposed reforms to the patent system and, in a sign of the times, many of the arguments against the bill presented by its detractors were oriented toward the national fear of communism (Tobbell, 2012). Further, although initially well-received by some groups, the proposed amendments
relating to drug marketing practices also met with resistance. Seen by many as an attempt to undermine the free market economy and introduce socialized medicine, opponents conjured images of a state-controlled healthcare system under which the autonomy of physicians would be severely compromised, a view bolstered by other recently proposed legislation, including the Medicare Act, which was deeply unpopular within the medical profession.

United against the bill, medical providers and the pharmaceutical industry solidified their alliance and, by exploiting the deep-held fears of socialism while simultaneously lauding the many recent therapeutic innovations, critics of the bill were effectively able to counteract the negative publicity against the drug companies that Kefauver’s team had generated since the start of the investigation. Central to this rhetoric was the assertion that curbs on patents and drug prices would lead to a diminished capacity for research and stymie new drug discoveries. In reality, many of the drugs developed during the pharmaceutical golden age, including sulfanilamides and antibiotics, had been developed in Europe; of the drug discoveries that could be credited to the U.S., the majority came from laboratories housed within academic institutions that were government- rather than industry-funded (Tobbell, 2012). Further, while the industry was cited to spend approximately six percent of its sales revenue on research, the Kefauver’s report claimed that many of the top pharmaceutical companies spent “5 to 11 times as much in advertising, promotional, and selling expenses” (Tobbell, 2012: 115).

The impetus that eventually pushed Kefauver’s bill through Congress (albeit in a watered down form) was another drug safety scandal which played out on a global scale. Originally developed in Germany, Thalidomide was marketed for a variety of ailments including respiratory infections, insomnia, and anxiety. After it was discovered to have antiemetic properties, it was also sold, often without a prescription, to pregnant women to alleviate morning sickness.
Although never licensed for sale in the U.S., quantities of the drug were dispersed across the country for testing purposes by Merrell Pharmaceuticals, with the expectation that it would soon be granted FDA approval. Even as disturbing reports began to emerge about the drug effect on fetus development, the drug continued to be distributed to doctors, and estimates suggest that approximately 10,000 children, including 17 in the U.S., were ultimately affected by phocomelia, a malformation of the limbs (Heaton, 1994). News of the Thalidomide tragedy altered the political landscape and Kefauver’s bill was once again front and center as the vehicle for industry reform. Rushed through the House and the Senate, the final legislation proscribed further safety checks for drug toxicity and tasked the FDA with advertising control. In addition, the bill strengthened the status of new drugs as prescription-only, required that manufacturers be able to prove the efficacy of their product for a specific condition, and mandated controlled studies to demonstrate drug-effectiveness (Peltzman, 1973). However, the pharmaceutical industry had won an important battle, and reform of the existing patent laws was conspicuously absent.

In his analysis of the pharmaceutical industry, Healy (2012) suggests that although Kefauver’s bill seemed to provide a robust safety net, the reality has been very different. He explains it in the following terms: “When a pharmaceutical company gets a drug on the market for lowering cholesterol, for osteoporosis, or for erectile dysfunction, this now marks the point at which the company begins to sell the condition, the point at which they can gear up to reengineer the medical marketplace to suit their product” (Healy, 2012: 47). As I will illustrate in the following chapters, a new emphasis on the treatment and marketing of “pain” as its own syndrome, rather than a symptom of an underlying issue, along with new pain relieving drug products has been an integral factor in the recent explosion of opioid prescribing in the U.S.
Although the intention of Kefauver’s bill regarding the safety and efficacy of a drug was to provide added consumer protection, results from randomized controlled trials turn out not to be as impartial as one might think, even when they appear in prestigious medical publications. Indeed, the integrity of clinical trials was thought to have been so severely compromised that in 2001, a dozen editors from some of the best-regarded medical journals across the globe collectively printed a statement warning that the objectivity of the research findings appearing in their journals was at serious risk (Abramson, 2004). Until the late 1970s, scientific research was largely supported by the federal government; however, as funding from the National Institutes of Health (NIH) began to wane, academic institutions were forced to look elsewhere for grants to support their work, and pharmaceutical companies were happy to fill the void. In tandem with these changes, in 1980, the Reagan administration passed the Bayh-Dole Act designed to promote innovation by allowing small businesses and academic research facilities to take out patents on inventions (including new drugs) stemming from government-funded research. The main provision of this legislation was that biotech companies and academic institutes could patent drug discoveries and thereafter license their products to the pharmaceutical industry for development, while retaining a share of the royalties. Additionally, researchers and their affiliated institutions increasingly owned equity in the companies to whom they granted these licenses, resulting in an even greater imperative to turn their innovations into commercially viable products (Angell, 2004).

In order to prove safety and efficacy, a new drug must undergo testing, usually in the form of clinical trials, with results submitted to the FDA for review. In 1991, around 80 percent

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13 Prior to the Bayh-Dole Act, inventors were obliged to hand over new drug discoveries to the federal government which, by the time the act was passed, held 28,000 patents, only 5 percent of which had been licensed for commercial use (U.S. GAO, Report to the Congressional Committees, 1978).
of industry-sponsored clinical drug trials were conducted by researchers at medical schools or teaching hospitals. However, in little more than a decade, that figure had dwindled to less than a third (Abramson, 2004). The entities that have replaced academic institutions are independent, privately run research organizations holding direct contracts with pharmaceutical companies that are able to administer clinic trials in a fraction of the time it would take an academic institution to perform the same task. A consequence of this is that the rigor associated with research directed within an academic institution has been lost to the point that scientists conducting drug trials “may have little or no input into trial design, no access to the raw data, and limited participation in data interpretation” (Abramson, 2004: 96). Further, now that drug testing is so carefully controlled by the companies that develop the product, it is uncertain whether negative findings are likely to be published at all. For example, a review by the Swedish government of all the known studies (whether published or not) relating to the efficacy of five new antidepressants found that, from a total of 42 studies, half reported the new drugs to be effective\(^{14}\) and half did not. However, of the half that did not, only six had been published (Abramson, 2004).

Also pertinent to the current trends in opioid prescribing are the techniques pharmaceutical companies use to sell their products. The amount of money the industry spends on marketing has been referred to as a “black box,” from which it is difficult to extract verifiable numbers, although it was estimated in 2001 to be a minimum of $19.1 billion per year, and perhaps as much as $54 billion (Angell, 2004). Since the majority of drugs are only available via prescription from a medical professional, doctors constitute the primary target for drug

\(^{14}\) Although randomized controlled trials are required as part of the FDA approval process, there is no obligation that drug companies compare the efficacy of a new drug with the best existing available therapy, and new drugs are often only tested against a placebo. Thus, new drugs are often approved not because they are better than older (often cheaper) products already on the market, but because they are better than no treatment at all (Angell, 2004).
marketing, and a significant proportion of the marketing budget is directed with this in mind. In order to encourage doctors to prescribe their products, pharmaceutical companies employ a variety of techniques including sending armies of “detailing” men and women directly to doctors’ offices to hand out free drug samples along with other giveaways, at an estimated cost of $10,000 per physician, per year (Abramson, 2004). In a critical review of the impact of physician-industry interaction on doctors’ practices, Wazana (2000) found that while both residents and physicians purportedly held cynical views regarding visitation from detailers, there was a lack of concern about how these visits may influence their practice. However, an examination of the outcomes of these visits suggested a number of negative effects on knowledge, attitude, and behavior including: “[the] inability to identify wrong claims about medication . . . awareness, preference, and rapid prescription of a new drug . . . making formulary requests for medications that rarely held important advantages over existing ones; non-rational prescribing behavior; increasing prescription rate; [and] prescribing fewer generic but more expensive, newer medications at no demonstrated advantage.” (Wazana, 2000: 378).

A second important marketing strategy employed by the pharmaceutical industry is to reach medical providers through symposiums and lectures often delivered by well-respected senior physicians considered “thought leaders” within the profession (Abramson, 2004). In order to renew their license to practice medicine, the majority of states require that physicians earn continuing medical education (CME) credits throughout their careers which can obtained by attending approved meetings where educational components are offered relating to a variety of

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15 The practice of “gifting” often starts in medical school and is amplified during residency and beyond. Giveaways range from small tokens such as meals and penlights to medical equipment, including stethoscopes or textbooks, to cash stipends and all expenses paid symposiums in prime locations.

16 Medical practitioners can request that particular medications be added to a “formulary”, a list of approved prescription drugs that are covered at least partially by medical insurance plans. Where brand-name medications are not included on formularies, patients may be liable for 100 percent of the cost.
topics. However, some commentators have questioned these meetings’ funding sources and the impartiality of the presented materials, given that a proportion of financing comes from the pharmaceutical industry (Relman, 2003). Indeed, since the beginning of the 2000s, the Accreditation Council of Continuing Medical Education (ACCME), the organization responsible for overseeing CMEs, has endorsed more than 100 private Medical Education and Communication Companies (MECCs) to deliver CMEs to physicians, which includes planning the meetings, deciding the content of the teaching materials, and selecting thought leaders to deliver the lectures (Angell, 2004). These firms, primarily contracted by the pharmaceutical industry, then provide their educational curricula at no charge to hospitals, other CME sponsors and physicians (Relman, 2001). However, marketing materials from one of the largest MECCs, Concepts in Professional Education and Communications, leave no room for ambiguity about their potential benefit to the pharmaceutical industry, as referenced in a report released by the Public Citizen’s Health Research Group in 2000: “Medical education is a powerful tool that can deliver your message to key audiences and get those audiences to take action that benefits your product” (cited in Relman, 2001: 2010). Although new guidelines were instituted by the ACCME in 2004, the pharmaceutical industry continues to support more than half the costs associated with CMEs in the U.S. (Brody, 2009) and the questions regarding the professional integrity of this practice endure.

Aside from physicians, another important marketing target is, of course, the person who will ultimately ingest the drug prescribed by the doctor, that is, the patient. Direct-to-consumer advertising (DTCA) has been a mainstay of the pharmaceutical industry for decades. However, as a result of FDA requirements that drug advertisements fully disclose all potential side effects, the 30-second television commercial format was largely impractical, and until 1997, drugs were
mostly advertised on printed matter, a medium better able to accommodate this information (Angell, 2004). In 1997, the FDA softened the regulations for television advertising and between 1996 and 2000, annual spending on DTCA tripled (Rosenthal et al., 2002). As previously asserted by Healy (2012), medical advertising is adroit at selling not only a product, but a way of life, and as Abramson suggests, pharmaceutical advertising quickly became adept at creating the impression “not only that health and happiness can be achieved by using the right drugs, but that drugs are necessary [emphasis in the original] for health and happiness” (Abramson, 2004: 151).

There is little doubt that DTCA is an effective tool, and in 2010 a national survey, *Consumer Reaction to DTC Advertising of Prescription Drugs*, reported that a third of participants had instigated a conversation with their doctor regarding a specific prescription medication after seeing an advertisement for that drug (Prevention, 2010). This type of interaction between doctor and patient has likely resulted in a subtle change to the relationship as the success of an office visit may well be predicated on whether the doctor complies with his or her patient’s request (Abramson, 2004). Indeed, as pressure mounts within the health system to shrink costs by shortening the time spent with patients, and expanding restrictions on insurance reimbursement limit the scope of therapeutic options, a prescription may be the most meaningful outcome of an office visit. Moreover, as patients become more discerning as consumers of the health care system (Stephens, 2010), supplying a prescription for a requested drug could influence the type of feedback a doctor receives and ultimately affect future business (Lembke, 2012).

Finally, although drug companies are required to submit all the materials associated with a new marketing campaign to the FDA to assess that the information intended for the consumer is presented in a fair and balanced way, the number of submissions the FDA receives every year
vastly outnumbers the number of staff they have available to review these materials. Thus, while there is the appearance of checks and balances, the reality is that many of the advertising campaigns that are found to be in violation of FDA guidelines will have already concluded by the time the campaign has been reviewed (Angell, 2004).

My intention in providing an historical overview of both the use of opioids in the U.S. and the industry that sells them is to relay to the reader that the current opioid situation we are experiencing was not conjured from thin air. Rather, it is a continuation of the postwar consumer culture in this country that has resulted in a restructuring of social institutions including the medical system (Hertzberg, 2009). The following chapter will focus on the contemporary context as it relates to our current understanding of pain, as well as actions by the pharmaceutical industry that have precipitated the resurgence of opioid prescribing during the previous three decades.
CHAPTER TWO: THE UNDER-TREATMENT OF PAIN

“I have given a name to my pain and call it dog”

Nietzsche

Following the Harrison Narcotics Act (1914) and continuing for most of the twentieth century, the use of opioid-based products for pain relief was severely curbed and largely limited to treat cancer and end-of-life pain. The increased use of these medications since the mid-1990s can be attributed in part to two coinciding events: 1) an emerging clinical focus on the under-treatment of pain; 2) the release and aggressive marketing of OxyContin®, a newly patented long-acting opioid analgesic. The following chapter discusses each of these phenomena in more detail.

The conceptualization of pain has transformed through the ages. Previously regarded as an independent entity, a “thing” rather than an experience or event (Bourke, 2014), pain has in turn been closely aligned with theology, evolution, and disease, and often examined through a philosophical rather than a physiological lens. Prior to the seventeenth century, pain, along with other emotions and sensations, was thought to originate from the heart. As the dominant metaphor of Judeo-Christian doctrine (Meldrum, 2003), pain was often understood to be “a chastising communiqué from a Higher Being” (Bourke, 2014: 9) and an integral part of human suffering. Pain was thus both physical and spiritual, and while members of the medical profession used first opium and then laudanum to relieve their patients’ symptoms, pain was also inflicted by doctors in procedures employed to realign the four humors, an imbalance of which was thought to be the origin of disease.¹⁷

¹⁷ Prior to the nineteenth century, Humorism dominated the understanding of the human body. At its core was the theory that the body contained four fluids—phlegm, black bile, yellow bile, and blood—acted upon by spirits known as the natural, the vital, and the animal. In a healthy individual, each of the humors was perfectly balanced; however
The middle of the seventeenth century saw a dramatic change in the understanding of human physiology and the perception of emotions or sensations. Propelled largely by René Descartes, who theorized a mechanistic view of the body, pain became one sensation in a vat of possible neurophysiological responses to stimuli. Vividly illustrated in several of his treatise, Descartes’ conceptualization of pain included diagrams detailing the sensory-motor system and the principles of action-reaction, or reflex which he described as follows: “Just as, pulling on one end of a cord, one simultaneously rings a bell which hangs at the opposite end” (Descartes, 1641: 27). Largely as a result of Descartes’ work, a new understanding of physiology emerged spurring the Cartesian distinction between body and mind that formed the foundation of our understanding about pain until the modern era (Bourke, 2014).

The division of mind and body was solidified at the beginning of the nineteenth century with the advent of the “clinical gaze” (Foucault, 1963). A shift toward empirical enquiry meant that rather than relying on existing systems of disease classification, symptoms were now carefully observed prior to diagnosis. Foucault suggests that a consequence of this was a subtle transformation in the way doctors communicated with their patients, and where a physician’s inquiry once might have started with “What is the matter with you”, the clinical gaze provoked the question “Where does it hurt?” (Foucault, 1963: xviii). While this approach stimulated many medical advances, Morris (1991) contends that the clinical gaze objectified pain to such a degree that pain not evidenced by the presence of visible lesions lost its authority. Thus over time, the explanation for pain has become entirely medicalized. And yet paradoxically, even with the enormous advances made in the medical sciences, pain—especially chronic pain—has reached epidemic proportions (Morris, 1991). Indeed, estimates from the Institute of Medicine (2011)

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a deficit or excess of any/all of the fluids could lead to physical and/or mental dysfunction. Realigning the humors was attempted through a variety of often painful medical procedures including purging and bleeding.
suggest that 100 million Americans experience chronic pain at an annual cost, including health care expenses and lost productivity, of $560-630 billion.

More recently, pain has come to be understood as a multifold concept, and it is now acknowledged not only that different causes of pain are felt in qualitatively different ways, but that pain is subjective and may be dependent on social factors, independent experiences, and emotional states (Morris, 1998). In 1976, the newly formed International Association for the Study of Pain (IASP), convened a panel of medical experts who defined pain as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (Merskey, 1986). However, while this definition would seem to attenuate the distinction between physical and emotional pain, some scholars question whether this is the case. For example, Morris (1991) suggests that the division between physical and mental pain continues to prevail, and while Bourke (2014) eschews the mind/body dichotomy, she concedes that “the Cartesian distinction between mind and body is alive and well and does a vast amount of ideological work for physicians, psychiatrists, psychologists, the pharmaceutical industry, and chronic pain patients today” (Bourke, 2014:12). Further, as Goldberg (2009) points out, many ethnographies of pain among Western populations rely on the separation of mind and body as the organizing principle for the interpretation and understanding of pain among affected groups, including illness sufferers themselves.

The distinction between chronic and acute pain is an important one. Whereas acute pain is typically localized, short in duration, and yoked to a known, underlying physical cause, such as a broken bone or appendectomy, chronic pain persists beyond the expected time for healing of an illness or injury and is thought to be a “pathologic process that results in aberrant signaling from a previously injured location or site of trauma” (Dhesi and Hurley, 2002: 10). Further,
while acute pain has a biological or evolutionary purpose to protect—individuals suffering from congenital analgesia, with the resulting absence of pain, for example, typically injure themselves frequently and have a shortened life expectancy (Goldberg, 2009)—chronic pain serves no obvious function, and is often accompanied by suffering, depression, or demoralization (Jackson, 2005). Although the syndromes associated with chronic pain have been discussed within the medical community across the ages, the absence of obvious injury or illness has meant that its root cause has alternatively been seen as real or imagined. As the field of neurology has expanded and specific diagnostic tests became more readily available to identify certain ailments, “true” pain was seen as stemming from a “specific noxious stimulus” as opposed to imagined pain, which condemned the sufferer as “maligners or drug abusers” (Meldrum, 2003: 2742), and as Jackson suggests, “a lack of a visible mark is considered by some pain sufferers to create the conditions for stigmatization” (2005: 340).

In the last 30 years, the emergence of pain as its own specialty has highlighted the extent to which pain is under-treated, and as Bourke (2014) points out, in the 1970s, only 0.3 percent of the content in text books related to oncology published in the U.S. tackled the issue of pain, although the majority of people with cancer would certainly be likely to suffer pain at some point during their illness (Bourke, 2014: 294). Using a political lens to examine the recent shifts in the way pain has been conceptualized and treated, Wailoo (2014) recalls former President Reagan’s 1985 State of the Union address in which he stressed the need for a free market economy. He suggests that the deregulation that occurred during the Reagan era diminished consumer protection and weakened FDA oversight, both of which had become synonymous with constraining the market and preventing people from receiving the pain relief they needed and to which they were entitled. Under the watch of free market conservatives, proposed regulations for
monitoring adverse drug reactions were scrapped, government oversight limited, and the FDA pushed toward a faster system intended to promote rather than inhibit ingenuity (Wailoo, 2014).

The push for deregulation coupled with a shift in the perception of treatment and an urging from specialists to treat pain as the “fifth” vital sign resulted in a rethink of the use of opioid analgesics to treat chronic pain. Although opioid analgesics have always been prescribed for malignant, end-of-life pain, use of these drugs for other types of non-cancer pain had been limited since the Narcotics Harrison Act (1914) and subsequent Supreme Court rulings, which resulted in the prosecution of thousands of physicians for prescribing opioids beyond the scope of professional practice. However, bolstered by two widely cited articles suggesting that the risk of complications from opioid therapy were minimal, pain advocacy groups urged an easing of restrictions regulating the prescribing of these drugs.

The first of these articles, authored by Porter and Jick (1980), and published as a letter to the editor in the New England Journal of Medicine, consisted of a single paragraph reporting findings (but no analysis) from a study of patients who had received narcotics while being treated in hospital. The authors stated that of the 11,882 patients who received opioids, there were only four documented cases of opioid use disorder associated with those who had no history of addiction. The second, authored by Portenoy and Foley (1986) and published in Pain, provided findings from a study of 38 patients and reported that opioid analgesics could be effectively used for the treatment of long-term pain with only minimal risk of psychological

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18 A subsequent bibliometric analysis of this letter conducted between the time of its publication and March 30 2017 identified 608 citations with a notable increase following the release of OxyContin®, a long-acting opioid analgesic formulation discussed in detail below. Of the articles that included a reference to the letter, many conveyed incomplete information about the study, and some citations grossly misrepresented the conclusions of the letter. For example, the study had involved opioid treatment to patients administered in the controlled setting of a hospital to alleviate acute pain and not long-term opioid therapy as was often inferred. The authors of this analysis conclude that despite the lack of evidence presented in the original letter, it was “heavily and uncritically cited as evidence that addiction was rare with long-term opioid therapy” (Leung, P.T.M et al., 2017).
dependence ("addiction") or other negative health outcomes. Why these particular publications had the impact that they did is difficult to ascertain, but both papers went on to be cited more than 600 times, and their conclusions—that patients could be prescribed opioids with minimal risk of developing an opioid use disorder—helped support the resurgence of opioid prescribing in the U.S.

Recognizing that chronic pain was undertreated in many patients, in 1998, the Federation of State Medical Boards of the U.S. issued new guidelines for the use of controlled substances, relaxing the restrictions that governed the use of opioid analgesics for chronic non-cancer pain. Endorsed by both professional medical associations and the federal government, including the Drug Enforcement Administration, the move toward greater use of opioids for pain relief was in keeping with the post-Reagan years in which deregulation had flourished.

*The case of OxyContin®*

The momentum for the improved treatment of pain coincided with the release of a new semi-synthetic, controlled-release opioid analgesic manufactured by Purdue, a relatively small pharmaceutical company purchased in 1952 by the Sackler family. The drug, brand named OxyContin®, was developed by the company largely because the patent on an extended release morphine pill, MS Contin®—which until the late 1980s had been their main source of revenue—was about to expire, resulting in the loss of millions of dollars as cheaper, generic versions were released onto the market. In an internal memo written in 1990 and recently published by the *LA Times*, Robert F. Kaiko, vice president for clinical research wrote: “MS Contin® may eventually

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19 Dr. Portenoy went on to become a thought leader within the medical profession, heavily promoting the use of opioids to treat chronic pain. In a video-taped interview with a medical colleague in 2010, Portenoy stated that he “gave innumerable lectures in the late 1980s and 90s about addiction that weren’t true.” (*Wall Street Journal, December 2012*).
face such serious generic competition that other controlled-release opioids must be considered” (Ryan et al., 2016). The result was OxyContin®, the active ingredient of which, oxycodone, is derived from thebaine, an opioid alkaloid approximately 10 times stronger than morphine.

Although oxycodone has been in clinical use since 1917, the novelty and presumed advantage of OxyContin® was its time-release mechanism which promised effective pain relief for up to 12 hours, twice as long as the short-acting generic oxycodone formula. As with all drugs, in order to receive FDA approval, Purdue were required to submit a new drug application including results from completed clinical trials. Paradoxically, the FDA does not require that new drugs be compared to the best existing therapies, and many trials are conducted by testing a new product against a placebo. In one trial submitted as part of the approval package and described in Abramson (2004), OxyContin® was tested against a placebo for pain relief following knee replacement surgery. Divided into treatment and control groups, patients were either given OxyContin® twice per day as a preemptive measure, or were given a twice-daily dose of a placebo. Patients in both the treatment group and the control group were also able to request additional pain relief, and the preemptive doses they were given were then tweaked depending on their request for additional medication. The results of this study concluded that preemptive use of OxyContin® resulted in improved pain control. However, as Abramson (2004) points out, the study shows only that “treatment of moderate to very severe pain after knee replacement surgery with preemptive doses of OxyContin® is superior to treatment with preemptive doses of nothing.” (Abramson, 2004: 103). Nonetheless, in 1996, OxyContin® received approval from the FDA and was aggressively marketed to doctors nationwide.

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20 Patients who requested additional pain relief were give Percocet®, a quick acting oxycodone pill in a dose roughly one sixth of the strength of the 24-hour dose of OxyContin®.
OxyContin® was touted as a safe, long-acting pain medication for the non-malignant pain market, and it was anticipated by both the FDA and Purdue that the controlled-release formula would reduce the incidence of misuse and psychological dependence to the extent that the original package insert stated the following: “delayed absorption, as provided by OxyContin® tablets, is believed to reduce the abuse liability of a drug.” (Cicero et al., 2005: 662). Indeed, pharmaceutical sales representatives for the company were trained to promote OxyContin® as having a “less than one percent” risk of addiction (Meier, 2003: 99), an often cited statistic stemming from the Porter and Jick (1980) letter referenced above. Utilizing a range of sales strategies including all-expenses paid symposiums for prescribers and lucrative bonuses for sales representatives (Van Zee, 2009), Purdue funded more than 20,000 educational programs relating to pain-management in the six years following the release of the product (U.S. GAO, 2003). In Massachusetts, Purdue donated $3 million to the Massachusetts General Hospital to support educational activities, including continuing medical education, the curriculums of which had been designed by Purdue to help doctors overcome their concerns about prescribing opioids, specifically OxyContin®, for pain relief (Abramson, 2004). Further, through an agreement with the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), Purdue was the only pharmaceutical company permitted to distribute selected pain management educational materials, facilitating access to OxyContin® in hospitals (U.S. GAO, 2003).

To reiterate, oxycodone, the active ingredient in OxyContin®, is not a new drug; however, the extended release formula with its promise of 12-hour pain relief made it attractive to physicians for the treatment of chronic pain compared with generic short-acting oxycodone formulas indicated to alleviate pain for a maximum period of six hours, as well as justifying its considerably higher cost. But how effective is OxyContin®? A recent exposé by the Los Angeles
\textit{Times} suggests that, for many patients, OxyContin® does not work effectively for the full 12 hours, a fact the \textit{Times} claims that Purdue was aware of, but have never acknowledged. Indeed, following their review of 1000s of pages of documents, including internal emails and company memos, the \textit{Times} reports that, in response to their patients’ complaints, when doctors began prescribing OxyContin® for a duration shorter than 12 hours, Purdue “mobilized hundreds of sales reps to ‘refocus’ physicians on 12-hour dosing” encouraging medical providers to prescribe stronger doses rather than more frequent ones (\textit{Los Angeles Times}, 5 May 2016).

Further, despite Purdue’s assurances regarding the safety of OxyContin®, the mechanism that enabled the dose to be time-released was not robust, and people using the drug soon discovered that by rubbing or sucking the coating off the tablet and crushing, or dissolving the tablet in water, the entire dose was immediately available, precipitating a potent high.

Regardless, sales exploded, and between 1996 and 2002, the number of prescriptions increased from 316,786, valued at $44 million, to 7,234,204, valued at over $1.5 billion (U.S. GOA, 2003). By 2004, OxyContin® was one of the most widely misused drugs in the U.S. (Van Zee, 2009).

The last decade has seen multiple law suits brought against Purdue and its affiliates, sometimes with costly results. For example, in 2007, the company, along with three of their executives, pled guilty to criminal charges that they had misrepresented the abuse potential and risk of addiction related to OxyContin® and were instructed to pay more than $634 million in fines (\textit{New York Times}, 10 May 2007). Following the intense scrutiny of its product, in 2010 Purdue released a reformulated abuse-deterrent OxyContin® tablet designed to prevent the medication from being crushed, chewed, dissolved, or otherwise tampered with. Although the reformulation does seem to have reduced the incidence of OxyContin® misuse, data suggests that
individuals who were using OxyContin® may have simply transferred to other types of opioid analgesics (Cicero et al., 2012).

In their analysis of the problematization of the OxyContin® crisis, Whelan and Asbridge (2013), report that findings from studies both in pain and addiction journals assigned responsibility for the proper distribution of opioid analgesics to physicians, citing overprescribing and a lack of follow-up or screening procedures for substance use issues. The authors argue that by taking responsibility, physicians may be able to exert “clinical control [emphasis in the original] over the problem, not merely clinical culpability; that is, if those who treat pain are able to define and thereby ‘acknowledge’ the problem, they may also be empowered to find ways to solve the problem as they have defined it.” (Whelan and Asbridge 2013: 406). However, this response presumes a lack of intentionality on the part of physicians, and to date there remains limited understanding regarding how opioid-related corruption may operate within the profession. While the role that doctors have played in prescribing opioids will be explored further in Chapter 6, the 2010 OxyContin® formulation change and the subsequent effect it had on the diverted opioid market will be explored in Chapter 7.
CHAPTER THREE: STUDY CONTEXT, DESIGN, AND METHOD

The data presented in this dissertation were collected as part of a qualitative interview study conducted at the New York City Department of Health and Mental Hygiene (NYCDOHMH) to examine opioid analgesic misuse in New York City21. The study aimed to explore three key areas: (1) initiation into opioid analgesic misuse; (2) trajectory of use; and, (3) mechanisms of diversion from medical to non-medical use. Qualitative methods were selected to provide context to existing epidemiological data focusing on opioid analgesic prevalence, morbidity, and mortality. Utilizing in-depth, face-to-face interviews, the purpose of this research aimed to gain a deeper understanding of patterns of use and market dynamics from the perspective of individuals with experience of opioid analgesic misuse, in order to explore behavior that is often stigmatized among a hidden population.

