A CONSTRUCTIVIST GROUNDED THEORY ANALYSIS OF SEVEN MEDICAL PROVIDER PERSPECTIVES ON MAJOR BARRIERS TO PRESCRIBING BUPRENORPHINE TO YOUTH WITH OPIOID USE DISORDER IN OUTPATIENT MEDICAL SETTINGS: "WE SHOULD BE PROVIDING THEM WITH WHAT WE KNOW TO BE THE GOLD STANDARD OF CARE."

A Dissertation

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ABSTRACT

A CONSTRUCTIVIST GROUNDED THEORY ANALYSIS OF SEVEN MEDICAL PROVIDER PERSPECTIVES ON MAJOR BARRIERS TO PRESCRIBING BUPRENORPHINE TO YOUTH WITH OPIOID USE DISORDER IN OUTPATIENT MEDICAL SETTINGS: "WE SHOULD BE PROVIDING THEM WITH WHAT WE KNOW TO BE THE GOLD STANDARD OF CARE."

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This study utilized Primary Care Provider (PCP) perspectives to unveil major barriers to prescribing buprenorphine to youth (ages 16-25) with opioid use disorder (OUD). Semi-structured interviews were conducted with seven PCPs recruited through convenience and snowball sampling. Interviews were conducted and recorded via Zoom video conferencing. Transcripts were generated and analyzed for themes using a Constructivist Grounded Theory (CGT) approach. The CGT of the present study describes four major barriers that limit PCP prescription of buprenorphine to youth: 1) PCPs Feel Overwhelmed, 2) PCPs Feel Ill Equipped to Treat Youth Patients with OUD, 3) PCPs Hold and Observe Stigma toward Patients with OUD—Especially Youth, and 4) Structural and Systemic Barriers. Each major barrier consists of related subcategories and sub-subcategories. Findings offer stakeholders suggestions for targeting individual, relational, clinical, and systemic level changes to increase primary care access to buprenorphine for youth ages 16-25.

Keywords: primary care, buprenorphine, youth, opioid use disorder, medications for opioid use disorder, Constructivist Grounded Theory

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Table of Contents

List of Tables

List of Figures

CHAPTER I: INTRODUCTION

Statement of the Problem

Opioid-related overdose death rates have increased dramatically among adolescent and young adults—termed "youth"—cohorts in over the last decade (Bahji et al., 2020). The continued rise of youth overdose deaths is driven in large part by the increasing prevalence of illicit synthetic opioids, like fentanyl (Ciccarone, 2021). Significant scientific evidence has amassed in recent years that supports the use of medications for opioid use disorder (MOUDs; e.g., methadone, buprenorphine, and naltrexone) as a front-line treatment for Opioid Use Disorder (OUD; Cicero et al., 2018; Connery, 2015; Larochelle et al., 2018; National Academies of Sciences Engineering and Medicine [NASEM], 2019). In recent years, momentum has grown to encourage the prescriptions of MOUDs in office-based settings, with a particular emphasis on increasing office-based buprenorphine treatment (Borodovsky et al., 2018).

Despite the American Academy of Pediatrics' (2016) recommendation that buprenorphine be used to treat youth with OUD in office-based medical settings such as primary care clinics, youth struggle to access buprenorphine—or *any* MOUD—in such settings (Borodovsky et al., 2018; Carney et al., 2018; Durkin, 2017; Levy, 2019; Olfson et al., 2020). The lowest rates of primary care buprenorphine use is seen among youth ages 15-24 years old (Olfson et al., 2020). The present study seeks to illuminate the barriers that primary care provider's (PCP) face when prescribing buprenorphine to youth with OUD. Results gathered through a Constructivist Grounded Theory (CGT) analysis of seven semi-structured interviews with PCPs are intended to help professionals carefully and strategically determine what next steps are needed to increase access to buprenorphine youth in office-based medical settings.

Dissertation Structure

This dissertation is organized as follows. Chapter I (Introduction) includes a brief review of literature, the study's primary purpose, an outline of the study's structure, an important update regarding the directives provided to prescribers, and a note on language used throughout. Chapter II (Review of Literature) includes an in-depth literature review and exploration of current research. Chapter III (Methods) reviews the study's philosophical assumptions, research strategy, research question, study sample, recruitment, ethical approval, and data collection. Chapter IV (Results) discusses participant demographics, predominant themes and categories discovered through CGT analysis, and an exploration of the four major barriers PCPs encounter along their journey to prescribing buprenorphine to youth with OUD in primary healthcare settings. Chapter V (Discussion) explores applications and implications of this CGT within the context of the original literature review. Chapter VI (Recommendations and Suggestions for Future Research) explores recommendations specific to the results of this study and makes relevant suggestions for future research and practice improvement. Chapter VII (Limitations, Summary, and Concluding Remarks) includes a discussion of the present study's limitations as well as a summary and final section with concluding remarks.

Important Update Regarding Directives Provided to Prescribers

Recent changes to federal law recently made prescribing buprenorphine much easier for providers in the United States. Until December of 2022, the federal government mandated that providers abide by the rules of the Drug Addiction Treatment Act of 2000 (DATA), which permitted physicians to prescribe buprenorphine outside of Opioid Treatment Programs (OTPs) if they obtained what is commonly referred to as either a "DATA-Waiver" or an "X-Waiver." To obtain a Data-Waiver or an X-Waiver, providers had to take an eight-hour course and submit a

Notice of Intent (NOI) to SAMHSA in order to be able to prescribe buprenorphine for OUD treatment in office-based settings outside of registered opioid treatment programs (SAMHSA, 2023a). Even after completing this additional training, there were limitations on the maximum number of patients for whom prescribers were permitted to prescribe buprenorphine.

On December 29, 2022, President Biden signed into law section 1262 of the Consolidated Appropriations Act of 2023, which removed the X-Waiver Program. This means that today, licensed prescribers with a current Drug Enforcement Administration (DEA) registration no longer need an X-Waiver registration to treat patients with buprenorphine for OUD and there are no longer any limits on the number of patients a prescriber may treat for OUD with buprenorphine (SAMHSA, 2023a). Additionally, new training requirements to become a DEA registered provider were added to the Act, which mandate at least 8 hours of training on treating patients with OUD in order to obtain or renew a DEA license (SAMHSA, 2023a). These new training requirements go into effect June 21, 2023 (SAMHSA, 2023a).

The President of the American Academy of Physician Associates (AAPA), Jennifer M. Orozco, DMSC, PA-C, DFAAPA, referred to the elimination of this X-Waiver requirement as a "game changer" in increasing access to OUD treatment (AAPA, 2023). Similarly, the Substance Abuse and Mental Health Services Administration (SAMHSA) strongly encouraged that all eligible prescribers screen patients for OUD and offer buprenorphine treatment to those in need (SAMHSA, 2023a).

A Note on Language

Below is a brief explanation of key concepts, words, and acronyms used throughout this dissertation, included to ensure that readers understand the exact meaning and definition behind commonly used terminology. Notably, in the field of opioid use research there are multiple terms

that have either changed over time, or words that may appear similar but are in fact very different in their definition. This section is intended to be referenced as a glossary as readers review the following dissertation.

This study's definition of the "opioid epidemic" refers to four waves spanning from the last 1990s to present day, during which enormous amounts of Americans have been tragically impacted by prescription and non-prescription opioid drugs. The opioid epidemic is also explained at the start of Section II. This study uses the term "youth" to refer to individuals ages 16–25. The lower limit is set at 16 because buprenorphine is only FDA-approved for the use of individuals over the age of 16 years old. The upper limit is set at 25 to mirror common definitions of "youth" in other youth-oriented OUD studies (Hadland et al., 2017; Levy, 2019), and to align with national, public health definitions of "youth" (CDC, 2016). This study uses the term "opioid" and not "opiate," which are often used interchangeably. Opiates are narcotic analgesics that are derived from an opium poppy or are naturally found. Opioids, on the other hand, are narcotic analgesics that are at least partly synthetic. Most professionals use the term "opioids" as an umbrella term to refer to *all* opium-like substances, ranging from natural, opium poppy derived drugs like morphine to synthetic, manufactured opioids like Oxycontin.

This study uses the term "primary care providers" (PCPs) and not "primary care physicians." The primary researcher considers a PCP to be health care providers (e.g., MD, DO, PA, ARNP, NP, RN), who currently work or have previously worked within a primary care, internal medicine, or family medicine setting and have provided direct care to patients (e.g., have prescribed medications, directly assisted prescribers, monitored and collected health data, etc.). While the majority of final participants in this study could also be considered "primary care prescribers" given their prescriptive authority as MDs, the term "primary care provider" was

used throughout recruitment to include key players who have expert knowledge of buprenorphine but do not have the power to prescribe, like RNs. Although some may not consider RN's to be medical "providers," the present study considers the term "provider" to encompass nurses, as they are licensed medical professionals that deliver face-to-face medical care for patients and routinely and intimately assist medical prescribers in medication disposal and management.

This study uses the term "OUD" to refer to the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5] (American Psychiatric Association (APA], 2013) diagnostic criteria for OUD. According to the DSM-5, OUD refers to a "problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following symptoms, occurring within a 12-month period: 1) opioids are often taken in larger amounts or over a longer period of time than was intended, 2) there is a persistent desire or unsuccessful efforts to cut down or control opioid use, 3) a great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects, 4) craving, or a strong desire or urge to use opioids, 5) recurrent opioid use resulting in a failure to fulfill major role obligations at work, school, or home, 6) continued opioid use resulting in a failure to fulfill major role obligations at work, school, or home, 7) important social, occupational, or recreational activities are given up or reduced because of opioid use, 8) recurrent opioid use in situations in which it is physically hazardous, 9) continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance, 10) tolerance, as defined by either a need for markedly increased amounts of opioids to achieve intoxication or desired effect or a markedly diminished effect with continued use of the same amount of an opioid (unless opioids are being taken appropriately

under medical supervision), and 11) withdrawal, as manifested by either the characteristic opioid withdrawal syndrome or opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms.

This study uses the term "MOUD" to combine the 5th edition, DSM-5 Diagnostic (APA, 2013) terminology of "opioid use disorder" with "medications." This refers to the three, FDA-approved medications for OUD: methadone, buprenorphine, and naltrexone, and various combinations or formulations of these medications (e.g., Suboxone, Sublocade, Vivitrol, etc.). MOUD is preferred to the commonly used term "Medication Assisted Treatment," or MAT, because these medications do not only *assist* with treatment, but can themselves be a solitary form of treatment.

The following study uses the terms "withdrawal," "withdrawal management" or "medically supervised withdrawal" in lieu of the terms "detox" or "detoxification" in accordance with Saitz et al.'s (2021) recommendations for non-stigmatizing, more clinically accurate language. Any use of the term "detox" or "detoxification" included in the present study are included because they are either mentioned directly by participants, or the specific terms used in cited works.

CHAPTER II: REVIEW OF LITERATURE

The Opioid Epidemic

Understanding certain historical events can help to contextualize the opioid epidemic. In 1914, the federal government passed the Harrison Anti-Narcotic Act, which sought to confine the use of opioids and cocaine within medical practices. The Harrison Anti-Narcotic Act also stipulated that opioids could *not* be used as medications to treat OUD. Nearly four and half decades later, heroin use was on the rise in the 1960s, as subsequently methadone distinguished itself as an excellent, pharmaceutical solution. However, the use of methadone was quickly intensively regulated and restricted, meaning that methadone could only be accessed within OTPs, which at the time and still to this day have many strict requirements of patients (i.e., mandatory counseling)—requirements which are not otherwise mandated in other medical clinics. Furthermore, these regulations also limit the amount of methadone a patient can take home and therefore require that patients make multiple, on-site visits to pursue treatment.

Although one can strongly argue that the first wave of the opioid epidemic began in the 1960s, some scholars assert that the first wave began in the 1990s and primarily involved opioid-overdose deaths from prescription opioids, including natural opioids and synthetic opioids (CDC, 2022; Ciccarone, 2021). Throughout the 1990s and into the 2000s, a shift in thinking about the role of medications in OUD was underway, amidst this national surge in prescription opioid use and misuse. The increased presence of prescription opioids in the United States meant that—for many—it was easier to access opioids by taking pills, rather than using heroin. Therefore, a new population of the United States was exposed to opioids. Around this time, buprenorphine was approved for as a medication to treat OUD introduced into primary care settings in 2002. However, methadone remained strictly regulated and only accessible within OTPs. Stigma

toward methadone and OTPs continued to rise at this time, with methadone clinics coming under intense scrutiny and often being regarded as responsible for increases in methadone-related poisonings (Belluck, 2003).

The second wave began in 2010, with an increased rate of overdose deaths from heroin (CDC, 2022). The third wave began in 2013–2014, with significant increases in opioid-related overdose deaths involving synthetic opioids, particularly fentanyl, which is an extremely lethal synthetic opioid that is 100 times more potent than morphine, 50 times more potent than heroin, and often found in combination in heroin, counterfeit pills, and cocaine (CDC, 2022; DEA, 2020). A temporary decline in deaths due to opioid overdose deaths occurred between 2017 and 2018, with overdose mortality rates again increasing in 2019 (Ahmad et al., 2022). Data from the past five years has illuminated the emergence of a "fourth wave," beginning in 2019. CDC provisional data noted a 10% increase in all opioid overdose deaths, with deaths due to synthetic opioids up 21%, deaths due to prescription opioids down 2%, and deaths due to heroin overdose down 7%, therefore indicating that the current rise in opioid related deaths is primarily driven by synthetic opioids, not including methadone (Ahmad et al., 2022; Wilson et al., 2020). Today, stimulant-related overdose has also recently increased nationwide, with overdoses driven primarily by cocaine and methamphetamine. Concurrently, overdose due to illicit synthetic opioids (fentanyl and fentanyl analogs continue to rise in the US—with rates rising before the COVID-19 pandemic and continuing to rise (Ciccarone, 2021).

Synthetic opioids, including fentanyl, were involved in over two-thirds of overdose deaths according to data collected in March of 2022 (CDC, 2022). Synthetic-opioid overdose deaths have increased over 80% over the past two years (CDC, 2022). An increasing number of overdose deaths in the United States today have bene linked to Xylazine, a non-opioid veterinary

tranquilizer also known as “tranq” which is not approved for human use (Friedman, Montero, Bourgois et al., 2022). Individuals who are exposed to xylazine are often using it, either knowingly or unknowingly, using it in combination with other drugs such as fentanyl (Friedman, Montero, Bourgois et al., 2022).

Youth at the Center of the Opioid Epidemic

Opioid-related overdose death rates have increased dramatically among adolescent and young adults—termed “youth”—cohorts in recent years (Bahji et al., 2020; Bohm & Clayton, 2020). Between 1997 and 2012, the United States lost over 9,000 young lives to opioid poisonings, with the pediatric mortality rate increasing over three-fold (Gaither et al., 2018). Among 8,986 young lives lost to opioid-related overdoses between 1999 and 2016, 75% were male, 88% were adolescents between the ages of 15 to 19, and 6.7% were children ages zero to four years old (Gaither et al., 2018). Pediatric mortality rates among children ages 0 to 4 years old and five to nine years old rose steadily as well during this time (Gaither et al., 2018). According to a 2015 report, nearly 5,000 children younger than six years old were evaluated in the emergency department for opioid exposures, and hospitalization rates among children ages one to four years old more than doubled between 1997 and 2012 (Gaither et al., 2016).