Recruitment strategies

Because the study was conducted at NYCDOHMH, it was important that it be inclusive of each of the five boroughs. However, epidemiological data also guided where to recruit participants; for example, residents of Staten Island have the highest rate of unintentional drug-poisoning overdose involving opioid analgesics in New York City (10.7 per 100,000 residents), four times higher than other boroughs (Paone, et al, 2014). Further, in 2010, Staten Island residents had the highest rate of opioid analgesic prescriptions filled compared with the rest of the city (Paone et al., 2012). Data also showed that residents of the wealthiest neighborhoods had the highest rate of opioid analgesic-involved deaths in the city (Paone, et al, 2014). Thus, where

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21 As co-investigator on the study, I was responsible for the overall design, implementation, and data collection.
previous studies of persons who use opioid analgesics have often focused on street-based populations (Lankenau et al., 2012a; Mars et al., 2014), who may be more visible and therefore easier to access, this study aimed to reach a diverse sample not only geographically, but also socioeconomically.

Persons who engage in what is considered to be deviant behavior (such as illicit substance use) are regarded as part of a hidden population and therefore hard-to-reach (Magnani et al., 2005). For this study, a number of different strategies were used to gain access to potential participants. Initially, a colleague connected me with Maggie, a woman whose two adult children had histories of opioid analgesic misuse. Maggie agreed to speak with me as a key informant, and during my visit introduced me to Natalie, her 26-year old daughter. Natalie became the first participant in the study and acted as an informal “gate-keeper” (Seidman, 2006) to those members of her social network who also misused opioid analgesics. This scenario, during which an individual enrolled in the study acted as gate-keeper to their social network played out multiple times during fieldwork.

In some cases, finding a gate-keeper living in the community was not always possible, and institutional alternatives were sought (see Flick, 2009). In neighborhoods that were difficult to penetrate, staff from harm reduction programs and/or drug counseling services acted as gate-keepers to their clients and agreed to disseminate information about the study by displaying posters in their waiting areas, or distributing fliers to clients who might be eligible for interview. Posters and fliers contained information regarding the nature of the research, its confidentiality, the approximate duration of the interview (1 hour), the amount of the honorarium ($30), and a telephone number for interested persons to call.
That the study was affiliated with NYCDOHMH likely facilitated this process, and access to clients may have been granted with fewer hurdles than if the research had been proposed by a non-governmental institution. However, government-funded research may also have its pitfalls. Some of the agencies the research team contacted for help with finding participants were also in contract with NYCDOHMH, and it is possible they may have felt an obligation to assist in the research. Further, the fact that a City agency rather than an academic institution led the study, could possibly have shaped some participants’ responses, as they may have been suspicious of an underlying agenda. However, assuring anonymity through the waiver of written consent is likely to have alleviated some of the unease participants may have had regarding the government’s role in the research process.

In neighborhoods where no appropriate programs or services existed, posters were placed in a variety of venue-based settings including, but not limited to: coffee shops, local restaurants, and Laundromats. In addition to these strategies, street-based recruitment was conducted. This involved visiting neighborhoods, or specific venues such as public parks or college campuses, and administering a very short street-intercept survey to engage people in conversation regarding the study and assess their eligibility to participate. Persons who completed this survey were given a keychain flashlight as a token honorarium.

Recruitment to this study relied to a large extent on chain referrals also known as “snowball” sampling (Biernacki and Waldorf, 1981), a technique commonly utilized in studies of hidden-populations. This method requires existing study participants to refer individuals in their social networks for interview, who in turn refer individuals from their own social networks, and so on. In this study, participants were paid $10 for each successful referral. One limitation of snowball sampling is that it can lead to selection bias, as members of social networks are likely
to share some similar characteristics (e.g., sources of drugs). For example, individuals who most actively referred to the study tended to be those entrenched in the street drug scene who typically have few resources and to whom the possibility of earning a small referral fee is enticing. Indeed, a study exploring how people who use drugs negotiated a more formal, but similar recruitment procedure known as respondent-driven sampling (RDS) found that “an ‘underground’ stratified marketplace of coupons and study-related services had cropped up.” (Scott, 2008). In this study, limiting the number of referrals from each person to a maximum of five and receiving referrals from many different “seeds” located in disparate neighborhoods minimized the risk of recruiting homogenous samples.

Data collection

Data were collected via in-depth, semi-structured interviews conducted and audio-recorded in private, semi-private, or public locations, usually chosen by the participant, including: participants’ homes, coffee-shops, parks, cars, and rooms in community-based organization. Although some of the interview settings turned out to be less than ideal in terms of noise and seclusion, having participants select the interview time and location, and interviewing where possible in situ, offered them some control over the interview process and enabled them to select a space in which they felt comfortable to talk. Prior to the interview, participants underwent a verbal consent procedure, including a detailed review of the study protocol, the risks and benefits of participation, and the right to terminate their involvement at any time. No identifying information was collected and the study was approved by the New York City Department of Health and Mental Hygiene’s Institutional Review Board (IRB). A Federal

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22 NYCDOHMH’s Institutional Review Board approved a waiver to collect written consent because of the sensitive nature of the topics under discussion.
Certificate of Confidentiality (CoC) from the National Institute of Drug Abuse (NIDA) was also obtained to protect the identity of participants via audio recordings. Following the interview, participants received an honorarium of $30 for their time.

The interview guide was semi-structured and incorporated questions intended to explore participants’ experiences of opioid analgesic misuse, including: demographics; routes of initiation and trajectory of use; pill acquisition; mechanisms of opioid analgesic diversion from medical to non-medical use; and participation in the illicit opioid analgesic market. Utilizing a semi-structured format meant that topics could be covered systematically while allowing participants to answer in their own words (Kvale, 1996) resulting in a “purposeful” conversation (Burgess, 1984; Lincoln and Guba, 1985). This type of semi-structured format is particularly useful for studies in which interviews are conducted by more than one person. Quinn suggests that interviews are “the fullest and most decipherable records” researchers have (2005: 4) and other scholars have noted that within their own work, the most comprehensive representation of the prescription “drug-scene” was garnered from interviews with actors involved at a local level (Inciardi et al., 2009a).

**Sampling**

Initially, interviews were conducted with individuals aged 18 years and older who were resident in New York City, and who reported current or recent (within 12 months) opioid analgesic misuse. However, as the study progressed, the eligibility criteria were expanded to include current heroin users whose misuse of opioid analgesics had directly preceded their initiation into heroin. This decision was based on emerging research suggesting that among new initiates, pathways into heroin tend to start with opioid analgesic misuse (Inciardi et al., 2009b;
Kuehn, 2013; Lankenau et al., 2012b; Mars et al., 2014), a trend that has significantly increased during the past decade (Jones, 2013). Since trajectory of use was one of the key research questions, it was important to include people who had transitioned from opioid analgesics into heroin use as this has been a key area of concern among public health professionals. The 18-year age requirement reflects the legal age at which research participants are able to provide informed consent and, while it might have been possible to obtain a waiver to interview younger participants, given that this was a retrospective study, it is unlikely that data collected from this vulnerable group would have provided substantially different information than from older participants reflecting back on their experiences.

Within these parameters, the sampling frame for this study developed as data was collected and typologies began to emerge. Thus, sampling decisions were made “serially” and based on previously collected data (Lincoln and Guba, 1985). This method of purposeful sampling is a type of non-probability sampling that does not claim to be generalizable (Palys, 2008). In fact, some researchers have questioned the use of the term “sample” to describe participants who are selected using purposive sampling, preferring instead to refer to them as “panels” of individuals who have experienced a specific phenomenon or witnessed a particular event (Weiss, 1994). As the study progressed, participants were purposefully selected depending on several considerations, including both the extent of their involvement with opioid analgesics and their previous drug histories, in order to capture the range of experiences relating to both problematic and non-problematic use.

A total of 111 participants were consented into the study and interviewed. However, following review of the interview transcripts, 18 were excluded from the final analysis for the following reasons: the participants did not reside in New York City (n=2); they did not self-
identify their use of opioid analgesics as misuse (n=2); they had only used heroin (n=5); they had previously misused opioid analgesics but not within the previous 12-months (n=9).

**Analytic procedure**

The interviews, which lasted between 30 and 190 minutes, were audio-recorded, professionally transcribed for analysis, and uploaded into Dedoose Version 7.0.23 (2016), a web-based tool to aid data management, coding and analysis. Additionally, following the interview, a field note was written detailing the environment and setting in which the interview took place, the method of recruitment, as well as the interviewers’ reflection on the interview process (Emerson et al., 1995). The analytic process I utilized to make sense of the data presented in this dissertation was heavily influenced by Guest et al.’s (2012) *Applied Thematic Analysis*. While this method has many attributes in common with grounded theory and does not preclude theoretical development, “its primary goal is to describe and understand how people feel, think, and behave within a particular context relative to a specific research question” (2012: 13). Through an iterative process, coding began with broad categories derived from the domains incorporated within the interview protocol, for example, “first misuse of prescription opioids,” “sources of opioid analgesics.” Careful reading of the data then produced inductive codes such as “OxyContin® formulation change,” “OK to use pills,” and “pervasiveness of opioids.” Following, codes were reviewed and refined, and organized into a hierarchy of themes and subthemes generating a network of associations that guided the direction of the findings.

In order to minimize error or bias in the research process, Guba (1981) suggests four guidelines relating to the “trustworthiness” of data. The first, *credibility*, encapsulates the idea that the interpretation given to the data must resonate within the group from which it was
gathered. During the data collection period, emerging observations were conveyed back to individual participants serving as “member checks” (Guba, 1981: 80) to ensure that the findings made sense to members of the population under study. The second principle, transferability, suggests that although context cannot (and should not) be removed from the phenomena, where there are “essential similarities” (Guba, 1981: 81) the data may be transferable. As analysis progressed, themes were compared between groups of participants who presented with similar characteristics—for example, those with similar demographics, social structures, or pathways into use—to develop typologies or classifications that may form the basis of future hypotheses.

The third and fourth tenets, dependability and confirmability, were addressed by way of an “audit trail” (Guba, 1981: 87). This involved keeping detailed records of the research process, including transcripts, memos, and discussion notes, and frequently discussing the analytic process and findings with colleagues to assess whether the approach I had taken was appropriate.

Ethical considerations

Given the sensitive nature of the topics and the fact that most drug use in the U.S. is illegal, it was essential to protect the identity of participants. As previously described, the NYC DOHMH IRB issued a waiver for written consent; individuals did not have to provide any identifying details and could participate in the study anonymously. In addition, a Federal Certificate of Confidentiality from the National Institute of Health was issued to the study to protect participants against possible identification via the audio recording. By protecting researchers and institutions from being compelled to disclose information that would identify research subjects, CoCs help achieve the research objectives and promote participation in studies by assuring confidentiality and privacy to participants. All research protocols, including the
verbal informed consent script describing the risks and benefits of the study and the interview schedule, were described to participants were approved by the NYC DOHMH IRB.

Study participants were 18 years of age or older, and therefore legally entitled to provide their informed consent. After consent was obtained, participants were assigned a numeric ID code which was used as a name for the digital file of the interview audio-recording and the subsequent interview transcript. The electronic transcripts and digital audio-recordings of the interview were stored on an end user device protected by a strong password. The findings presented here are reported without identifying information, and all names reported are pseudonyms.

Some researchers have questioned the ethics of paying cash honorariums to persons who use drugs for their participation in studies relating to substance use and propose gift cards or food vouchers as alternatives (Brody and Waldron, 2000). Proponents of cash payments, on the other hand, argue that denying persons who use drugs cash payments is paternalistic and reinforces negative stereotypes (Ritter et al., 2003). While gift cards or vouchers may be the only form of compensation for research participants permitted by some grant-awarding bodies or institutions, substituting cash payments simply because the participants are persons who use drugs does not comply with the principles of respect and dignity that should be afforded to research participants and those in this study were paid an honorarium of $30 in cash to compensate them for their time and any out-of-pocket expenses they may have incurred as a result of their involvement in the study.
Sample characteristics

The final sample consisted of 93 participants: 33 women and 60 men with ages ranging from 18 to 62 years. A full description of the sample can be found in Table 1 below. Of note are the number of people who self-reported stable housing (84.9%), current employment (37.6%), and educational attainment beyond a high school diploma or the Tests of General Educational Development (GED) (59.1%). Samples from other recent qualitative studies of persons who misuse opioids that have tended to include participants with greater housing instability, lower educational attainment, and less employment (Lankenau et al., 2012a; Mars et al., 2014; Mateu-Gelabert et al., 2015). In Chapters 4, 6, and 7, I utilize the full data set from all participant interviews. In Chapter 5, I focus on a subset of participants who first misused opioid analgesics prior to any subsequent use of heroin.
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<tr>
<td><strong>Gender</strong></td>
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<tr>
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<tr>
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CHAPTER FOUR: PATHWAYS INTO OPIOID ANALGESIC MISUSE

As a result of the factors described in Chapter 2, the rate of opioid analgesic misuse in the U.S. has increased dramatically. Results from the 2014 National Survey on Drug Use and Health (NSDUH) reported that an estimated 4.3 million people aged 12 or older, representing 1.6 percent of the population, currently use opioid analgesics non-medically (SAMHSA, 2015). The misuse use of these drugs now constitutes the second most common form of illicit drug use after cannabis (SAMHSA, 2012). However, while prevalence has been well-documented, there is less information about the context and circumstances in which individuals begin to misuse opioid analgesics. This chapter explores the circumstances of initiation into opioid analgesic misuse, examining both motivation and source of pills at the point of initiation, as it is only by considering these factors in tandem that the etiology of opioid analgesic misuse can fully be understood.

Previous studies of opioid analgesic misuse have tended to incorporate initiation events into a broader analysis of trajectories of misuse with samples stratified by demographic subtypes including age (Cicero et al., 2012; Funk et al., 2014), gender (Green et al., 2009), or university enrollment (McCabe et al., 2009). Other research has focused on user characteristics such as chronic pain (Liebschutz et al., 2010), drug use history (Daniulaityte et al., 2009; Wu et al., 2010), or mental health issues (Dowling et al., 2006) as constraints for inclusion and analysis. However, while identifying individuals’ trajectories of misuse, these studies often overlook the circumstances of an individual’s primary initiation event. Further, collectively these studies are based on survey data, which lacks the capacity for an in-depth exploration of the context and circumstances of the drug initiation event.
Research reporting on the circumstances in which opioid analgesic misuse is initiated has highlighted several factors. For example, Mui and colleagues (2014) found that participants described the normalization of drug use in social settings; however, as their study focused on several different categories of prescription medication in addition to opioids, including stimulants and benzodiazepines, it is difficult to pinpoint whether normalization of drug use related specifically to opioid initiation or was more aligned with other drug types. Similarly, while focusing broadly on motivations for misuse of prescription pills, including opioid analgesics, a mixed-method study by Rigg and Ibañez (2010) failed to capture the circumstances of initiation. Other studies that have more closely examined initiation events have included individuals who had a history of heroin use prior to first misusing opioid analgesics (Daniulaityte et al., 2006; Rigg and Murphy, 2013) and as such are likely to have had a different initiation experience than those who at the time of first misuse were opioid naïve.23

In their review of prescription opioid misuse among adolescents, McCabe and Boyd (2012) suggest that, to date, national surveys have omitted questions that might illuminate motivations for prescription drug misuse. The authors subsequently propose four scenarios in which adolescents may engage with opioid analgesic misuse: (1) using someone else’s prescription medications to self-treat a medical condition; (2) using someone else’s prescription medications for other motives; (3) misusing their own prescription medications to self-treat a medical condition, and (4) misusing their own prescription medications for other motives. However, having posited this framework, their later work differentiates predominantly between medical misuse and nonmedical use defined as follows: “medical misuse is the use of prescribed

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23 I use “opioid naïve” here to indicate that while members of this group may have previously taken opioid analgesics under medical supervision, they had not previously misused any type of opioid including pain pills or heroin and had not developed an opioid tolerance.
opioids by a patient with a prescription for an opioid analgesic who uses the prescription in a manner not intended by the prescriber;” whereas “nonmedical use of prescription opioids is defined as the use of someone else’s prescription opioids” (McCabe et al., 2013: 1208), thus within these definitions the organizing principle relates to the source of the medication, rather than the intent of misuse. In keeping with McCabe and Boyd’s earlier framework, I would argue that exploring motivation and source in tandem is crucial to better understand pathways into opioid analgesic misuse.

For the purposes of this study, I defined opioid analgesic misuse as taking opioid analgesics for the experience or feeling they caused or taking them in any manner other than that prescribed by a doctor, including: taking medication beyond the cessation of pain; self-medication for a different injury/health condition; or mixing medication with other substances for euphoric effect. Initiation events as described by participants were organized with consideration to the four-pronged framework put forward by McCabe and Boyd (2012), rather than by the dual categories referenced in their later work (McCabe et al., 2013). Further, the sample was stratified into two distinct groups: participants who were opioid naïve at the point of first opioid analgesic misuse (i.e., new opioid initiates) (n=63); and participants who had a history of heroin use prior to their initiation into opioid analgesic misuse (n=30). As referenced earlier in this chapter, this distinction has often been overlooked in the literature but is important to consider. Results from these disparate groups are therefore presented separately, with differences in demographics shown in Table 2.
Table 2: Demographics of new opioid initiates and experienced heroin users (N=93)

<table>
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<tr>
<th></th>
<th>Total</th>
<th>New opioid initiates</th>
<th>Experienced heroin users</th>
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<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
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<tr>
<td><strong>Total</strong></td>
<td>93 (100%)</td>
<td>63 (100%)</td>
<td>30 (100%)</td>
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<tr>
<td><strong>Age (median, range)</strong></td>
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<td>Range</td>
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<td>18 to 58 years</td>
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<td><strong>Gender</strong></td>
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<tr>
<td>Female</td>
<td>33 (35.4%)</td>
<td>22 (35.0%)</td>
<td>11 (36.7%)</td>
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<tr>
<td>Male</td>
<td>60 (64.5%)</td>
<td>41 (65.0%)</td>
<td>19 (63.3%)</td>
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<td><strong>Race/ethnicity</strong></td>
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<td>48 (76.2%)</td>
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<td>Latino/a</td>
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<td>Multi-racial</td>
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<td>3 (4.8%)</td>
<td>1 (3.3%)</td>
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<td>Native American</td>
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<td><strong>Sexual orientation</strong></td>
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<td>Heterosexual/Straight</td>
<td>82 (88.2%)</td>
<td>54 (86.1%)</td>
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<tr>
<td>Gay/Lesbian</td>
<td>6 (6.5%)</td>
<td>5 (7.9%)</td>
<td>1 (3.3%)</td>
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<tr>
<td>Bisexual</td>
<td>4 (4.3%)</td>
<td>3 (4.8%)</td>
<td>1 (3.3%)</td>
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<td>Undecided</td>
<td>1 (1.1%)</td>
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<td><strong>Educational attainment</strong></td>
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<td>13 (13.9%)</td>
<td>6 (9.5%)</td>
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<td>High school graduate/GED</td>
<td>26 (27.9%)</td>
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<td>Further education</td>
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<td><strong>Borough of residence</strong></td>
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<tr>
<td>Brooklyn</td>
<td>26 (27.9%)</td>
<td>23 (36.5%)</td>
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<td>Bronx</td>
<td>20 (21.5%)</td>
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<td>Manhattan</td>
<td>15 (16.1%)</td>
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<td>8 (26.7%)</td>
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<tr>
<td>Queens</td>
<td>14 (15.1%)</td>
<td>8 (12.7%)</td>
<td>6 (20.0%)</td>
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<tr>
<td>Staten Island</td>
<td>18 (19.4%)</td>
<td>18 (28.6%)</td>
<td>0 (0.0%)</td>
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<tr>
<td><strong>Housing</strong></td>
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<tr>
<td>Own home</td>
<td>41 (44.0%)</td>
<td>29 (46.0%)</td>
<td>12 (40.0%)</td>
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<tr>
<td>Family home</td>
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<td>4 (13.3%)</td>
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<td>Partner/Friend’s home</td>
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<td>4 (6.4%)</td>
<td>2 (6.7%)</td>
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<td>Sheltered/supportive housing</td>
<td>14 (15.0%)</td>
<td>3 (4.8%)</td>
<td>11 (36.7%)</td>
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<tr>
<td>Street homeless</td>
<td>2 (2.1%)</td>
<td>1 (1.6%)</td>
<td>1 (3.3%)</td>
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<tr>
<td><strong>Employment</strong></td>
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<tr>
<td>Full- or part-time</td>
<td>35 (37.6%)</td>
<td>26 (41.3%)</td>
<td>9 (30.0%)</td>
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<tr>
<td>Student</td>
<td>10 (10.8%)</td>
<td>10 (15.9%)</td>
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<tr>
<td>Unemployed</td>
<td>31 (33.3%)</td>
<td>22 (35.0%)</td>
<td>9 (30.0%)</td>
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<tr>
<td>Disability/unemployment</td>
<td>17 (18.2%)</td>
<td>5 (7.9%)</td>
<td>12 (40.0%)</td>
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In this sample, the group I have termed “new opioid initiates,” i.e., those who had not used heroin prior to their misuse of opioid analgesics, tended to be younger than the experienced heroin user group with a median of 22 compared to 45 years. Members of this group were also more likely to be white, and educated beyond high school. Data from national surveys shows that opioid analgesic misuse is more prevalent among individuals who identify as white (4.6%) and Hispanic (4.5%) as compared with those who identify as black (3.8%) (SAMHSA, 2011). In contrast, in New York City, higher rates of heroin use historically have been associated with black and brown communities (Frank, 2000). While this sample is not representative of the broader population of people who misuse opioid analgesics, it is worth mentioning that despite efforts, young black and Latino/a opioid misusers are under-represented in this study.

Initiating opioid analgesic misuse with the intent to get high (Non-medical initiates)

Non-medical initiates (n=44) typically began using opioid analgesics as part of a trajectory of drug experimentation, often while in their teens, and following the use of other substances such as alcohol and/or marijuana. Mostly, young, affluent, and white, many participants in this group reported that prescription pills, including opioids and benzodiazepines, were widely available in their social networks, and several spoke specifically about a high school culture in which the non-medical use of prescription medications was normalized to the extent they were considered equivalent to other “low-risk” substances. Although for a couple of participants in this group, the source of pills was a prescription written in their name and obtained as the result of illness or injury, the defining characteristic of non-medical initiates was that they intended to misuse opioid analgesics for their psychoactive effect

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24 Benzodiazepines (e.g., alprazolam, diazepam, and lorazepam) are central nervous system depressants often prescribed for anxiety. Common brand names include Xanax®, Klonopin®, and Valium®.
rather than to mitigate pain, regardless of whether the pills they first misused came from their
own prescription, or another source. As Eliza (white, aged 24), commented:

Everyone loves Percocet® and Vicodin®. They may do and it’s not super scary or
anything, and you know, prescription pills were really trendy and friendly in college and
even in high school. . . Like why I mean they’re friendly is that all these kids I went to
school with, their parents had them in their medicine cabinet while they were growing up,
and so, you know, everyone knew what they were and they were kind of naturalized.

The majority of participants who initiated opioid analgesics in a recreational context first
used opioid analgesics in the presence of someone who had already experimented with the drug.
Typically, these participants recalled that their interest in opioids had been stimulated by
references to opioid use found in popular culture (for example, the rapper, Eminem), or by
member(s) of their peer group who, having previously tried opioids, were able to speak to their
effect. Donna (white, aged 20), described how she initiated opioid analgesics with her best friend
when she was 15 years old.

We were at my house, and we were just sitting there, and I was asking her about it
because I had heard she was doing pills. And she was like, “Just try it, just try it, it’s
really not that serious. It’s just like alcohol, really just try it.” And she crushed, like half
of it, on my table and I sniffed it and I didn’t get sick. Like I’ve seen a lot of people when
they try it, they throw up. I didn’t get sick, I didn’t get anything. I just felt great . . . I
don’t remember being nervous. . . I just didn’t think, I didn’t think anything. I just did it,
and then after that, the feeling of it overrode any thoughts of, I'm doing something wrong, you know?

Witnessing, or hearing about a friend or peer’s reaction to opioid analgesics often served to reduce the potential anxiety of a new drug experience, and as scholars have commented, observing social group members engaging in a particular activity or action, including drug use, can serve to normalize a behavior (Measham et al., 1994; Shildrick, 2002). Research has also shown that many education-based substance abuse programs delivered in a school setting are at best inadequate and at worst may serve to encourage drug experimentation. For example, studies examining the efficacy of the Drug Abuse Resistance Program (commonly known as DARE), found small negative effects in drinking and smoking potentially due to an over-emphasis on the most extreme and/or damaging aspects of drug use (Werch and Owen, 2002; Sloboda, 2009). Following, the risks associated with the misuse of pharmaceutical drugs that may legitimately be supplied by a doctor often seemed overblown to patients. An example of this is Jason (white, aged 21), who first tried opioid analgesics as a freshman in high school and recounted how he became aware of pain pills after seeing other kids using them. Already a regular user of alcohol and marijuana, Jason was “open-minded” about drugs and interested in having a new experience.

And I remember, I guess, a couple of the older kids in the school, they had little pills in their hand, the little blue pills. And they were popping them. And I was just curious, like What’s that? And they’re like, “Yo, this thing will fuck you up. This is a 30 [mg] right here. These are the best.” And I was just like, “Alright, how much are they?” They’re like “$20” I was like, “Alright” And they were like, “Yeah, but you got to take half first.
"You can’t take the whole thing if it’s your first time, blah, blah, blah.” And I remember I took half. I went to class. It kicked in. I felt amazing! And about a minute after I felt amazing, I got this overwhelming feeling I was going to throw up. I remember running outside, running out from of the school and puking in front of the school.

Experiencing both positive and negative drug effects was a common theme among non-medical initiates, and “first-time” narratives often included incidents of nausea or vomiting. Although in some cases the sickness participants’ suffered acted as a temporary deterrent to further opioid misuse, for most, the pleasurable effect of the high outweighed the unpleasant consequences. Indeed, for some participants, vomiting as a result of opioid use became part of their drug-taking culture, in a similar vein to suffering physical sickness as a result of excessive alcohol use. Another advantage cited by some participants was that, compared with alcohol, they could get high on pain pills and not lose control. That is, where other substances including alcohol would cause them to “get stupid,” opioid analgesics allowed them to be fully aware of their surroundings even when in the thick of an altered state.

The perceived social benefits non-medical initiates gained from misusing opioid analgesics was an important factor driving their use and for some young male participants, the heightened confidence engendered by opioid analgesics had the added dimension of enhancing sexual performance. Indeed, in some cases, it was the possibility of increasing sexual staying-power that piqued the interest of some participants to first misuse opioid analgesics. Reflecting on the circumstances of his initiation, Joe (white, aged 20), recounted that the enticement of an enjoyable high in and of itself would not have been enough to induce him to use these pills.
However, when a friend told him that opioids would increase his sexual stamina, he became interested in trying them.

_The kid told me all about it. And at first the way I was put onto it was “Listen, if you take half of one of these, or even a quarter, it’ll make you fuck like a…” excuse my language, but it makes you last, and it makes you have really good sex. So that was the incentive to take it the first time, because if he would’ve said “Oh, it’s going to make you feel good” I’d be like “Nah.” . . . the incentive was “Keep a little quarter of the pill. Every time you have sex, eat it and then you’ll fuck forever.” So I think that’s a lot of the reasons why people first started taking, but then it quickly grows from there. The second you feel that opiate high and what it does to your body you like it, you really like it._

The potential for enhancing a sexual experience was not only true for young men. Grace, (white, aged 23), who initiated opioid analgesics non-medically described how taking pills had impacted having sex with her boyfriend.

_[Opioid analgesics] make you horny too, so I used to like to have sex. . . It’s not like I take a Roxy [oxycodone 30mg] and I need to [have sex], but when I’m with my boyfriend or whatever, yeah, like it’s like the dick just doesn’t go down. It just stays hard and they don’t come. It’ll take hours. And it makes your body so numb. So it’s like you could take, you know, you want it as hard as they can give it._
While improved sexual performance was a motivating factor for some participants’ initiation, there is currently very little literature relating to this phenomenon. An exception is Mateu-Gelabert and colleagues (2015) who found that some male and female participants in their study of young opioid users reported enhanced sexual experience after taking opioid analgesics; however, findings from this study did not link this to the initiation of opioid use per se. Indeed, opioid use has typically been associated with decreased sexual functioning, especially among individuals who use long-term and may have developed a substance use disorder (Deyo, et al., 2013; Hallinan et al., 2008), and sexual performance as a driver for initiation should be incorporated into any future public health prevention messaging.

Although most participants who initiated opioid analgesic misuse non-medically did so in a social setting with the intention of having a shared drug experience, some first used while they were alone. Natalie (white, aged 26) was 18 when she tried pain pills, and her pathway into misuse began only after she had been selling oxycodone for several months. Working behind the deli counter of a local store, Natalie encountered an old family friend who suggested she could make good money selling Percocet®—which he would supply—within her peer network. Over time, her customers’ enthusiasm for the pills she was selling piqued Natalie’s curiosity and alone in her car, she tried one for the first time.

_I was working in a deli and he [family friend] came into the store and someone at the counter was talking about pills. That's how he started the conversation. He was like, “You could probably get rid of all these pills.” I didn't want to work in the deli anymore, I was getting ready to go to college, so I said “Alright, what do I have to do?” . . . He was giving me maybe 500 in a zip lock bag. . . Perc 10s, and I was getting rid of them._
Everybody wanted them. And then I got curious, like why does everybody want these fucking things, so I did one and it was like the greatest feeling in the world, to me anyway, you know. I didn’t like drinking, I didn’t like pot, so when everybody was doing these things, I was doing nothing. Now, all of a sudden this pill, it kind of made you feel like gummy in a way, like you were just waltzing around, happy, you know.

While the intent of individuals who first misused opioid analgesics in a recreational context was to get high, the point at which members of this group first misused was often not their first experience taking these drugs. Indeed, many had previously been prescribed opioid analgesics for an illness or injury but at the time, had taken them as directed by the physician, even if they had experienced some effect beyond the alleviation of pain. In his seminal work on controlled drug use, Zinberg theorizes that when examining why and how people use drugs, three factors must be considered, including: “drug (the pharmacologic action of the substance itself), set (the attitude of the person at the time of use, including his personality structure), and setting (the influence of the physical and social setting within which the use occurs)” (Zinberg, 1984: 5). Thus an individual’s experience taking opioids prescribed by a doctor to treat pain is likely to be qualitatively different from the same individual’s experience taking opioids supplied by a friend in a social setting. An example of this phenomenon was recounted by Miranda (Latina, aged 30). Prior to misusing opioid analgesics, Miranda had been prescribed opioids on two occasions; the first after having her wisdom teeth pulled, the second having broken her collar bone. Although Miranda acknowledged the relaxing feeling the opioids gave her while recovering from these previous injuries, it was not until she took the drug in a social setting that she felt what she described as a more “intense” effect.
For some reason I guess, it seemed like it was different when... I think maybe ‘cause I was older, and also ‘cause I didn’t have any pain and I wasn’t lying around. I was out doing some things, like during the day, you know? We went out to see a concert, you know, and regular things. That was like, yeah, it was weird. . . I guess I just noticed like Oh wow, these things make you really high.

For Miranda, previous exposure to opioids in a medical context may have reduced the potential anxiety associated with taking a new drug which can sometimes result in the user experiencing a diminished or different drug effect. Further, taking opioid analgesics under the care of a doctor without experiencing euphoria may have lessened her expectations of how she would feel, contributing to a relaxed state that conversely enabled a more pronounced high. According to Zinberg (1984), the decision to use an opioid is associated with anxiety relating to all three of the determinants, drug, set, and setting. However, as illustrated by these descriptions of initiation events, the stigma and potential fear of using opioid analgesics largely appears to have been moderated by their widespread use for warranted medical treatment.

Sources of pills at the point of initiation

The majority of non-medical initiates, that is, individuals whose motivation to misuse opioid analgesics was to get high, obtained the opioid analgesics they first misused from members of their social network for free. This reflects findings from the NSDUH (SAMSHA, 2012) suggesting that 54 percent of people who report misusing opioid analgesics in the past year obtained their pills from family and friends. The interpretation of these findings has often been that many people acquire pills through one degree of separation from a prescription, that is,
Person X receives a prescription for Percocet®, and subsequently Person Y acquires a pill directly from her/him. Indeed, many public health campaign messages have been predicated on this understanding and have included sustained efforts to educate the public regarding the safe disposal of “leftover” medication, for example, the DEA’s National Prescription Drug Take-Back Day, where designated drop-off boxes are established on a few days of the year so that the public may dispose of any type of unwanted prescription medications in their possession. While tracing back sources of pills beyond participants’ own acquisition was not possible, data from this study suggest that, in addition to obtaining pills for free from family and friends’ prescriptions, opioid analgesics were actively traded and sold beyond intimate social networks. Moreover, for some non-medical initiates (n=5) opioid analgesic misuse occurred only after they had begun selling pills in volume and for profit, which they had acquired from a dealer, and not through their own or a family member’s prescription.

Only two individuals who first misused opioid analgesics with the intent of getting high had used pills remaining from a warranted prescription written in their name, and in both cases, they were encouraged to do so by members of their social group. Stephanie (white, aged 30), first misused opioid analgesics in her early 20s with a prescription she received from her doctor following knee surgery. Straight-edged25 for most of her school days, Stephanie had no idea that her medication could be used for recreational purposes until encouraged by her roommates.

That was in college, and yeah, I was doing it really just to catch a buzz, and I just liked the feeling that it gave me, and it relaxed me. [My friends] are the ones who kind of introduced it to me. They were like “Oh, because you have Vicodin®, let’s take some.

25 “Straight-edged” refers to a philosophy of living that advocates abstinence from drugs including tobacco and alcohol.
Give us one.” . . These were my roommates too, and we were all close, so I didn’t mind giving them a couple, but yeah, they were pretty much the ones that introduced me that you can take this when you’re not in pain and you’ll feel good. . . Telling me a different way to use it.

For both these participants, their initiation into opioid analgesic misuse was distinct from the treatment they received from their physician, occurring only after their pain had abated. In cases such as these, encouraging physicians to adopt judicious prescribing guidelines, including key messages advising the use of lower doses for shorter duration, may go some way to reducing the pool of available opioid analgesic pills that are subsequently misused. However, there has been tremendous resistance to these types of guidelines from industry-funded groups, such as the U.S. Pain Foundation, which cautioned that future access to pain medications could be limited as a result.

Medical initiates

In contrast to non-medical initiates who first misused opioid analgesics to get high, the intent of medical initiates (n=19) was to alleviate pain. The majority of participants in this group first misused pills from their own prescription written to them to treat a warranted illness or injury, either while still under the care of a physician or with surplus pills left over from a previous prescription. Less often, participants in this group had acquired the opioid analgesics they first misused from a close family member to self-treat acute pain such as a headache or sprained ankle and, in contrast to the non-medical initiates described above, it is notable that no medical initiates had obtained the pills they first misused from friends.
For individuals who began misusing opioid analgesics while under medical supervision, first misuse often occurred early in their course of treatment. A typical example is Mike (white, aged 34) who, at the time of interview, had been misusing pain pills for more than 10 years and had recently transitioned to heroin. At age 22, Mike tore his bicep tendon, an injury that rendered him unable to continue his daily gym workout schedule. To treat the pain, he was prescribed a 30-day supply of oxycodone with acetaminophen which he started misusing a couple of days later. Although Mike initially increased his dose because of the pain, he also enjoyed the feeling the pills gave him. He recalled:

... I was in very good shape and the gym was my life. Like I was taking steroids, I was in very good shape and [after the injury] I couldn't work out. And I felt so depressed because I felt like everything I worked for got taken away, and I couldn't go to the gym. I couldn't do what I wanted, what I loved. ... I took them because of the pain, but like I said, I was depressed, so I was taking more than I actually needed. And I liked the feeling. I liked to be able to just go to sleep. ... I liked the feeling but I wanted more of it obviously, I just, you know, I did feel the pain go away, but I liked the warm feeling, that relaxed feeling, ... It put me to sleep so I wouldn't have to think about the position I was in, that I couldn't work out. So that was mainly it. Like I would wake up, take [opioid analgesics], and go back to sleep. I was, I think very depressed. ... Because [the injury] took away what I loved. I was a gym rat. I was in the gym all the time. I was very into my health, you know, plus I was taking a lot of steroids. I started taking steroids when I was 16, and I was very into it. I was very vain if you want to say. To take that away from me depressed me.
Similarly, Neil (white, aged 22), began to misuse opioid analgesics following an accident in which he broke both his ankles. Only 14 years old when the accident occurred, Neil was prescribed opioid analgesics for several months to ease the pain associated with his injuries. During the course of his treatment, Neil’s mother kept careful track, and administered his medication as directed by his physician. However, when his ankles healed and the prescription ran out, Neil experienced symptoms of opioid withdrawal that prompted him to seek out pills from other sources, including hospital emergency rooms where he would present with fake symptoms in order to receive pain medication. He described his trajectory below:

First they gave me Tylenol 3 codeines and then after that they upped me. I think they were five milligram Percocets®. . . I was prescribed for a couple of months because I was in a wheelchair, then I was on crutches and then I had a cane. . . I couldn’t stretch my legs, I had cramps, I remember waking up in the middle of the night screaming in pain because I had a leg cramp that I couldn’t get up and stretch, I couldn’t walk it off. So I was just sitting there for like half an hour just in terrible pain until my medication finally kicked in because I’d woken up in the middle of the night. And then from that point, I was just hooked. . . My mom tried to wean me off of it. And I was doing okay but I was living in [Anonymous], and it wasn’t like it was difficult to find [opioid analgesics]. So, I’d say probably by the time I was 16, a Junior in high school, I was taking it regularly even though I didn’t need it. I was going to hospital telling them I had... [I] went to the hospital once, told them that I had a testicular torsion and I went to like four different hospitals to get medication from them.
For Mike and Neil—both of whom ended up misusing opioid analgesics on a daily basis for extended periods of time—the etiology of their substance use disorder was arguably iatrogenic. However, during the current opioid crisis, cases of “iatrogenic addiction” have largely been sidestepped in the literature, and as Beauchamp and colleagues (2014) suggest, no recent articles that allude to this phenomena have “explicitly called for a disambiguated determination of the role of inadvertent iatrogenic addiction as opposed to the role of intentional misuse and diversion” (Beauchamp et al., 2014: 2023). Further, although the meaning of “iatrogenic” appears straightforward, there is a lack of consensus among clinicians regarding the constitution and processes that result in “iatrogenic addiction.” Indeed as Ballantyne suggests, “it seems that iatrogenic addiction is simply what the reporting person says it is” (Ballantyne, 2006: 1249). In my view, this lack of willingness on the part of much of the medical community to fully acknowledge and/or take responsibility for the current opioid crisis is deeply troubling.

Musto (1984) suggests three categories relating to iatrogenic addiction following the prescribing of psychotropic substances, such as anxiolytics or opioid analgesics, including: (1) inadvertent addiction, when a doctor prescribes a substance that is not yet known for its addictive properties; (2) negligent addiction, when a doctor prescribes in response to a patient’s request or desire for a psychotropic medication, or to maximize his/her business in a competitive health delivery system; (3) intentional iatrogenic addiction, which includes the prescribing of opioids for end-of-life or cancer pain. As will be discussed in Chapter 6, although some physicians do engage in practices that could be deemed negligent, current prescribing trends—determined in part by aggressive pharmaceutical marketing, a recent emphasis on patient satisfaction surveys which typically include an assessment of pain relief, and changes in the administration of health care (Beauchamp, 2014)—have given rise to another category that Musto’s typologies fail to
address, including patients who are prescribed opioid analgesics as a result of a warranted injury or illness and become dependent on these drugs as a result of inadequate screening or treatment follow-up. Thus, while iatrogenic addiction is often only considered in light of chronic pain therapy because of the increased risks from prolonged exposure, treating patients with opioids for acute pain may also result in misuse and dependence (Beauchamp et al, 2014).

Anna (white, aged 35), illustrates how the routine prescribing of opioid analgesics for acute pain may result in downstream substance use issues. Anna’s first experience with opioid analgesics followed a diagnosis of kidney stones, for which she was prescribed Percocet® 5mg. Initially she took the medication as directed, but after the condition had resolved, Anna used the remaining pills on an occasional basis to treat other minor ailments such as headaches and joint pains. Following weeks of sporadic use, Anna came to realize that in addition to alleviating her pain, opioid analgesics engendered a feeling of wellbeing, and she began to take a pill simply to enhance a quiet night in front of the television. While contemplating when she had first made the connection that opioid analgesics did more than alleviate her pain, Anna said:

. . . It was within a couple of months afterwards. I can’t really pinpoint a moment, but I think part of it too was that even with the pain, the pain would be gone, and I’d be like “Oh, I feel fabulous!” You know, so it was kind of concurrent. [The pills made me feel] relaxed. I think also at that point because it was converging at the time when I stopped working, I had a lot of anxiety about what the future was gonna hold, what am I doing, so it just... everything relaxed. And I’m an anxious person by nature so this idea that my head was not running was the best part of it, besides the fact that I just sunk into this wonderful slumber, like a body slumber kind of thing.
When her initial prescription ran out, Anna requested, and was given a second prescription from her doctor to treat the joint pain she was also experiencing, which she then was able to renew each month. However, by now Anna was taking multiple tablets a day and recalled: “It got to the point where I would go to work [high]. I mean I’d be on conference calls and this and that. No one ever saw. It was always like I just had my own little secret happiness.” Anna continued to receive a prescription from her doctor every month for almost a year. Because she took more than the prescribed dose, she consistently ran out of medication before her next prescription was due. However, unlike other participants, she did not seek out opioid analgesics from an additional source or ask her doctor for additional pills, but rather held off refilling her prescription until the appropriate time had passed.26

A second category of medical initiates includes individuals who did not have their own prescription, but who obtained pills from someone for the purpose of self-treating acute pain. While McCabe and colleagues (2013) define this scenario as “non-medical” use, I argue that since the intention of use is to treat pain, when considering pathways into misuse, this group should be incorporated under the medical rubric. The initiation experiences of these individuals tended to be very different from those initiating non-medically in that pills were typically used at home, often when the person was alone, and in every case were acquired from close family rather than friends. Jordan (white, aged 21), whose mother was prescribed opioid analgesics for chronic back pain describes his initiation event:

26 Medical providers ought not to provide a patient with a refill for a Schedule II medication without an in-person office visit. Presenting to a doctor before the duration of a filled prescription has passed, i.e., receiving a 30-day opioid prescription, but requesting a refill prior to a 30-day period, is considered by many practitioners to be a warning sign that a patient is misusing their medication.
I had a really bad migraine. And I asked my mother where the ibuprofen was, that I have a bad headache. She said it was upstairs on the dresser. And at that time, she was getting Percocet® 10mgs, the yellow ones. And they sort of look like ibuprofen. And I had a headache. I didn’t even look at the bottle, and at that time, she wasn’t hiding her medication because I wasn’t stealing them at that time. And I went up and I didn’t even look at the bottle, I just saw a big bottle of pills which I assumed were ibuprofen and took two of them. And I was watching a movie. And in about 20 minutes my headache completely went away and I started to feel better. And in about five or ten minutes from then, I felt great. I got a euphoric feeling from my stomach emanating throughout my whole body. I couldn’t even feel my legs. And when I was smoking a cigarette it was just delicious, you know. And I was like, What the fuck? I was like, I feel amazing! and I looked at the bottle and it said Endocet® 27 10 milligrams. And I said Oh shit! you know, these are hers. I heard kids in my neighborhood talk about them and how they get you high, and that was my introduction to prescription opiates.

Although the circumstances of initiation for members of this group differed, the commonality of their experience was that they had first misused opioid analgesics to treat pain without the intention to get high. However, many medical initiates went on to misuse opioid analgesics for the positive emotional feelings they experienced when taking the medication and, as I shall illustrate in the following chapters, some went on to drug-seek, often exaggerating or prolonging symptoms in order to obtain or continue receiving prescriptions from their doctors.

27 Endocet® is the brand name of an opioid analgesic containing acetaminophen and oxycodone, similar to Percocet®.
A weakness in the literature relating to the use and misuse of opioid analgesics and highlighted in this chapter, is the lack of clarity surrounding definitional terms. In a systematic review of terminology describing prescription drug misuse, abuse, and related events (MAREs), Smith and colleagues (2013) critique the myriad definitions of MAREs currently used by scholars and propose a set of standardized classifications to assess MAREs that occur in clinical trials and post-marketing adverse event surveillance and monitoring. These classifications relate closely to the medical and non-medical initiate groups presented in this chapter. For example, the authors conclude that the term “misuse-event” should be defined as “any intentional therapeutic use of a drug product in an inappropriate way” (Smith et al., 2013: 2291) and contrast this with “abuse-event,” which is defined as “any intentional, non-therapeutic use of a drug product or substance, even once, for the purpose of achieving a desirable psychological or physiological effect” (Smith et al., 2013: 2292). Accordingly, the initiation event of participants categorized above as non-medical (recreational) initiates would, under this classification system, be defined as an “abuse-event” whereas the initiation event of participants categorized as medical initiates would be considered a “misuse-event.” However, while the authors’ attempts to solidify some clear definitions are laudable, facets of these definitions remain ambiguous. For example, in their definition of misuse-event, it is unclear what constitutes “inappropriate” use, and whether the source of the pills is a factor. Additionally, as Sullivan (2013) points out, the parameters of “therapeutic” versus “non-therapeutic” use also remain unclear. Further, a recent announcement for public comment from the Office of National Drug Control Policy (ONDCP) titled Changing the Language of Addiction (ONDCP: October 4th 2016), challenges the use of stigmatizing language, including the term “abuse,” which has been identified by scholars to be strongly
associated with negative judgment and punitive measures (Kelly et al., 2016), and may perpetuate the stigma related to substance use.

Definitional ambiguities such as those highlighted above also draw attention to the limitations of large national surveys such as the National Survey of Drug Use and Health (NSDUH), conducted on an annual basis with a sample of approximately 70,000 randomly selected individuals aged 12 or over. Embedded in the survey are questions relating to opioid analgesic misuse which read: “Now we have some questions about drugs that people are supposed to take only if they have a prescription from a doctor. We are only interested in your use of a drug if: (1) the drug was not prescribed to you; (2) you took the drug only for the experience or feeling it caused.” (NSDUH, 2013) While this measure informs trends, the paucity of information relating to the context and circumstances of “misuse” limits the interpretation of these findings, and future iterations should consider ways in which motivations for use could best be explored in a closed-ended format (Zacny and Lichtor, 2008). Additionally, while the intent to misuse may be clear at the point of initiation, it is likely that motivations for continued misuse will change over time. For example, Luke (white, aged 30), first misused analgesic opioids because the opportunity arose and he was curious:

I took Vicodin® a couple years ago just to take it, just to see how, what it did to me and...[it] kind of made me more talkative a little bit. . . just kind of relaxed. Made me feel good, but I could see how people can get really into them. But at the same time, it wasn’t something that I was like “Oh, I need to try this again. I need to do this again” it was more just like I had a friend at work that had an extra one and was like, “You want one of these? Let’s try it.”
However, following his initiation event, Luke’s continued sporadic misuse of opioid analgesics was to alleviate pain as he underwent a complicated series of tattoos across his back.

[I] took them just to kind of take the edge off. Doesn’t take the pain completely away, but makes it a little bit more tolerable . . . I have a friend who they were prescribed to his grandmother. She doesn’t take them, so he got a couple of those from her for me specifically, with the intent of me using them for my tattoo.

Another example of how drivers of misuse may change over time is exemplified by Preston’s narrative. A committed athlete, Preston (white, aged 24) had suffered multiple injuries during his sporting career for which he had been prescribed opioid analgesics. During his teenage years, these medications had been carefully monitored by his mother. However, when he went to college and moved into the highly competitive arena of division two college sports, Preston found opioid analgesics were misused widely both for injuries and recreational pursuits. He describes the circumstances of his initiation into misuse in the excerpt below:

We were in our townhouse. And we were all sitting around and a kid pulled out a bottle and unscrewed it. Tossed one to a friend, tossed one to a friend. Looked at me and I put my hands out. Tossed one to me and he was like, “You should probably break that in half, bro. I know you don’t take these so you should probably break that in half.” So I broke it in half, took it, 20 minutes later, he’s like, “You’re turning white, bro.” He said “bro” a lot, I know. Not me. He said bro. He was like, “You’re turning white.” And I was like “Really? Yeah, my stomach’s a little off.” And he was like, “Just wait a second, maybe
you need something to wash it down.” He brought in a beer and then also a glass of water. I chose the glass of water thankfully. Drank almost the whole glass of water, within a minute ran to the bathroom and threw it all up. And they were all laughing, “Light weight.” And they were like, “Don’t worry, bro”. . . It was fun being with my friends. And it was fun, I felt like I was getting in with the older guys, which sounds stupid. I felt like I was being accepted as a young player.

Following this event, Preston continued to misuse opioid analgesics but mostly to alleviate pain sustained from injuries rather than for recreational purposes. Pills were freely available, provided to players by team coaches with minimal oversight, and players were encouraged to take them in order to quickly get back into the game. Indeed, within sporting circles, opioid analgesics were often referred to as “silver bullets” because they allowed players to remain on the field even when injured. “At halftime it was a drug clinic inside the locker. . . You would go into a back room, you would go into the coaches little room and they would open a drawer and there would be bottles, bottles, bottles, OxyContin®, Vicodin®, Percocet®.” Preston continued to misuse opioid analgesics sporadically until the untimely death of a friend resulted in him using pills to self-medicate his emotional rather than physical pain, a shift that led to a sharp increase in use:

I was so sad. I was crying all the time. And they like man, they were looking at each other like, “What do we do with this kid” Quick fix. Quick fix. They were always called the silver bullet. I hate that term because it’s like a bullet. So the silver bullet was the pills that we would take. Pain medication and antianxiety medication.
Preston’s narrative raises an important distinction between the nature of physical and emotional pain, and while this bifurcation has been discussed extensively by pain scholars (see Goldberg, 2009 and Bourke, 2014), it is under addressed within the clinical sphere. A study conducted by Boscarino and colleagues (2010) examining long-term opioid therapy in primary care patients found that a significant variable associated with opioid use disorder was a history of depression, and other studies suggest that mood disorders are a factor in long-term opioid use (Halbert et al., 2016). Further, in their commentary on the function of long-term opioid therapy for non-cancer pain, Sullivan and Ballantyne (2012) astutely ask “What are we treating with long-term opioid therapy” and suggest that often, opioid therapy is used to alleviate “total pain including physical, psychological, social, emotional, and spiritual elements. . . or what one of our primary care colleagues recently termed terribly sad life syndrome [emphasis in the original]” (2012: 433). While the majority of participants in this study did not associate their initiation into opioid analgesic misuse with a desire to alleviate depression, many spoke of how opioids served to “numb” emotional pain and as Jordan thoughtfully remarked:

*There’s something that draws me to opiates. . . There’s just something about the euphoric feeling and the calm that it gives me and the confidence that I feel from it. . . and I feel very euphoric and I love that. . . I’m not blaming this completely on it, but when I was a kid, I wasn’t ever starving, but my father was an alcoholic and my mother had a lot of anxiety issues and money problems. She was a compulsive spender. And I just went through some rough patches in childhood. And from the time I did my first prescription opiate to the last time I used heroin, it just helps numb emotions that otherwise are
constantly playing on my mind along with the fact that it makes me feel great and confident.

Jordan’s perspective highlights the point that although the opioid crisis has been well-documented in terms of mortality and morbidity, there has been little sociological exploration as to why so many individuals have developed a dependence on opioids. Opioids can certainly be risky drugs with a high potential for misuse, and increased exposure to these medications has doubtless played a part. Yet, there is a paucity of analysis regarding the macro sociocultural and political factors that have resulted in the current opioid crisis, or an effort to explore problem drug use using an alternative paradigm to that situated within the context of individual responsibility. Thus, when epidemiologists and clinicians cite statistics suggesting that 100 million Americans suffer from chronic pain (Institute of Medicine, 2011), a valid question might be why is this so? Additionally, as Alexander (2008) has attempted to do in his book, The Globalization of Addiction, efforts should be made to reflect on problem substance use as “a latent human potential that expresses itself universally under particular social circumstances” (2009: 2), rather than simply as an individual or pathological issue.

Experienced heroin users and initiation into opioid analgesic misuse

As referenced in the introductory paragraphs of this chapter, previous studies examining the etiology of opioid analgesic misuse have often failed to distinguish between participants who were opioid naïve at the point they initiated opioid analgesic misuse, and those who had previously used heroin. To reiterate, opioid analgesics and heroin have similar pharmacological and physiological properties; both are central nervous system depressants that bind to the mu
receptors in the brain, blocking the perception of pain and resulting in a calming or euphoric effect. In this study, 30 participants reported their use of heroin preceded their misuse of opioid analgesics, and while many scholars have commented on the trajectory of opioid analgesic use to heroin (Jones, 2013; Mateu-Gelabert et al., 2015), few have referenced that the relationship between these different opioids is often bidirectional (c.f. Lankenau et al., 2012; Rigg and Murphy, 2013).

The experienced heroin users in this study had typically been using heroin off and on for many years; they tended to be older than participants in the two groups described above with a median age of 45 years, compared with 28 years for non-medical and medical initiates combined. Years of entrenched, often poly-substance use meant that for most experienced heroin users, pinpointing the first time they misused opioid analgesics was often impossible. Further, opioid dependence as well as chronic pain issues tended to blur the distinction between the non-medical and medical contexts of initiation as described earlier in this chapter. For example, for some experienced heroin users, the first time they misused opioid analgesics was when they were anticipating, or already were in acute heroin withdrawal. Pain relating to symptoms of opioid withdrawal, which may include stomach cramps, nausea, vomiting, diarrhea, chills, and muscle aches, can be intense. Often, by the time a person has developed a physical and/or psychological dependence on opioids, alleviating these symptoms is referred to and conceptualized as “getting straight” rather than “getting high” in that taking opioids simply will serve to restore a level of functionality, rather than produce a euphoric effect. Thus, in these circumstances, the line between non-medical or recreational use and medical use cannot always be clearly delineated.

Becky (white, aged 28), first started experimenting with heroin when she moved to New York City from Albany in her early 20s. For the first few years, heroin was not her preferred
drug and she used only sporadically. However, after engaging in an intimate relationship with a man who was regularly using, Becky’s own consumption increased. She recalled:

*I didn’t have a real problem with [heroin] until when I was [in NYC] and I did it here and there, but then I met this guy that I’m with now—this was three years ago—he was using a lot, so what he would do is make a lot of money every day and then we would cop in the afternoon and go home and get high. And that’s when... he had really good heroin, somewhere he was getting it in [Anonymized]. It was really good, like nothing I had ever done before.*

Previous literature has documented that women often initiate substance use with male intimate partners (Eaves, 2009; Hser et al., 1987), and although Becky’s degree of agency regarding her drug trajectory was not specifically explored during her interview, what is clear is that her boyfriend, Dave, was the primary drug locator and purchaser for the two of them and was instrumental in Becky’s initiation and eventual preferential switch to opioid analgesics. It was he who had the connection to the heroin supply and on a day when their usual dealer proved unreliable, Dave sought out an alternative source of opioids in the form of oxycodone pills, which he then taught Becky how to administer via injection.

*It was a day that we couldn’t cop or something, or they didn’t have the dope he wanted, so he knew somebody that had pills—I don’t think he knew what kind until we met up with the person but...he got them and he said we’ll do these instead, you know, we won’t be sick. . . So we did those and I just remember the high was a lot longer and better and I*
asked him why, and he was telling me that because the pill, it's not like a bag of dope that's been stamped on and stuff added to it.

Following her initiation, oxycodone became Becky’s opioid of choice, although she reported that market constriction in the months preceding the interview had led to a scarcity of these drugs, with the result that she had reverted predominantly back to daily heroin use. Becky’s preference, however, was in contrast to most other participants in this group, who maintained their preference for heroin and, who presented with the choice, would rather use heroin than opioid analgesics.