The continued rise of youth overdose deaths is driven in large part by the increasing prevalence of illicit synthetic opioids, like fentanyl (Bohm & Clayton, 2020; Ciccarone, 2021; (Friedman, Godvin, Shover et al., 2022). Among youth ages 14–18, fentanyl was identified in over 77% of adolescent deaths in 2021, compared to approximately 13% for benzodiazepines, 9% for methamphetamines, 7% for cocaine, 5% for prescription opioids, and 2% for heroin (Friedman, Godvin, Shover et al., 2022). Illicit opioids like fentanyl come with heightened risk, as they often have variable potency from batch to batch (Friedman, Montero, Bourgois et al.,

2022). Furthermore, fentanyl has increasingly been added to counterfeit pills since 2015, which adolescents often identify as less dangerous than injectable or intranasal forms of opioids (Friedman, Godvin, Shover et al., 2022). The increase of fentanyl use among youth with OUD also makes buprenorphine induction more challenging, because fentanyl persists longer in the body's peripheral tissues than other opioids and is therefore uniquely difficult to safely medically withdrawal from (Shearer et al., 2021).

A Brief Overview of Racial and Ethnic Disparities amidst the Opioid Epidemic

The rapidly changing landscape of the opioid epidemic requires a large-scale, rapid, and culturally tailored public health response that acknowledges historical racial inequity in the management of opioid use and access to treatment.

Over the last 15 years, death rates from prescription-opioids among non-white groups have increased substantially, especially among young adults (Han et al., 2015; Mokad et al., 2018). Among people who use drugs, we see an overrepresentation of minority groups, especially African American and Latino individuals (Kandel et al., 2017; Soelberg et al., 2017). A multitude of biases and systemic forms of healthcare inequity—namely who gets to access specialty pain management services—are likely the root of the disparities. Furthermore, discrepancies in drug use across racial and ethnic groups bolster the need for increased access to MOUDs—as well as to substance use care in general—for all individuals.

Annual average rates of prescription pain reliever use among individuals ages 12 and up from 2015 to 2019 was the highest among individuals who reported two or more races (Center for Behavioral Health Statistics and Quality [CBHSQ], 2021). Out of those ages 12 to 50 and over, youth ages 18 to 25 had the highest rates of prescription pain reliever use across the following racial and ethnic groups: White, Black, African American, Asian, Latinx, or two or

more races. The highest rates of prescription pain reliever use among adolescents ages 12 to 17 years old was also among those who reported two or more races. Within the American Indian/Alaska Native and Native Hawaiian/Pacific Islander groups, the highest rate prescription pain reliever use was among individuals ages 26 to 34.

Annual average rates of fentanyl use among individuals ages 12 and up from 2015-2019 was highest among individuals who reported two or more races (CBHSQ, 2021). The next two highest rates of fentanyl use among individuals ages 12 and up was among White and Hispanic/Latino groups. Overall estimates of past year fentanyl product use among youth ages 18 to 25 was the highest among White youth and youth reported two or more races, with the next highest rates seen among both Black, American Indian/Alaskan Native, and Hispanic youth ages 18 to 25. Among individuals ages 26-34, estimates of past year fentanyl product use was highest among White adults, with the next highest rates among Native Hawaiian or Other Pacific Islander adults ages 26-34. Estimates of past year fentanyl product use for adults ages 35-49 was highest among adults reporting two or more races.

Data from 2015-2017 reveal the highest rates of drug overdose deaths involving any opioid or synthetic opioid among White adults ages 25-34 years old (CBHSQ, 2021). Furthermore, the largest absolute increase in drug overdose death rates involving any opioid or synthetic opioid from 2015-2017 was among White adults. However, Black youth ages 18–24 years old experienced the largest percentage increase—a 139% increase—in opioid-involved overdose death rates. The largest percentage increase—a 379% increase—in synthetic opioid-involved overdose death rates was among Hispanic adults ages 25-36 years old.

Overall, the percentage of all opioid-involved overdose deaths involving synthetic opioids increased across all racial and ethnic age groups in each metropolitan category,

according to data from 2017 (Lippold et al., 2019). In 2017, the largest number of synthetic-involved opioid overdose deaths in metro areas was among Black individuals, with the percentage increase among White and Hispanic individuals trailing closely behind in small, medium, and large metro areas (Lippold et al., 2019).

A Brief Overview of Sex and Gender Disparities amidst the Opioid Epidemic

Few studies explicitly analyze gender differences related to opioid use. While existing studies suggest that women tend to use prescription opioids more than men (Bawor et al., 2015; Evans et al., 2015; Fink et al., 2015; Gladstone et al., 2015; Graziani & Nisticò, 2016; Hemsing et al., 2016; LeResche et al., 2015; Manubay et al. 2015; Serdarevic et al., 2017), there is insufficient data to determine what may be contributing to these gender-based disparities, and therefore more research needs to be conducted. In 2020, Bagley et al. found differences among male and female youths in sociodemographic characteristics and incidence of nonfatal opioid overdose. Results from this study suggest that male and female youth may have different risk factors, and that these risk factors may have important implications when considering how to develop effective screening and intervention to prevent opioid-overdoses among youth (Bagley et al., 2020).

Girouard et al. (2019) note that that individuals in the LGBTQ community are prescribed opioids at higher rates than their peers from sexual and gender majority groups. According to data adapted from SAMHSA's National Survey on Drug Use and Mental Health from 2015, 14.2% of sexual minority individuals ages 18-25 years old were documented as misusing opioids in the past year compared to 8.0% of their same-aged sexual majority peers (Medley et al., 2016). Rates of opioid misuse among sexual minority adults ages 18 and over were higher amongst females than males, according to the same SAMHSA (2015) dataset (Medley et al.,

2016). Data on rates of opioid misuse amongst trans individuals, and amongst sexual minority individuals under the age of 18 years old were not included in this data set (Medley et al., 2016). Results of Girouard et al's (2019) study reveal that OUD treatment has been shown to increase safer sex practices and injection-drug practices, which can potentially decrease HIV risk amongst this community.

Developmental Considerations

Adolescence—a period of transition between childhood and adulthood typically coinciding with the onset of puberty and lasting up to ages 18-25 years old—is commonly regarded as a time of distinct brain and behavioral changes, as well as heightened emotionality and increased risk for the development of mental illness (Powers & Casey, 2015). The many developmental changes that occur throughout this period, in addition to peer relationships, environmental exposures, and cultural and familial influence, have considerable impacts on a young person's decision-making and propensity to engage in risky behaviors (Rutherford et al., 2010). Adolescents are therefore likely to make choices that lead to more immediate reward versus long-term benefit, despite potential negative consequences (Aklin et al., 2005).

Typically, the adolescent brain is discussed in a manner that describes it as defective or dysfunctional. However, as Casey (2015) notes, we do not describe other developmental progression in such a manner; for example, we do not regard infants as "defective" for not yet knowing how to walk. Over the last ten years, researchers have made an attempt to shift their language toward adolescent brain development toward language that more adequately reflects the unique intellectual, physical, sexual, and social developmental challenges of adolescence

According to Casey (2015), there are two primary approaches to understanding adolescent brain development: translation and transition. Casey denotes that translational studies

attempt to understand age-typical behavior from an animal-based, evolutionary perspective, shedding light on adaptive factors inherent to typical adolescent behaviors. For example, novelty seeking, spending time with peers, and embracing increasing independence are actually not unique behaviors to human beings (Spear, 2010), and are in fact typical across mammalian species. While these behaviors do have risks, they also have many adaptive functions, such as increasing the probability of reproductive success or attaining additional resources for food (Crockett & Pope, 1993; Irwin & Millstein, 1986; Spear, 2010), or even increasing one's ability to face challenges alone (Csikszentmihalyi & Larson, 1987; Daly & Wilson, 1987; Meschke & Silbereisen, 1997). Transitional studies, on the other hand, emphasize the importance of understanding developmental transitions across the span of childhood to adolescence, and adolescence to adulthood (Casey, 2015). Instead of focusing on distinct and separate stages of development (i.e., infant, child, adolescent, adult, etc.), transitional studies focus on understanding developmental processes in sequence in order to robustly understand the cumulative consequences of interacting systems (Casey, 2015; Masten & Cicchetti, 2010).

Youth and the "Reward Center" of the Brain. In the years preceding adolescence (Galvan, 2010), the brain's reward center, or the system in our brain that drives behavior toward seeking pleasurable stimuli, like food, sex, and alcohol or drugs, undergoes rapid maturation. This reward center consists of various pathways, with a primary pathway being the mesolimbic dopamine system—which comprises the ventral tegmental area (VTA) and nucleus accumbens (NAC). As a young person's reward center matures, they are better able to discriminate between less meaningful and more meaningful rewards, making them increasingly selective about what "reward" they want to pursue. In other words, adolescents are drawn to engage in highly stimulating behaviors to activate their brain's reward center. By directly binding to receptors in

the brain, psychoactive substances quickly fulfill a young person's developmentally driven desire for stimulation.

Youth and the Development of the Prefrontal Cortex. A young person's prefrontal cortex—the area of the brain responsible for executive functioning that influences self-monitoring, error correction, and impulse control—does not fully mature until one reaches their mid to late twenties (Galvan, 2010). Research asserts that an immature prefrontal cortex makes the brain's reward center more vulnerable to developing changes in one's brain that can ultimately lead to the neurological development of addiction (Casey et al., 2008).

Youth and the Optimistic Bias. By nature of having a developing brain, young people often see the world through what researchers have come to call the "optimistic bias," the belief that they are invincible and that tragic consequences of risky actions would "never happen to me" (Arnett, 2000). Optimistic bias often leads young people to underestimate the impact that drug use may have on their lives. This way of seeing the world is especially dangerous considering the highly powerful and lethal nature of illicit opioids like fentanyl. Gunn et al. (2021) found that people between the ages of 18-25 seemed to believe they were more immune to fentanyl overdose when compared to people over the age of 35, who perceived fentanyl as more lethal and therefore made more attempts to avoid the substance.

The Impact of Peer Relationships on Youth Substance Use. Research shows peer-to-peer relationships can negatively impact youth substance use, with many studies indicating a positive association between drug use and connection to peers who also use drugs (Li et al., 2017; Osborne et al., 2020). In a recent systematic review, Nawi et al. (2021) explored risk and protective factors for drug use among adolescents. In this study, it was found that a main risk factor within the community risk factor domain was having peers who also use drugs (Nawi et

al., 2021). In a quantitative study among emerging adults ages 18-29, researchers (Keyzers et al., 2020) differentiated between negative peer pressure—or peer pressure to use substances—and positive peer pressure—or peer pressure to socialize. Those who experienced more negative peer pressure were more likely to engage in binge drinking and struggle with a lifetime of alcohol and cannabis use than those in the positive peer pressure group (Keyzers et al., 2020).

While peer-to-peer relationships can lead to increased substance use for a young person, this is not always the case; peer relationships can also be a positive influence. Evans et al. (2020) conducted a study on their Living the Example (LTE) program, a George Washington University-affiliated program within 3 Maryland high schools which trains adolescent youth ambassadors to develop and spread prevention messages within their own social media networks and through involvement in school activities. Evans et al. (2020) found that overall, the LTE program had a protective effect, with exposure to social media messages aimed at preventing youth substance use ultimately leading to reduced desire to use or sell drugs. Other protective factors that often involve peer-to-peer relationships include connectedness to one's school environment and regular involvement in school activities (Nawi et al., 2021). According to Spillane et al. (2020), the availability of school activities and a child's involvement in these activities impacted middle schooler's use of marijuana, with lower availability and engagement leading to increased use. Zuckerman et al. (2020) found that the sense of connection a young person feels to their school has the potential to protect against drug abuse, therefore underscoring the importance of including schools into discussions of youth substance abuse prevention.

Evidence-Based Treatment of Opioid Use Disorder

Currently, the first-line approach to OUD treatment includes a combination of MOUD treatment, with either an agonist or antagonist medication, in combination with multiple other

psychosocial services (Peavy, Saxon, & Friedman, 2023). Regulatory requirements in the United States highly encourage individuals in MOUD treatment to also pursue adjunctive psychosocial treatment, although the only form of MOUD treatment that currently requires patients to also receive addiction counseling is methadone treatment. Settings that prescribe buprenorphine, however, are only required to have either the capacity to provide in-office counseling services or to refer patients out to psychosocial treatment.

Access to evidence-based treatment remains very challenging for youth with OUD. Alinsky et al. (2020) conducted a retrospective cohort study to assess the percentage of youths receiving timely evidence-based addiction treatment, which they define as a claim for behavioral health services, for buprenorphine, methadone, or naltrexone prescription or administration, or for both behavioral health services and pharmacotherapy within 30 days of an overdose incident. According to their findings, less than one third of youth had access to timely addiction treatment, and only one in 54 youth received the recommended evidence-based pharmacotherapy (Alinsky et al., 2020). Approximately 68.9% of youth with opioid-related overdose and continuous enrollment in the study for at least 30 days after overdose did not receive any addiction treatment within this 30-day post-overdose incident period. Only 29.3% of these youth received behavioral health services alone, and only 1/9% received pharmacotherapy (Alinsky et al., 2020). Youth who survived a heroin overdose were much less likely than youth who survived other opioid related overdoses to get any kind of treatment after their overdose, with an adjusted odds ratio of 0.64 (Alinsky et al., 2020).

Evidence-Based Behavioral Therapy

As previously noted, a combination of MOUD treatment—with either an opioid agonist or antagonist—and adjunctive psychosocial treatment is regarded as the first-line treatment for

OUD (Peavy, Saxon, & Friedman, 2023). This first-line approach also accounts for a patient's potential need to undergo medically supervised withdrawal in order to begin an antagonist medication like naltrexone. While this combination of treatments is considered the first line-approach, it is also true that many patients prefer to seek psychosocial treatment alone, which is also referred to as nonmedication treatment. Typically, when an individual pursues nonmedication treatment, multiple psychosocial modalities are employed.

Contingency Management (CM) is an incentive and reinforcement-driven behavioral intervention that is typically added to other interventions like counseling and Cognitive Behavioral Therapy (CBT; Davis et al., 2016). CM has consistently been found to be an effective treatment for OUD and overall aims to decrease substance use and increase engagement in treatment.

Motivational Interviewing (MI), a psychotherapeutic intervention that was designed to explore ambivalence to changing behavior is frequently used to treat patients with OUD (Miller & Rollnick, 1991). Many clinical trials have found MI helps reduce substance use; a smaller amount of clinical trials have also shown that MI is effective at reducing opioid use among patients with OUD (Saunders et al. 1995; Smedslund et al., 2011).