In addition to staving off withdrawal, another scenario in which experienced heroin users sometimes used opioid analgesics was to mitigate the effects of stimulant use, most often, after smoking crack. For people who are polysubstance users, a typical pattern is to first use a drug for its stimulant effect and subsequently use opioids or other central nervous system depressants to level out the high. While some people use heroin and cocaine or crack simultaneously, a practice known as “speedballing,” others prefer to take the drugs consecutively. Perry (black, aged 49), who had been using cocaine and heroin for many years, described how he had recently learnt about opioid analgesics while in an in-patient drug treatment program where he was being treated for crack and alcohol use.

I was in a program in [Anonymized], a 28-day rehab, and I met a lot of people in [Anonymized]. And this one lady was telling me “Oh, I can get you a script...” And I really wasn't taking the pills. I wasn't on it. This is like maybe last year. I'm not taking the pills. I knew what the feeling was, but... I'm like “Damn, man, take Oxys? Man,
that's how some serious people OD [overdose]. I mean, they're ODing, they're dying... I'm like [don't] fuck with that.”

Perry’s initial apprehension regarding the potential risk of opioid analgesics differs from the majority of other participants in this study, who perceived opioid analgesics as qualitatively safer than heroin. However, after further conversation with his peers in drug treatment, Perry’s concern about the risk of overdosing dissipated and when the opportunity arose, he tried a Percocet® tablet: “’Yo, man, this is Percocet®. This ain't that other shit [heroin]. You ain't sniffing it. You know you ain't sniffing this shit.’ All right. Give me one.” Since this experience, Perry had regularly taken Percocet®, and at the time of interview, was trying to get a prescription of his own with the intention of both using the pills himself, and selling a proportion to generate extra income.

While a history of heroin use prior to opioid analgesic misuse is the organizing principle of this group of participants, some had ceased using heroin for an extended period before initiating opioid analgesic misuse. Martin (white, 45 years), first developed a problem with heroin when he was 15 years old, stopping only after he was sentenced to a lengthy prison term. On his return to the community, Martin suffered a neck injury, but knowing he would be vulnerable if he used a narcotic-based analgesic, he declined the opioid prescription suggested by his doctor. Martin avoided opioids for several more years until he was offered oxycodone by a co-worker in the construction industry.
Working in the union, pills were very, very big. Just from people having sore backs, sore this, sore that. Everybody that worked in my union had something or another for pain, but the Roxies [oxycodone] were very big . . . We used to eat those all the time.

Shortly after he began misusing oxycodone, Martin was again injured on the job, this time breaking three vertebrae in his back. On this occasion, he did not reveal his substance use history to his physician and accepted an opioid analgesic prescription knowing he could use it to get high. Martin did misuse his prescription and within a couple of months, was once again using heroin. For participants in this group, substance use issues often complicated their relationship with health care providers and several spoke about their ambivalence to disclose current or previous opioid dependence out of fear they would be stigmatized and denied care. As Martin commented:

No, I did not [disclose my history]. No I wasn’t telling them anything, because then [the doctor] wouldn’t do it. I knew what I was getting involved with probably. But they were—I don’t know why. I was just in a lot of pain, and you know, I didn’t want to tell them to jeopardize them not giving [the medication] to me. So, I didn’t tell them about my past. No.

Similarly to Martin, many experienced heroin users in this study had complicated medical histories including painful physical symptoms that could be alleviated by opioid analgesics. As previously stated, members of this group were, on average, in their mid-40s (range 28 to 62 years) and for older participants especially, years of using street drugs had
resulted in a variety of painful ailments, including: injuries from fights or accidents and chronic diseases such as diabetes, arthritis, and HIV/AIDS (Davis and Johnson, 2008). Determining the most effective therapeutic solution for people who have a history of opioid use disorder is not always straightforward (Passik and Kirsh, 2004). Further, when mental health issues are also a factor, the problem of pain becomes even more complex, adding another layer of ambiguity to the definitional problems raised in this chapter regarding what constitutes “misuse,” and highlighting the difficulties of delineating the experience of physical and emotional pain.
CHAPTER FIVE: SOURCES OF OPIOID ANALGESICS

In the previous chapter, I described pathways into opioid analgesic misuse including the source of pills participants had used at the point of their initiation. This chapter will examine how participants obtained opioid analgesics on an ongoing basis, and explore the processes of pill acquisition among two different user groups: those who developed a physical dependence to opioid analgesics and those who did not. For the purposes of this analysis, I have excluded participants categorized as experienced heroin users described in the previous chapter (n=30), as members of this group were often opioid dependent prior to their involvement in opioid analgesics and typically misused these medications on an ad hoc basis, often as a substitution for heroin when supplies were scarce. Thus, the relationship to the opioid analgesic market of experienced heroin users differed from participants who first developed an opioid dependence on pain pills as, at the point these individuals were dependent on opioid analgesics, their demand for these drugs was inelastic.\(^{28}\)

Previous research on illicit prescription drug markets suggests that medications, including opioid analgesics, originate from filled prescriptions that are then diverted through a variety of sources. The concept of diversion is often used to describe a broad range of processes which may include: supplies of medication prescribed to one person being used by others; taking medication in a way other than directed (i.e., sniffing or injecting pills that are meant to be consumed orally); or amassing quantities of pills that are prescribed to be taken on a daily basis (Bell, 2010). One

\(^{28}\) Elasticity of demand measures the sensitivity of the quantity demanded in response to market conditions such as price, which in an illegal market can be driven by a variety of factors, including risk of enforcement. The demand for any good, including drugs, tends to be more elastic if there are alternative products available, or if the product is not considered a necessity. In this context, opioid dependence results in inelasticity of demand as individuals must either obtain drugs, or go through painful withdrawal.
of the most prevalent forms of diversion referenced in the literature is medication sharing within familial and social networks. For example, in a mixed-methods study with young adults conducted by Daniulaityte and colleagues (2014), 88 percent of their sample reported they had ever received opioid analgesics for free, and almost a third (30%) had not paid for the majority of pills they had consumed in the previous six months. Further, almost half their sample reported having obtaining pain pills from a relative at least once, and, for 12 percent, this remained their primary source. In contrast, while 47 percent had ever misused opioids from their own prescription, only four percent reported prescribed medication to be their primary source in the previous six months, and the prevalence of doctor shopping was also low. Moreover, for those who did regularly pay for pain pills (53%), sellers were often found within existing social spheres and participants rarely reported purchasing drugs from strangers.

These findings are in contrast to other research. For example, Inciardi and colleagues (2009b) reported that obtaining opioid analgesics via doctor shopping was a common practice among their sample. Additionally, participants in this study described an illicit opioid market that was fueled via pill brokers—middlemen who recruit and maintain a list of individuals willing to obtain prescription pain pills either with or without a warranted medical reason with the intention of selling the entire supply—as well as “script docs,” medical providers who are known for prescribing opioids beyond the scope of professional care.

It is possible that some of the differences in the composition and operation of opioid analgesic markets between these studies relate to the patterns of use, specifically the elasticity and inelasticity of demand, among the participants included in each of the samples. For example, in the study conducted by Daniulaityte et al., (2014), in which findings described an opioid

29 In Daniulaityte et al., study, doctor shopping was defined as “receiving prescriptions from one or multiple physicians without a legitimate medical reason.” (Daniulaityte et al., 2014: 201).
analgesic market largely facilitated by medication sharing, the sample consisted of individuals who were not dependent on illicit opioid analgesics at the time the interviews were conducted, and who reported no lifetime dependence on opioids. Conversely, the sample included in Inciardi et al.’s., (2009b) study, in which participants described a more open drug market involving a variety of actors, was recruited from two residential substance use treatment programs and is therefore suggestive of more entrenched opioid use.

To date, few studies have explored sources of opioid analgesics as pegged to particular patterns of use, with notable exceptions including analyses of the National Survey on Drug Use and Health (NSDUH). In 2014, the NSDUH reported that 68 percent of persons misusing OAs obtained their pills from family or friends (SAMHSA, 2014); however, recent secondary analyses of these data indicate that, while many individuals do obtain opioid analgesics from friends or family, patterns of acquisition were related to frequency of use. Indeed, few respondents who reported daily misuse obtained opioid analgesics from these sources; rather, they accessed medication through prescribers or street markets (Jones et al., 2014). These findings mirror an earlier study by Ford and Lacerenza (2011), whose analyses of NSDUH (2008) also suggests a strong association between frequency of use and sources of diversion.

This chapter seeks to extend these findings by exploring how participants reporting different patterns of use acquired the drugs they misused. The data presented below is limited to the 63 participants whose opioid analgesic misuse preceded use of other opioid drugs (i.e., heroin) stratified into two groups: (1) those who reported experience of opioid dependence; (2) those who did not report experience of opioid dependence. Across the groups of dependent and non-dependent participants, demographics were fairly homogenous as demonstrated in Table 3.
Table 3: Demographic characteristics of participants in the dependent user and non-dependent opioid user groups

<table>
<thead>
<tr>
<th>Demographic characteristics</th>
<th>Dependent users</th>
<th>Non-dependent users</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>63 (100%)</td>
<td>44 (100%)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>24 years</td>
<td>25 years</td>
</tr>
<tr>
<td>Range</td>
<td>18 to 58 years</td>
<td>18 to 58 years</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>22 (34.9%)</td>
<td>13 (29.5%)</td>
</tr>
<tr>
<td>Male</td>
<td>41 (65.1%)</td>
<td>31 (70.5%)</td>
</tr>
<tr>
<td><strong>Race/ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic white</td>
<td>49 (77.8%)</td>
<td>36 (81.8%)</td>
</tr>
<tr>
<td>Non-Hispanic black</td>
<td>2 (3.2%)</td>
<td>2 (4.5%)</td>
</tr>
<tr>
<td>Hispanic/Latino/a</td>
<td>9 (14.3%)</td>
<td>6 (13.7%)</td>
</tr>
<tr>
<td>Multi-racial</td>
<td>3 (4.7%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td><strong>Educational attainment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did not complete high school</td>
<td>6 (9.5%)</td>
<td>5 (11.4%)</td>
</tr>
<tr>
<td>High school graduate/GED</td>
<td>19 (30.2%)</td>
<td>16 (36.4%)</td>
</tr>
<tr>
<td>Further education</td>
<td>38 (60.3%)</td>
<td>23 (52.2%)</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Own home</td>
<td>28 (44.4%)</td>
<td>16 (36.4%)</td>
</tr>
<tr>
<td>Family home</td>
<td>26 (41.3%)</td>
<td>21 (47.8%)</td>
</tr>
<tr>
<td>Friend’s home</td>
<td>4 (6.4%)</td>
<td>2 (4.5%)</td>
</tr>
<tr>
<td>Shelter</td>
<td>3 (4.7%)</td>
<td>3 (6.8%)</td>
</tr>
<tr>
<td>Street homeless</td>
<td>2 (3.2%)</td>
<td>2 (4.5%)</td>
</tr>
<tr>
<td><strong>Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Full- or part-time</td>
<td>26 (41.3%)</td>
<td>15 (34.1%)</td>
</tr>
<tr>
<td>Student</td>
<td>10 (15.8%)</td>
<td>5 (11.4%)</td>
</tr>
<tr>
<td>Unemployed</td>
<td>22 (34.9%)</td>
<td>20 (45.5%)</td>
</tr>
<tr>
<td>Disability/unemployment insurance</td>
<td>5 (8.0%)</td>
<td>4 (9.0%)</td>
</tr>
<tr>
<td><strong>Type of initiate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreational (non-medical)</td>
<td>44 (69.8%)</td>
<td>28 (63.6%)</td>
</tr>
<tr>
<td>Medical</td>
<td>19 (30.1%)</td>
<td>16 (36.3%)</td>
</tr>
</tbody>
</table>
Trajectories of use for dependent users

Among those respondents (n=44) who reported developing an opioid dependence, 28 were recreational initiates and 16 medical initiates. As illustrated in Chapter 4, the majority of recreational (i.e., non-medical) initiates sourced the opioid analgesics they first misused from members of their peer network, in most cases for free. In contrast, medical initiates tended to first misuse pills obtained from their own prescription or from the prescription of a close family member. In the medical initiate group, no participants reported paying for the pills they first misused. Whether participants initiated opioid analgesic misuse for recreational or medical reasons, the trajectory toward opioid dependence followed a similar pattern consisting of several key transition points described below.

For those who initially began misusing dual-entity pain medication such as Percocet® or Vicodin®, which contain both an opioid compound and acetaminophen, the move to a higher strength, single-entity pill containing only one opioid compound with no other active ingredient, was often a pivotal point along the trajectory toward opioid dependence (Harocopos et al., 2016). Somewhat paradoxically, the motivation to switch to a single entity formulation often centered on the concern that the overconsumption of acetaminophen found in dual-entity compounds could be damaging to the liver or stomach, especially as the number of pills consumed per day increased in light of growing tolerance. The most popular pill used by participants in this study was a generic short-acting oxycodone formula available in 30mg tablets. Known colloquially as “oxy’s,” “roxies,” or “blues,” these pills were widely used by most people in this study and by

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30 Percocet® and Vicodin® are dual-entity formulations containing oxycodone and hydrocodone respectively, and acetaminophen. These dual-entity medications are typically found in doses of between 2.5mg/325mg to 10mg/325mg, with the first number indicating the strength of the opioid and the second, the acetaminophen. Single-entity formulations, such as Roxicodone® and Zohydro®, are most commonly prescribed in higher strength doses starting at 10mg and above.
the time participants acknowledged they were opioid dependent, the majority specifically were seeking out this formulation.

The switch from a dual-entity formulation to a higher strength, single-entity formulation was often followed by a change in route of administration from oral to intranasal use. Although it is possible to crush and sniff dual-entity tablets, participants generally described experiencing an unpleasant “burning” sensation as they inhaled the drug. However, sniffing single-entity formulations was less disagreeable and, for individuals in this group who became dependent on opioid analgesics, all but one favored intranasal use as their primary route of administration.

Philip (white, aged 25), described his preference for sniffing single entity formulations.

\[
I \text{ didn’t start sniffing pills until later, when I started with the roxies, ‘cus you’re not gonna sniff Perc 10s, like. You know what I mean? It’s like sniffing an aspirin. You know what I mean, but it’s really different, like it’s really weird. Like, I think that they made these roxies to be able to make them to sniff, because they taste great. They don’t burn your nose. It’s like they’re meant to sniff. Like, these doctors, like, whoever made these things, they knew that that would be able to be done with it. Like, you know what I mean, like try and sniff a Perc 10, like have you ever broken a Perc 10? You see how much chalk and powder is in there? It’d probably taste disgusting. Probably burns your nose, right? But a roxy just has, like, this sweet taste to it, and it just has, like, this great drip to it, like it comes down like the bag is great. I don’t know what it is about those things. It’s great. You don’t even feel nothing.}
\]
Although more experienced peers had counseled some participants that intranasal use would enable them to experience opioid effects at an accelerated rate, others described a more organic process in which repeated exposure to a specific behavior inured them to the practice without the need for direct encouragement. Intranasal use, therefore, was often normalized within friendship groups by a process of diffusion and not necessarily pegged to peer pressure. As Chris (white, aged 22), who first misused pills when he was 17 explained:

...I mean at this point, like I was a neighborhood kid that hung out at the park, knew everybody from the neighborhood so I mean this was becoming an epidemic. Everybody was taking them. So it wasn’t... I was always hanging out with other kids that were doing [opioid analgesics], kids that were already sniffing them when I was still eating them, so it wasn’t like they had to teach me. I’d seen them do it every day. They would crush up the pill, roll up a bill and sniff it, and that’s it. And at the beginning, like I said, it was just because it hit you faster, but then, when I one day went to just eat one and it didn’t hit me, I didn’t understand why, so now I realized, OK, I just upgraded to the next level and now I have to just continue sniffing them.

The majority of participants who developed a physical opioid dependence via the use of opioid analgesics discussed the transition points as detailed above. However, within this group, knowledge of the risk of dependence varied and even among those who were cognizant of the possibility, there was often a disbelief that it might happen to them. Recall Joe, who first used opioids to enhance his sexual experience. The following excerpt provides a rich description of his trajectory toward daily opioid use and his reluctance to acknowledge the associated risks.
Even sniffing opioid analgesics I went a long while only doing quarters and halves [of tablets], but once you start sniffing it, there's much more of a bang. There's much more of a rush, and it slowly—I wouldn't say it was overnight, like “You know what, forget the sex aspect of it. I'm just going to start taking it to feel good”—it slowly morphed into “You know what, I'll just take it today. I'm not going to have sex today, but I'm just going to take it today because I want to feel good” or “I kind of have a headache today. I'm going to take a little bit just to feel good.” And slowly but surely I started seeing myself not skipping days as often, or instead of doing it one day and skipping two days I would do it two days and skip one day. And slowly but surely that built up to taking a quarter or a half a day, but I would always skip days. And then it only took about one or two weeks where I literally said, I remember even saying this, I said “Fuck it. Who cares? I'll be fine.” And I sniffed a half, and then I sniffed a half that night. And then it became “Okay, I'll only do it on weekends.” Then it became “Okay, I'll only do it at nighttime.” Then it eventually came to “Okay, I'll only do it in the mornings and at nighttime. This way I can wake up and feel good.” Then at that point you're addicted whether you like it or not, whether you realize it or not too, because that's a big thing. A lot of kids become addicted, and they don't even realize their dependence. That's how it gets you; that's how it gets you.

Thus, among both recreational and medical initiates who became opioid dependent, a common thread was the belief that they would not be adversely affected by their misuse of OAs and further, that they would be insulated by the negative outcomes of extensive drug use. For example, Donna recalled that when she first tried opioid analgesics she was not worried about
the consequences because she simply did not believe she was vulnerable: “I’m not really afraid of much. I wasn’t afraid. I always thought like, I’m better than… like nothing is going to… you know what I mean?” Although this may partly be due to the fact that opioid analgesics are often considered safer than other types of street drugs, this sense of invincibility continued even as participants’ opioid use became more entrenched. As Joe reflected:

Nobody thinks they’re going to withdraw. “Ah, I’ll be fine,” duh, duh, duh. I remember the first time I felt withdrawal. I was trying to be mind over matter because I’m a perfectionist by nature. I like to do things perfectly. I like to make sure everything is right, so I tried to be mind over matter, like “I’m stronger than this, this can’t take me over.” And it was impossible-feeling. It felt so impossible.

Previous research has noted that among networks of people who use drugs, discussions involving the negative consequences of risky substance use rarely occur. For example, a study exploring the social networks of drug injectors during the height of the AIDS epidemic, found that conversation topics within circles of people entrenched in drug use were generally one-dimensional (centering predominantly on drug acquisition), and rarely included exchanges relating to the potential risks associated with some drug-using practices (Freidman et al., 1999). As Jack (white, aged 19), commented:

Nobody’s gonna tell you “Oh hey, take this, but if you start doing it for two months you’re going to get sick every day until you take it.”
For some participants, the realization they had become opioid dependent occurred only after they had experienced withdrawal symptoms for the first time, and for those with a steady supply of pills, this was often months after their drug-taking had escalated to daily use. As David (white, aged 28), recalled:

> For the first year maybe year, or two years, I didn’t know that it was physically addicting. I didn’t know that if I didn’t take them today, I wouldn’t feel good, because I was taking them every day. . . At least within the first year, nobody talked about [opioid withdrawal], I don’t think. A lot of people didn’t know. There was a lot of newcomers, and they were just like, “Hey, I could get them,” and we were all talking about getting them and taking them, but we were never talking about not taking them.

Early signs of “dope sickness,” including symptoms such as aching limbs, an upset stomach, or a runny nose, were often first attributed to a viral or bacterial infection, and even after being advised by peers that they were likely in opioid withdrawal, some participants only accepted this as true when symptoms disappeared following further dosing. Danny (white, aged 21), described his dawning realization that what had started as casual, recreational use more than two years previously, had resulted in opioid dependence.

> First when I felt sick and my friend told me what it was I was like “There’s no way, no way.” Mentally, I didn’t want to believe it. So for like two hours, I was sitting downstairs miserable, sick. And then I went upstairs and I did one and all of a sudden I got these goose bumps and I felt phenomenal, I felt great. Then I realized it’s because of the pills.
However, within other networks, opioid analgesic misuse was so ubiquitous that symptoms relating to opioid withdrawal were not only acknowledged, but also an accepted part of the pill-taking culture. Thus, in the same way that opioid-induced vomiting was considered a minor inconvenience during initial experiences of misuse, for some, the symptoms resulting from physical dependence were both expected and inevitable. Jason (white, aged 21), explains:

*I didn’t think it was a problem. I just felt like, this is what happens . . . This is the way that...you want to do these pills, all right. You’re gonna go through withdrawal. And it was just like a normal thing. Like everyone I was involved with, my whole circle of people were doing them. It was just part of the lifestyle . . . To be honest, I don’t remember the exact first time [experiencing withdrawal symptoms]. But I just know people told...I knew, I guess I knew before I went through them from other people that went through them and said, “This is what’s going to happen. You’re going to feel sick, you’re going to feel shitty.” And I was prepared for it.*

In this study, 31 of the 63 participants who had *not* used other opiates prior to misusing opioid analgesics eventually initiated heroin. An often cited factor for this shift was a notable constriction of the opioid analgesic market resulting in rising prices and falling availability. Thus, as pills became more expensive and harder to obtain, heroin, a cheaper opioid alternative, was seen as a viable option. While most participants who initiated heroin continued to use opioid analgesics intermittently, for many, heroin became their primary drug. The data below are therefore focused on sources of opioid analgesics as participants moved toward growing opioid dependence, and shifted from having an elastic to an inelastic demand for opioid analgesics.
Sources of opioid analgesics for dependent users

The majority of participants who became opioid dependent were in social networks that facilitated ongoing use. For example, of the participants who had initiated opioid analgesic misuse in their teens, many described a milieu where opioids and other prescription medications, such as benzodiazepines and sleeping aids, were widely available. Indeed, descriptions from many individuals in this group suggest that opioid use was pervasive in their communities and, when describing trajectories toward opioid dependence, the ease by which participants were able to access pain pills was a common theme. For example, Harry (white, aged 44), first used opioid analgesics following a work accident that left him with several crushed fingers. As his hand healed, his doctor prescribed him dual-entity pills containing oxycodone and acetaminophen. Although he used his medication as directed, Harry enjoyed how he felt when taking the pills and, once they were finished, was able to easily find an alternative source of opioids through word-of-mouth.

I asked people I knew if anybody knows where to get them. Everybody seemed to know. Everybody seemed to know “Yeah, that guy is selling them. That guy is selling them.” Everybody was selling them. . . All of them were going to doctors, getting—making believe they were hurt, getting prescriptions and selling their prescriptions. It was actually like a lot of illegal doctors that were doing it . . . The doctors had to have known all that was going on because my doctor, when the cast came off and everything, stopped [prescribing]. These guys, for some reason, never stopped.
Similarly, when Mike, who had received successive opioid prescriptions for many months following surgery on a torn bicep, could no longer get refills from his doctor, it was straightforward for him to find diverted medication from sources close to him:

_I just knew people, I had one person. I don’t know where he got it from but he always had a lot of Vicodin®. And I think that he was getting it from somebody at a pharmacy. . . And it was just, I knew like... [Anonymized] is a very small community I want to say, and a lot of people know other people. It’s like three degrees of separation in [Anonymized]. And back then I was going to clubs, I knew a lot of people and I was very social. And you get to know, like whose got what._

For those who had started misusing opioid analgesics recreationally, and had initially acquired their pills from a source other than their own prescription, the easy acquisition of pills through close social networks was also a central component in the telling of their trajectory toward opioid dependence. Indeed, at the time many of these participants initiated opioid analgesics misuse, their narratives indicated that the illicit pill market for diverted pills was robust and largely unhampered by later initiatives implemented to constrict diversion, such as changes to existing drug formulas and the introduction of prescription monitoring programs (PDMPs).31 For example, Donna, who at the time of interview had been misusing opioid

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31 In 2010, Purdue, the maker of OxyContin, a long-acting opioid analgesic available in high doses, reformulated the medication with the intent of making the time-release mechanism more robust and unable to be tampered with. In 2013, the I-STOP (Internet Tracking System for Overprescribing) came into effect making it mandatory for medical practitioners to look up patients in the PDMP prior to prescribing schedule medications II to IV. These types of initiatives changed the market for diverted opioid analgesics considerably and are discussed further in Chapter 7.
analgesics for approximately five years, described a community awash with opioids where connections to people who were able to supply her with the pills she sought were easily made.

I know it’s harder now. [Until recently] it was very easy to get them, and I never—I always knew at least 10 people that I could try, and get through them or someone that had [opioid analgesics], so if someone didn’t have it, they could get it. I never really had a problem getting them. It would all be from neighborhoods in [Anonymized]... And my close friends, my best friend that was using, too. So whoever she knew, she brought in people and you just knew people.

While it is not possible to know with certainty where others in the community acquired their pills, several participants described buying opioid analgesics directly from individuals who themselves were receiving a prescription from a doctor. These types of exchanges between close community members have not been well documented in the literature, and studies exploring sources of diverted opioid analgesics often lack nuance with respect to the relationship between buyers and sellers, who typically are categorized simply as “dealers,” a catch-all term to denote persons selling illicit drugs. The relationship between buyers and sellers, therefore, often remains poorly defined, and where some “dealers” might be known only to the buyer in the context of their drug use, many of the participants in this study described acquiring opioid analgesics from people well-known to them in their community.

The following excerpt from Luis (Latino, aged 40), demonstrates how opioid analgesics were diffused within community networks and illuminates the social bonds that often existed between participants and the person from whom they purchased their drugs. Luis first misused
opioid analgesics following a tooth extraction seven years previously and, when his prescription ran out, reached out to an old friend residing in upstate New York whom he had known for more than 25 years.

I spoke to a friend of mine and he told me that he could get more... And I started making excuses on why I needed it, like I would tell my friend, “Hey, my leg is hurting. My tooth is still hurting. Can I have some of yours?” “Sure, no problem”... I don’t know where he was getting them. He was buying them in the street, that much I know, [and] then reselling them and taking them himself... That went on for about a year, and then I started finding people on my own because I got tired of driving upstate... I knew an older woman [Alice] that would get [opioids] because she had problems with her back. And then she kind of, she would sell them to me very cheap. She would sell them to me, about 240 pills for 70 bucks, the five milligrams. She would get a whole bottle of 240 a month [and] she wouldn’t take them. She had back problems, but she didn’t like the way they made her feel actually... [I’ve known her] since I was a kid.

Luis purchased Alice’s prescription every month, and sold any surplus pills to his upstate friend, from whom he had previously acquired pills, often at no cost. A growing awareness of the potential ill-effects from the acetaminophen in the dual-entity formulation, however, led to a drop in demand for these pills, prompting Luis to find an alternative supply. His next source was an “older gentleman,” also within his community, who offered to sell Luis his monthly prescription of 60 tablets of 10mg oxycodone for $120, an arrangement that continued for about a year until the man’s arrest (on charges unrelated to drugs), necessitated Luis finding another...
source. Again, within his community, Luis approached a family friend and retired doctor who wrote him several months’ worth of prescriptions for 120 tablets of 10mg oxycodone, which he filled at the pharmacy with cash payments. Thus, Luis was able to sustain a supply of diverted opioid analgesics for many months, even years, without ever having to negotiate with community outsiders, a situation that he suggested contributed to his growing dependence:

_I could always get them whenever I wanted. Maybe it wasn’t the 10mg, it was the 5mgs, but they were always available one way or another. Like, if I couldn’t get them, a friend could get them, you know? Always somebody knew where to get them. . . It was like 10, 15 of us that would take them and, worst case scenario, I would drive upstate, there was always [opioids] up there._

Buying, selling, and trading opioid analgesics within close social networks was a prevalent theme among participants in this study, and for those who became dependent, easy access to opioids within friendship groups helped sustain regular use and likely increased the risk of developing an opioid dependence. However, while medication sharing is widely cited in the diversion literature, most of the sharing described by participants in this study was in fact transactional in nature, and persons selling their own prescriptions made sizeable profits by doing so. For example, an insured patient receiving a prescription for 120 tablets of 30mg oxycodone stood to make up to $2400 net profit, minus the cost of a co-pay, if applicable. Thus, for many participants, the people supplying the opioids, the “dealers” as they would be classified under the law, were typically the mothers, fathers, sisters or brothers of people within the local community. As Donna suggested: “The pill dealers could be anyone’s mom. I mean, I have
gotten pills from peoples’ moms. Whoever has a script, those are the pills dealers, you know, anybody.”