CBT—and other similar therapies like Acceptance and Commitment Therapy (ACT)—can also help individuals with OUD increase awareness of their thoughts, feelings, physical sensations, behaviors, and most important values in life. While many clinical trials of CBT for OUD have suggested efficacy, others have produced mixed results (Gregory & Ellis, 2020; Kouimtsidis et al., 2012; Magill & Ray, 2009; Miotto, et al., 2012). Nevertheless, CBT skills can be very helpful to patients with OUD who may struggle to skillfully respond to triggers or make health-promoting behaviors in high-risk situations (Peavy, Saxon, & Friedman, 2023).

Other helpful psychosocial interventions or nonmedication treatment approaches include addiction counseling—a term broadly used to describe individuals and group therapies who encourage abstinence, mutual help groups such as Narcotics Anonymous (NA), and peer-support communities like Medication-Assisted Recovery Services. It is recommended that clinicians coach their patients to help prepare them to maximize the benefit of any mutual help groups (Peavy, Saxon, & Friedman, 2023). Currently, there are no randomized clinical trials that test the efficacy of mutual help groups for patients with OUD.

Within primary care practice, a common behavioral health intervention for OUD treatment that can be implemented by any interdisciplinary team member including non-physicians is Screening, Brief Intervention, and Referral to Treatment (SBIRT; Levy et al., 2016). To screen youth for substance use, including opioid use, team members can employ the use of validated brief screening tools. After screening is complete, this team member can then provide the youth with a brief intervention, which can simply come in the form of affirming the youth's choice to be vulnerable and open about their use. Psychoeducation can then be provided to the youth as another form of brief intervention. It is important to note that brief interventions for opioid use have been minimally studied. However, there is a robust evidence base on the impact of brief intervention on reducing youth alcohol and marijuana use (Mitchell et al., 2012), therefore suggesting that brief interventions may deter youth from intensifying or continuing their use.

In 2017, Carrol and Weiss published a review of randomized control studies that explored the efficacy of adding behavioral health interventions to office-based buprenorphine maintenance treatment for adults with OUD. Carroll and Weiss found that high-quality medical management of OUD with buprenorphine may be enough for some patients to succeed. However, due to a lack of data on the characteristics of individuals who do—and individuals who do not—find

medical management sufficient, the authors suggest that providers take a stepped-care approach to OUD treatment. In this stepped-care model, Carroll and Weiss recommend all patients begin on a relatively non-intensive behavioral health regimen, with the possibility of increasing care for those who struggle during early stages of buprenorphine treatment. Rather than focusing on which behavioral intervention is most effective in helping individuals with OUD, the authors encouraged further research on how to enhance patient retention in buprenorphine treatment. According to Hadland et al. (2018), timely receipt of buprenorphine treatment was associated with higher rates of care retention among youth with OUD compared with only care retention rates among youth with OUD receiving behavioral treatment alone.

The frequently co-occurring nature of counseling services and medical buprenorphine treatment make it very challenging to determine the isolated effect of behavioral interventions beyond the therapeutic benefit of buprenorphine. Within the existing four randomized controlled trials on buprenorphine treatment for youth (Marsch et al., 2005; Marsch et al., 2016; Woody et al., 2008), the subjects included youth receiving counseling services—from cognitive-behavioral interventions to psychoeducation to family therapy. Subjects in Marsch et al.'s (2016) trial also received contingency management through a community reinforcement approach (CRA; Budney et al., 1998), in which clinicians and clients collaborated to determine goals and conducted an analysis of one's substance use (Budney et al., 1998).

While it is challenging to determine the isolated impact of behavioral intervention on OUD treatment, observational studies help determine which interventions are helpful to youth with OUD. Observational studies of youth-specific residential programs indicate that 12-Step AA or NA attendance can improve abstinence outcomes among this age cohort (Kelly et al., 2005; Labbe et al., 2013). However, a considerable body of evidence also shows that programs like

these produce high rates of drop out and relapse among youth (Matson et al., 2014; Pecoraro et al., 2013). Motivational Interviewing (MI) strategies have also been shown to be effective for youth, especially for those who find themselves in a pre-contemplative state (Grenard et al., 2006). Lastly, many observational studies point to the added benefit of approaching youth OUD treatment from a systems lens, integrating key individuals from a young person's school or family into treatment (Clemmey et al., 2004; Fishman et al., 2003; Perry & Duroy, 2004).

Withdrawal Management

Another component of OUD treatment is the management of opioid withdrawal, which involves addressing and alleviating withdrawal symptoms until opioids are discontinued. Opioid withdrawal is a clinical syndrome that can cause severe discomfort, lead individuals back toward drug-seeking behavior, and can prevent an individual from wanting to or physically being able to engage in treatment (Srivastava et al., 2020). Although opioid withdrawal is frequently regarded as non-life threatening, symptoms of withdrawal from opioids can lead to death by way of extreme fluid loss and electrolyte abnormalities (Srivastava et al., 2020). Therefore, opioid withdrawal must be carefully managed and monitored. Management and monitoring often occurs in inpatient or residential treatment facilities and is very challenging and dangerous to manage without access to medical support (Center for Evidence Based Policy, 2017).

Some addiction experts note that withdrawal management can be an essential part of the process of OUD recovery but should not be viewed as comprehensive treatment in and of itself (Center for Evidence Based Policy, 2017). Rather, withdrawal management should be considered the *first* step in the process of healing from OUD; most people will resume drug use if withdrawal management is the only treatment intervention they receive (Center for Evidence Based Policy, 2017; NIDA, 2016). Furthermore, withdrawal management can actually put people

at risk for opioid poisonings and death, as withdrawal results in loss of opioid tolerance, which leaves the body ill prepared for opioid doses previously consumed prior to opioid withdrawal.

Medications for Opioid Use Disorder (MOUDs): Methadone, Naltrexone, and Buprenorphine

The third evidence-based treatment method for OUD is the use of opioid agonist and antagonist medications, referred to in this study as medications for opioid use disorder, or "MOUDs." There are three FDA-approved MOUDs: methadone, naltrexone, and buprenorphine (CDER, 2019). For the purposes of the current study, more information will be provided on buprenorphine than methadone or naltrexone. The present study focuses solely on buprenorphine because it is approved for the use of individuals 16 and older in outpatient medical settings, because of its specific partial-agonist qualities, and because it is frequently the medication of choice for outpatient medical providers engaging in MOUD treatment. Methadone has strict age- and setting-related regulations and is also a chemically different medication from buprenorphine—albeit a very effective and important medication for OUD treatment. According to SAMHSA, Naltrexone is not recommended for individuals under the age of 18, and also operates very differently as an MOUD treatment given that it is a full agonist.

Naloxone is not a MOUD, but rather intended for immediate treatment and must be administered as quickly as possible to avoid prolonged respiratory depression or damage to the central nervous system (CDER, 2020). Naloxone is commonly referred to by the brand name of NARCAN and less commonly Evzio, is a medication that rapidly reverses an opioid overdose Any patient prescribed opioid pain relievers or MOUDs should discuss the availability of naloxone with their provider (CDER, 2020).

Defining and Describing Methadone

Methadone is a full opioid agonist, meaning that it fully activates the opioid receptors in the brain, therefore reducing cravings and symptoms of withdrawal (Substance Abuse Mental Health Services Administration [SAMHSA], 2023b). Methadone has been used for over forty years and is supported by a large body of evidence (Mattick, 2003). Methadone is offered in outpatient, state-funded and accredited opiate substitution treatment agencies that also provide counseling services and support methadone's daily or almost-daily dosing (Norlund et al., 2004). To be considered eligible for methadone maintenance treatment, anyone under the age of 18 must have (SAMHSA, 2015):

> two documented unsuccessful attempts at short-term detoxification or drug-free treatment within a 12-month period to be eligible for maintenance treatment. No person under 18 years of age may be admitted to maintenance treatment unless a parent, legal guardian, or responsible adult designated by the relevant State authority consents in writing to such treatment. (Guideline 42 CFR 8.12.e.2)

Current FDA-approved methadone products include: Dolophine (methadone hydrochloride) tablets and Methadone (methadone hydrochloride) oral concentrate (CDER, 2019).

Defining and Describing Naltrexone

Naltrexone is approved by the FDA to treat both alcohol use disorder (AUD) and OUD and a recommended treatment for anyone over the age of 18 years old (SAMHSA, 2023c). Naltrexone can be prescribed by any practitioner who is licensed to prescribe medications and is indicated for OUD treatment to be administered as an extended-release injectable called Vivitrol for patients with both OUD and AUD (SAMHSA, 2023c).

Naltrexone is a full antagonist of the mu-opioid receptor and completely blocks the euphoric effect of opioids (Kleber, 2007). It is very hard for an opioid to surpass the blocking effect of naltrexone and is therefore not uncommon for individuals on naltrexone to attempt to

take a large amount of opioids in an effort to push past this blocking effect, which poses a great risk for overdose (NASEM, 2019; SAMHSA, 2023c,). Naltrexone is indicated for use with highly motivated patients, ideally those who have been able to successfully abstain from opioid use and are not currently using opioids (Kolodny et al., 2015). Naltrexone is a relatively newly approved MOUD, and therefore has limited evidence supporting its efficacy, especially when compared to buprenorphine or methadone (Banta-Green & Cooley, 2018). Currently, no randomized efficacy trials and very few studies in general exist that explore the efficacy of extended-release naltrexone among youth with OUD (Borodovsky et al., 2018; Camenga et al., 2019).

Defining and Describing Buprenorphine

Buprenorphine is a partial-opioid agonist, which means that it only partially activates the opioid receptors in the brain (SAMHSA, 2023d) Buprenorphine was approved for use by the FDA in 2002 for individuals over the age of 16 (SAMHSA, 2023d). Buprenorphine can be, and often is, prescribed in a combination formulation with naloxone (SAMHSA, 2023d). It can be prescribed in any medical facility, as well as in opioid treatment programs (SAMHSA, 2023d). Up until this year, a physician could prescribe buprenorphine only if they took an eight-hour course—or a 24-hour course for PA's and ARNPs—and received a X-Waiver from the Drug Enforcement Administration (DEA] (SAMHSA, 2023a).

While film and tablet formularies of buprenorphine are approved for use by individuals over the age of 16 years old, long term subcutaneous depot formulations or injections are only approved for use by individuals 18 and over (SAMHSA, 2023d; Prokop et al., 2022). The current FDA-approved, long term subcutaneous depot formulation of buprenorphine is called Sublocade (CDER, 2019). The following list includes current FDA-approved buprenorphine products

approved for treatment of OUD: Bunavail (buprenorphine and naloxone) buccal film, Cassipa (buprenorphine and naloxone) sublingual film, Probuphine (buprenorphine) implant for subdermal administration, Sublocade (buprenorphine extended-release) injection for subcutaneous use, Suboxone (buprenorphine and naloxone) sublingual film for sublingual or buccal use, or sublingual tablet, Subutex (buprenorphine) sublingual tablet, and Zubsolv (buprenorphine and naloxone) sublingual tablets (SAMHSA, 2023d).

Evidence in Support of Providing Youth with Access to Extended-Release Buprenorphine (XR-BUP) or "Sublocade." XR-BUP—or Sublocade—appears to be a particularly promising intervention for youth OUD treatment. However, limited research exists as Sublocade is still a relatively formulary of buprenorphine in the United States. Prokop et al. (2022) recently published a case study of a 17-year-old with OUD whose regular, twice-a-day dosing of buprenorphine films was interrupted when he got incarcerated; this interruption influenced his eventual relapse on fentanyl. According to Prokop et al. (2022), the frequency of youth incarceration in juvenile detention facilities is the approval of Sublocade for youth with OUD who are under the age of 18 years old. Current age criteria represent a problematic gap in access for youth with OUD to life-saving treatment.

Wenzel et al. (2021) published a pilot study in which 22 young adults ages 18-25 were placed in either a historical treatment as usual (H-TAU) intervention group or an extended-release medication for OUD (XR-MOUD) group, including the option of extended-release naltrexone (XR-NTX) or extended-release buprenorphine (XR-BUP), or Sublocade. Those in the XR-MOUD group who were either taking XR-NTX or XR-BUP also received 12-24 weeks of Youth Opioid Recovery Support (YORS) intervention (Fishman et al., 2020). YORS is a multi-component intervention to improve treatment engagement and MOUD adherence for young

adults transitioning from an acute inpatient stay to outpatient treatment (Fishman et al., 2020). Components of the YORS program include home delivery of XR-MOUD, family or significant other treatment involvement with an emphasis on medication adherence, assertive outreach to help maintain contact through chaotic trajectories of treatment (i.e., ambivalence, relapses, lapses in care, or periods of no contact), and contingency management incentives (Fishman et al., 2020). While studies have shown YORS to be a promising intervention, most studies have been limited to youth seeking XR-NTX treatment and not XR-BUP treatment (Wenzel et al., 2021).

Wenzel et al. (2021)'s study showed that YORS is a feasible and effective intervention that is enhanced with expanded patient-choice of either XR-NTX *or* XR-BUP. Compared to youth in the H-TAU group, youth involved in the YORS intervention received more MOUD doses at 12 weeks and 24 weeks, had lower rates of relapse at both 12 and 24 weeks, and also had greater cumulative relapse-free survival rates over a 24-week period. While results did not differ by medication choice—between XR-NTX or XR-BUP, these results nonetheless highlight the need to expand access to and choices of XR-MOUD interventions for youth with OUD.

Phases of Buprenorphine Treatment: Induction, Stabilization, and Maintenance. The first phase of buprenorphine treatment is the induction phase, during which patients who are currently dependent on opioids must reach a state of moderate opioid withdrawal before receiving their first dose of buprenorphine (Kraus et al., 2011). If managed well, patients are typically instructed to stop taking opioids and wait until they begin to develop moderate withdrawal symptoms, which can be measured by the Clinical Opioid Withdrawal Scale (COWS; Wesson & Ling, 2003).

Once patients reach a moderate state of opioid withdrawal, they may then be given their first dose of buprenorphine. According to SAMHSA's (2021) practice guide to dosing

buprenorphine in primary care settings, on a patient's induction day, they can receive a dose of 2mg to 4 mg at a time, with the maximum, first-day recommended dosage being 8mg.

SAMHSA's (2021) practice guide to dosing buprenorphine in primary care settings refers to days two to seven as the stabilization phase of beginning buprenorphine treatment. Within this window of time, a patient's daily dosage should not exceed 24mg. On days three, four, five, six and seven, patients should ideally be receiving and tolerating the same dosage, but can up their dosage minimally if they continue to not stabilize by the time of their next dosing that day. Ideally, after one week of the induction and stabilization phase, a patient should reach the final stage of maintenance, where their dosage stays consistent, and they are able to truly begin to experience the full benefit of buprenorphine OUD treatment.

Evidence-Based for Buprenorphine for Youth: Review of Randomized Controlled Clinical Trials. Four randomized, controlled clinical trials support buprenorphine as a safe and effective method of treating youth OUD, without serious, adverse side effects (Gonzalez et al., 2015; Marsch et al., 2005; Marsch et al., 2016; Woody et al., 2008). Furthermore, all four trials evaluated the effect of some form of CBT intervention to improve maladaptive thinking and behavioral patterns.

Marsch et al. (2005) found that buprenorphine was better than clonidine at lowering rates of illicit opioid use among adolescents ages 16-18 years old during a 28-day treatment period. In Woody et al.'s (2008) randomized trial, researchers found that eight weeks of buprenorphine treatment followed by a four-week taper was more effective at curbing illicit opioid use and retaining adolescent participants in treatment than a two-week buprenorphine medically managed withdrawal. Amongst 80 youth ages 16-25, Gonzalez et al. (2015) compared buprenorphine-naloxone plus memantine (either 15 or 30mg) with buprenorphine-naloxone plus placebo.

Results of this study revealed that youth given 30mg of memantine demonstrated improved rates of abstinence at three months compared to participants in the 15mg or placebo arm of the study. Lastly, in Marsch et al.'s (2016) study, youth ages 16-24 who were randomly assigned to either a 28- or 56-day buprenorphine treatment period benefited from having a longer treatment duration.

Overall, these studies reveal that buprenorphine leads to reduced risks in overdose related deaths and is therefore an integral instrument in promoting public health (Gonzalez et al., 2015; Marsch et al., 2005; Marsch et al., 2016; Woody et al., 2008). The primary outcome in all three of these trials was opioid abstinence as measured by urine drug toxicology. The three studies demonstrate that buprenorphine is more effective than clonidine withdrawal management, and that longer buprenorphine administration schedules are more effective than shorter withdrawal management administration schedules, resulting in higher rates of abstinence and treatment retention.

Common Myths and Misconceptions about Buprenorphine. Many pervasive myths about buprenorphine persist which exacerbate existing barriers, increase stigma, and contribute to misinformation and misunderstanding (Wakeman & Barnett, 2018). It is essential to dispel myths about buprenorphine to increase access to those who need it.

Another commonly cited myth is that buprenorphine is simply a "replacement addiction," substituting one addiction for another (Wakeman & Barnett, 2018). However, this perception is built upon a fundamental misunderstanding of addiction, physical dependence, and their associated behaviors. While individuals who take MOUDs will become physiologically dependent on medications like buprenorphine or methadone, when taken as indicated, these medications will not lead individuals to engage in the high-risk behaviors that are commonly

associated with substance use disorders (e.g., theft, violence, driving under the influence, sexual risk taking, suicide, etc.).

This feeds into another commonly touted myth, which is that treatment not involving medication management are more effective interventions for individuals struggling with substance use disorders (Wakeman & Barnett, 2018). However, there is no known study that provides evidence to support that this is true (Wakeman & Barnett, 2018). By contrast, there are decades of scientific evidence to support medication treatment. Harm-reduction approaches, or approaches that emphasize engaging "directly with people who use drugs to prevent overdose and infectious disease transmission, improve the physical, mental, and social wellbeing of those served, and offer low-threshold options for accessing substance use disorder treatment and other health care services" (SAMHSA, 2022, p.1)

Practitioners also often cite that prescribing buprenorphine is time-consuming and complicated (Wakeman & Barnett, 2018). However, providing patients with buprenorphine may be comparable to treating other types of chronic illnesses. Like any office-based visit, when prescribing buprenorphine providers can expect to discuss medication adherence, how to manage cravings, how best to titrate doses, and the need to monitor health trends by ordering laboratory testing.

Finally, a commonly cited concern of providing buprenorphine to individuals with OUD is the risk of it being diverted or sold to others for whom it has not been prescribed (Cicero et al., 2018). Inappropriate use and diversion of buprenorphine does occur, with Cicero et al.'s 2018 study revealing that in a sample of 303 adult respondents, 58% had used diverted buprenorphine. According to Cicero et al.'s findings, the primary reasons for use non-prescribed use included wanting to treat or prevent withdrawal symptoms, attempting to maintain abstinence from other

drugs or self-wean off opioids, using it as a substitute to get high when other preferred drugs are not available, or using it because access to other OUD treatment was not an affordable option for them. Only 4% of participants in Cicero et al.'s study indicated that they would use non-prescribed buprenorphine as their drug of choice, while 81% of participants reported that they would prefer to use prescribed buprenorphine, if available.

Access to MOUDs in Primary Care

MOUDs remain widely under-utilized and highly inaccessible for individuals of all ages seeking outpatient medical services in primary care, family medicine, and internal medicine settings (Andrilla et al., 2017; Arken et al., 2010; Buresh, et al., 2021; Hutchinson et al., 2014; Mauro et al., 2022). A recent cross-sectional, nationally representative study revealed that only 28% of people in need of OUD treatment report past-year MOUD use, including 0% of adolescents ages 12-17, 22% of youth ages 18-25, and 13.2% of adults over the age of 50 (Mauro et al., 2022). According to this data, the age cohorts with the highest rates of MOUD receipt were among adults ages 24-34 and 35-49, with 42.3% and 30.8% respective MOUD use-rates. The critical shortcomings in MOUD-accessibility revealed within this data highlight the need to increase efforts to address barriers to MOUD access, especially for youth.

PCPs are on the frontlines of treating individuals with OUD. Luckily, OUD can effectively be managed and treated in primary care settings, with a strong body of evidence supporting the integration of pharmacotherapy and addiction treatment into regular primary care practice (Buresh et al., 2021; Carney et al., 2018; Durkin, 2017; Fiellin et al., 2008; Fiellin et al., 2014; Hickman et al., 2018; Larochelle et al., 2017; O'Conner et al., 1996; Weinstein et al., 2017; Weisner et al., 2001). According to Buresh et al. (2021), primary care MOUD treatment is financially effective and improves outcomes for not only OUD but also other medical

comorbidities, particularly HIV and Hepatitis C (Edelman et al., 2014; Rich et al., 2018; Weiss et al., 2008). Furthermore, it has also been reported that patients view integrated, office-based, MOUD treatment as a more accessible and flexible setting of care than more traditional substance abuse residential treatment facilities or outpatient therapy (Fox et al., 2016).

Strong evidence supports buprenorphine treatment of OUD in office-based settings (Gibson et al., 2003; Haddad et al., 2015; Korthuis et al., 2016; O'Connor et al., 1996). Buprenorphine has been shown to substantially improve opioid abstinence, increase retention improve treatment outcomes, and significantly reduce the risk of mortality for adults with OUD. The large body of evidence in support of office-based buprenorphine treatment has helped to increase the number of adults able to access buprenorphine treatment in community health centers and primary care clinics (Center for Behavioral Health Statistics and Quality, 2013).

Barriers that Limit Access to Buprenorphine in Primary Care

In 2022, the Pew Charitable Trusts published a report which suggests targeted strategies to ease barriers that limit access to buprenorphine in primary care in Philadelphia (Budick, 2022). First, the report explained how the Drug Addiction Treatment Act of 2000 has been a major barrier to buprenorphine treatment access expansion, despite the original intention of the Act; while it was meant to increase access to buprenorphine treatment in primary care settings, this act discouraged buprenorphine prescribing as it required providers to get additional training and receive special permission from the Drug Enforcement Administration (DEA).

Second, the Pew Charitable Trusts report (Budick, 2022) cited stigma as a major concern and impediment to buprenorphine access expansion in primary care. Relatedly, research shows that stigma as a major hindrance in healthcare delivery (Van Boekel et al., 2013) in the United States and in curbing the U.S. opioid epidemic (Tsai et al., 2019). When it comes to stigma, the

report explained how the need to complete additional training and receive a waiver exacerbates stigma toward OUD treatment, and highlighted that providers often view OUD patients as a particularly challenging population to treat (Budick, 2022). Patients are impacted by this perceived stigma, and relatedly often struggle to seek out care for fear that they will be treated poorly or have trouble finding a provider who is even to treat them (Budick, 2022). In Barry et al.'s (2014) national online public opinion survey, respondents held significantly more negative views about individuals with a drug addiction versus an individual with a mental illness. Specifically, more participants were unwilling to have a person with a drug addiction marry into their family or work closely with them on a job and were more open to discriminatory practices, were skeptical about the efficacy of drug addiction treatment, and were more likely to reject proposed policies that would help individuals with drug addictions (Barry et al., 2014).

Third, the Pew Charitable Trusts report (Budick, 2022) described how providers often feel there is a lack of institutional and peer support for buprenorphine prescription, and noted how providers want and need more support, especially regarding highly complex cases. This is understandable, given that PCPs in the United States are currently experiencing extremely high rates of high rates of burnout, with levels of burnout only worsening during and after the COVID-19 pandemic (Nishimura et al., 2021; Nishimura, 2022; West et al., 2018). Additional barriers cited in this report included but are not limited to insurance reimbursement, provider capacity and time, and knowing little about buprenorphine (Budick, 2022).

Finally, the Pew Charitable Trusts report (Budick, 2022) offered multiple suggestions for how to increase access to buprenorphine treatment in primary care for individuals of all ages. These suggestions included increasing educational campaigns for patients and providers, augmenting the primary care workforce, incentivizing primary care physicians to prescribe,

increasing telehealth investment, increasing peer support and mentorship for providers and patients, and investing in more robust medical training in medical schools and continuing medical education. Additionally, the report strongly asserted the importance of enforcing federal law that requires parity for mental and behavioral health services, and in general increasing funding for treatment. Lastly, the report urged people to fight against the stigmatization and mischaracterization of addiction and encourage others to see OUD as a chronic disease like any other treated within primary care settings.

A Recent, Promising Shift in Provider Attitudes toward Primary Care MOUD Prescription

Recent studies indicate that provider attitudes toward MOUD may be changing, especially among newer generations of physicians (Kennedy-Hendricks et al., 2020; McGinty et al., 2020; Peterson et al., 2020. There is a growing interest among medical residents and new medical professionals to provide their patients with access to MOUDs (Kennedy-Hendricks et al., 2020; Peterson et al., 2020). As such, there is a movement to integrate teachings about the treatment of OUD into medical school training today (Haffajee et al., 2018; Tesema et al., 2018). Recent data reveals that current primary care trainees are more inclined to view MOUDs as effective, and more likely to express interest in working with this population, than a comparison group of actively practicing PCPs (Kennedy-Hendricks et al., 2020; McGinty et al., 2020; Peterson et al., 2020).

Youth Access to Buprenorphine in Primary Care

Despite the American Academy of Pediatrics' recommendation that buprenorphine be used to treat youth with OUD in primary care, youth struggle to access buprenorphine in primary care settings and have low rates of buprenorphine treatment retention (Borodovsky et al., 2018; Feder et al., 2017; Hadland et al., 2017; Hadland et al., 2018; Levy, 2016; Levy, 2019; Olfson et

al., 2020). Increasing youth access to MOUDs in primary care should be considered a preventative measure, considering that approximately 2 in 3 adult individuals with OUD first used opioids before they turn 25 years old (Spencer & Weathers, 2020); we must work to ensure youth have access to life-saving treatment *when*—or even before—they think they need it.

Results from a survey of a national prescription database that covered 72-92 percent of the US population from 2010-2018 show that PCPs' treatment of youth ages 15-24 years old declined significantly, despite rising rates of OUD overdoses and overdose-related deaths in this age cohort during at time (Olfson et al., 2020). In contrast, this database also revealed that general rates of buprenorphine treatment by PCPs increased from 12.9 people per 10,000 in 2010 to 27.4 in 2018 (Olfson et al., 2020). The discrepancy between overall increase in rates of buprenorphine treatment and rates specific to treatment of youth highlights the distinct difficulties youth face when seeking buprenorphine treatment in primary care.

In Bagley et al.'s (2021) cross-sectional study of youth ages 16–25 years old engaged in primary care and with a confirmed OUD diagnosis, receipt of medication for OUD (e.g., buprenorphine, oral naltrexone, or injectable naltrexone) was the lowest among youth ages 16–17 years old (14%) and the highest among youth ages 22-25 years old (39%). Among the group of 16–17-year-olds with OUD, only 10% received buprenorphine (Bagley et al., 2021). For 18–21-year-olds with OUD, 28% received buprenorphine, and for 22–25-year-olds, 37% percent received buprenorphine (Bagley et al., 2021). According to Olfson et al. (2020), the highest rates of buprenorphine use within primary care is among patients ages 25-34 years old, while the lowest rates of buprenorphine use is among patients ages 15-24. A 2017 retrospective cohort study revealed that only one in four commercially insured youth with OUD will receive

pharmacotherapy (buprenorphine or naltrexone), revealing disparities based on sex, age, and race/ethnicity (Hadland et al., 2017).

Present Study

Despite the pressing need to increase a youth's ability to access buprenorphine in primary care, no known qualitative studies exist that explore PCP perspectives on existing barriers. To fill this identified gap in the literature, the present study employed a CGT methodology to analyze qualitative data collected from seven, semi-structured interviews with PCPs. Each qualitative interview was driven by the following questions: Do you prescribe buprenorphine to youth with OUD? Why or why not?

It is hoped that the findings of this study can help professionals carefully and strategically determine next steps in treatment, training, policy, and advocacy. After all, if we do not understand why those with the power to prescribe are not prescribing, how can we create meaningful practice-improvement and regulatory change to help youth with OUD access this life-saving medication?

CHAPTER III: METHOD

The objective of this study was to examine factors that limit and enhance PCP prescription of buprenorphine to youth with OUD seeking outpatient medical services. To generate a theory rooted in data, the present study design was informed by a Constructivist Grounded Theory (CGT; Charmaz, 2006) approach, which centers the experience of participants, as well as researcher reflexivity and awareness of bias. Qualitative approaches like CGT allow researchers to "ground" theory in novel data, utilizing both inductive (i.e., developing codes from raw data) and deductive (i.e., using codes to drive more in-depth questioning and analysis) methods of analysis. By collecting and analyzing a substantial amount of data, researchers are able to identify clear patterns and witness connections between data emerge. Researchers are able to root their CGT in the original data, utilizing the words and experiences described by participants to help explain the phenomenon being studied.

Seven virtual interviews were conducted with participating PCPs. Interviews were independently transcribed and coded by the primary researcher. Each semi-structured interview lasted approximately 30-45 minutes and centered around the following questions: Do you prescribe buprenorphine to youth with OUD? Why or why not? Using a CGT methodology, the primary researcher used participant data to develop an original CGT that unveils barriers that limit access to buprenorphine for youth in primary care.

Research Methodology: Constructivist Grounded Theory

To understand why youth with OUD struggle to access buprenorphine in primary care, we must engage with the PCPs who have the power to prescribe this medication to them. Qualitative approaches are particularly useful when attempting to understand a phenomenon that remains largely misunderstood. By collecting and analyzing a substantial amount of data, the

researcher is eventually able to witness clear patterns and connections emerge. The researcher roots their theory in the original data and explain the previously indecipherable phenomenon.