The close nature of the social bonds between sellers and buyers was also articulated by Sonia (white, aged 18), who had first misused opioids with her brother when she was 13 years old, and had recently transitioned to heroin. Deliberating on the relationship she had with many of the people she acquired drugs from she commented:

*I feel like we all grew up together basically. There was a few that, you know, I just used as a drug dealer, but a lot of dealers were my close friends, a lot of my dealers. Like I said, we all grew up in the same neighborhoods, all the pills were really in [Anonymized].*

When referring to themselves or their peers, some participants often prefaced their comments with qualifying statements regarding their appearance (“presentable”), their background (“good family”), or their socioeconomic status (“well-off”), attributes that were also extended to the people they bought drugs from. On the other hand, when talking about people who were drug-involved and outside their social network, participants were often quick to emphasize social differences, as Natalie did when recounting a story about a person she bought drugs from after she had become opioid dependent: “He was obviously no good. I would never talk to him sober, you know. But as a drug dealer, he was great.” Recall that Natalie had sold opioid analgesics within her social network even prior to her own initiation. Her assessment of her dealer’s character, therefore, is unlikely to be attributable simply to the distinction between user and seller, but rather is a thinly veiled comment on racial and/or class differences.
Opioid analgesics then were not only widely available within participants’ locales but also could be sourced from community *insiders* without the trepidation of acquiring drugs from someone considered “other.” Further, in tight-knit communities where relationships between doctors and patients were well-established, obtaining an opioid prescription from a doctor was typically straightforward, because patients were community insiders and, as such, beyond suspicion of medication misuse or diversion. Thus, in many communities, growing demand was met with local supplies stimulated by the increasing number of people obtaining and diverting prescribed opioids written directly to them, as reported by Jordan:

... Really the majority of [pills] is from people that worked, you know, middle class families that worked, that got hurt, that either sell their whole script or half their script. That’s a big percentage of people in working middle class neighborhoods.

An interesting comparison to the narratives describing the close social networks within which many participants acquired and used their drugs comes from Jonathan (white, aged 28), who had been misusing opioids for around five years. In the months before his interview, Jonathan had been getting high with a friend from his neighborhood who, having recently tried crack for the first time, suggested to Jonathan that together they drive to an area of town known for its semi-open drug market to purchase more. He described the experience as followed:

*I was constantly on drugs, so I didn’t even care, like yeah, let’s go, I don’t give a fuck.*

*I’m from [Anonymized], I live here. [My friend’s] like, “We’ve gotta go to [name of project].” I’ve never ever really been there, like there’s no reason to go there. No one*
has family from there, you’re not gonna date anyone from there. It’s like you don’t go there. It’s like any ghetto, you don’t go there. . . So we parked on one of the side streets and a guy came up to the window and he’s like “Yo, what the fuck’s going on? Why the fuck you guys over here?” And we’re like whoa, very aggressive, and we’re like “Hey man, listen, just trying to get high, just trying to get high, we can’t find this shit anywhere else, you know, we got money, let’s do a deal.”. . . We got with one guy, you know, and then these guys they’re never... they’re not very reliant, you know, they sleep and they’re up all night, but we want to get high at 10 in the morning, so we then had to go fish again for another guy, daytime guy, nighttime guy, one guy wasn’t around, he was going upstate, like they’re all, these people just... they’re like living this vagabond lifestyle. . . . It’s not like the white drug dealers, the pill kids. They’re always around. They’re more... consistent.

It is not within the scope of this dissertation to comment on the racialization of drug use and the way in which the prescription opioid crisis has further revealed the divergent approaches to drug policy depending on the racial and/or ethnic identity of those involved. However, Jonathan’s portrayal of his crack-purchasing activities is instructive in that it reinforces the notion that for many of this studies’ participants, there was no need to leave their own community to acquire the drugs they wanted, or for those residing in predominantly white, middle-class neighborhood, to cross boundaries “that [would] lead them from the imagined safety of the suburban and rural white community and [expose them] to the violence that supposedly characterizes the inner city drug markets” (Netherland and Hanson, 2016: 677).
While social network analysis previously has been utilized to explore behavioral health risks, especially relating to blood-borne infections associated with substance use, such as HIV and viral hepatitis (Friedman et al., 1999; Klovdahl et al., 1994; Pivnick et al., 1994), and more recently to assess risk of gun homicides in high-crime communities (Papachristos and Wildeman 2014), problem substance use per se is often still considered at an individual level. The narrative descriptions of some participants regarding the ubiquitous nature of opioid use among their communities suggests that greater exploration of what Pivnick and colleagues (1994) term an “inter- and intracommunity problem” might yield new insights into the proliferation of opioid misuse within particular geographic locales. As previously discussed, the pharmaceutical industry undoubtedly contributed to the current opioid issue by promoting prescribed opioids for widespread use. However, utilizing a network approach might help shed light on why some communities appear to be more vulnerable to widespread opioid misuse than others.

As participants who eventually became opioid dependent moved toward entrenched use, many sought out more cost effective ways of accessing pills, which often involved finding a doctor from whom they could obtain a prescription, and/or selling opioid analgesics to fund their use. Accounts given by participants in this study suggest that between the years 2008 to 2012, the street price of opioid analgesics increased significantly. Thus, while a 30mg oxycodone tablet had once sold for $8 to $12, by the time fieldwork was conducted in 2013 and 2014, a single 30mg oxycodone tablet cost an average of $20, with prices as high as $25 reported.32 Given that participants who became opioid dependent were generally consuming a minimum of three, and sometimes as many as 15 tablets a day, the financial burden of their escalating use was often extremely high. The majority of participants in this group reported that on one occasion at least, 

32 As with many types of sales transactions, the price quoted for a single unit (in this case a pill) would typically be discounted if a customer bought multiple units at a time.
they had received a prescription directly from a doctor with the intention of misuse, and the mechanisms by which they did so are discussed further below.

For those individuals who had initiated opioid analgesic misuse with pills from their own prescription while under the care of a physician (n=16), attempts were often made to draw out their symptoms for as long as possible with the hope that the physician would continue to provide opioid therapy. For example, Mason (Latino, aged 24), first received pain medication following an accident when he was 17 years old. Knocked off his bicycle by a car, he suffered a back injury and was given a prescription for 7.5mg oxycodone/acetaminophen tablets. After a month of treatment, Mason, who by this time had started to misuse his medication, complained to his doctor of continuing pain in the hope he would prescribe something stronger: “I felt really good. . . I think I was still in pain, but that kind of numbed everything. I liked that feeling.”

Following, the doctor wrote him a monthly prescription for 120 tablets of 30mg oxycodone and Mason was able to obtain opioids prescriptions from medical providers for several years before he transitioned to heroin. Mason’s medical history relating to his injuries leant legitimacy to his request for ongoing pain medication, and if he thought one doctor suspected he was misusing or knew he had given a “dirty” urine sample,33 he simply found another. Mason estimated that in three years, he had received prescriptions from five different doctors: “Some of them I got drug tested and I knew I was dirty, so I just wouldn’t go anymore. I would just find a new pain management doctor. It was very easy to find a new doctor.”

33 Patients who receive an opioid analgesic prescription for more than three consecutive months typically are considered “chronic” opioid users. In such cases, physicians often utilize urine analysis screening to monitor whether the patient is actually using the medication prescribed to them, and to check for the presence of other substances.
Mark (white, aged 35), was also first prescribed opioid analgesics for his back following a car accident in 2007. Now opioid dependent, Mark had been able to get prescriptions from various doctors over the years because of his extensive medical history. However, like Mason, it had become difficult for him to distinguish if he continued to need pain relief for his physical injuries, or because he enjoyed the feeling of the medication, and when asked directly if he was taking his medication to get high, Mark responded: “I think so. I believe so, because I like the coping mechanism. Sometimes you just want to get away, and it like relaxes me really.”

The ambivalence expressed both by Mason and Mark over whether their continued use of opioids was driven by their physical pain, or another sensation they gained by taking the medication, was echoed by other participants who had also suffered serious injuries. Further, once an individual had developed a physical opioid dependence, the distinction between the pain relating to their original injury and the pain they experienced as a result of opioid withdrawal (which can include severe muscular aches) was also difficult to differentiate. Paula (black, aged 52), who had been prescribed opioids for seven months following a shoulder injury, described the dilemma of her growing opioid dependence:

> . . .My body’s used to [opioid analgesics] now. . . If I miss it, I get nauseous. I feel nauseous, yeah, like to throw up. And then I start hurting real bad. It seems like the pain will come more from that.

For some participants, the stack of medical records they had accrued as a result of a warranted medical injuries enabled them to obtain opioid prescriptions on an ad hoc basis. For example, Lucas (white, aged 28), had been misusing opioids off and on since the age of 17. In
his early 20s, he suffered a motorcycle accident, treatment of which had generated a thick medical file documenting a serious leg injury. When he moved to New York a few years later, Lucas had not used opioids for several months: “It was on and off, on and off. I’d be clean for about three months, and then I would dip and do it for a week.” However, when he arrived in the city, short of money he knew he could generate by selling opioids, he went armed with his medical records to his local doctor’s office and requested a new prescription.

The doctor's office, you came into.. the first one, it was the closest one to where I lived in [Anonymized] which was the craziest thing, and I went in there and I said simply, “Hey I'm blah, blah, blah, I'm just looking for a physician to continue my medication” and a nurse sees you first, not the doctor. And she goes, “Okay, what is the medication?” I go, “It's OxyContin® 80.” So she starts writing this thing and she goes, “How many times a day?” like it's nothing in the world. Three times a day, okay, is there anything else? I was like, “Sure, 90 of Xanax® 2 milligram.” So she just wrote it out, you know and just not thinking or whatever . . . And she lays it there for the doctor to sign. The doctor came in the first time, just signed it, you know, he was in a hurry. The second time of course when I come in there, he kinda saw and he was like, “Whoa, this is very strong, blah, blah, blah.” So, he wanted to always taper 'em but I would always discourage him, look, you know, this is how much I used to be on and this is working for me now, can you wait and I would probably spin it and he prescribed me that for a year.

The previous two decades have seen a tremendous upsurge of prescriptions for opioid analgesics to treat chronic pain; however, the efficacy of long-term, or chronic opioid therapy,
has come under increased scrutiny (Martell et al., 2007; Papaleontiou et al., 2010). A 1997 consensus statement by the American Pain Society and the American Academy of Pain Medicine supporting the use of opioids for non-cancer pain asserted that the risks of maintaining patients on long-term opioid therapy were low, and that endeavors to curb diversion should not limit prescribing (Von Korff et al., 2011). However, there is little evidence to support long-term opioid therapy and few studies have been conducted to determine the efficacy of opioid treatment over time. Further, in 2009, a review of the evidence for an American Pain Society and American Academy of Pain Medicine clinical practice guideline concluded that current recommendations for treating chronic non-cancer pain were based on findings in which important research gaps were subsequently identified (Chou et al., 2009b)

While there is still relatively little research detailing the rate of opioid use disorder among patients receiving long-term (chronic) opioid therapy, some studies have indicated that this phenomenon is not uncommon (Van Korff et al., 2011). Boscario and colleagues (2010) report that among their sample of primary care patients receiving long-term opioid therapy, 26 percent were estimated to be misusing their medication. Further, findings from a study among patients receiving long-term opioid therapy for low back pain suggest that more than half (56%) of patients progressed to problematic opioid use (Martell et al., 2007). These figures are wildly divergent to those previously reported in support of opioid therapy. For example, a letter to the editor of the New England Medical Journal—often cited by thought leaders espousing the benefits of opioids in the 1990s and early 2000s—suggested that the risk of addiction among patients treated with opioids amounted to less than 1 percent (Porter and Jick, 1980), a statistic widely referenced by the pharmaceutical industry when promoting the use of opioids to treat chronic pain.
In considering patients who initiate opioid analgesic misuse as a result of a warranted illness or injury and prolong symptoms in order to extend their supply, Lembke suggests we examine their behavior through the “new cultural norms concerning the nature and meaning of pain,” and the role of “illness narratives” in supporting patients to perpetuate their use of these medications (Lembke, 2016:40). She argues that in modern times, pain is considered anathema, and the current view that has yoked the experience of physical and/or mental pain to neurological damage that may result in increased susceptibility for future pain, has helped stimulate the recent increases in opioid prescribing.

It is paradoxical then, that treating current pain, as well as mitigating the risk for future pain might, conversely, incur other lasting consequences. Opioid induced hyperalgesia (OIH) is a syndrome in which sustained opioid use has the effect of creating greater sensitivity to pain (Chang et al., 2007). Studies in both humans and animals have shown that, over time, some people who take opioids on a regular basis, whether their use is medical or non-medical, may experience worsening pain, unexplained pain, and/or pain at sites distant from the underlying injury or surgery (Angst and Clark, 2006; Chu et al., 2006). While OIH has been referenced in the medical literature since the late 1800s, the incidence of this syndrome is unknown (Varney and Bebarta, 2013), and there is currently a dearth of research in this area. However, the use of opioids for chronic, non-cancer pain has likely resulted in increased rates of OIH, and individuals embarking on long-term opioid use may end up exacerbating, rather than ameliorating, their symptoms (Angst and Clark, 2006).

Many participants who became opioid dependent but did not have a medical history that warranted opioid therapy also found ways to obtain prescriptions from doctors and, within close-knit communities, information about physicians inclined to write for opioids was a commodity in
and of itself. These doctors’ details were often traded within networks of people misusing opioids on the understanding that the pills garnered from the first few prescriptions would be divided between the patient and the person providing the information quid pro quo. The range of oversight provided by the prescribing physicians varied enormously. Broadly speaking, participants described two types of medical providers; (1) prescribers who to some extent were complicit in prescribing beyond the scope of professional practice, a phenomenon that will be discussed in more detail in Chapter 6; (2) prescribers who were unwittingly misled by patients seeking opioids.

For those participants who set out to mislead a physician in order to obtain an opioid prescription, a common strategy was to present bogus medical records indicating a medical need for pain treatment. Jason, who initiated opioid misuse non-medically, and did not have a warranted medical reason to get his own prescription, explained how easy it was to fabricate the necessary documentation:

I had a friend that said, “I can make you a fake MRI.” Guess he had a typed-up paper of a real MRI and just changed the name on the top, changed the date, whatever he had to do. And I . . . had to pay him for that, pay him for the doctor hookup because he showed me what doctor to go to in the city. And then I had to give him, let’s say, 50 pills the first time I picked up my prescription, too. And then, boom, I gave him that. And now I’m hooked up with my doctor.

While details of the various schemes utilized by participants to get prescriptions differed slightly, the consistency between their stories was striking. Chris, who resided in a different borough than
Jason, and also began using opioids non-medically, provided a similar account of how he was able to procure his own prescription:

First you have to go to a doctor’s office, usually people will tell you which doctors to go to. It all starts with a doctor who’s willing to give you a script. Before that, you go and you get an MRI and it’s usually like a fake MRI, you know, that shows you tore a ligament in your leg or something like that. You know, the doctor sees that, he’ll give you the script then you go to the pharmacy and you get it filled and that's it... [I got the doctor’s information] through someone else who sold drugs on the outside... The way it worked is he gave me the information and then he got X amount of the script. So if it was for 180 pills, you know, I would split it with him. [It] cost me $150 for the fake MRI, I got that from the same person that sent me to the doctor. I guess he was using them for other people and he gave one to me, I think it was just all the same one... I guess [the doctor is] covered on his end because he’s taking this MRI, he’s looking at it whether he knew or not that it was, you know, a non-legit MRI, I don’t know. The way he acted about it was that, you know, he saw it, he goes “OK” and he prescribed me the medication.

In a commentary published in the *New England Journal of Medicine*, Lembke (2012) considers factors that might lead doctors to prescribe to patients who they may be aware are either misusing their own medication or diverting it to non-medical use. Aside from the support of pain as the fifth vital sign and the push for physicians to act compassionately with regard to their patients’ subjective experience of pain, Lembke suggests that ubiquitous patient satisfaction assessments, coupled with increasing numbers of websites that encourage patient evaluation of
doctors, could result in physicians turning a blind eye to patients’ drug-seeking behavior. Poor reviews are likely to result in loss of earnings, and unfavorable comments stemming from a refusal to prescribe pain medications are to be expected given the current zeitgeist in the U.S. that “all suffering is avoidable” (Lembke, 2012: 36), and any type of physical or mental pain ought be alleviated with medication. Further, she suggests that until substance use issues are given the same credence as other chronic diseases and reimbursement for treating problem substance use is adequate, prescribing opioids to their patients may seem like the easiest course of action (Lembke, 2012).

In cases where aberrant prescribing is identified, a paradigm often used to characterize the physicians under scrutiny is the “4D” model, first presented at the White House Conference on Prescription Drug Abuse in 1980, and subsequently adopted by the American Medical Association (AMA) (Lowinson, 2005). The 4Ds categorize prescribers as “dated,” “duped,” “disabled,” and “dishonest.” In brief, dated refers to physicians whose training is no longer in line with standards of practice; duped describes physicians who have been deceived by patients attempting to obtain medical services or prescriptions under false pretenses; disabled relates to physicians whose judgment is compromised by their own illness, substance use, or other behavioral issues; and dishonest refers to physicians who are complicit in prescribing controlled substances fully aware that they are likely to be misused or diverted (Council on Scientific Affairs, 1982).

Several commentators have suggested the “4D” framework is problematic, especially when considering doctors who fall into the duped category. For example, Jung and Reidenburg (2007) question the extent to which a physician should be held accountable for prescribing opioids to a deceitful patient, citing a study in which even criminal justice personnel failed to
ascertain if someone was lying. They argue that physicians operate with a “truth bias” (Burgoon et al., 1994, cited in Jung and Reidenburg, 2007: 434) and work from the premise that their patients’ complaints are genuine. Further, the authors reference several studies demonstrating that a physician’s ability to identify “standardized patients”—that is, individuals who have been trained to mimic the symptoms and experiences of specific medical issues for training and research purposes—is often lacking.

The premise of Jung and Reidenburg’s disquiet is that if a physician is duped by a patient, this may be taken as substantiating a claim that they were prescribing beyond the scope of professional practice. However, in an earlier article by the same authors, they demonstrate that: “When adequate documentation exists in the medical record, the risk of civil, criminal, or administrative action being taken by the DEA against a physician for prescribing opioids for a chronic pain patient is small” (Jung and Reidenburg, 2006: 353). The stipulation regarding “adequate documentation” is all important here and exemplifies the issues with the existing model: being duped does not reflect the behavior of the physician her or himself, but focuses instead on the behavior of the patient for which a physician should not be held accountable. However, as Jung and Reidenburg point out, providing a doctor engages with the patient and their medical care in a meaningful way, they are unlikely to be targeted for prosecution or administrative sanction (Jung and Reidenburg, 2006).

While obtaining a prescription under false pretenses (i.e., drug-seeking) was fairly common among participants who became opioid dependent, the practice of visiting multiple

34 Results from this study can be found in: Ekamn, P., and O'Sullivan, M. (1991). Who can catch a liar? American Psychology, 46, 913-920.
35 Jung and Reidenburg’s research showed that in the 2003 and 2004 study period, of the 963,385 physicians registered with the DEA, there were only 47 arrests and 56 revocations of registration.
doctors for concurrent opioid prescriptions, or doctor shopping, was reported only sporadically.\textsuperscript{36} Barry (white, aged 35), who had been misusing opioids for more than 15 years explained how he had once had three doctors simultaneously prescribing Percocet\textsuperscript{®}.

\begin{quote}
At one point I had three doctors. One was in Long Island, one was in Queens, and the other one was in Brooklyn. The Brooklyn guy knew I was trying to get something. The Queens guy kind of suspected, where he kind of wanted to drop me because he felt like I was, but he couldn’t prove it, so he couldn’t really drop me because of that, and the Long Island guy, he was my doctor from the beginning. He had no idea about anything. He thought he was the only one. And then work comp would pay for one—they would pay for the Long Island one—Medicaid would pay for the Queens one, and then I’d pay out of pocket for the Brooklyn one.
\end{quote}

However, with the recent institution of the New York State Internet System for Tracking Over Prescribing, or I-STOP bill written into law in August 2013 and discussed in detail in Chapter 7, many participants commented that obtaining prescriptions from multiple prescribers in the same month was no longer feasible.

In addition to obtaining opioid prescriptions directly from a doctor, a few participants described other strategies for acquiring pills from medical providers. Generally, these schemes were more convoluted and involved a greater degree of prevarication than a personal visit to the doctor. However, the substantial profit that could be made from multiple prescriptions was a powerful incentive. In their description of prescription drug diversion in Miami, Florida, Inciardi

\textsuperscript{36} While there are multiple definitions of the term, for the purposes of this analysis, doctor shopping was categorized as obtaining an opioid analgesic prescription from more than one doctor in the same month.
and colleagues (2007) use the term “pill broker” to describe a person who steers individuals to obtain prescriptions from a doctor in order to then sell them. Jack, described a similar scheme in which he organized a group of friends and acquaintances to visit doctors for opioid prescriptions, furnishing them with the cash to pay for the office visit and dividing the pills once the prescription was filled.

A couple of my friends have [physical] problems. And I know a person who knows a doctor so I get my friends into the doctor and they break me off [share the resulting pills]. . . It was me and my one friend, it was our gig. My one friend knew the three doctors because he had prescriptions for himself because he was doctor shopping. And I know kids that have—a lot of them have legitimate problems. Car accidents, sport accidents, torn rotator cuffs. . . I go with them to the doctor, or my boy will go with one of them to the doctor. And we’ll sit there, they’ll get the prescription, we’ll go with them to fill the script. And then they break us off. . . I take half for three scripts, and then I take a quarter for every other script. So the first three times they go, say they get 180, I get 90 of them the first three times. Then I’ll get a quarter of them, so I’ll get 30 of them. But that’s for every time they go.

Similarly, Danny, who started selling opioid analgesics in high school before ever misusing himself, was also operating as a pill broker. In his tight-knit community, it was easy for him to find people to go to the doctor on his behalf and he commented: “You pay them four or five hundred dollars and… they’ll do it happily.” Reflecting on the time he was engaged in selling he said:
[I sold pills] probably like two or three years. I probably would've never stopped selling if I didn’t get arrested [on a misdemeanor assault charge], I was making too much. I mean I was still a boy and I was pulling in more than what my father was mak[ing]...I was making like twelve, thirteen hundred dollars a week and I wasn’t doing anything for it. I was just going to school and then I would come home and sit on my ass and then come outside and meet somebody. You know, I was meeting somebody that are taking six pills, that’s $60 profit right there, and that was recurring itself [sic], you know, every 10 or 15 minutes. My phone would be blowing up so much that I would have to put my phone on vibrate.

While participants noted that the I-STOP legislation, had made it considerably more difficult for one individual to obtain prescriptions from multiple doctors, the schemes described by Jack and Danny involved multiple individuals visiting one or several doctors making them much more difficult to detect.

The procedures for obtaining opioid analgesics above were described by participants whose trajectory of misuse resulted in opioid dependence, and by the time members of this group had identified their use as a problem, all were either purchasing pills, misusing pills from a prescription written in their own name, or selling pills to fund their use. Indeed, the majority had, at some point, actively engaged in selling opioids, not just on an ad hoc or sporadic basis, but as a substantial money-making venture. Participants’ narratives suggest that within their communities, a wide range of individuals were involved in the diversion of opioid analgesics resulting in a diffuse market from which many people could profit. More than half (25 out of 44) the participants who reported opioid dependence, also reported they had, at some point, and to
varying degrees, sold pills themselves. Further, reports suggest that among this sample, the vast majority of diverted pills were generated from prescriptions written by medical providers which were then redistributed throughout communities.

Research has shown that individuals who “redistribute” prescription medication, perceive the risk associated with such behavior to be lower than the risk associated with the distribution of illicit drugs (Harris et al., 2015). Indeed, using enforcement for possession as a proxy for risk, data show that Americans are substantially less likely to face arrest for possession of prescription medications as they are for possession of illegal drugs. For example, in 2009, the arrest rate per 100,000 was 15.6 for the illegal possession of pharmaceutical drugs, compared to 72.8 for the possession of heroin or cocaine (U.S Census Bureau, 2009, cited in Netherland and Hanson, 2016), despite the considerably higher rates of prevalence for the use of prescription drugs.

Sources of opioid analgesics for non-dependent participants

In contrast to the participants described above, participants (n=19) who, at the time they participated in the study, had not developed an opioid dependence, did not tend to be immersed in social networks that facilitated ongoing misuse. The fact that their demand for pain pills was not driven by a physical or psychological dependence meant that typically, pills were acquired in a less deliberate and more opportunistic way.

Phoenix (multi-racial, aged 23), described how her use of opioids tended to be circumstantial, and her narrative mirrors findings from Daniulaityte and colleagues (2014) highlighting medication sharing among family members. Phoenix had first misused hydrocodone when she was aged 13, with a pill she took from her mother who was on long-term opioid therapy following a childhood bout of polio. She did not remember anything positive about that
experience, but over the next several years, sporadically took and/or was given opioids from her parent’s prescriptions to treat incidental pain and “because I was bored.” Following a wisdom tooth extraction when she was 17, Phoenix received her own prescription for hydrocodone and although she used it as directed, on this occasion, she enjoyed the opioid effect and continued taking the remaining pills after the pain had subsided. However, once the prescription was finished, she did not seek out an alternative source, and the pills she had intermittently continued to misuse since then had almost exclusively come from leftover pills from her own or her father’s warranted prescriptions, or her father’s. Occasionally, she obtained pills from a friend, and several months previously, while working as a babysitter for a family in New York, she taken a couple of hydrocodone tablets from their medicine cabinet.

Phoenix’s opioid misuse was tied to accessibility and she acknowledged that while she does not seek out pills to use, she will take them whenever she happens upon them. However, beyond a cursory look for opioids when visiting her father, she had not made an effort to find a regular source or previously paid for diverted opioids.

*When I’m at my dad’s house, I’ll look around, but I wouldn’t go try and buy it unless… the only time I’ve sought anything out was when I had gone to the doctor and they had done a minor surgery, but it wasn’t extreme enough for them to give me anything for pain afterward. And I was in pain and I asked my boyfriend to find any one of these [types of opioid analgesics], but nothing came of it. But that’s because I was actually legitimately in pain and I was taking eight ibuprofen a day and it wasn’t working.*
The details relating to Phoenix’s narrative—obtaining pills from the family medicine cabinet, misusing extraneous pills from warranted prescriptions, and pilfering pills from other people’s medicine cabinets—have been highlighted by scholars, policy makers, and the media as being an integral part of the opioid problem. However, while leftover pills surely account for a proportion of opioid analgesics that are misused, the distribution of this excess medication is probably so diffuse that individuals who become opioid dependent and require a steady supply are driven to find an alternative source.

Like Phoenix, some participants who did not become opioid dependent suggested that their patterns of use were, at least to some degree, governed by access. George (white, aged 25), had been misusing opioids since he was 18 and, along with his ex-girlfriend, had experienced periods of more or less frequent use. For the previous year, George had been purchasing opioid analgesics from an individual who sold a variety of drugs including marijuana, ecstasy, and other pharmaceuticals such as Xanax® and Adderall®. In contrast to the in-network transactions described above, George’s relationship with his dealer was purely transactional, and he did not interact with him in any other context aside from drug purchases. However, acquiring drugs from this source was so easy and convenient, the frequency with which George misused opioids increased:

So I started seeing him maybe once every other week for a few months. And then it was around March or April where he would just essentially—what it worked out to be was he would just text me whenever he got Percocet because he wouldn’t always have it, because it goes really fast. And so he’d just text me and be like “Hey, I have tens, or I have 30s” . . . And a lot of it was just the really simple convenience of it all. It’d be like
he’s going to come and meet me at my house after I get off work. Like it was just really, it wasn’t a hassle for me.

George typically saw his dealer once a week and tended to limit his spending to no more than $100 in a single transaction. However, although he was using pills more frequently than previously, how much he used was still determined by the amount his dealer could supply him with, and at no time did he seek out an alternative source.