One of the most widely used qualitative research methods is Grounded Theory (GT; (Bryant & Charmaz, 2007). Since its inception, GT has undergone multiple iterations of development and change. Today there are three main methods: Glaserian or Classic GT, Straussian or Evolved GT, and Constructivist Grounded Theory (CGT; Bryant & Charmaz, 2007). While the three main genres of GT share many similarities, there are distinct differences in each genre's philosophical assumptions, position of the researcher, use of the literature, and approaches to coding, analysis, and GT development. Below is a brief explanation of the three kinds of GT, with a more in-depth explanation of CGT which is the specific methodology used in the present study.

Types of Grounded Theory

Glaserian Grounded Theory

In this version of GT, Glaser (1978) asserted that the goal of GT was to generate an original, conceptual theory to explain an existing, poorly understood pattern of behavior. Both Straussian (e.g., Evolved) and Constructivist genres of GT evolved from this traditional, Glaserian genre of GT.

Straussian Grounded Theory

Straussian GT is profoundly influenced by symbolic interactionism and heavily influenced by the works of Strauss, Corbin, and Clarke. In this genre of GT, special attention is paid to the subjective meaning humans place on objects, behaviors, or events based on their perception of truth (Clarke, 2005; Griffin, 1997).

Constructivist Grounded Theory

CGT, the third genre of GT, was developed by Charmaz (2006), a symbolic interactionist. While CGT is built upon the same symbolic interactionist principles of Straussian GT, CGT is also rooted in constructivism (Chamberlain-Salaun et al., 2013). According to constructivism, researchers co-construct meaning with participants (Bryant & Charmaz, 2007). Furthermore, the focus of research is on how participants construct meaning in relation to the area of research inquiry (Chamberlain-Salaun et al., 2013).

The current study was conducted using a systematic, CGT approach, developed by sociologists Barney Glaser and Anslem Strauss in 1967. This approach was chosen instead of other qualitative approaches because of the emphasis CGT places on researchers actively engaging with participants and co-constructing experience and meaning alongside participants through the process of in-depth coding and analysis. As a behavioral health provider who has worked alongside many outpatient medical providers, I was already aware of many barriers informally reported to me throughout my time working in outpatient medical clinics. Coming into this study with some preconceived knowledge and awareness, I wanted to capitalize on said knowledge and experience and closely engage in the illumination of barriers alongside participants. Other qualitative research methodologies place a large emphasis on distancing the researcher from the participant, and do not celebrate researcher's first-hand knowledge in the way that CGT does.

Key Concepts and Processes of CGT

Theoretical Sensitivity

CGT begs researchers to keep an open mind, but also keep a close eye on what is and is not significant and meaningful to the overarching CGT theory. Therefore, the process of

theoretical sensitivity encompasses the entire research process of a CGT study. Theoretical sensitivity is a complex concept that generally refers to a researchers' level of knowledge and awareness of the relevant body of literature. According to Glaser and Strauss (1967), theoretical sensitivity is the ability to identify when something is meaningful and significant to the ultimate development of the CGT. Strauss and Corbin (1990, p.4) define theoretical sensitivity as being able to "separate the pertinent from that which isn't." Birks and Mills (2015, p.181) assert that theoretical sensitivity allows the researcher to 'recognize and extract from the data elements that have relevance for the emerging theory." Essentially, as a researcher becomes more immersed in their research, the more their theoretical sensitivity will increase (Birks and Mills, 2015). Hoare et al. (2012) note that to achieve heightened theoretical sensitivity," researchers must "dance with the data" (pp. 240–241).

In traditional GT, it is expected that researchers enter their data collection and analysis with limited knowledge or minimal predetermined thoughts, so that they can remain "sensitive to the data by being able to record and detect happenings without first having them filtered through and squared with pre-existing hypotheses and biases" (Glaser, 1978, p.3). Glaser even claimed that the researcher should attempt to go into traditional GT data collection and analysis as a tabula rasa or blank slate to legitimately develop theoretical sensitivity. This notion has encountered substantial criticism however, noting that it is impossible to rid oneself of hypotheses or biases. In response, specific strategies have been developed to enhance theoretical sensitivity throughout analysis.

Strauss and Corbin encourage a variety of techniques to "probe the data," or (e.g., waving the red flag, the flip-flop technique) to increase researcher sensitivity (Strauss & Corbin, 1998). While these methods are often associated with the Straussian method of GT, they can easily be

employed within the data analysis phase of a CGT approach. “Waving the Red Flag” refers to noticing when words such as “never” or “always” arise, the researcher should investigate and question the severity of this claim (Strauss & Corbin, 1998). For example, hearing these words in an interview may cause a researcher to probe, or to ask the participant to elaborate further in order to attune with the participant’s experience or contextual understanding of the phenomenon more deeply. The Flip-Flop technique refers to the process of flipping a concept “inside out” by looking at the opposite extreme understanding of the concept to further elucidate its meaning (Strauss & Corbin, 1998). Both of these techniques were employed throughout semi-structured interviews with participants as a way to encourage deeper reflection. It is important to note, however, that these methods do not produce new data, but rather encourage reflection about the data at hand and therefore provide alternative ways of interacting with and understanding it (Corbin, 1998). Researchers can employ these tools throughout the process of theory construction.

Treatment of Literature

In line with a CGT approach, a preliminary literature review was conducted before data collection and analysis began. Throughout the entire data coding and analysis process, the primary researcher continued to digest relevant literature to develop a nuanced and intimate understanding of the explored phenomenon. On November 1, 2022, the primary researcher ceased the process of literature review. Therefore, any studies published during or after this time will be excluded from the present study. Search terms used throughout this preliminary literature review included: primary care, buprenorphine, youth, opioid use disorder, medications for opioid use disorder, constructivist grounded theory.

Theoretical Sampling

According to Glaser and Strauss (1967), theoretical, or purposive sampling, is "the process of data collection for generating theory whereby the analyst jointly collects, codes, and analyzes his data and decides what data to collect next and where to find them, in order to develop theory as it emerges" (p.45). From a CGT lens, theoretical sampling is a method of generating further data from initially identified concepts, to either confirm or refute these concepts and therefore dictate any directional shifts in the way future interviews are conducted (Charmaz, 2000). As an example of this, a researcher might begin to develop initial concepts and then infuse these concepts into the questions they ask in subsequent interviews.

Charmaz (2000) asserts that the researcher inherently influences the research through interactions with participants and data, and therefore the researcher's experience is a deeply valued part of the analysis process. Considering that the researcher is a co-creator of knowledge in CGT, it is critical to differentiate theoretical sampling from "forcing the data," or imposing one's own bias on the data to force or fit it into preconceived categories rather than allowing the data to organically guide the process of category development. According to Charmaz (2014), one way to avoid forcing the data is for the researcher to employ reflexive strategies to promote theoretical sensitivity, including consistent memoing, a review of existing literature, and the use of strategies like those mentioned above (i.e., waving the red flag, the flip-flop method).

Coding

Coding is an essential component of CGT development. In fact, Charmaz (2006, pg. 46) refers to coding as the pivotal link between collecting data and developing a meaningful, emergent theory to represent these data. Coding helps the researcher to determine what is happening in the data and therefore begin to grapple with consequences and implications. The

present study engaged sequentially in open coding, axial coding, and theoretical coding, all while actively keeping and reflecting upon memos and engaging in constant comparative analysis (Figure 1). The present study's process of coding analysis is described within the section entitled: "Procedures and Analysis of Present Study."

Memoing

CGT asks that the researcher engage in observations and reflections on their own experiences, thoughts, assumptions, and biases throughout the entire data collection and analysis process. The main way that this is accomplished is through the process of memoing, in which the researcher takes note of anything they deem important—from what thoughts are going through your head, to how you think the codes and categories are developing over time, to how you think your theory is being represented and formed by the data. In this study, the researcher wrote a "memo" after each interview, and throughout each phase of coding. This allowed the researcher to not only track considerations relevant to theory development, but to also note biases and blind spots that may have come up throughout data collection and analysis.

Constant Comparative Analysis

A CGT approach places a large emphasis on the process of constant comparative analysis (Birks & Mills, 2015; Charmaz, 2004), an iterative process of data collection and analysis in which the process of data analysis begins before data collection is complete. Data collection and analysis are therefore completed simultaneously, allowing analyzed data to guide subsequent data collection. According to Gregory (2010), throughout constant comparative analysis, "Researchers need to make comparisons between empirical data and concept, between concept

and categories, among data, among categories, and among 'different slices of data' in order to reach higher levels of abstraction and advance with the conceptualization" (p.7).

Philosophical Assumptions of CGT

Guided by the core philosophical assumptions of symbolic interactionism and constructivism, the present study aims to unveil social meaning attributed to buprenorphine and how this social meaning influences the behavior or providers, considering these interactions within the unique context of the relationship between PCPs and youth with OUD. For the purposes of this study, buprenorphine can be considered an object; a medication with its own social meaning. The social meaning attached to the object of buprenorphine influences the way in which human beings interact with or integrate this object into their lives and practice. It is hoped that insights gleaned from this analysis may help to shift the social meaning attached with buprenorphine and therefore influence patterns of prescriptive behavior of PCPs.

Symbolic Interactionism

Underpinning the CGT methodology (Glaser & Strauss, 1967) of this study are the philosophical assumptions of symbolic interactionism (Charon, 1979)—a sociological theory associated with George Herbert Mead and Max Weber—which considers society as the product of a shared system of symbols, placing a particular emphasis on communication and language. Central to symbolic interactionism is the concept of the *self*, which forms the foundation for one's social interaction. The very existence of the self is a key distinguishing feature of human beings, as it enables an ability to communicate with oneself through internal communication,

reflection, and contemplation. To truly understand human interaction, therefore, one must also have a solid understanding of the self.

According to Blumer (1969), anything that can be pointed to or referred to is considered an object. He categorized three main types of objects: social objects (e.g., friends, family), physical objects (e.g., chair, house), and abstract objects (e.g., morals or ideas). As previously explained, because human beings have the capacity to reflect and engage in thought, they therefore regard themselves as social objects (Charon, 1979). However, in order to reflect on oneself as an object, one must take on the subjective perspective of others (Mead & Morris, 1934), which is referred to as "the looking glass self" (Cooley, 1902, p.189). Blumer (1969) asserts that the meaning attached to these objects is the byproduct of social interaction between human beings and objects. As a result, social meaning is attributed to every object—including the self—and this social meaning dictates the way in which human beings interact with other objects around them. By way of a process known as "joint action" (Blumer, 1969, p.17), our behaviors and our relationships with and understandings of the objects around us are deeply influenced by the behavior of others around us.

Constructivism

The research paradigm of constructivism denies that an objective reality exists, and instead asserts that reality is a construction of one's own mind (Guba & Lincoln, 1994). Constructivist researchers emphasize the subjective nature of the relationship between the researcher and the participant, and how both parties interact and create co-constructed meaning. Therefore, researchers are considered human beings who are very much so a part of the research endeavor and not objective observers. Inevitably, the "humanness" of researchers influences

study outcomes and findings. CGT is inherently rooted in constructivism, as it seeks to construct theory from learning about issues in individual's lives (Glaser & Strauss, 1967).

Design of Present Study

Research Questions

The research questions of the current study are: Do you (i.e., the PCP) prescribe buprenorphine to youth with OUD? Why or why not? After this question was posed, the researcher engaged participants in relevant and appropriate follow up questions based on participant response; the dialogue between researcher and participant was guided by a list of semi-structured interview questions and prompts (Appendix E). The goal of each semi-structured interview was to allow the conversation to flow organically, after an initial probing with the aforementioned research question, but to also gently guide questioning based on the researcher's awareness of current literature surrounding the topic of access to buprenorphine for youth in OUD seeking outpatient medical services.

Study Sample and Rationale

Participants included 7 PCPs from Washington state who currently work or have previously worked in a primary care/family medicine outpatient setting. Participants recruited for this study were PCPs, *not* patients, to further understand what barriers providers face when prescribing buprenorphine to youth. For more specifics on recruitment, inclusion, and exclusion criteria, please see below. While both patient and provider barriers hold importance and relevance to this study, the primary goal was to identify specific barriers within primary care systems that can be changed to increase access to buprenorphine for youth.

A Note on the Inclusion of an RN in Study Sample

Although initial recruitment was geared toward the recruitment of primary care prescribers, after engaging in a thorough literature review, it became clear that specialty OUD nurses are increasingly included in projects and grants for OUD treatment improvement. With this informed understanding, it was determined that recruitment should expand to include RNs. After this determination, all initial recruitment messaging and flyers that were initially sent out were updated to reflect the desire to recruit primary care "providers," which this researcher determined meant all MDs, ARNPs, PAs, DOs, *and* RNs. Throughout recruitment, only one RN reached out with interest to participate. Recruitment was limited to only MDs, ARNPs, Pas, and DOs for one out of four total months of recruitment; it is possible that one reason the present study only was able to recruit one RN was influenced by the shorter span of time spent including primary care providers—including RNs. It is also possible that more RNs may have been reached through recruitment through specific nursing listservs and networks, of which the primary researcher was not privy to.

Recruitment

From January 12, 2021, to May 3, 2022, potential voluntary participants were recruited through convenience sampling and the distribution of a digital flier (Appendix A). Of note, Appendices A and B show the most updated version of the present study's recruitment flier. From January of 2021 to February of 2021, verbiage within the digital flier and email text did not include RNs within the scope of eligible participants. This was updated after a review of literature revealed the importance of hearing RN perspectives on OUD treatment for youth in outpatient medical settings. Messaging within each flier and email included the following four eligibility questions (Appendix B): 1) Are you a licensed medical provider in WA state (i.e.,

MD, ARNP, PA, DO2) Or are you a Registered Nurse who has worked with prescribing practitioners in a primary care setting? 3) Do you currently—or have you previously—worked as, or with, a prescriber in a primary care setting in WA state? 4) Are you curious to chat about your experiences and understanding of providing youth with access to buprenorphine?

In total, the primary researcher sent out eight recruitment emails to known individuals working in Washington state outpatient medical clinics that provide primary care, family medicine, and internal medicine services. Targeted institutions included urban, suburban, and rural hospitals and community health clinics that provide primary care, family medicine, and internal medicine services. Those who received initial recruitment messaging were also encouraged to forward recruitment messaging to other eligible participants within their network. It is unknown how many individuals forwarded recruitment material to others within their professional networks, per this researcher's request.

Inclusion and Exclusion Criteria

To be considered eligible to participate, participants had to be a licensed medical provider currently or previously working in a family medicine, internal medicine, or primary care outpatient medical clinic in Washington state (e.g., MD, DO, ND, PA, NP, ARNP, RN). Of note, all eligible medical providers had prescriptive authority *except* Registered Nurses (RNs). RNs were included in eligibility criteria after a careful review of the literature revealed that OUD nurses are more and more frequently integrated into primary care MOUD treatment and in order to account for their valuable insight as medical providers who work closely with prescribers in outpatient medical settings. RNs, however, were only eligible to participate if they endorsed actively or previously working within a family medicine, internal medicine, or primary care outpatient medical clinic. All eligible participants must have an active, non-revoked license.

Furthermore, each participant must have access to either a phone or a laptop to participate in a recorded interview. Participants who did not meet all inclusion criteria were excluded from this study. Participants who met all inclusion criteria were then asked to answer a series of demographic questions (Appendix C) to determine age, race, gender, years in practice, experience working with youth with OUD, etc. Before participating in an interview, all participants were asked to read, sign, and turn in an informed consent document and demographics questionnaire via email (Appendix D).

Theoretical Saturation

Via these primary methods of recruitment, the primary researcher interviewed 7 participants, at which point theoretical saturation (Glaser & Strauss, 1967)—or the point at which no additional insights or issues emerged from new data and all conceptual categories have been determined and explored—was reached. According to Grady (1998),if researchers begin to hear the same comments repeatedly, this indicates that data saturation is being reached and therefore data collection can cease and data analysis can begin. Similarly, Legard et al. (2003) note that within an interview, "Probing needs to continue until the researcher feels they have reached saturation, a full understanding of the participant's perspective." Within the present study, it was determined that after analyzing the sixth participant transcript, no new themes were emerging, and rather, all themes fit within categories drafted by the primary researchers. Upon analyzing the seventh transcript, this redundancy was again observed, and therefore it was determined that theoretical saturation was reached. Upon reaching theoretical saturation, data collection ceased.

Procedures and Analysis of Present Study

Ethical Approval

Prior to commencing the research process, a proposal for this study was reviewed and approved by the Antioch University Seattle Institutional Review Board (IRB). An addendum was submitted to the IRB once RNs were included in inclusion criteria, and this addendum was formally approved before recruitment of RNs could commence. Several measures were instituted to ensure the best possible ethical conduct of this study and all ethical guidelines would be followed throughout the duration of this study.

Informed Consent

An electronic document of informed consent was distributed to each participant to sign prior to participating in the study (Appendix D). The informed consent document included information about the topics that might be covered during data collection and the possible inclusion of verbatim extracts and quotes used throughout qualitative coding. Participants were made aware of the anonymous nature of this study and that audio or video recordings will be immediately deleted and de-identified after transcriptions are complete. Participants were also informed that they have the right to decline answering any questions and may withdraw their participation and associated data at any time. Although no potential risk or harm for participants was identified by the primary researcher, participants were nonetheless granted access to resources should they experience anything harmful throughout their participatory process. All signed informed consent and demographic documents were encrypted and stored on a password-protected device. Participants were offered a copy of their informed consent form by email.

Confidentiality

All efforts were made to keep participant responses confidential throughout the duration of data collection and analysis, as well as the written and verbal presentation of findings. Participants were not asked to provide their first or last name, however, some participants accidentally included their names on their demographics questionnaire and were therefore given an anonymous identification number. Any corresponding data was only associated with this identification number. All potentially identifying information in the data was replaced with the letter "X," or a generic reference to the deleted word (i.e., "hospital name," "clinic name," "city/town name," "medical school name," etc.) to limit the possibility that participants or their patients could be identified.

Incentives

This study did not provide incentives for participation. Participants were told that the benefit of engaging in this research would be to inform clinical practices, which may improve treatment outcomes for youth with OUD.

Procedure

All interviews were conducted over Zoom and lasted approximately 30- 45 minutes. Interviews were semi-structured and based on the following research question: Do you (i.e., the PCP) prescribe buprenorphine to youth with OUD? Why or why not?

Interviews were recorded on Zoom and stored on the password protected laptop of the primary researcher. Audio recordings of each interview were independently transcribed by the primary researcher and uploaded to Delve data analysis software for the purposes of qualitative analysis, coding, and CGT formation. Data collection occurred over the course of four months, from February to May 2022. Data analysis began in March of 2022—during the middle of data

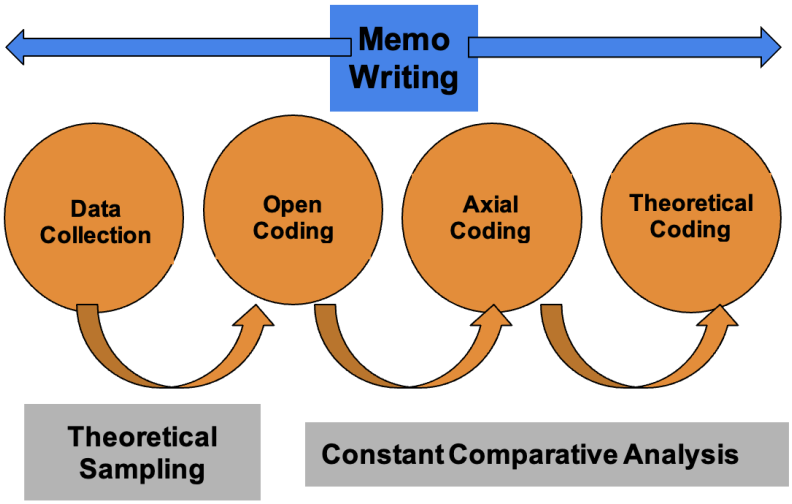
collection—in adherence with a true CGT approach which necessitates that the researcher begins initial data-analysis before reaching theoretical saturation to engage in more purposive sampling and interviewing.

Data Analysis and Coding

Data analysis occurred in three phases, moving sequentially from open coding to axial coding to theoretical coding (Figure 1). After theoretical coding was complete, the process of CGT development began until a theory was developed that was representative of the data. The primary researcher engaged in memoing throughout to enhance researcher reflexivity.

Figure 1

Sequencing of Constructivist Grounded Theory Data Analysis



Open Coding

The first stage of coding in the present study was *open* coding (Charmaz, 2006). During open coding, the primary researcher generated ideas directly from the data by conceptually labeling and categorizing content within each transcript. The primary researcher completed open coding by engaging in an active, line-by-line analysis of each participant interview transcript (Birks & Mills, 2015). Throughout this phase, labels were assigned to significant parts of the

data. The researcher actively engaged with the data, looking for implicit and explicit meaning, contemplating assumptions behind participant statements, implications of these assumptions, and seeking to identify key actions, happenings, processes to prepare for more precise analysis in the following, focused stage of coding. The researcher engaged in the process of constant comparative analysis throughout this initial coding phase, comparing data with codes, data with data, and codes with codes.

Axial Coding

The second phase of coding in the present study was *axial* coding (Charmaz, 2006). This phase asked the primary researcher to closely engage with the data, constantly compare new data to old data, refine open coding categories, and reassess what is really going on with the data—or what story the data is trying to tell. During axial coding, ideas from the open coding stage were organized into a set of central codes, or prominent and influential themes in the data. Through this process, the researcher transformed basic data into concepts and a theory to begin to emerge.

Building upon the work completed in the open coding phase, the primary researcher identified core categories, determined theoretical data saturation, engaged in constant comparative analysis, and created new memos—while making sure to reflect upon old ones as well (Birks & Mills, 2015; Glaser, 1998). The primary researcher reviewed categories and codes and determined which ones could be combined or subsumed underneath existing categories and codes. Furthermore, the researcher refined and defined pertinent characteristics for each category and identified variations within each category. A core category began to emerge throughout this phase of coding, and relationships between categories were identified.

Theoretical Coding

The third and final stage of coding was *theoretical* coding (Charmaz, 2006). The techniques that occur in the theoretical coding stage are the techniques necessary to transform abstract concepts into a final CGT. This final stage of coding "integrates and synthesizes the categories derived from coding and analysis to now create a theory" Saldana (2013, p.224) to weave pieces of the original story back together to form one cohesive narrative (Glaser, 1978).

During this final phase of coding, the primary researcher refined the central codes determined in the axial coding phase, and then placed them within an overarching CGT. In line with Charmaz's (2000) method of coding, the primary researcher attempted to keep codes as like the data as possible - even using direct quotes to create categories. The primary researcher did not engage in any group reflective processing or coding, which is a limitation and will be further explored in the limitations section.

Constant Comparative Analysis

Across all three stages of coding, the primary researcher employed the use of constant comparative analysis (Glaser & Strauss, 1967). Throughout the initial phase of data analysis, the researcher reviewed transcripts of participant interviews line-by-line, assigning thematic labels to significant parts of the data. In doing so, the researcher was able to constantly compare newer codes to older codes, and collapse these codes into thematic categories; a process that formed the structure for the present study's original CGT.

CHAPTER IV: RESULTS

Participant Demographics

Seven participants (N = 7) consented to being interviewed remotely via Zoom. Interviews lasted from 30-45 minutes and were audio recorded and transcribed. All demographic data described in detail below and listed in Table 1.

Table 1

Participant Demographics

Age	# of Participants	% of Participants*
31-40 years old	3	42%
41-50 years old	2	29%
51-60 years old	2	29%
Gender	**# of Participants**	**% of Participants***
Female	5	71%
Male	2	29%
Race	**# of Participants**	**% of Participants***
White/Caucasian	6	86%
Biracial/Multiracial	1	14%
Current Residence	**# of Participants**	**% of Participants***
Washington State, U.S.	7	100%
Medical Degree		
Medical Doctor (MD)	6	86%
Registered Nurse (RN)	1	14%
Years of Practice		
Under 5 Years	2	29%
5-10 Years	2	29%
10-15 Years	1	14%
20-25 Years	2	29%
Primary Place of Practice	**# of Participants**	**% of Participants***
Urban Community Health Center	0	0%
Suburban Community Health Center	1	14%
Urban Family Medicine Clinic	4	58%
Suburban Family Medicine Clinic	1	14%
Urban Addiction Medicine Clinic	1	14%

Note. Important Considerations Indicated with an Asterix and are addressed in the order they are presented in the table: 1) Percentages were rounded up to the next whole number if a fraction of greater than or equal to .5 remained in the tenths place (i.e., 28.5% → 29%); 2)The participant who practiced under an R.N license did not have prescriptive authority, however, did work closely with providers who did and therefore met inclusion criteria and was a certified addiction RN

Age

Participants ranged in age from 31 to 60 years old. A mean participant age, and corresponding standard deviation, are not able to be determined as all age demographics were given based on a nine-year age range span. Three out of seven participants (n = 3) fell within the 31– 40-year-old range, two out of seven (n = 2) within the 41– 50-year-old range, two out of seven (n = 2) within the 51– 60-year-old range. No participants (n = 0) fell within the 60+ year old range.

Gender

Two out of seven participants (n = 2) identified as cisgender male and five out of seven participants (n = 5) identified as cisgender female. No participants identified as transgender, genderqueer, gender neutral or non-binary, and or identified as not fitting a gender category listed on the demographic's questionnaire.

Race and Ethnicity

Six out of seven (n = 6) participants identified as White/Caucasian, and one out of seven (n = 1) identified as Biracial/Multiracial, with the one Biracial/Multiracial participant indicating they have both Hispanic/Latinx and White/Caucasian Heritage. No participants (n= 0) identified as Black/African American, Asian/Southeast Asian/Pacific Islander, or American Indian/Alaskan Native.

Tribal Membership Status and Geographic Location

No participants (n = 0) identified as being a recognized Native American or member of an indigenous group in the United States. Seven out of seven participants reported currently living in the United States and seven out of seven reported currently residing in the state of Washington.

Type of Medical License

Six out of seven participants (n = 6) practiced under a Medical Doctor (M.D.) license and one out of seven participants (n = 1) practiced under a Registered Nurse (R.N.) license. No participants (n = 0) reported having a Physician's Assistant (P.A.) license, an Advanced Registered Nurse Practitioner (A.R.N.P.) license, or a Doctor of Osteopathic Medicine (D.O.) license. The participant who practiced under an R.N. license did not have prescriptive authority but did closely help credentialed prescribers manage buprenorphine prescriptions.

A Note on the Inclusion of an RN in Study Sample

After the present study's inclusion criteria were updated and relevant recruitment were resent, one OUD specialty R.N. reached out to this researcher indicating interest in participation. This nurse specifically had prior experience working on an opioid treatment grant, and therefore worked closely alongside primary care prescribers providing buprenorphine treatment. This nurse closely assisted the management of buprenorphine treatment, and therefore grew intimately familiar with many barriers PCPs face when providing buprenorphine treatment to youth with OUD seeking outpatient medical services. After the transcript of the RN interview was analyzed, it was determined that the major themes, subcategories, and sub-subcategories aligned with emerging findings and therefore added to and strengthened the emerging grounded theory. It appeared—based on this RN perspective—that PCPs and RNs experience many of the same barriers when it comes to providing youth with buprenorphine treatment in outpatient medical clinics. The RN is therefore grouped with the other primary care "providers" and not differentiated or identified separately throughout the results section. This is also done in an attempt to maintain the privacy and anonymity of the RN participant.

Years in Practice

Participants ranged in years of licensed practice, with two out of seven participants (n = 2) reporting under five years of practice, two out of seven participants (n = 2) reporting five to ten years of practice, one out of seven participants (n = 1) reporting 10–15 years of practice, and two out of seven participants (n = 2) reporting 20–25 years of practice. No participants (n = 0) reported having either 15–20 years of practice or 25+ years of practice.

Primary Place and Type of Practice

Participants were asked to provide additional information regarding the current medical setting they work in. One out of seven participants (n = 1) reported working within a suburban community health center. Four out of seven participants (n = 4) reported working within an urban family medicine clinic, and one out of seven (n = 1) participants reported working within a suburban family medicine clinic. One out of seven participants (0 out of 7) reported working within an urban addiction medicine clinic. 7 out of 7 (n = 7) participants reported either currently or historically working within an outpatient primary care practice (i.e., a primary care, family medicine, or internal medicine clinic.

Although participants were not specifically asked to endorse previous addiction medicine training or certifications in the pre-interview demographics questionnaire, it was noted within conversation by 5 out of 7 participants (n = 5) that they had pursued specific fellowships and trainings in addiction medicine. Furthermore, 6 of the 6 eligible prescribers who responded to recruitment calls by this researcher had previously prescribed buprenorphine—or in other words had completed the necessary regulatory requirements in order to be waivered to prescribe buprenorphine. This is important to note, as recruitment was oriented towards any and all prescribers, not simply those who *had* prescribed buprenorphine throughout their career. It seems

then, that the pool of final participants were self-selecting in that 100% of eligible prescribers who participated in the study had past experience prescribing buprenorphine, which research indicates is not an accurate or reflective representation of the current proportion of PCPs who do and do not prescribe in the US.

Results of CGT Analysis

Results of this study reveal that PCPs encounter four major barriers along their journey to prescribing buprenorphine to youth with OUD in outpatient medical settings (e.g., primary care clinics, family medicine clinics, internal medicine clinics, etc.): PCPs feel overwhelmed, 2) PCPs feel ill-equipped to treat youth patients with OUD, 3) PCPs hold and observe stigma toward individuals with OUD—especially youth, and 4) structural and systemic barriers.