It pretty much stayed that way for like the next five months which it was probably about three or four times a week. And then, you know, with some fluctuation. I mean sometimes there’d be two week where I wouldn’t at all because he wouldn’t have anything. . .[Then] I would definitely get frustrated because [taking opioids] became this routine, this habit. I would get frustrated that I wasn’t able to, like I couldn’t leave work and go and have this relaxing evening. Specifically, what I would do, I just got into this habit of when I’d take them, I would just sit. I was living in a place at the time that had a front porch that I could sit on. And I would just sit out there and read all night. Not all night, but just like read later into the night, just chain smoking. And so yeah, that continued when they were available, right up until I moved out of that place. And no it’s like I don’t really have access to that guy anymore. I don’t live near him.

Despite his use of the word “habit,” George did not report the he had ever become opioid dependent, and following his move to a new neighborhood, he had not purchased opioids from his dealer for around six weeks. Reflecting on his recent abstinence from pills, he said: “I would
argue that’s because of lack of access, not like complete strong resolve on my behalf.” While it is not possible to characterize the interconnection between access and patterns of use, it is noteworthy that individuals who did not become opioid dependent had more limited means of acquiring these medications and did not tend to seek out alternative sources that could provide them with a more consistent supply. Further, in contrast to those who became opioid dependent, no participants in this group reported ever selling opioid analgesics.

Recall Anna, a medical initiate described in Chapter 4. Initially prescribed for a warranted medical condition, Anna asked for and received consecutive prescriptions from her doctor which she misused every month. Provided only with a low dose, and low median day’s supply, she always ran out of pills before it was time for her to refill her prescription, but Anna was not in a social group that facilitated ongoing opioid misuse, and rather than find another source, she waited until she could refill her prescription from her doctor without raising suspicion. Anna commented:

*It’s funny ‘cos I thought, well, I’m not gonna go doctor shopping, and I’m not gonna try and find some street connection, like I just thought, I’ll have to wait until it’s time. And there was a part of me that was relieved too. Because during the time, at least for me, the experience was, during the time that I’m on these pills, I wasn’t telling anyone, and I’m not a secretive person by nature so I was very uncomfortable with that and I always felt like I was not in control, but I couldn’t not take them, so if they were there, I had to take them, so I had a lot of relief when they weren’t there any more, like I don’t have to keep doing this, alright, good, let me get back to normal.*
Despite her sense of relief when she had finished her supply for the month, when the time came to renew her prescription, Anna visited her doctor for a refill on the very day she was able. Anna continued misusing her opioid prescription in this way for more than a year, facilitating a pattern of use which resulted in periods of enforced abstinence, and as with some of the other participants in this group, it is possible that her reticence to seek opioid analgesics from an alternative source safeguarded her from becoming dependent.

Although there were some similarities in the sources of opioid analgesics between dependent and non-dependent users, the difference in acquisition between these groups related predominantly to the consistency of access and/or volume of pills that these provided. While non-dependent participants tended to acquire opioids on an ad hoc and opportunistic basis, those who became dependent reported communities and social networks that facilitated ongoing use. Thus, for participants in the latter group, any changes in the dynamic of the illicit market are likely to have had a substantial effect and will be explored in more detail in Chapter 7.
CHAPTER SIX:
DOCTORS AND OPIOIDS: A CONTINUUM OF PRESCRIBING OVERSIGHT

“Doctors pour drugs, of which they know little, to cure diseases of which they know less, into patients, of whom they know nothing.” Voltaire

For most of the twentieth century, among the medical community, the use of opioid-based analgesia was restricted to end-of-life and cancer pain, with many doctors eschewing these medications for fear of the potential negative consequences. However, a focus on the inadequate treatment of pain in the late 1980s stimulated by professional bodies such as the American Pain Society and American Pain Foundation,\(^{37}\) coupled with a marketing blitz of new formulations of opioid-based products from the pharmaceutical industry, resulted in a profound attitudinal shift among physicians regarding the use of opioid analgesics for acute and chronic, non-cancer pain and an explosion in the rate of opioid prescriptions. For example, in 2006 there were 47 million opioid analgesic prescriptions\(^{38}\) dispensed per calendar quarter in the U.S., increasing to 62 million in the fourth quarter of 2012 (Dart et al., 2015); on an annual basis, these figures equated to enough medication to provide a three weeks supply to every adult in the U.S. (CDC, 2014).

Increases in the number of opioid prescriptions have been concurrent with increases in the number of people misusing these medications and while a proportion of the opioid analgesics

\(^{37}\) The American Pain Foundation (APF), an advocacy group for pain patients, strongly supported the use of opioid analgesics for non-cancer pain suggesting that the risk of developing an opioid use disorder when using these medications was minimal. In 2012, ProPublica launched an investigation into the entities that funded this group and found that in 2010, 90 percent of the foundation’s funding originated from the pharmaceutical industry. The investigation also revealed that the organization had lobbied against federal and state proposals to limit the use of opioids, and that several of the foundation’s board members had financial ties to drug companies (ProPublica, May 2012). As the U.S. Senate Finance Committee announced an investigation into the pharmaceutical companies that manufacture opioids and the groups that advocate for them, the APF announced it was disbanding with immediate effect due to “irreparable economic circumstances.”

\(^{38}\) This data includes prescriptions written for six types of opioid analgesic medication including: oxycodone, hydrocodone, hydromorphone, fentanyl, morphine, and tramadol.
that are ultimately misused are diverted from the supply chain prior to being dispensed, law enforcement data from New York City suggest that the loss of opioid analgesics from manufacturers or distributors is low (NY/NJ HIDTA, 2015). It is likely, therefore, that the majority of opioid analgesics that are misused or diverted into the illicit market originate from prescriptions written by doctors (Davis and Carr, 2016; Volkow and McLellan, 2016).

The usefulness of opioid analgesics as a pain medication is undisputed, and both morphine and codeine are included on the World Health Organizations’ Model list of essential medicines (WHO, 2015). However, opioid analgesics are risky drugs and physicians have a responsibility to prescribe them carefully and in a manner that will “first do no harm.” Much of the previous literature relating to the diversion of opioid analgesics has focused on the role of drug-seeking patients (Davis and Johnson, 2008; Inciardi and McElrath, 2011), and while there has been some attention on cases of egregious overprescribing often in relation to clinics branded “pill-mills,” there has been less discussion about the range of prescribing practices and patient oversight among physicians. As referenced in the previous chapter, while some doctors seemed unaware that their patients were seeking opioids with the intention to misuse and prescribed within the scope of professional practice, other physicians appeared to be complicit in their patients’ drug-seeking behavior, performing only perfunctory examinations, and often requiring payment in cash.

There is relatively little research relating to the sanctions or consequences imposed as a result of aberrant prescribing practices. In their review of the forensic implications of opioid prescribing, Rich and Webster describe a legal hierarchy of professional behaviors in medical practice, stating that only physicians whose conduct is “demonstrably outside the bounds of

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39 Often thought of as part of the Hippocratic Oath, *primum non nocere* or “first do no harm” appears in another work written by Hippocrates, *The History of Epidemics.*
minimally acceptable clinical practice” should be criminally prosecuted, and that other forms of transgression including “distinct pattern[s] of negligent practice or one or more instances of gross negligence or recklessness in patient should be adjudicated by the licensing authority” [emphasis in the original] (Rich and Webster, 2011: S63). Thus, even in cases where negligence has been shown, the authors argue that criminal proceedings are not appropriate and that discipline should be meted out by state medical boards.

According to Freidson (1970), one of the defining characteristics of professional occupations is a high degree of autonomy or self-regulation, and since medical boards were established in the late nineteenth century, these bodies have been responsible for both granting and revoking licenses permitting physicians to practice medicine. In her excellent ethnography of a medical licensing and disciplinary board, Horowitz observes that: “The licensure movement contributed to the creation of a powerful medical community with a self-justificatory discourse, organizations to meet its needs, ethical codes, and training institutions for its members” (2013:48). Indeed, once established, medical boards helped shape the image of the doctor as altruistic, ethical, and capable of self-policing and, for many years, state courts left physicians almost entirely to deal with their own affairs, with the result that even a conviction from a criminal court did not necessarily result in a physician losing her or his license (Horowitz, 2013).

By the second half of the twentieth century, however, a shift toward more progressive politics coupled with a growth in consumer advocacy groups called into question what was essentially a closed system of internal oversight prompting medical boards to open their doors and, for the first time, permit layperson representation. By allowing outsiders in, medical boards gained some much needed legitimacy, but their continued failure to discipline their professional members has remained a point of contention, and it has been argued that as a self-interested
group, there will always be a reluctance to expose the bad apples within (Horowitz, 2013). Indeed, as Jung and colleagues point out, at the time they conducted their review of US physicians disciplined for criminal activity: “medical licensing boards in thirteen states and jurisdictions do not consider a felony conviction related to the practice of medicine to be sufficient grounds in and of itself for board review, hearing, or action.” (Jung et al. 2006: 1).

Further, among physicians convicted of a drug-related offense including criminally prescribing, using, or possessing a controlled substance, only 54 percent had their medical licenses revoked, surrendered, or suspended (Jung et al. 2006).

The “4D” model introduced in the previous chapter is often used as a basis to determine sanctions against doctors under scrutiny for their prescribing of opioids and other scheduled medications; however, as discussed, not all the categories correspond to the physicians’ own behavior and concern about being “duped” may unnecessarily compromise the professional responsibility a doctor has to trust their patient. An alternative method for evaluating the actions of physicians in relation to their prescribing of opioids is to examine their professional conduct during patient interactions, including the degree to which they manage, oversee, and document the treatment plans of the individuals to whom they prescribe opioids. In this study, a typology emerged to describe the continuum of oversight related to prescribing practices including four categories I have termed: flagrant, loose, routine, and judicious, each of which is discussed in more detail below.

At one end of the continuum were flagrant prescribers who prescribed widely to anyone with the necessary means to pay, often only accepting cash for office visits. Levels of criminal involvement within these medical clinics varied, and while some doctors appeared to be working independently, other clinics attracted a host of players including pill brokers and middle-men
working onsite to steer patients and organize prescription pickups. Participants who had received prescriptions from flagrant prescribers described an office environment bustling with patients waiting to be seen, and reported that in the course of their brief interaction with the physician they had received little to no care. Often referred to in the media as “pill mills,” these doctor’s offices or clinics seemed to be well-known within the drug-using community, and while data from the PDMP indicates that these types of prescribers are relatively few in number, they are likely responsible for hundreds of thousands of diverted pills.

In clinics where a broader criminal element was involved, “patients” were sometimes recruited by pill brokers simply as entities to whom the doctor could write prescriptions. A typical scenario would proceed as follows: a patient receives cash from a pill broker to cover the cost of an office visit, with the expectation that s/he will then fill her/his prescription either with a valid insurance card or a further cash advance. Once filled, the pill broker appropriates the entire prescription (typically 180 pills) in return for a cash payoff. Kelly (white, aged 49), provided the following account of how she and her friend were recruited by a pill broker to get opioid analgesics from a doctor in the Bronx:

"[Last summer], we didn’t have a lot of money and we went to Astramed, and we were given $300 cash to go in and see [the doctor] and then offered another $500 to get the prescription for oxycodone and aspirin and something, and [the doctor] had to write two

40 My decision to de-identify the clinic described by Kelly in the above excerpt is deliberate. Two months prior to Kelly’s interview, the owner of Astramed, Kevin Lowe, was indicted by the U.S. Attorney’s Office Southern District of New York along with 24 other individuals including doctors, clinic staff, and pill-brokers who were described as overseeing “crews of ‘patients’ sent into the clinics for medically unnecessary prescriptions” (USAO, New York Southern, 15-115). The indictment charged that the clinic unlawfully distributed more than five million oxycodone tablets over a period of three years. Following a trial in 2015, the owner of the clinic was sentenced to 12 years for conspiracy to distribute narcotics. The 24 individuals also arrested had previously pled guilty to the conspiracy. Given that the case has been disposed and the defendants found guilty, I do not feel that it is in breach of research ethics to reveal the name of the clinic.
prescriptions, so we did that. . . The [Anonymized] gave us the money order for $300. I would go in, hand it to [clinic personnel], because they watched you like hawks because if you walked out with that $300 money order, the [Anonymized] was going to kill you. So you had to give that to [clinic personnel] and then the doctor would come, ask you a couple of questions and then just write the prescription. . .

With prescriptions in hand, Kelly and her friend were escorted to a car and driven to multiple pharmacies, where they attempted to get the prescriptions filled. However, each time the doctor’s details were entered into the system, the respective pharmacists refused to provide them with the medication, and Kelly concluded: “The doctor was flagged. Totally flagged. He popped right up on the computer, ‘I’m sorry, we can’t fill this.’” While Kelly and her friend were eventually taken home, the pill broker held on to their Medicaid cards, and a week or so later, the cards were returned to them along with $500 cash, leading Kelly to believe they had found a willing pharmacist and, either fraudulently utilized their insurance cards, or paid for the prescription in cash.

Kelly’s depiction of Astramed was echoed by another participant, Paula, who had been misusing opioids for several decades and had also received unwarranted prescriptions from the clinic, although not at the behest of a pill broker. In her narrative, Paula reproached the clinic for “gypping people” as the doctor not only charged patients a $300 cash fee for the office visit, but additionally billed Medicaid for the same service. She was further indignant about the pill brokers steering patients to the clinic as, for an extra fee, these individuals often jumped the line, their “appointments” given priority:
My niece told me about [Astramed], but I didn’t like that place anyway. I was going to stop going there anyway, because they had some guys from down here coming in there running the place. They was putting their people in and getting…and at first it was $200 to get in, then after that they changed to $300. But then the guy would bring in people from down here. They paid them $100 to put them ahead, but we had appointments! . . . And we was sitting there and we got appointments, and then after a certain amount of people, then he [the doctor] didn’t want to take nobody.

In addition to the prescribing practices reported above, participants described doctors who wrote prescriptions for individuals with whom they had no direct contact. While this practice was corroborated across several participants’ accounts, the mechanisms involved, including the role played by the doctor, were less clear as most of these individuals had provided their name to others to get a prescription on their behalf, rather than obtained the prescription themselves. As Jordan explained:

Like I said, I had a friend that I just gave him my name and social and everything, and he got me a prescription twice a month, and I would get about. . . I never had to [go to the doctor]. . . He had a croak doctor.41 . . He was getting a lot, he was cashing a lot. He got me two of like 180 oxycodone a month and we split it down the middle. I got like 70-ish. Well, I guess it’s a little more in his favor than down the middle because he’s doing most of the work, but I got 70 [from] each. . . And I would go to a pharmacy, and you know the people, yeah, sometimes I’d pay cash, sometimes I’d use insurance etcetera, etcetera . . .

41 ‘Croaker’ or ‘croak’ is a slang term used to describe a doctor willing to prescribe for monetary gain.
You know it’s a funny thing because I’m like a young kid in like a Yankees cap, you know what I mean? It’s obvious that I’m like 17 years old and that I’m not walking with a cane, that I shouldn’t be getting this much powerful pain killers, but it’s going on. I don’t know. I’m showing a legitimate script, you know, if they called the doctor [he would verify it].

Similarly, Philip reported how his doctor sometimes issued prescriptions for opioid analgesics to patients who would then present with a different identity and receive further prescriptions for the same medication. He described the office setting as follows:

You should have seen it. It was like homeroom, like you would see all your friends from school in there. It was like homeroom in there. Like, it was all young kids in his waiting room. And then you would have kids going in with other IDs, like with their older brother’s IDs. This guy was so stupid that he didn’t even realize that it was like the same person, and write the script to a different name. Like, that’s how stupid this guy was.

The scenario described above is indicative of how the “4D” model might be used to characterize a physician as having been duped, and exemplifies why any taxonomy developed to explain cases of aberrant prescribing should focus on the action of the physician rather than the intent of the patient. While in Philip’s estimation the doctor was too obtuse to realize he was writing prescriptions to the same person, it is not possible to determine the degree to which he was complicit in providing drug-seeking patients with opioids. However, whether complicit or not, the fact that he was incapable or unwilling to keep adequate records to effectively document his patients characterizes him as a flagrant prescriber.
In contrast to the above examples, Mark, who had first used opioid analgesics following a serious back injury sustained in a car accident eight years previously, had received prescriptions written to other people directly from his doctor. Unlike Philip who considered his prescriber to be witless, Mark interpreted his physician’s actions as benevolent and further suggested that in providing him with prescriptions written in others’ names, his doctor was in fact rewarding him. He explained:

_I had found my doctor’s prescription book and it was all... and I could have tooken it [sic] and I know how to forge and all that because it’s been... but I was real honest about it and I gave it back to him. He’s like, “You know, you’re the first person I’ve ever seen give it back to me.”... That’s why he gives me whatever I want, whenever I want it._

_That’s why he gives me whatever I want, whenever I want it._

_He’ll look out for me because he knows that I looked out for him, because he could have got into trouble for that... but he does look out for me every now and again. He’ll give me some for different people, like I’ll tell him somebody else’s name and all that. He will do it for me. He looks out for me._

Within this analytic framework then, flagrant prescribers are those who make little or no pretense of selling prescriptions for cash, engage in practices that are blatantly fraudulent, and/or maintain such haphazard medical records that they are unable to, or uninterested in distinguishing the patients to whom they prescribe. Although some of the practices in this category are similar to “loose” prescribers positioned further along the continuum of oversight and described below, what differentiates flagrant prescribers is the scale of their transgression which may result in the distribution and diversion of thousands of pills. Indeed, an indictment in May 2017 involving
three Brooklyn pain clinics charged that in a five year period doctors prescribed in the region of 6.3 million opioid analgesic pills to patients via medically unwarranted prescriptions.42

Most participants in this study who reported they had received a prescription as a result of drug-seeking behavior had done so from physicians I have categorized as “loose” prescribers. While the parameters separating these typologies are sometimes blurry, loose prescribers typically exercised a greater degree of medical oversight than doctors operating pill mills. Moreover, while the majority of practitioners in this group also only accepted cash payments, visits usually involved a degree of doctor/patient interaction before a prescription was issued including, but not limited to: urine toxicology screens, on-file MRI requirements, and cursory physical examinations. However, these processes were generally understood by participants to be an effort to provide a veneer of legitimacy to the doctor should they come under scrutiny, rather than as standards of good practice, referred to by one participant as “CYA” or “cover your ass.”

Will, first introduced in Chapter 4 described how, when he could no longer get pain pills from his regular doctor, he switched to a new provider who supplied him with opioid prescriptions for cash.

[When] I stopped with that doctor, I wound up going to another doctor in New Jersey who would basically write me whatever I wanted. . . Cash. All cash, no insurance, $300 [per visit]. . . At first, [he wrote me] 240 30 mg OxyContin®, I mean oxycodone. . . And he would give me 60 2mg Xanax®. . . I went to him, I want to say for about two years

42 The indictment, which was the culmination of more than three years investigative work, included three primary care clinics, Parkville Medical Health, LF Medical Services of NY, and PM Medical, the first two owned by Dr. Feygin, and the third by Dr. McClung. According to the charges laid out by the office of New York City’s Special Narcotics Prosecutor, the clinic owners were using oxycodone prescriptions as incentives for patients who agreed to submit to medically unnecessary tests and procedures which were then billed to Medicaid and Medicare for amounts totaling more than $24 million.
because then things started getting... when I first went there, I was getting 240 [pills] then he switched it where I’d have to see him every two weeks and he would give me 120 each. And then a little bit after... He would give me two scripts. I would see him once and he would post-date the script. And it was funny too because he would urine test me to make sure [the oxycodone] was in your system. But I remember a couple of times I came up positive for cocaine and he would just be like, “Come back when you’re clean.” And I think that happened once or twice... And he had a folder on me and he had all my X-Rays and all my paperwork from the previous doctors... I brought it in. I had all my medical records.

Leaving the doctor’s office one day, Will was pulled over by the DEA and questioned extensively about the doctor’s practice, including the medical procedures he underwent during the visit. After confiscating the prescriptions he had just received, the DEA officers let him go with a warning not to alert the doctor that he was under investigation. Will did not visit the doctor again, turning instead to the street market for his supply. He later discovered that the doctor had indeed been arrested.

Within the loose prescriber group, there was some variance among physicians’ prescribing practices, and while it is difficult to perceive the motivation driving doctors operating pill mills as anything other than pecuniary, the intent of some of the doctors in this group appeared to be more complex. Recall Grace, a 23-year old who had begun misusing pills non-

43 It is considered good practice for medical providers who prescribe opioid analgesics on an ongoing basis to randomly conduct urine analysis on patients to ensure that (a) the drug they are prescribing is being ingested by the patient and not diverted; (b) that the patient is not using any other type of substance.
medically. At the time she was interviewed, Grace had recently connected with a doctor from whom she was receiving monthly prescriptions for oxycodone. She explained:

*I just heard about this doctor. What he does is he takes people, and a lot of his patients have legit pain, but people like me, we just go in there and we tell him, “I don’t have neuralgia or anything. I’ve been taking these for years. I take ten a day.” . . . I was on his waiting list. I waited for a month or two. And then [the office] called me. I had to put down $100 deposit just to get the appointment. I got the appointment. Went in with $250 [cash], told him my fucking story. I told him I used to get [opioid analgesics] prescribed from other doctors, that I’ve been in car accidents, that I have a bad back and that’s why I started taking them, blah, blah, blah. He asked me if I used to get them prescribed, but he pretty much took my word for it, you know, no MRIs, no other copies of prescriptions. He just took my word.*

During her initial visit, however, the doctor also informed Grace that he would, over time, slowly reduce the number of pills he prescribed, telling her: “The plan is to get you off these things.” At the time she was interviewed, Grace had been seeing the doctor for four month. Following her initial visit, he had prescribed 180 oxycodone 30mgs tablets to her for a 30 day period. The next month, he wrote her the same prescription, but at the third visit, had reduced the number of tablets to 165, and most recently, she had also received a prescription for 165 tablets. Had this pattern continued, the physician theoretically would have tapered Grace’s opioid analgesic prescription in what one might argue to be a medically appropriate manner. When asked her opinion about the doctor’s intent, Grace said: “I think he’s a drug dealer. He’s a drug
dealer that makes a lot of fucking money.” However, her later comments reflect the complexities involved in the characterization of pain, and if one examines the doctor’s behavior with this in mind, his actions could be interpreted through a more compassionate lens.

... It is pain, because when you’re on [opioid analgesics] you really do get pain. You wake up in the morning, you’re sick and you’re in pain but it’s [withdrawal pain]. The pain is brought on by yourself. You brought on the pain because you’re so reliant on them and numb, so when you’re not on them, fucking anything hurts. Exactly, the pain is from nothing, but it is real pain.

Similarly, Philip described a scenario whereby after his pain management doctor was shut down, he visited his primary care doctor who prescribed him 60 oxycodone tablets, despite, and likely because he was aware that Philip had an opioid use disorder, and was suffering acute symptoms of withdrawal. Philip recalled:

... I went in there sick. I was sitting there and sweating. He was like “Are you alright?” I was like, “No, I’m not alright.” I’m like, “I haven’t had a fucking blue [oxycodone 30mg] in like three days, I feel like I’m gonna die. It’s like I can’t even move, I can’t go to work.” He was like, “I can give you sixty, here.” I mean he knows I take 220 a month.

While Philip’s primary care physician prescribed him small amounts of oxycodone on more than one occasion, he also encouraged Philip to find another pain management clinic, and
additionally, advised him to consider medication-assisted treatment, such as buprenorphine, a partial agonist used to treat opioid use disorder often referred to by the brand name Suboxone®.

*He’s suggesting Suboxone, he’s suggesting weaning myself off. He was always that nag in my ear. He was a good doctor, but he was still giving them to me, ’cus he knows like when you’re sick. That’s the only thing about these drugs, like opioids are great when you’re doing ’em, but when you’re not doing it, it is a fucking nightmare. . . you’re sitting there throwing up shit and it is just the worst fucking thing when you don’t have that shit. It is just the worst feeling in the world.*

The descriptions of flagrant and loose prescribers provided by some participants align with the concept of “script docs” similar to those referenced by Inciardi and colleagues (2009). However, as illustrated above, while some of these physicians’ practices were clearly incompatible with the Hippocratic principle, the intent of others was less obvious. In recent years, there have been a number of highly publicized prosecutions of doctors indicted for offenses involving opioid analgesic prescribing, ranging from drug distribution to felony murder, which several commentators have argued has led to a “chilling effect,” resulting in some patients finding it hard to access much needed pain medication (Reisman et al., 2009).

To be considered criminal behavior rather than simply professional negligence, prosecutors must establish that the U.S. Controlled Substances Act has been violated and that a physician knowingly distributed a controlled substance they knew to be such “outside the usual

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44 For example, in 2009, Richard Morgan, DO., was indicted on charges of conspiracy to distribute and to possess with intent to distribute oxycodone and sentenced to 14 years incarceration, followed by three years supervised release; and in 2007, Noel Chau, MD., was convicted of felony murder after one of his patients died of an accidental drug overdose as a result of consuming the pills Dr. Chau had prescribed.
course of medical practice.” A general standard often applied by the courts is whether the doctor was acting in *good faith* that the prescription they issued was for a warranted medical purpose. However, when considering the latitude that physicians have within the law, it is important to remember that prescribing opioids for “detoxification treatment” or “maintenance treatment” is not considered to be a legitimate medical purpose (Code of Federal Regulations: 21 CFR 1306.04). Prosecutors have laid out several indicators relating to actions questioning the notion of good faith including: failure to follow professional procedures (e.g., taking a comprehensive medical history, conducting a thorough physical examination, or formulating a proper treatment plan) and suspicious circumstances (e.g., long lines of patients waiting to be seen, short length of consult, and receiving payment in cash only). However, the volume of opioids prescribed, as well as the dosage, have also been examined, and it is perhaps these indicators that have caused the most tension between medical practitioners and law enforcement.

Despite the considerable media coverage of doctors who have been prosecuted for opioid-related offences, research conducted by Goldenbaum et al., (2008) found that between 1998 and 2006, criminal or administrative charges and/or sanctions relating to opioid analgesic prescribing were not very common. Indeed, over the study period, only 986 cases were identified, representing 725 individual physicians or approximately 0.1 percent of the total 691,873 patient-care physicians active in 2003: of these, just over a third (n=335) involved criminal cases, and the remainder (n=651) involved administrative cases. Further, the study also challenged the assertion that it is largely pain management doctors who are targeted by law enforcement (Libby, 2006), as these specialists accounted for only 3.5 percent of the physicians involved in the identified cases (Goldenbaum et al., 2008).
Reidenburg and Willis (2007) also found that criminal prosecutions against doctors were fairly rare. In their review of indictments and/or trials of doctors across the U.S. for opioid offenses over a two year period, they identified 47 cases involving 53 physicians, and in only 32 instances was the charge based on the overprescribing of opioids. However, despite the low incidence of cases, the authors question the appropriateness of bringing criminal charges, and argue instead that cases of aberrant prescribing first should be investigated by state medical boards rather than law enforcement entities, in order to determine whether criminal action is justified.

According to Libby (2006) doctors specializing in the treatment of pain face a professional dilemma in that they may be sanctioned for under- as well as overprescribing. Critical of what he sees as a renewed impetus to prosecute doctors suspected of writing medically unnecessary opioid analgesic prescriptions, Libby suggests that “red flags,” such as those detailed above, are arbitrary and often have no bearing on criminal behavior. The American Medical Directors Association (AMDA) address the criminalization of medical practice in resolution D95 (1995) which states that “a definition of criminal neglect should combine elements of intention and recklessness with a departure from the standard of care.” However, factors that constitute criminal neglect may be ambiguous and criminal cases against physicians are difficult to prosecute. Further, even cases in which criminal convictions are secured, state licensing bodies may not suspend or revoke a physician’s license to practice.

Along the continuum from loose prescribers are “routine” prescribers. These are physicians who may be writing warranted prescriptions for opioid analgesics, but who do not necessarily institute careful follow-up, or consider alternative strategies for managing ongoing pain. What is distinctive about routine prescribers is their simultaneous adherence to standards of
medical practice, while engaging in high-dose or long-term prescribing with little acknowledgment of the associated risks, and little use or exploration of non-opioid pain management strategies. Recall Will, who described his experience with a loose prescriber earlier in this chapter. A medical initiate, Will started misusing opioid analgesics from a prescription provided to him by a routine prescriber following an acute injury. Initially prescribed 60 pills of 7.5mg Vicodin® (hydrocodone and acetaminophen), he started to misuse within a few days of his injury; however, refills were written as a matter of course and when he complained of continuing pain, his doctor switched him to a higher strength formulation with no discussion about the potential risks. He provided the following account:

*I remember they gave me refills, and a few times I had gone to refill it before it was time because I was taking so many. I had friends that [used opioids] so a couple of times I had to buy them off the streets until my prescription filled. So yeah, I was doing a lot and they kind of... when I started going to physical therapy, my surgeon stopped giving me the Vicodin®. When I started doing the physical therapy, I was like “I need something stronger,” and he gave me morphine sulfate.*

The fact that Will had been seeking to fill his prescription early ought have alerted the doctor that he was not taking the medication as directed and stimulated a discussion about his need for ongoing medication, the risks of dependence, and/or options for alternative pain relief. However, because Will presented with a legitimate injury, and additionally, suffered some further complications during his treatment, he was prescribed opioids on an ongoing basis in absence of any probing, or further assessment.
Another example of a participant who was routinely prescribed opioids is Anna first introduced in Chapter 4. Anna initially received opioids in the emergency department following an acute condition, and while following up with her own doctor a couple of days later, was prescribed approximately 20 tablets of 5mg Percocet®, which she gradually used up over time to treat incidental pain. Recognizing that she enjoyed their effect, when she switched doctors after moving to a new borough, she requested a refill of her Percocet® prescription, and after a general medical examination and brief discussion about the joint pain she sometimes felt, was provided it without question. Over the next year, Anna visited her doctor regularly to refill her prescription and during that time does not recall having one conversation about the risks posed by opioids. Indeed, the only opioid-specific reference Anna remembered is when her doctor mentioned the increased scrutiny she felt doctors had come under for the prescribing of these medications:

. . . What she said was “You know, they’re really coming down on this stuff.” and she, I don’t remember her exact words, but the impression she left, and I think what she meant to say was that she thought it was inappropriate that doctors were being overly scrutinized and she goes, “You know, I have like an elderly woman and she’s in a lot of pain, and you tell me I can’t give her this?” . . . So whether or not she doesn’t understand the risk, or the addiction potential. I think also she thought at least in my case, I wasn’t coming back two weeks later, or making up a story . . and I look normal, you know, I go to work. Like I don’t think... so I just feel like between the way I presented . . I think she was a little dumb, but I also think there weren’t necessarily signs to make her think there was a problem. I can’t say she’s to blame, or she’s some kind of irresponsible prescriber.
Despite the attention that opioids have garnered over the previous decade, and the steady increase in overdose deaths involving opioid analgesics across the US, doctors have continued to prescribe these medications at a surprising rate, including to treat conditions for which evidence of their effectiveness is questionable or even non-existent (Manchikanti et al. 2010; Chaparro et al., 2014). While the confluence of events described throughout this dissertation, including the intense marketing strategies by pharmaceutical companies and a focus on treating pain, played an important role in persuading physicians to broaden their use of opioid-based analgesia for chronic, non-cancer pain, it is disconcerting that amidst all the publicity regarding the public health consequences relating to opioid use, the number of opioid prescriptions written by physicians has not fallen substantially.

A contributing factor is the lack of education concerning pain management provided to physicians as part of their medical training. In their survey of medical schools across the U.S. and Canada, Mezei and Murinson found that many were not providing their students with any meaningful instruction on this topic, and concluded that pain education across the U.S. was “limited and fragmentary” (Mezei and Murinson, 2011: 1199). These findings are mirrored by results from a survey conducted with 246 medical residents in which almost two-thirds rated their medical school training to assess patients with non-cancer chronic pain as “fair” or “poor” (Yanni et al., 2010). Further, while research has shown that a large proportion of opioid prescriptions are written by family or internal medicine physicians (Volkow et al., 2009; Chen et al., 2015), a study conducted by Keller and colleagues demonstrated that more than a third of the primary care physicians they interviewed felt that the medical education they had received centering on chronic pain had been unsatisfactory (Keller et al., 2012).
In tandem with this deficit is the lack of training within medical schools on substance use disorder. Estimates suggest that in the U.S., approximately 40 million people, 16 percent of the population, are affected by a substance use disorder, more than heart disease (27 million) or diabetes (26 million), and yet while 82 percent of physicians feel “very prepared” to identify diabetes, only 17 percent feel the same way about detecting risky use of prescription drugs (National Center on Addiction and Substance Abuse, 2012, cited in Lembke, 2016), and fewer than 1 percent of practicing doctors identify as addiction specialists (Lembke, 2016).

The difficulty for physicians treating chronic pain in patients who may also be susceptible to substance use disorders is exemplified by Darren (white, aged 39), who began misusing opioid analgesics approximately 15 years ago. When he was 19, Darren was involved in a car accident which resulted in four herniated discs. For the next five years he suffered chronic back pain until he started dating a nurse practitioner who suggested he try Percocet. Darren enrolled in the practice where she worked and, following an examination from the doctor which included some unspecified tests as well as an MRI, he was prescribed Endocet® 10mg, a dual-entity oxycodone-acetaminophen formulation. Recalling the first time he used this medication, Darren enthused:

*I remember being at work and my back was killing me. I had this bottle of pills that I had gotten from the doctor. It was very cold out. It was in the middle of January and I remember popping two of them. I remember being up on the ladder, speaking to one of my friends. We were cracking some jokes and everything, and all of a sudden, I felt a very warm sensation inside. The pain had just gone right away and I felt almost like, very stoned, like feeling like you were high, on weed shall we say, but not as intense as being*
stoned. Just like a really good feeling. I felt good. I felt like all the pain had gone away. I felt very energetic, very talkative. I noticed I was kind of over-talking. I’d be telling a story, kind of chewing someone’s ear off basically, feeling really good. It was a really good experience. It was like being reborn again basically for me, because I was in such agonizing pain before, that my whole life was based on being uncomfortable all the time.

For the next five years, Darren was somewhat stable on his medication, although often took more than he was prescribed at the weekends for recreational purposes, especially to compensate for the fact that he had stopped smoking marijuana at the behest of his girlfriend, the nurse practitioner who had first suggested he try opioid pain medication. However, stopping smoking was easy for him as long as he had his pills and he describes how opioids diminished his desire to use other substances.

She didn’t want me smoking weed anymore. But actually, I didn’t mind because I had found the ultimate drug, those drugs. I quit drinking, I quit smoking weed, I even quit smoking cigarettes. I quit everything. I didn’t want to do anything else. Those pills were perfect. They were a necessity for me. I could get up and be excited to pop some pills in the morning, to get up and go and, “All right, let’s go to work. I can’t wait to have a cup of coffee and go build a house.” It put me in a great mood. I could talk all day on the phone with clients and sell jobs. I could be on the job working like superman. I would work and do more than four excellent carpenters could never do in a day. I just became superman. It was amazing. I was overly intelligent—I can’t even explain it. It was like a whole other world. It was great.
Typical of many participants who became dependent on opioid analgesics, Darren’s use became more intense following his initiation of oxycodone 30mgs, a single-entity, higher dose opioid analgesic introduced to him by a friend in a non-medical setting. The first time he took one, he snorted it alongside the person who gave it to him, and was immediately taken by the faster onset. He subsequently requested that his doctor switch him to these higher dose pills saying that his tolerance to his original prescription had grown to the extent that he was having to take more than directed in order to achieve the same level of pain relief.

According to the National Institute on Drug Abuse (NIDA), when opioids are used repeatedly over time, tolerance is likely to develop with the result that a person no longer responds to the drug in the same way they did when they started the medication (NIDA, 2007). Tolerance is a well-known phenomenon among physicians and, in and of itself, may not be a marker that a patient is misusing their medication or developing an opioid use disorder. Thus, adjusting Darren’s prescription to a higher dose single-entity formulation pill may have seemed like a medically sound response. Indeed, when Darren first asked about oxycodone, his physician responded that because of the extra doses Darren had been taking, it was probably a good idea for him to switch, in order to minimize the potential damage from the large doses of acetaminophen he had also been ingesting in the dual-entity formulation. Darren was prescribed 15mg oxycodone tablets for approximately 18 months, before again requesting a higher strength dose, at which time his physician moved him onto oxycodone 30mgs. He says of this later request:

*I was kind of scared to tell him that I was taking more than prescribed because I was worried that he was going to cut me off, thinking that maybe I was abusing them. So I*
kind of beat around the bush for a while with that. I ended up getting the guts up to just be honest with him. So, he respected that and he boosted me up to the 30 milligrams.

Although Darren was by now almost exclusively using his medication intranasally, his doctor routinely continued to prescribe opioids to him with little oversight. However, around the time of the Medford, Long Island pharmacy shooting in which four people were killed during a robbery of prescription opioids, and perhaps as a consequence of that event, Darren’s doctor instituted urine toxicology testing within his practice and, the first time he was screened, Darren’s urine came back positive for cocaine. He explained:

What happened was I had done a line of cocaine at a party one night which I don’t really do cocaine at all. I did a couple of lines in high school, but didn’t really care for it. It wasn’t a big thing for me. But what happened was, I went to a party, did a line of cocaine, was going in to get my prescription for the month and for some odd reason, they had asked me to do a drug test that day. . . So what happened was he basically said “Sorry, we can’t help you anymore, we don’t know what to tell you.” I said, “What do you mean? How can you do this? I’ve been taking these things so long, can you give me something like a little less or wean me down off these things?” I was like “I can’t go cold turkey. I’m going to get very sick. I’m going to go through withdrawals.” And they were just coldhearted and said, “No, there’s nothing we can do for you.” So they just sent me out of there, cold turkey.
For Darren, the consequences of this positive drug screen were dire and, having received opioids from his physician for more than 10 years, he suddenly found himself cut off from the drugs to which he had become dependent. Perhaps in part because of the intense scrutiny on opioids following the pharmacy shooting, Darren was unable to find another doctor willing to take him as a patient on chronic opioid therapy and began buying pills from the street market. As the pills became increasingly more expensive and difficult to find, Darren was introduced to heroin, initiating use approximately two years prior to his participation in this study.

While Darren was clearly in substantial pain from his back injury, from the outset he also experienced positive feelings as a result of the opioids he was prescribed beyond the alleviation of pain. The acknowledgment that some patients will experience euphoria from opioid analgesics even while taking them as directed for a warranted medical reason is rarely mentioned in the literature. Indeed, the assertion that opioids might engender positive feelings in “legitimate” patients is entirely contrary to the strategy employed by pharmaceutical companies and pain advocate groups to minimize the risks that taking opioids may present. This juxtaposition between alleviating pain as a valid effect of opioid use, and experiencing pleasure as an invalid effect of opioid use reflects the puritanical reaction to substance use steeped in U.S. culture. Thus, the same object (an opioid pill) can be ascribed very different meaning, not only as a result of where it is placed (Lovell, 2006), but also how it is experienced.

Despite his misuse, Darren’s narrative of the years he was prescribed opioids was littered with references of a functional life including work, social occasions, and relationships, and it was only after his doctor cut off his supply that his situation began to deteriorate. Following the loss of his prescription, Darren’s primary focus became the acquisition of opioids in order that he might stave off withdrawals which, because of the continuity of his prescriptions, he had never
previously experienced. The consequence of Darren’s physician cutting off his medication were immense, and his life quickly deteriorated.

. . . Ninety percent of my day was going on the phone calling drug dealers, trying to find a way that I could find pills and the other ten percent of the day was going back and forth to the bank or going and getting another check or a deposit from another homeowner to make sure that I had enough money to cover myself for the week to go buy pills. It was ridiculous. So basically, all my concentration on work and making sure my guys were doing what they were supposed to be doing on the jobs all just started to go downhill. My business really took a toll. I also started falling behind on my mortgages. I started falling behind on my shop rent . . . My fiancée ended up leaving me which was very heartbreaking for me ‘cuz I really cared for her. Basically, my life fell apart. It really did. The last three years of my life, everything that I’ve worked for the last 20 years has all pretty much gone away from the pills, from having to buy the pills and spending all that stupid time looking for them.

Given the existing laws prohibiting doctors to prescribe opioids for the purpose of detoxification or maintenance, Darren’s physician may have felt he had little choice but to cut him off. However, his actions both in facilitating Darren’s chronic opioid therapy and in ceasing to prescribe to him resulted in serious consequences for his patient. According to Lembke (2016), doctors who discover their patients have been deceiving them suffer from what she terms a “narcissistic injury,” the reaction to which is often “reflexive and hostile.” She argues that the opioid crisis has resulted in the medical profession suffering a “collective” narcissistic injury, the
backlash to which is that many providers now entirely refuse to prescribe opioids, a situation that has created a cadre of “opioid refugees,” namely patients unable to find someone who will treat them (Lembke, 2016:109).

Without doubt, there are a substantial number of people in the U.S. who experience chronic pain, and current prevalence rates across the adult population are estimated to be around 11 percent (Nahin, 2015). Contrary to the message promoted by the pharmaceutical industry, while evidence supports the efficacy of opioids for short-term use (APS-AAPM 2009), data for the efficacy of more long term use (typically for 3 months or more) is scant (Chou and Huffman, 2009). Several city and/or state health departments across the country have released voluntary prescribing guidelines to medical practitioners suggesting limiting the daily supply of opioid analgesics for acute pain in order to avoid a pool of surplus medication which may ultimately be misused, and most recently, the CDC issued guidelines for primary care physicians who are treating chronic pain in outpatient settings (Dowell et al., 2016).

There is some evidence to suggest that direct messaging to health care providers via public health detailing (one-on-one educational visits) results in increased knowledge and prescribing behavior change. For example, a detailing campaign conducted by the New York City Department of Health and Mental Hygiene that reached 1069 health care providers in Staten Island,45 demonstrated “an association with improvements in health care provider knowledge about opioid prescribing recommendations, and suggested a decrease in the rate of high-dose prescribing.” (Kattan et al., 2016: 1436). These types of interventions may prove to be an

45 In 2013, when the public health detailing targeted physicians in Staten Island, the rate of accidental drug overdoses involving prescription opioids was three times higher than that of other boroughs in the city. The PDMP also showed that Staten Island residents filled high rates of opioid prescriptions, with high doses (more than 100 morphine milligram equivalents), and high median day’s supply.
effective way to educate physicians who routinely prescribe opioid analgesics to encourage safer practices.

The fourth and final category on the continuum of prescriber oversight are “judicious” prescribers who prescribe opioid analgesics carefully and with consideration, and do not write refills or increase dosage without a thorough assessment. Judicious prescribers tend to follow the guidelines developed for both acute and chronic pain advising physicians to favor non-opioid alternatives or to use the lowest effective dose and begin by prescribing short-acting rather than extended release formulations when opioids are utilized. Other recommendations for chronic opioid therapy include, but are not limited to: utilizing urine toxicology screening to assess for the presence of other controlled substances or illicit drugs, as well for the presence of the prescribed medication; establishing patient treatment goals; and discussing the potential risks and benefits of opioid therapy with patients (Dowell et al., 2016).

Participants who attempted to obtain opioid analgesics from doctors with the intention of misuse came to realize they were extremely unlikely to receive ongoing prescriptions if a doctor turned out to be a judicious prescriber, even if they had suffered a warranted injury. For example, Harry, who was prescribed opioid analgesics following an accident in which he crushed his hand described how, after his initial prescription had run out, his request for continued medication had been firmly refused. He recalled: “Basically the hand healed [and the doctor stopped prescribing]. . . He did his job properly, yeah, and exactly right.” Similarly, when Gina (white, aged 22), who had initiated misuse with her boyfriend several years previously broke her ribs and was prescribed Tramadol, an opioid considered to have a low potential for dependence (Epstein et al., 2006), her request for a repeat prescription was denied. Gina said of her doctors,
“They wouldn’t give me anymore . . . They said that I went through it and that my ribs should be healing, so they wouldn’t give me any more.”

Felipe (Latino, aged 45), who had used heroin prior to misusing opioid analgesics, knew nothing about the oxycodone-acetaminophen combination his doctor prescribed him following an accident in which he suffered a badly broken leg, and had no idea it would provide him with a similar high to heroin. Initially prescribed a one-month supply of 5mg pills, he quickly recognized the opioid effect and returning to his doctor hoping to get a further supply of pills recounted:

*I tried to go back to the doctor and get more, he told me no. And when he said no, I said “But you just gave me, and you only gave me such and such.” And he was like, “Yeah, but this is addictive stuff and it’s only as needed.” And I said, “Yeah, but I’m in pain! I went through the whole nine yards with him, but he didn’t want to give it to me. So I came out and I bought it in the street.*

Although these doctors behaved in a medically appropriate manner and prescribed opioids as intended for acute pain, the fact that pills were so readily accessible within the illicit market meant that while none of these participants had obtained another prescription from a doctor, they were easily able to source alternative supplies enabling them to continue using opioids.

As has been demonstrated in this chapter, the nature of oversight among physicians prescribing opioid analgesics is wildly divergent and ranges from flagrant to judicious practices. While it is likely that those prescribers at, or toward the flagrant end of the continuum, will come under scrutiny of regulatory or criminal justice entities, cases against these doctors typically take
several years to build and during that time, hundreds of thousands, if not millions, of pills might have been prescribed and either misused by patients, or diverted to the illicit market. Further, loose prescribers who prescribe beyond the scope of professional practice are likely to be more difficult to identify and sanction. Implementing a system of oversight that is driven by a regulatory body rather than law enforcement, including loss of license for cases shown to involve aberrant prescribing, might be a first step toward mitigating medical providers who fall into this category. However, finding a balance between limiting loose prescribers and educating routine prescribers in a way that does not discourage them from writing warranted prescriptions is a challenge.
CHAPTER SEVEN:

THE ILLICIT OPIOID MARKET: A TALE OF TWO INTERVENTIONS

In response to increasing mortality and morbidity rates associated with opioid analgesic misuse, numerous initiatives have been implemented since the early 2000s in an attempt to both reduce the number of opioids prescribed, and to stem the flow of pills diverted from medical to non-medical use. Centered predominantly on supply-side interventions, these have ranged in scope and include initiatives related to: the promotion of judicious prescribing; the implementation of state prescription drug monitoring programs (PDMPs); legislation tightening the operation of pain clinics; the addition of prominent warning labels to opioid packages; and the introduction of abuse-deterrent formulations (Alpert et al., 2017). Concomitantly, legal action against some pharmaceutical companies has resulted in substantial fines,\(^{46}\) and further litigation is ongoing. While it is likely that many of these initiatives, both individually and collectively, have exerted some influence on the supply and availability of opioid analgesics, two events that were often discussed among the participants in this study as having altered the dynamics of the opioid analgesic market in New York City were: (1) the abuse-deterrent reformulation of OxyContin\(^\circ\); (2) the passing of the New York State Internet Tracking System for Over-Prescribing, or I-STOP, bill which came into effect in August 2013.

As described in Chapter 2, the brand name opioid analgesic OxyContin\(^\circ\) was released by Purdue Pharma in 1996 and marketed as a long-acting pain medication with a controlled-release

\(^{46}\) In 2007, Purdue Pharma was fined $600 million to resolve criminal and civil charges for “misbranding” OxyContin\(^\circ\). Additionally, three company executives were also charged as individuals and collectively paid a total of $34.5 million in fines. The executives were sentenced to three years’ probation and 400 hours each of community service to be served in drug treatment facilities (Meier, 2007). More recently, several states, including Ohio and Illinois, as well as the Cherokee Nation, have also filed suits against several pharmaceutical companies citing that each trivialized the risk of opioids while simultaneously overstating their benefits for chronic pain.
formulation that the company claimed minimized the risk of misuse and dependence (Cicero et al., 2005). However, the time-release mechanism easily could be bypassed by rubbing or sucking off the coating and grinding the tablet into a powder, thereby releasing the entire dose, which could then be used intranasally, or via injection. According to the FDA, efforts to make OxyContin® abuse-deterrent began in the early 2000s; however, it was not until August 2010 that the new formulation was released onto the market. Vitally, physicochemical barriers in abuse-deterrent OxyContin® render the tablet impervious to crushing or dissolving (Coplan et al., 2016), while still maintaining the time-release properties that distinguishes this type of formulation from the generic short-acting version. Although subsequent research has shown that the new tablet is not entirely infallible (Cicero, 2012), the premise of abuse-deterrent formulations is that the effort required to tamper with the pills is so labor intensive that the majority of people will be deterred from doing so, and in 2013, OxyContin® became the first opioid with FDA-approved labeling describing abuse-deterrent characteristics (U.S. Department of Health and Human Services, 2013).

The reformulation of OxyContin® represents a substantial disruption to the supply of opioids across the U.S. (Alpert et al. 2017). As evidenced by findings from Coplan and colleagues (2016), comparison of the year prior to the introduction of reformulated OxyContin® to the three years following indicated a 13 percent reduction in the number of OxyContin® prescriptions dispensed, as well as reductions in rates of OxyContin®-involved misuse, overdose, and death (Coplan et al. 2016). A survey study of 2566 opioid-dependent patients entering substance use treatment programs across the U.S. also found a significant decrease in the number of patients reporting OxyContin® as their primary drug before and after reformulation (35.6% vs. 12.8%). Further, the authors noted a simultaneous increase in the use of opioids such as
hydrocodone and short-acting oxycodone following reformulation, as well as a significant increase in high potency opioids such as long-acting oxymorphone sold under the brand name Opana® (Cicero et al., 2012). Similarly, a time-series analysis conducted with a total of 232,874 patients found that during a four-year period, including 17-months following the introduction of the abuse-deterrent OxyContin®, while overall rates of prescription opioid misuse did not change, there were increases in the prevalence of misuse of certain opioid analgesic compounds such as long-acting oxymorphone (e.g., Opana) and single-entity, short-acting oxycodone (Cassidy et al., 2013). These finding are reflected in the narratives of participants from this study.

Prior to August 2010, many participants reported that OxyContin® 80mg had been the prescription opioid of choice within the illicit market; however, the introduction of the abuse-deterrent formulation was a catalyst for a market shift. Although in the immediate aftermath of the reformulation some participants reported an increased prevalence of Opana, by the time data were collected for this study, the preferred opioid analgesic for most was the generic oxycodone short-acting 30mg tablets. Jack, gave his assessment of the illicit opioid market following the reformulation of OxyContin®.

47 Patient records were accessed from assessments from 437 substance use treatment programs in across 33 states. 48 In 2012, Endo Pharmaceutical released a new tamper-resistant formulation of Opana, a long-acting oxymorphone formulation first marketed in 2006. However, in March 2017, an advisory panel convened by the FDA concluded that the potential risk to public health posed by Opana as a drug of abuse outweighed its benefits as a prescription opioid. The decision was made following several outbreaks of HIV, HCV, as well as a serious blood disorder linked to the misuse of Opana via injection. One such outbreak occurred in Scott County, Indiana, a rural area with a population of 24,000 and high rates of poverty and unemployment. In 2015, newly reported cases of HIV resulted in an investigation, the findings from which identified increases in injection drug use among people misusing Opana as a primary risk factor. While the new iteration of Opana had rendered the pill unsuitable for intranasal use, it remained possible to circumnavigate the time-release formulation for injection use. In response, many people reported transition to injection and as of March 2017, there were 215 confirmed HIV cases in the county (Duwve, 2017). In June 2017, the FDA took the unprecedented move of requesting that Endo Pharmaceuticals voluntarily remove Opana from the market, the first time the FDA has requested that a currently marketed opioid drug be removed because of concerns about abuse.
In 2010, they were supposed to stop the production of OxyContin®. . .They came out with OPs\(^{49}\) instead, and there were scripts of oxycodone being written, but barely, so they were hard to come across. . .There wasn’t a lot of doctors writing scripts for [oxycodone] because everybody was getting arrested. So they were writing out OPs because they’re gel and you can’t shoot or sniff them. And dealing with OPs to sell is like a fucking mission because nobody wanted them.

The transition from the original OxyContin® to the new formulation occurred swiftly with estimates suggesting that within one year of its release, 97 percent of OxyContin® dispensed in the U.S. was abuse-deterrent (Coplan et al. 2016). While two participants reported they were still able to access the original formulation (or “OCs”) from a corporate pharmacy chain by specifically requesting the “generic” version,\(^{50}\) most were unaware of this possibility and adjusted to the new market accordingly. Nate (white, aged 22), acquired his pills for a time from an individual who was being prescribed for cancer pain. He explained:

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I \text{ had a guy who was still getting the OCs from the pharmacy. . . He’d go to the pharmacy and he’d say, “Can I get generic OxyContin®?” And they’d give him the OCs, and this was for months after they... He was an older guy, 50-something years old. . . He had tongue cancer. He had no tongue, but he didn’t feel it. He liked the money more. . . And then when they’d reformulated the 80s and they really disappeared, he started getting the}
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49 The “OPs” Jack refers to in his narrative is the street name of the new formulation of OxyContin and corresponds to the imprint on the tablet. Prior to reformulation, the imprint was OC.

50 A generic version of the original long-acting OxyContin formula was produced by Apotex, a Canadian Pharmaceutical company and for a short time after reformulation could be ordered by special request.
30 milligram roxys and even then he’d give them to me for like $10 a pill. And at that point, that’s when the prices started going up to like $15 for one...”

An analysis of the New York State Prescription Drug Monitoring Program (PDMP) examining numbers of OxyContin® prescriptions filled by New York City residents in 20mg, 40mg, and 80mg doses two years prior and two years following reformulation suggests that the reductions in OxyContin® prescriptions seen elsewhere were mirrored in New York City. As illustrated in Figure 5, from 2008 to 2012, the number of prescriptions filled for OxyContin® in doses of 20mg and 40mg remained fairly stable; however, between 2010 and 2011, the number of prescriptions filled for OxyContin® 80mg decreased sharply, supporting participants’ views that following reformulation, OxyContin® 80mg was no longer the drug of choice within the illicit market.

Figure 5: OxyContin® prescriptions filled by New York City residents 2009-2011

Unpublished data: New York City Department of Health and Mental Hygiene
Similar reductions in the number of prescriptions written for OxyContin® have been reported elsewhere, with estimates suggesting that two years after reformulation, the dispensing rate of this drug had decreased 39 percent (Larochelle et al. 2015). In their study of pharmacy and medical claims data for commercially insured patients, Michna and colleagues (2014) found that while 69 percent of their sample had made the switch to the new OxyContin® product, the remainder either transferred to other long-acting formulations that were not abuse-deterrent (21.3%) or discontinued with long-acting opioids (9.3%). Further, of those who continued to use opioids, three-quarters (76%) switched to short-acting formulations (Michna et al., 2014). A complete analysis of New York City data is not currently available; however, preliminary findings from the NYS PDMP suggest that a substantial number of patients who had been filling 80mg long-acting oxycodone prescriptions in the months prior to August 2010 transitioned to short-acting formulations following the release of the new OxyContin® product (M. Nolan, personal communication, June 26, 2017).

Given that the accessibility and price of OxyContin® to the consumer did not greatly alter as a result of the reformulation, there are limited explanations for the sharp decline in prescriptions for OxyContin® 80mg immediately following the release of the new formula, particularly considering the stability of the 20mg and 40mg formulations. However, as data from the participants in this study suggest, the fact that the tablets could no longer be crushed for intranasal or injection use meant that OxyContin® as the preferred drug for misuse quickly lost its appeal. Dario (white, aged 33), explained further:

I was getting [OxyContin®] for a minute. I was getting that for like a year and a half, two years. . . The whole neighborhood was going [to the same doctor] I ended up finding out,
he had everybody. But then they eventually changed the 80s, so I just told him “Don’t give them to me anymore.” . . . Then they were junk, they didn’t do anything. Cus’ they went from $60 a pill to $8, and nobody wanted them and they didn’t really get me high really. They did, but it wasn’t like it was, so I just didn’t want ‘em. . . Cus’ we’re addicts and we want that full rush. Like I tried, I had…when he gave me the OPs I didn’t know, and then the pharmacy gave me them, I was like “What the fuck is this?” And then they told me, “That’s how they are now.” I ate 60 of them. You’re not gonna believe me, I ate them in like three days, like 60 of them. Like, it didn’t really fuck me up, not that I remember. I probably was fucked up but it didn’t really…it didn’t fuck me up like I should’ve been. Like when I sniffed ‘em, I was fucked up. Like when I ate them, I was just eating them like candy and they were gone, they were gone in three days.

Similarly, Jordan explained how, following the formulation change, his father was no longer able to sell the OxyContin® 40mg tablets he was prescribed and had been selling for several years. Asked whether there was still a market for OxyContin®, Jordan replied: “No, not at all. No, because they sniff them. They can’t shoot them. . . People will take them [to not get sick], but they’re definitely not first, second choice.”