Criteria of a Major Barrier

To be considered a major barrier, a broad concept must have been mentioned at least once by a *minimum* of four out of seven participants. If a concept was mentioned at least once by *fewer* than three out of seven participants, said concept was not categorized as a "major barrier."

Criteria of a Subcategory and Sub-Subcategory

All major barriers are further illuminated and described using subcategories or sub-subcategories, or specific phenomena described by participants that correspond with participants' understandings of each broader, major barrier. In order to be considered a subcategory, each distinct topic corresponding to a major barrier had to be mentioned *at least* once by three or more of the seven total participants. In order to be considered a sub-subcategory, each topic had to be mentioned *at least* once by at least two of the seven participants. If a topic was only mentioned by one participant, it was not included as either a subcategory or a sub-subcategory.

Barrier Overview

Participants in this study described four major barriers along their journey to prescribing buprenorphine to youth with OUD in primary health care settings (e.g., primary care clinics, family medicine clinics, internal medicine clinics, etc.).

Barrier number one is entitled “PCPs feel Overwhelmed” and encompasses the following subcategories and sub-subcategories:

Table 2

Subcategories and Sub-Subcategories of Barrier One

Major Barrier Title	Subcategories	Sub-Subcategories
1) Barrier Number One: PCPs feel Overwhelmed	1.A) PCPs feel stretched thin: "I don't have the time to learn about a whole other population."	1.A.i) Previous regulatory requirements decreased feasibility and/or desire to prescribe: "On the simplest level, we need to get rid of the waiver, because it is stupid." 1.A.ii) Many PCPs find it helpful to work alongside a RN with MOUD treatment knowledge "The key person is the RN."
	1.B) PCPs desire increased psychosocial support to manage youth OUD cases effectively	1.B.i) PCPs often struggle to manage complicated caregiver-child dynamics: "If the parents are involved, it's a whole different kettle of fish." 1.B.ii) PCPs do not feel comfortable being the sole provider of therapeutic intervention: "One of the things that I think is hard for us, is that sense of being alone. Having someone to play the case to and get some guidance from, especially from a therapeutic standpoint would be pretty fruitful, that's for sure."
	1.C) Buprenorphine induction for youth with OUD is complex and difficult for many PCPs to manage	1.C.i) The ability to initiate and appropriately manage buprenorphine induction "lives in the cusp" of youth ambivalence: "You're really asking people to suffer now to get better later, and that's hard." 1.C.ii) The ability to initiate and appropriately manage buprenorphine induction also "lives in the cusp" of provider ambivalence, which is especially high amidst the fentanyl era: "Since fentanyl came out, starting buprenorphine has gotten much harder."

Barrier number two is entitled “PCPs Feel Ill-Equipped to Treat Youth Patients with OUD and encompasses the following subcategories and sub-subcategories:

Table 3

Subcategories and Sub-Subcategories of Barrier Two

Major Barrier Title	Subcategories	Sub-Subcategories
2) Barrier Number Two: PCPs feel Ill-Equipped to Treat Youth Patients with OUD	2.A) PCPs get limited training on SUD treatment in general: “There’s a challenge in medical training, in that there’s so much to learn and limited time to do so.”	n/a
	2.B) PCPs get very limited training on OUD treatment of youth patients: “I think that there is a lack of exposure and a lack of conversation around caring for this age group.”	2.B.i) Limited training on youth OUD treatment can result in developmentally insensitive treatment approaches and expectations of youth: “The adolescent prefrontal cortex is not a stable place to be.”
	2.C) The “do no harm dilemma” is complicated by feeling ill-equipped	n/a

Barrier number three is entitled “PCPs Hold and Observe Stigma toward Patients with OUD—Especially Youth” and encompasses the following subcategories and sub-subcategories:

Table 4

Subcategories and Sub-Subcategories of Barrier Three

Major Barrier Title	Subcategories	Sub-Subcategories
3) Barrier Number Three: PCPs Hold and Observe Stigma toward Patients with OUD—Especially Youth	3.A) PCPs hold and observe stigma against individuals with OUD: "Stigma is really the starting point."	n/a
	3.B) PCPs hold and observe stigma against youth with OUD, which makes youth hesitant to seek treatment: "They aren't going to go to someone that they don't feel safe with or trust."	n/a

Barrier number four is entitled "Structural and Systemic Barriers" and encompasses the following subcategories and sub-subcategories:

Table 5

Subcategories and Sub-Subcategories of Barrier Four

Major Barrier Title	Subcategories	Sub-Subcategories
4) Barrier Number Four: Structural and Systemic Barriers	4.A) Limited treatment options: Few high-quality, youth-centered SUD/OUD resources exist	n/a
	4.B) Limited access to transportation: "How are they getting there?"	n/a
	4.C) Pharmacy-based barriers: "One big thing is making sure youth get their prescriptions, and that is a systems thing that needs to be solved."	n/a
	4.D) It would be helpful to increase buprenorphine prescription in school-based clinics and inpatient hospitals	n/a
	4.E) It would be helpful to integrate more flexible, youth-centric treatment approaches within outpatient medical settings	4.E.i) Virtual interventions (e.g., texting, calling, and video-conferencing) with youth should be normalized in outpatient medical settings 4.E.ii) It may be helpful to increase access to long-acting injectable forms of buprenorphine: "Being on Sublocade is like automatic stability in a lot of ways"

Barrier Number One: PCPs Feel Overwhelmed

This section refers back to the information in Table 2.

Subcategory 1.A: PCPs Feel Stretched Thin: "I Don't Have the Time to Learn about a Whole Other Population."

Participants painted a vivid picture of the state of overwhelm many PCPs are in. Many PCPs reported limited availability to take on new clients. In fact, one provider noted that they

were the only PCP on their team who was accepting new clients: “I am one of our few providers who are accepting new patients.” Given the high quantity of patients they are asked to see, many PCPs stated they feel overwhelmed and therefore lack the desire to take on new and highly complex cases. As one participant explained, “You know how overloaded I am in primary care. I’m expected to do preventative medicine. I’m expected to work on unknown etiologies. I’m expected to do procedures. You want me to do another thing. I don’t have time for that.”

Furthering this idea that treating substance use can feel like “another thing” a PCP doesn’t have time for, one participant stated, “To think about bringing in an additional population to their panel. I think that’s overwhelming in and of itself.” Another participant clarified that PCPs who work in smaller clinics are even more likely to feel overwhelmed, as they are often asked to shoulder more work than PCPs in clinics with more robust ancillary support: “If you’re at a small clinic or a private practice, you may have to do all that background work to set that up. And so, it can be more challenging.”

Sub-Subcategory 1.A.i: Previous Regulatory Requirements Decreased Feasibility and/or Desire to Prescribe: **“On the Simplest Level, We Need to Get Rid of the Waiver, because it is Stupid.”** All participants interviewed in this study cited the “X-Waiver” as a major barrier to prescribing buprenorphine to youth with OUD in primary care. First and foremost, participants said that the previous time commitment required of PCPs who wanted to get an “X-Waiver” often felt unrealistic to complete: “It is a pretty serious commitment of time at eight hours.” PCPs appear to have limited free time in their days, so having to take time away from work to complete an additional eight-hour training to provide care to high-risk and high-acuity patients reportedly feels overwhelming.

Unfortunately, participants reported that the requirements of the X-Waiver did not lead to measurable improvements in care, but instead increased fear of and stigma toward MOUDs among PCPs, decreasing PCP motivation to prescribe. As one participant described the X-Waiver" makes it seem like it's something you're not supposed to do." Another participant bolstered this sentiment, "Part of increasing access is just to get rid of this waiver because it really makes it feel like a very different beast. It's like the only thing that requires special credentials to prescribe. It makes it [Buprenorphine] seem dangerous."

To one provider, the previous requirements to prescribe buprenorphine in primary care felt particularly perplexing to some PCPs, with one provider exclaiming, "Getting a buprenorphine waiver historically is a barrier. It's a stupid thing. Like, if we can prescribe stronger opiates that are way more associated with poor outcomes why do you need a waiver to prescribe Suboxone?"

Because getting credentialed to prescribe buprenorphine has not historically been mandated in primary care practice, participants noted that they often observe an uneven disbursement of PCPs in their clinic who either *are* or *are not* credentialed to prescribe. Some participants described this uneven disbursement as being very discouraging because it is likely that if you are out of office, you will struggle to find a provider willing or able to cover their buprenorphine prescriptions. According to participants, this increases PCPs' hesitation to get credentialed to prescribe in the first place. As one participant vividly put it: "So in general, for buprenorphine prescribing, we definitely have the sense that being the only person who's going to do it is a big turnoff for people." Participants also explained that this lack of buprenorphine-prescribing providers is unfortunately not unique to primary care. One participant stated that in

the geographic area they currently practice, “None of the E.R. docs here are prescribing Suboxone. Zero.”

Providers described the split between those who “have a waiver” and those who “don’t have a waiver” as complicating ease of practice and fluidity of care, further increasing PCPs’ feelings of isolation and apprehension to take on buprenorphine treatment. One provider illuminated this sentiment, saying:

> Even if you do have a waiver, depending on how your clinic structure is set up, if you need to have a colleague covering your patients when you are out, if they don’t have a waiver, then they may not be able to prescribe like a refill or an emergency this or that. And so, I do know, of clinical settings where they just don’t prescribe suboxone period because of the coverage when other providers might be out. And I think that’s a major problem. . . .There are different philosophies by clinic, in that. And sometimes it’s like, we just make sure we have at least one suboxone provider who’s available, and do that 24/7. But some clinics don’t have the capacity.

Elaborating on the split between those who “have a waiver” and those who “don’t have a waiver,” another provider stated:

> I’ve seen where clinics don’t have any Suboxone providers, and some have 10 and some have one or two. The worst-case scenario is to have one or two. Obviously, the worst-case scenario is to have none, but to have one or two, they’re in a situation where they’re holding down this chronic disease in a way you would never imagine would be the case for only one PCP prescribing insulin.

As one participant described, the latter part of this statement illuminates a key issue: because PCPs have historically had to pursue additional training to prescribe, PCPs who *are* able to prescribe end up feeling as if they are shouldering a significant burden or taking on a “herculean effort” that is not widely supported amidst their clinical environments. The PCPs interviewed in this study described this as feels as though they are “in a situation where they’re “holding down this chronic disease in a way you would never imagine would be the case for only one PCP prescribing insulin.” PCPs in this study urged clinics to focus on building up robust

support and encouragement of buprenorphine prescription within primary care settings as a way to offset the feeling of being isolated and apprehensive to prescribe.

In acknowledgement of the systemic level from which this X-Waiver requirement historically came from, one participant stood in defense of PCPs and instead focused their critique on regressive policies toward buprenorphine prescription in the United States.

> Well, our stance in my clinic is like this isn't coming down on the PCPs because I know how busy the life is, but rather, the policy makers and the DEA is to say, "If you're going to have a DCA and DEA license, then that should include Suboxone." The idea that you can prescribe OxyContin, but you can't prescribe Suboxone is very mysterious. All of them have street values, so I don't really get the logic, but I know these are different layers. Every person who wanted the authority to provide controlled substances also had to have the authority to provide Suboxone, then you wouldn't have that problem. It would just be whether or not people do or don't, but it would've less to do with the waiver, which gives, again, that opt in environment. It's just very different. I don't criticize PCPs in this. To me, it's just policy.

This same participant asserted that the current state of buprenorphine access for youth with OUD calls for significant, systemic changes to our current practice; namely making the X-Waiver something that all providers must "opt-in" to and eliminating the option to "opt-out."

> There's something around the X waiver and what I would say is the mystifying nature of addiction that really just is the same as any other chronic condition that I think has made it more difficult for people to sign on. To have that to be an opt in rather than an opt out, it makes it harder for busy people to just want to opt in.

Another participant commented on the challenges that come with referring a patient with OUD to a primary care provider, noting that they frequently wondered throughout the referral process: "Are they [PCP] going to be certified? Are they [PCP] going to have an X-Waiver and be able to prescribe?"

Two participants described a recent shift in ideology and practice among medical school and residency training programs, in which programs are increasingly trying to encourage their trainees to get to prescribe and to therefore obtain necessary waivers and or additional training.

> Now most residency programs, at least that I'm familiar with, are trying to train their providers with [an X-Waiver], and then there's just a movement to remove the waiver anyway. If you don't have a waiver, obviously you're not going to be prescribing.

However, the PCPs in this study noted that it still appears that medical schools and residency programs are behind community mental health centers when it comes to mandating that medical providers can prescribe buprenorphine. As one participant noted:

> I think the community mental health centers, at least in our state, are all buprenorphine prescribing. I think all the providers are X-Waivered. So, it's like where we have not dealt with it is the non FQHC clinics. But I think we are going to get there. I mean the residency has been great, they're all on board. So, if we get the primary care docs and the mental health providers, then we're kind of there.

Participants in this study appeared to feel hopeful that the previously required X-Waiver is no longer required of providers who wish to prescribe buprenorphine in outpatient settings. Although participants described hope that this may lessen prescriptive barriers in the future, they also often referenced that the old credentialing system has left lingering psychological and structural barriers.

Sub-Subcategory 1.A.ii: Many PCPs find it Helpful to Work Alongside a RN with MOUD Treatment Knowledge: "The Key Person is the RN." Three participants asserted how impactful nurses can be in improving treatment access, retention, and success for individuals of all ages with OUD, but particularly for youth with OUD. As explained by many participants interviewed in this study, often nurses have increased capacity to initiate brief phone conversations or send messages to check in on a patient and send helpful reminders. According to participants, it is incredibly helpful to integrate nurses into primary care clinics who have advanced training, experience, or certification in addiction medicine. PCPs in this study report that having a nurse on an integrated primary care team not only improves the quality of patient

care, but it also seems to lessen the load that PCPs have to carry around when working with individuals with OUD.

According to one participant, having an OUD Registered Nurse (RN) on the primary care team significantly lightened a PCP's workload when working with individuals with OUD. This participant explained how helpful an OUD RN is, stating:

> Our researchers are working on primary care implementation for OUD treatment, although not specifically for youth to my knowledge, but there are people who are studying implementation tactics for OUD care within our organization and the key person was the RN. The key person was the RN. We had one OUD RN at our location and everybody else was just waivered primary care providers. Our RN knew a lot about OUD, so she managed, followed up with patients, made sure they got their UDS [Urinary drug screens] in, and pended the prescriptions to the docs who would sign them based on her follow-up visits. All of that was very, very well done by an RN. So, the RN basically case-managed the whole clinic's Suboxone panel. All the docs had to do was sign the prescriptions and the orders. It was extremely successful, and I think they're in need of the OUD nurse. Because it's not about technical medicine. It's not a procedure. It's really just about how to handle all of the logistics and case management.

Another participant reiterated how having an OUD RN lightens a PCP's workload and shed light on how rare it is to have someone in this role on a primary care team. According to one participant:

> There was only one in the state. And when the grant ran out, so did the option of them having a job. Even after two and a half years and all the people that we helped and all the providers saying, "I can't do this work without you." So, the level of care is just going to be much less without somebody in that position. When we had someone in that position, PCPs only had to see a patient once every three months for their check-in. Between those times, the OUD RN did the phone calls and the in-office visits. They pended the prescriptions, pended the labs, and worked with the insurance companies. All of those things. Also talking to the parents, talking to the pharmacy, and all that stuff. It was a lot of work.