It is evident then, that the reformulation of OxyContin® resulted in a decrease in the number of prescriptions filled for this drug, with a concomitant increase in prescriptions filled for short-acting oxycodone. The analyses that yielded these findings included patients who had been receiving OxyContin® for several consecutive months prior to the reformulation change (Coplan et al., 2016), and for these individuals, the switch to a different type of pain pill would have involved a discussion with their doctor. Recall, the OxyContin® formulation change had
been pending for several years, and at the time it was released, received wide press coverage. It is likely, then, that physicians and other medical practitioners licensed to prescribe opioid analgesics would have been aware of the new formulation either prior to its implementation or immediately after. However, an explanation as to why many providers appear to have been willing to switch their patients to short-acting oxycodone 30mg, rather than continuing to prescribe the new abuse-deterrent OxyContin®, is largely lacking in the literature. Some participants in this study reported successfully lobbying their doctor for specific types of opioids, or medication strength, and several mentioned that, following the OxyContin® formulation change, they had complained to their doctor of unintended side effects from OxyContin® with the intent of initiating a change in formulation to short-acting oxycodone.

Commentators have posited that the willingness of doctors to alter their patients’ medication in response to direct or indirect requests is associated with the perception of patients as consumers whose reviews may ultimately influence the success of a medical practice (Lembke, 2016). Indeed, whereas clinical decisions about a patient’s care were traditionally decided by physicians (McKinley et al, 2014), recent research suggests that patients who take an active role in their medical care often visit a doctor with a pre-formed therapeutic plan that may include the type of medication they expect to be prescribed. Findings from this study indicate a significant difference in a physician’s likelihood of prescribing oxycodone to treat sciatica to patients who specifically requested this medication compared with those who did not, and patient requests for narcotics tended to move prescribing from weaker to stronger formulations (McKinlay et al., 2014).

A recent analysis by Alpert et al., (2017) examining the effect of the OxyContin® reformulation found that while the rate of heroin-involved overdose deaths remained fairly stable
between 1999 and 2010, it more than tripled between 2010 and 2014 (from 1.0 to 3.4 per 100,000). The authors suggest that although the reformulation of OxyContin® resulted in a reduction in OxyContin® misuse, it is also associated with an increase in the number of heroin deaths such that “each percentage point reduction in the rate of OxyContin® misuse due to reformulation leads to 3.1 more heroin-related deaths per 100,000.” (Alpert et al., 2017: 5). Thus they estimate that up to 80 percent of the increase in heroin mortality since 2010, may be a direct consequence of the OxyContin® reformulation (Alpert et al., 2017).

The second event that many participants spoke about as contributing to a shift in the opioid analgesic market was the introduction of the Internet System for Tracking Over-Prescribing (I-STOP) legislation that came into effect in August 2013 and required all prescribers in New York State to consult the prescription drug monitoring program (PDMP) database when prescribing any Schedule II, III, IV controlled substances. Prescription drug monitoring programs are state-run electronic databases used to track the prescribing and dispensing of scheduled medications to patients. They can be used for clinical practice—i.e., to provide the prescriber with information about a patient’s history of prescribed controlled substances—and/or for monitoring purposes to identify diversion (CDC, 2017). Although the PDMP has been existence in New York State for many years, the capability to monitor prescriptions in real time was only achieved in 2002 (Paulozzi and Steir, 2010). Moreover, prior to the I-STOP legislation, many medical providers were unaware of the program’s existence, and fewer than five percent of prescribers in the state had an active registration; however, within six months of the bill’s enactment, there were more than 67,000 users conducting an average of 42,300 patient look-ups per day (PDMP Center of Excellence Briefing, Brandeis University 2016).
In tandem with increasing the number of physicians utilizing the PDMP, in the first quarter following implementation, there was a 9.5 percent reduction in the overall number of opioid prescriptions filled by patients in New York State. One area in particular where PDMPs are likely to have had an impact is reducing the prevalence of patients exhibiting “doctor shopping” behavior, i.e., those visiting multiple prescribers within the same month in order to obtain opioid analgesics. Indeed, following the introduction of the mandate in August 2013, the number of individuals categorized as doctor shopping—in this case defined as receiving prescriptions from five or more prescribers and filling them at five or more pharmacies in a three month period—decreased by 75 percent in the quarter following implementation as compared to the same quarter in the previous year (PDMP Center of Excellence, 2014).

Among the participants in this study, the implementation of I-STOP was reported to have had a substantial effect on a market already constricted following the reformulation of OxyContin® three years prior. Recall Becky, who had switched her opioid preference from heroin to pain pills a few years earlier and described how, in recent months, it had become considerably more difficult to find a reliable source of opioid analgesics on the illicit market. She explained:

I had a really good connection with this one guy but he ended up telling me that I wasn’t paying him enough, and I was, so he said if you don’t start giving me this much money, I’m not gonna, I can’t give you these anymore. So I said alright, I’ll find somebody else. And I’ve been having trouble finding someone else, so I don’t know. I notice there’s a lot of people…my one friend told me that his doctor got arrested so…and now they have this website, and so a lot of people that deal drugs that had more than one doctor are getting
in trouble and they can’t see that doctor anymore. I’ve noticed a lot of people have been
telling me. I’ve been hearing about that website a lot recently.

Similarly, Harry, who for several years had been buying opioid analgesics diverted from others’
prescriptions, reported that on returning from an upstate work trip, he was disconcerted to find
that within the short time he was gone, both his sources had been cut off from their doctor and
were no longer able to sell him the pills on which he had come to depend. He recalled:

I was buying the pills in [Anonymized], and I came back to get them and nobody had
them anymore. And I’m like “How could everybody just...three different people, two
different people, all of a sudden their doctors cut them off? How could this be?” And I
was asking other people, new people, and they said the same thing, their doctors cut them
off. The doctors cut them off. The doctors cut them off. And then it was like the price went
from $5, to $7, to $10 [for Percocet® 10mg].

Assessing the impact of PDMPs has proved challenging, especially in light of the wide
variability in types of programs and whether their use is mandatory or voluntary. A
comprehensive review of the efficacy of PDMPs was recently conducted by the PDMP Center of
Excellence (2014) and findings suggest that PDMPs are constructive in a number of ways
including, but not limited to: improvement of clinical decision-making and patient care;
identifying and reducing doctor shopping; and reducing inappropriate prescribing and medical
costs. However, while PDMPs probably are useful tools to curb the availability and diversion of
opioid analgesics onto the illicit market, and may have reduced some of the harms associated
with overprescribing, the current emphasis on these databases as an apparatus for enforcement, rather than as a tool with which to improve clinical care, has resulted in a number of unintended consequences.

Currently, 49 states now have PDMPs and, as previously reported, physicians across the country, as well as pain advocacy groups, have expressed concern that changes in prescribing practices as a result of the scrutiny afforded by the PDMP has resulted in a “chilling effect,” whereby patients with legitimate pain are being undertreated (Reisman et al., 2009). Equally important is how doctors have responded to patients who they have discovered through PDMP look-up are visiting multiple prescribers to obtain controlled substances. Although, according to the law, medical providers cannot prescribe to patients they suspect are seeking opioids for maintenance or detoxification, abruptly cutting off those who are opioid dependent without implementing an alternative treatment plan likely has contributed to an increase in patients seeking out other types of opioids. Thus, while PDMP’s may have served to diminish opioid diversion, data suggests that market constriction, resulting in lower availability and higher prices, has pushed many individuals with an opioid use disorder toward heroin (Kuehn, 2013).

While the association between opioid analgesic misuse and heroin was raised in the literature as early as 2003 (Siegal et al., 2003), warnings went largely unheeded. Further, a DEA alert sent to health providers to coincide with the release of abuse-deterrent OxyContin® also seems to have been ignored (Mars et al., 2014). Throughout the next decade, as access to opioid analgesics through prescription continued to rise steadily, so the number of people reporting past year heroin use also increased, from 400,000 in 2002, to 600,000 in 2010 (SAMHSA, 2011), and findings from the NSDUH reported that four out of five recent heroin initiates previously had misused opioid analgesics (Muhuri et al., 2013). Drug-poisoning deaths involving heroin also
rose sharply and between 2000 and 2013, with rates increasing from 0.7 to 2.7 deaths per 100,000 persons (CDC, 2014).

Among participants in this study whose first experience of opioid misuse had been via pain pills, many had since initiated heroin citing reductions in the availability of prescription opioids as a primary factor. Anton (white, aged 23), who had first misused opioid analgesics recreationally and begun using heroin two years previously, reported that numerous people in his social network also had transitioned to this drug. Commenting on the current market for illicit opioids he said:

Everybody’s switched to dope now. For the same reason, cus first of all, it’s harder to get. Because, you know, even the doctors themselves cannot prescribe as much, or as frequently because they realize there’s an epidemic. You know, everybody’s pretty much doing opiates, especially in the north-east, everywhere from like New Jersey, Massachusetts, Baltimore, yada yada, New York, stuff like that. So everybody’s just moving to dope now pretty much. And that’s why I changed too, because the game changed also. It’s not just that [pills] are too expensive for me, it was too expensive for everybody. It’s supply and demand, and people just can’t keep up with the prescriptions. . . It’s supply and demand. Then it was popular to do oxycodone, but they realized since it’s like $25 to $30 a pop, what’s the point? When I can get a bag of dope for $10. So you’d be getting three bags for the same amount as getting one pill.

Of the participants in this study who reported first use of heroin following misuse of opioid analgesics, 26 were opioid dependent prior to this initiation. As initiatives to reduce the
diversion of opioid analgesics were enacted, and pills became scarcer and more expensive, the cost and effort of sustaining daily use of these medications became untenable, and once heroin was introduced into participants’ social networks, the stigma associated with this drug soon dissipated. Recall Darren, who started using opioids following a back injury. After his prescription was cut off by his doctor, finding pills on the illicit market was so expensive and time-consuming that the prospect of using heroin became more acceptable, especially as a means to avoid withdrawal, a state that many opioid dependent participants were fearful of finding themselves in. Following the reformulation of OxyContin® he reported:

_Everyone wanted roxies [oxycodone] which were the 30mg. So basically, you know, every month that went by they got harder and harder to find, and the heroin thing came along. And someone had said to me, you know, when I really couldn’t find the pills, you know, they started to become very difficult to find, and there was one week that I couldn’t find them at all, and I got very scared and started getting real sick and desperate and I ran into somebody and they said “Hey, you know, don’t fool yourself, an opiate’s an opiate. . . They’re telling me “Hey, this is just heroin. Heroin is a straight opiate without Tylenol or synthetic mixtures.” So in my mind, being so desperate at the time to be feeling better, I believed the guy and I started snorting bags of heroin._

As Jordan, who first misused pills from his mother’s supply suggested, the transition to heroin for those who were opioid dependent was almost inevitable once the market for opioid analgesics had been tightened up. He commented:
I’m sure that like cracking down on the doctors, the government didn’t plan for this to happen, but it was just perfectly set up for street dealers because people are already addicted to powerful pharmaceutical grade opiates, and heroin in itself, though it not be pharmaceutical or made in laboratory is a powerful opiate. So you have a bunch of middle-class white kids with money, with families that come from money, that already have a predisposition to physical addiction of opiates, so of course, heroin is going to explode, you know.

The impact that initiatives to curb opioid analgesic diversion ultimately had on the market, and subsequently on individuals who were already opioid dependent, could and should have been better anticipated. For example, although in New York City, health department guidelines were issued to prescribers in the form of a letter advising medical providers to speak with patients who they identified through the PDMP had a suspected opioid use disorder, as reported by participants in this study, clinical care in these cases was often lacking, and often, patients were simply cut off by their doctor with no discussion or referral to drug treatment.

Given that many participants who were opioid dependent prior to using heroin initiated use of this drug at a point when they were feeling vulnerable to opioid withdrawal, better promotion of and increased access to opioid agonist therapy such as methadone or buprenorphine could have provided opioid dependent patients with an alternative to seeking out illicit opioids.

The reformulation of OxyContin® and the implementation of I-STOP appear to have constricted the market for the misuse and diversion of opioid analgesics with some effect on negative health outcomes. For example, following the release of the abuse-deterrent formulation, the number of prescriptions for opioid analgesics decreased slightly from 2011 to 2013, with a
concomitant decrease in the number of overdose deaths involving these drugs (Dart et al., 2015). Recent data from the NYS PDMP also shows a reduction in the number of prescriptions written for New York City residents, from 85 per 1,000 residents in 2012, to 62 per 1,000 residents in 2016, a reduction of 27% per cent (Bachhuber et al., 2017). However, it seems clear that these supply-side interventions resulted in an impetus for some individuals—especially those with an opioid use disorder—to seek out alternative drugs, including heroin, which arguably pose a greater public health risk (Paulozzi et al., 2012). Any future supply-side initiatives ought to carefully consider the possibility of unintended consequences and plan accordingly. For example where interventions are likely to lead to market constriction, public health officials should bolster the promotion of, and access to, evidence-based treatments for opioid use disorder including opioid agonist therapy (OAT) such as buprenorphine and methadone.
CONCLUSION

In his book, *The Culture of Control*, David Garland (2001) suggests that “all too often we tend to see contemporary events as having only contemporary causes, when in fact we are caught up in long-term processes of historical change and affected by the continuing effects of now-forgotten events” (2001: 77). Thus, to fully understand, and effectively address the public health harms resulting from opioids in the U.S., it is critical to locate patterns of prescribing, use, and misuse of these drugs, within an historical, political, and social context, and not simply view it as the consequence of recent, well-intentioned efforts to relieve the pain of millions of Americans.

Indeed, when considering the current opioid epidemic, Goldberg astutely notes, “the problems centering on the regulation, distribution, and use of opioid analgesics and the problems centering on the undertreatment of pain are *simply not the same problems* [emphasis in the original] (Goldberg, 2010: 20). As Goldberg argues, while opioids are doubtless an important tool with which to treat pain, despite the exponential increase in the number of opioid prescriptions filled across the U.S., there appears to have been little headway made in reducing the number of people who report chronic pain, and in recent years, the efficacy of opioid analgesia for treating chronic-non cancer has been repeatedly called into question (Chaparro et al., 2013; Von Korff et al., 2011). Moving forward, then, the focus ought not simply to be how better to regulate, or control opioids to minimize the risks of misuse and diversion, but rather how can we rethink our cultural and societal attitudes toward both pain (Bourke, 2014) and I would add, the use of licit and illicit drugs.

In their essay on the undertreatment of pain, Resnik and colleagues (2001) acknowledge that pain is a problem for medicine, largely because of its failure to conform to a *scientific*
approach. The authors present five reasons why this is so, including: “(1) pain is subjective, not objective; (2) the causal basis for pain is often poorly understood; (3) pain is often regarded as a ‘mere’ symptom and not a disease; (4) there often are no ‘magic bullets’ for pain; and, (5) pain does not fit the expert knowledge model” (Resnik et al., 2001: 277). While their analysis of the problem is comprehensive, the solutions they propose—better education, more dialogue between patients and medical providers, increased understanding from health care professionals as to the subjective nature of pain, and a more inter-disciplinary approach to pain management—fall far short of the sweeping, deep-rooted, and philosophical transformation necessary to achieve meaningful change in the conceptualization and treatment of intractable pain. Thus, although pragmatic solutions for effective pain relief might seem like a sensible option, as Bourke (2014) suggests, what is needed is “attention [to] be paid to ideological frameworks, interpersonal relationships, and environmental interactions between the person-in-pain and those around him or her,” including a “repudiation of the Cartesian distinction between body and mind, as well as a radical re-think about the inequalities that mark people’s lives” (Bourke, 2014: 300).

While it is perhaps unrealistic to suggest that such a transformation will take place in the current political climate, we ought at least to ponder why, given the scope and intensity of harm that opioid use and misuse has had at a population level, the use of prescription opioids has remained so abundant. For example, although recent data from the CDC demonstrate a reduction in the number of opioid prescriptions filled nationally, from 81.2 prescriptions per 100 persons in 2010 to 70.6 per 100 persons in 2015, the morphine milligram equivalent prescribed per capita remained three times higher than it was in 1999 (640 MME compared with 180 MME) and the average number of day’s supply of opioid prescriptions actually increased (Guy et al., 2017).
If prescription opioids had been shown to be effective for chronic pain, the argument to perpetuate their use, despite the potential for harm would be more compelling, but many studies now demonstrate this is not the case, and clinical evidence suggests that even a short duration of opioid therapy can increase the risk that patients will transition to long-term use (Shah et al., 2017). Moreover, it is also not that we lack the technical ability to treat long-term pain using non-opioid based medications, or indeed, non-pharmaceutical tools (Goldberg, 2009); only that the structure of the for-profit health care system in the U.S. does not accommodate treatments (for example, cognitive behavioral therapy, acupuncture, visualization techniques) that while effective, are time-consuming and therefore not conducive to help doctors meet billing quotas (Lembke, 2016).

Americans constitute only 4.6 percent of the global population, yet they consume roughly 80 percent of the world’s opioid supply (Manchikanti et al., 2010). To better understand the proliferation of opioid use in the U.S., it is helpful to examine the political and economic structure and the shift toward neoliberalism that occurred in the latter half of the twentieth century, a characteristic of which is the dynamic of capitalist production and market exchange, driven by a profit motive (Garland, 2001). As referenced in Chapter 1, in the U.S. post-war era, pharmaceutical companies took advantage of the consumer boom, and adopted a number of strategies including extensive advertising in medical journals as well as teams of detailers to visit doctor’s offices to promote brand-named medications (Hertzberg, 2009). An essential marketing strategy included direct-to-consumer advertising (DTCA) which has proliferated since the early 1980s, and coincided with a political climate particularly favorable to the pharmaceutical industry including deregulation and new interest from consumers regarding their health care choices. The loosening of government oversight in the post-Reagan era was also a tremendous
boon for the industry and during the previous 30 years, pharmaceutical companies consistently have been one of the most profitable businesses in the U.S. (Angell, 2004).

In tandem with growing profits, the pharmaceutical industry has become a powerful lobbying force primarily through their trade association, the Pharmaceutical Research and Manufacturers of America (PhRMA). As described by Freudenberg (2014) in his book examining the influence of corporations on public health, PhRMA represents forty-eight of the world’s leading pharmaceutical companies and lobbies hard to “create laws, court decisions, and regulations that enable its member drug companies to maximize profits and defeat any policy that might interfere with this goal.” (Freudenberg, 2014: 112). Active in both federal and state elections, PhRMA has contributed millions of dollars to a variety of players on the political spectrum successfully “capturing” the FDA in order to shape its decisions and make it more disposed to beneficial business practices. For example, in 1992, PhRMA negotiated with the FDA that, in return for user fees, the regulatory body would complete new drug reviews within a 12-month period. In 1993, user fees accounted for only 7 percent of the FDA’s drug-review budget; however, by 2004, this had increased to 53 percent (2014: 120).

Although the Federal government has taken some steps to mitigate the public health harms that have been wrought by opioid analgesics, including, but not limited to: encouraging the development of abuse-deterrent formulations; prescriber and patient education; and, instituting label changes for opioids, their actions have at times been contradictory. For example in 2014, the FDA concurrently both rescheduled hydrocodone from a Schedule III to a Schedule II controlled substance, and approved the first long-acting, single-entity, hydrocodone medication, Zohydro®, a product that is available in 10mg to 50mg doses, and is not abuse-deterrent. Given that hydrocodone is the most misused opioid in the U.S., and that Zohyrdo® is a
pure hydrocodone product that easily can be crushed to release the full dose of the medication, the FDA-appointed scientific advisory committee voted 11-2 against approving this medication. However, the committee was ultimately overruled, and while the FDA profess to be a science-based agency, in the case of Zohyrdo®, market forces and the influence of the pharmaceutical industry appear to have trumped the concern for public health.

With regard to the vigorous marketing techniques utilized by the industry to promote drugs such as OxyContin®, Freudenberg points out that an effective strategy to avert regulation was to offer up voluntary standards of practice. For example, in response to growing concern over potential conflicts of interest between the pharmaceutical industry and health professionals, in 2002, PhRMA established the Code on Interactions with Health Care Professionals which laid out ethical parameters intended to protect the best interests of the patient. However, while the document is an acknowledgement of some of the ethical issues relating to these interactions, its framing maintains that marketing remains a valid and necessary strategy to improve patient care, rather than a recognition that “the very nature of pharmaceutical marketing to professionals threatens professional objectivity and good healthcare” (Weber, 2006: 68). Until there is some acknowledgement from the industry, as well as professional bodies such as the American Medical Association, that interactions between healthcare professionals and pharmaceutical representatives predominantly constitute product promotion rather than “education,” the status quo will remain (Weber, 2006), and the aggressive tactics utilized by companies like Purdue will continue.

It is also of note that while pharmaceutical companies continue to heavily promote opioid analgesics, they are simultaneously funding interest groups such as the Community Anti-Drug Coalition of America (CADCA), and Partnership for Drug-Free Kids, allowing them to heavily
influence these organizations’ policy goals away from prescription drug misuse, and toward anti-cannabis campaigns (Fang, 2014). Recent studies following legislation change sanctioning medical cannabis have found that, in states where medical cannabis is permitted, rates of opioid analgesic prescriptions have fallen substantially (Bradford and Bradford, 2016). Further, in a study conducted by Bachhuber et al., 2014, findings indicate that states with medical cannabis laws have significantly lower opioid-involved overdose mortality rates. While an alliance between pharmaceutical companies and interest groups advocating for tighter drug controls may seem like a contradiction, their common goal is to lobby for cannabis to remain a Scheduled I controlled substance, as relaxation of regulation around cannabis control could heavily impact those companies for whom sales of opioid analgesics represent a significant market share.

While the pharmaceutical industry is concerned with profits, the medical profession surely ought to be motivated by what is in the best interest for their patients, and doubtless, for many physicians, this is their primary concern. Nonetheless, the structure of the medical system in the U.S. is such that, rather than being driven by scientific evidence, treatment is often dominated by market forces, as well as patient expectations for doctors to provide a “quick fix.” and recent research shows an increasing demand for all types of prescription pills, with almost three-fifths (59%) of U.S. adults reporting use of any prescription drug in 2011-2012, an increase of nine percent from the previous decade (Kantor et al., 2015). As patients become more engaged with their healthcare choices through DTCA, doctors also have been under increasing pressure to respond to requests for particular medications, and patient satisfaction surveys, that can help make or break their business, exert further pressure to respond to consumer-led demands (Lembke, 2016).
However, as this study has shown, although the health care system is heavily influenced by the medical industrial complex, physicians’ exercise fairly wide discretion in their prescribing decisions, and as described by participants, the range of prescriber oversight includes a continuum of practices that range from flagrant to judicious. Although there has been a substantial amount of media attention paid to the prosecution of aberrant prescribers, evidence shows that the number of criminal proceedings against doctors for over-prescribing is low. And, while some scholars have argued that cases of negligence, gross negligence, or even recklessness should be arbitrated by state licensing authorities (Rich and Webster, 2011), in some states, even a felony conviction related to the practice of medicine is not grounds for board review, or license revocation (Jung et al., 2006).

I must profess to an ambivalence on this issue. On the one hand, it seems justified that physicians who are found to be in violation of the law and their professional code of conduct should, (just like the rest of us), face criminal sanctions rather than have the opportunity to be adjudicated by a potentially sympathetic professional body, especially if their motive for dispensing opioids to their patients is driven predominantly by economic gain. On the other, cases involving criminal prosecution often take several years of investigative work before charges are brought, during which time doctors could continue to prescribe thousands, if not millions of pills. Thus, sanctions from state boards, including the revocation of licensure, could be a more efficient mechanism to shut down unscrupulous prescribers in a timely fashion. However, targeting doctors also perpetuates a prohibitionist approach toward drug use shown to have failed time and time again, and as demonstrated by some participants in this study, will likely result in increased harm as people seek out alternative sources of opioids from the unregulated and illicit market (Netherland and Hanson, 2016).
Any intervention aimed at reducing the availability of prescription opioids will probably have similar consequences, and two initiatives described by participants in this study—the reformulation of OxyContin® in 2010, and the 2013 New York State I-STOP bill mandating physicians look up their patients at the point of prescribing—were both reported by participants to have had a sizeable impact on the prescription opioid market. However, despite warnings from several bodies (including the DEA), stating that individuals using OxyContin® were potentially at risk of transitioning to heroin (Mars et al., 2014), the public health community largely failed to respond. It is worth mentioning here that while the opioid problem has evolved as a result of these supply-side measures, the potential harms resulting from the shift to heroin have been further exacerbated by the recent introduction of non-pharmaceutical fentanyls (NPFs)51 into the illicit drug market. New York City mortality data show that between 2010 and 2016, the rate of unintentional drug overdose death increased 143 percent, from 8.2 per 100,000 residents in 2010 to 19.9 per 100,000 residents in 2016: more than 82 percent of these deaths involved an opioid. In 2016, there were 1,374 unintentional drug overdose deaths in NYC compared with 937 unintentional drug overdose deaths in 2015, an increase largely driven by NPFs (Paone et al., 2017). Given that NPFs are often mixed into the heroin supply chain without the users knowledge, the transition to heroin for many opioid analgesic users is likely to turn this public health crisis into a public health catastrophe.

And what of the individuals in this study, whose experiences with opioid analgesics are most often viewed at the individual level, but are rarely considered as a product of the broader

51 Fentanyl is a synthetic opioid 50 to 100 times more potent than morphine. Starting in 2014, reports from across the country began to emerge that non-pharmaceutical fentanyls (NPFs), so called because of the wide array of fentanyl analogues and compounds, were being illicitly manufactured and mixed into the heroin supply chain, often without the consumers’ knowledge. Between 2014 and 2016, the number of overdose deaths in New York City increased from 800 to 1347. In 2016, 72 percent of drug overdose deaths involved heroin and/or fentanyl (Paone et al., 2017).
political and economic structure. For many, initiation into opioid misuse occurred within communities described as being awash with prescription pain pills, and while participants may not have received the opioids they misused directly from a healthcare provider, their overarching understanding of the illicit opioid market was that the vast majority of diverted medication had originated from a doctor’s office, rather than been diverted from another source. Indeed, that opioid analgesics were so freely available from physicians had served to normalize their use, to the extent that for many individuals in this study, pain pills were, at least initially, considered “no big-deal.”

And yet, any serious discussion among physicians regarding the iatrogenic consequences of increased opioid prescribing, has been conspicuously absent from the literature, especially acknowledgment of potential downstream effects, from a prescription that may have been warranted. The rhetoric among many doctors is that much of the problem is attributable to “bad” patients who exhibit drug-seeking behavior; however, what is sorely lacking within the medical community is any reflection on factors that may have contributed to those patients becoming drug-seekers in the first place. Further, once a patient has an opioid use disorder, the health care system is woefully inadequate to engage and provide effective substance use treatment.

The difference in the perception and understanding of opioid analgesics as “ethical” medications (DeGrandpre, 2006) compared to illicit drugs such as heroin, the use of which within most social groups is highly stigmatized, and considered inherently dangerous, is illustrative of how objects or things are ascribed meaning, not as a result of their intrinsic characteristics, but rather how and where they are positioned in society (Lovell, 2006). For example, while opioid analgesics are deemed “safe,” by the government, medical professionals, and consumers alike (it is the person using who is risky, not the drug itself), heroin is considered
as exceptionally dangerous, despite its almost identical pharmacological properties. Moreover, even the use of the same object can be considered valid or invalid depending on how it is experienced, and while taking prescription opioids to alleviate physical pain is condoned, the moment one recognizes, or names the drug effect as pleasurable, *even when taken as directed*, its use becomes censured.

Drug policy in the U.S. is littered with these incongruous distinctions (recall the differences in sentencing policy between cocaine and crack), driven predominantly by racial bias, and the cultural meaning ascribed to particular substances. Indeed, when the opioid problem was perceived principally to be related to prescription pain medication and largely affecting white communities, the issue was typically framed as one concerning public health rather than public safety, with many high ranking officials including James Comey, then head of the Federal Bureau of Investigation (FBI), stating that we could not “arrest our way out of the problem.” That this stance was likely driven by the high visibility of white people affected by opioid use is unconscionable. However, as Netherland and Hanson point out in their analysis of the media portrayal of white opioid users versus black or brown heroin users, “the prescription opioid epidemic has created an interesting policy space and an important opportunity for both a new representational and political approach. . . [by showing] that a less punitive, more humanistic approach to responding to drug problems is possible” (Netherland and Hanson, 2016: 679).

At the start of this project, I shared this optimism. However, as the opioid landscape has evolved, and heightened attention on heroin and fentanyl has once again stimulated a “tough on crime” rhetoric including interdiction as a primary response, mandatory minimum sentences, and the investigation of accidental drug overdose scenes as homicides, I fear that the window of opportunity for sensible drug policy reform may have already closed.
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