Similarly, another participant reiterated how helpful an OUD RN can be because they often spend more time with patients and therefore have more time to build rapport and to help patients feel safe and heard in the clinical environment.

> I mean, an RN is a great person in that role, because a lot of OUD care is listening. A patient will come in and be like "I want to tell you all the terrible things that have happened." Which providers need space and time to listen to.

One participant described how pivotal well-done change and implementation projects can be within primary care environments. According to this participant, a change and implementation project that was carried out in their primary care facility—and that integrated an OUD RN onto the clinical team—was particularly well-done and helpful., however, this participant asserted that the utility and helpful impacts of this project fell outside of the norm, in that most change and implementation projects either fall through or do not actually improve clinical practice. This participant stated:

> This was a very well-done implementation project. That is not the typical implementation project in medical operations. Normally, you get a huddle to learn about it and an email and then you're on your own. Right? But this was a beautifully done change and implementation project. It was also studied and analyzed by the research institute, so I have nothing but amazing feedback about that. I wish that all healthcare implementation could be done with that.

Subcategory 1.B: PCPs Desire Increased Psychosocial Support to Manage Youth OUD Cases Effectively

According to one participant, the lack of access to "broader substance use services" is one of the biggest limitations in prescribing buprenorphine in a family medicine environment:

> I would say that the biggest limitation in providing in a family medicine environment compared to what I do now is that you do have the opportunity to give people a life-changing medication and a life-saving medication, but it's hard to be successful in getting the patient broader substance use disorder care. Like making sure that they are talking to people about therapy. OUD is just one addiction and Suboxone only fixes that one addiction. Even though they're not going to die from an overdose on Suboxone, or they're unlikely to overdose, nobody is necessarily helping them figure out what to do with their underlying conditions, if you will. People might not relapse on opioids, but they start drinking or they start using cannabis or they all of a sudden are a smoker, but they weren't before because they're not getting education and community support around addiction. I think that it's really important to have a low-barrier to Suboxone, but really, really, really important is life- saving medication. But I think it's also important to recognize that it's a biopsychosocial chronic condition in the same way insulin doesn't

> really cure diabetes, it just helps people manage it. So that would be even more so true for youth.

Similarly, another participant emphasized, "I would also just like to highlight the insufficiency of mental healthcare in general for youth."

Although participants of this study acknowledged that buprenorphine treatment as a stand-alone treatment approach is impactful, many participants also asserted that buprenorphine treatment is more impactful when paired with wrap around behavioral health services. According to one participant:

> Let's say if a kid has alcohol use disorder or some substance use disorder in their youth, they've got a whole life to live in front of them. So, you really want to have the opportunity to change the trajectory and to help with the certain type of education around how to have sustainable recovery and even recovery language. That doesn't mean that if you can't have that, that it's still not the harm-reduction model to just give them the life-saving medicine as just the first step, but it's hard for that to be the first *and* last step and to imagine that's going to actually work.

Multiple providers interviewed in this study explained how current limited access to mental health care services for youth with OUD amplifies the experience of the "Do No Harm Dilemma" (see results section 2.C)—or the mental push-and-pull they experience of both wanting to help a patient but also not wanting to cause them any harm. Participants explained that many PCPs worry that youth with OUD will need much more robust clinical support than their PCPs will actually be able to provide themselves or grant them easy access to through referrals to mental health care providers.

According to one participant:

> Not every youth who has OUD has psychiatric comorbidities, but many do. And traumas. So, it's not just about Suboxone. That's really important because that's what gets them stabilized and can handle other things. It's really important. I don't want to downplay that, but if the kid has PTSD and you don't have a child psychiatrist to back you up, then you're again alone taking care of a highly complex patient and not necessarily serving them well. So then, you're again feeling like you're doing the best you can in that situation, but not every PCP is willing to just "do the best they can" when the kid might

> have more severe comorbidities that they are not in a position to handle. I think that the reason why we haven't yet taken on youth is because we don't have child psychiatry backup yet, nor do we have therapists that have expertise with youth. But I think even in our specialty clinic, we want to take care of patients and talking to you is definitely motivating me to ask the next question of our team as to what we need to do to build up that capability.

Another participant asserted that some providers want to be assured that they can have ease of access to behavioral health services before even starting a patient on buprenorphine.

> There's this feeling that if you are prescribing, you need to have the availability of a counselor and a social worker and someone needs to be in treatment like the idea that it has to be this package deal. People have a lot of discomfort when they have no behavioral health support. It feels inappropriate for them to get involved with that.

Another participant noted that a similar hesitancy and worry arises for providers who are asked to complete ADHD evaluations for youth within primary care:

> You'll see the same hesitancy for primary care providers doing say, like ADHD treatment for kids. Because you need to collect the forms from the teachers and get releases, and get everything put together. It's like a project, right? That's even more complex on some level than buprenorphine care, but it's the same level of standard that you want to apply to a kid who's suffering, and you need to have help in order to do that because your appointments are just booked. And you have got to have psychiatric backup.

One provider interviewed in this study underscored the need to not only increase access to behavioral health services, but to also ensure that case management can be delegated to a provider that is not the PCP. Speaking to the importance of case managers in primary care practice, this participant stated:

> The ability to access case and care management. The PCP can be in the prescribing role, but not in the case management role. If that part can be delegated then it's no harder to prescribe buprenorphine for youth than anyone else, but there's just a higher need for case management for the rest of what they need. If that could be somehow delegated, then that would be very highly feasible the same way we delegate the chronic condition follow-up for diabetics to nurses in many cases.

Bolstering the need for case management services within primary care for patients with OUD, one participant shared that they do not currently have case management or broader behavioral

addiction management services within their current primary care practice, “We were not offering addiction services previously within the organization. There are a couple of psychiatrists that have fellowship training, but they don’t run an addiction program with substance use disorder therapists and case management.”

One participant took a strengths-based perspective, noting that PCPs are often resourceful even when faced with tight time constraints and busy schedules and therefore uniquely poised and skilled at helping treat SUDs. Sadly, though, this participant also noted that they did not currently feel supported enough to do so in their current primary care clinic:

> We’re [PCPs] really good at and used to working with challenges and being resourceful, but I think the cycle time that you have with the patient and the level of support is not enough. In my current practice, we have a full-time nurse who largely does entirely case management and two full-time therapists. I don’t get that same feeling in my primary care clinic.

Although many of the PCPs interviewed in this study noted that, often, PCPs are skilled at juggling multiple, complex tasks, they also explained that because of PCP’s current high-level of overwhelm, sometimes PCPs appear to be less interested in treating patients with SUDs, and especially youth with SUDs who often have highly complex and risky presentations and psychosocial situations (i.e., unstable housing, unsupportive parents, unsafe peer relationships, etc.).

Sub-Subcategory 1.B.i: PCPs Often Struggle to Manage Complicated Caregiver-Child Dynamics: “If the Parents are Involved, It’s a Whole Different Kettle of Fish.” Many participants discussed how youth with OUD often exist within complex, family systems. As one participant explained: “Substance use can lead to a lot of family disruption.” Therefore, it is not unlikely that when working with a youth with OUD a provider will also have frequent contact or communication with said youth’s caregivers. When working with a youth with OUD, PCPs are

immediately concerned and/or curious about what that youth's relationship is like with their caregiver. According to one provider, "When prescribing buprenorphine to youth under 25, I tend to break it out by whether it's a parental thing or a non-parental thing." While participants noted that it is ideal when a youth with OUD who is seeking treatment has their caregivers' support, they also addressed that it is not uncommon that youth do not have this type of wrap-around, caregiver support. In the words of one participant, "Some of them have a very open relationship with parents or guardians that they may be with, but some of them don't."

Participants discussed how potential turmoil within the youth-caregiver dyad contributes to their sense of overwhelm, and therefore leads to an increase in fear and apprehension to take on buprenorphine treatment for a youth with OUD. According to those interviewed in this study, the idea of working with youth with OUD without supportive caregivers is not only *stressful*, but it can also be *concerning*, given that significant strain within the relationship can also mean that the youth lack caregiver supervision as well. According to participants, caregiver supervision can be a critical part of treatment adherence and greatly increase a youth's success along their treatment journey. One participant explained the power of having a supporting caregiver or parent on their side as a youth is going through OUD treatment: "The benefit of having parents involved in supportive is potentially huge. But it [Child-caregiver relationship] is a lot more fraught when you're talking about people who are legally not independent." Another participant similarly shared, "It's a very different picture of like supportive parents versus like no parental supervision. So, like the no parental supervision thing feels scary because you're like, "I'm in this nebulous world and I'm not sure you have support.'"

Although having caregiver support was described by participants as an overarchingly protective factor, participants also noted that sometimes when a youth comes in with their

parents, it *can* signal that the youth is not individually or intrinsically motivated to change, but is rather showing up unwillingly per the request of their caregiver. One participant stated "If there are parents involved, it gets more complicated. You don't always have the young person onboard with this plan. The person has to be willing to talk about it to the provider without the parents hopefully." However, this participant later noted that unfortunately, youth often "don't want to be seen and if it wasn't for their parents, they wouldn't be there." According to another participant, while parents often have very good intentions, sometimes "it doesn't do a lot to have the parent in there making all the decisions."

Participants described many ways in which having caregivers present and involved in youth OUD treatment complicate treatment from the provider's perspective. For example, in situations where treatment is namely initiated by the caregiver, participants reported that caregivers sometimes show up in a very "hyper-involved" or "intense" way. While PCPs explained that the intentions of these caregivers is often very good, the intensity of this hyper-involvement can somewhat deter PCPs from desiring to work with youth with OUD in the first place. One participant described the nuances of this complex family-systems dynamic, noting:

> Their parents bring them in every week and are hyper-involved. And it's a really intense dynamic. So, in both situations, the parents were actually providing money for drugs because they were scared of their kid withdrawing. And like 16-year-olds aren't making their own money, so they're providing money for drugs no matter what. And in one situation the parents were buying drugs. So, there's always some money stuff. There's always weird boundaries.

Another participant stated:

> So, if your parents are trying to get you to take this buprenorphine, and even if you think it's the right thing to do, having your mother rush at you with buprenorphine has got to piss you off. I just think it's really hard. And really, I don't feel like I'm honestly smart enough to negotiate that. I don't know that anybody really is, but it's a challenge for sure.

One participant provided a vivid example of an intense youth-caregiver dynamic in which the caregiver's goals and youth's goals were misaligned and led to a rupture in their relationship. This participant shared:

> So, I tried to micro dose this kid in the outpatient setting probably for five months where the dad was holding all the meds and trying to get the kid to take a half a quarter film four times a day. And they would battle every time. And by the time we were done with it, they were just like. . . they were like they were previously pretty bonded and working towards the same goal. . . but this whole thing just drove a wedge in between them and it seemed like they were working on different goals. And we had this beautiful therapeutic alliance at first that I saw getting chipped away at because the process was so difficult. And with this incredible Dad, I saw some yucky parts of him. And I saw the kid being really shitty. I mean, you're the shittiest to the people you're closest to, right?

Participants noted that it is not only complex when youth do not align with their caregivers throughout the treatment trajectory, but it is also really complex for PCPs to navigate how they show up in the room with their youth patients; it appears that aligning strongly with the youth's caregiver can alienate a youth, whereas ignoring or not honoring the perspective of the caregiver can also cause disruption in the relational dynamic. One participant described an experience in which they felt more aligned with the parent, and this seemed to worsen a youth's sense of trust and connection to them as their PCP. This participant explained:

> As family medicine providers, you're trained to do adolescent/child well visits, where the parent doesn't have to personally be in the room. But those are very low stakes conversations. These feel like super high stakes and it's often, I think, really easy for the provider to end up aligned with the parents who're really worried the kids get overdose and die and we're worried the kid's going to overdose and die. And kids up to 25 are not thinking they're going to overdose and die. So, I think that's a really complicated trap.

Another participant commented on the complexity of who to "align" with throughout treatment, noting, "We do have a handful of people that have parents involved. And it's so much harder, from a provider perspective, who is trying to align with a youth, a youth who gets to make their own decisions about addiction."

When it comes to being a part of a youth's OUD treatment journey, participants frequently reported that both caregivers *and* PCPs need more behavioral health and specialized support than they are currently getting. One participant referenced the lack of parental support built into our current primary care system, stating, "Parents need a lot of support and there is a huge lack of parental support on how to navigate this as a parent. So, I also understand that they are very, very scared." Another participant asserted that they often feel PCPs lack the therapeutic skills needed to artfully navigate complex youth-caregiver relationships. According to this participant, "If the parents are involved, it's a whole different kettle of fish because then you get involved with their relationship dynamics and I have to be honest, I'm not that good at that. I think even for us in addiction medicine and certainly for those of us in primary care, I don't think we're that good at that. I should say that we're not taught how to do that. It's a training thing."

One provider described a more supportive system that exists within her the clinic she currently works in which she, the PCP, will meet with the youth in need of OUD treatment and then the case manager will meet with the parent at the same time to ensure the youth gets their own privacy and the parent gets more support. According to this participant, "One of the things that we do—because I'm also working with case managers—is that I will meet with the youth and then the other person will meet with their caregivers."

Two providers explained the benefits of taking the time to ensure that caregivers are given adequate psychoeducation about the benefits of buprenorphine treatment. As one participant noted, "Sometimes I'll share with parents this idea that when your kid takes buprenorphine, what they're really doing is making a commitment not to use opiates during the time that buprenorphine is onboard. And parents like that." Another participant elaborated on this point, stating:

> Even as recently as maybe five years ago, parents were very often really leery about their kids being on buprenorphine. They didn't want it to trade a drug for a drug or they didn't want them to be on 'another thing.' And they were often really aspiring for their kids to reach total abstinence. But I think there's been so much press in the media about overdose deaths that I haven't found that over the last five years to be a problem at all, I've had parents who are almost always excited for them to get the medicine. And if they're not, all I have to do is really tell them that it'll help lower their overdose death and the parents are on board.

According to another participant, providing parents with adequate psychoeducation throughout the entire course of their child's OUD treatment is important. However, one participant noted that the induction period is a particularly important time to ensure parents feel supported: "Especially with the induction process, it's so incredibly challenging."

Sub-Subcategory 1.B.ii: PCPs do not feel Comfortable being the Sole Provider of Therapeutic Intervention: "One of the Things that I think is hard for us, is that Sense of Being Alone. Having Someone to Play the case to and get some Guidance from, Especially from a Therapeutic Standpoint would be pretty Fruitful, that's for sure." Providers interviewed in this study reported that they desire enhanced training in evidence-based therapeutic intervention for addiction in order to succeed in treating individuals with OUD. According to one participant, there is palpable hesitation and discomfort among fellow PCPs when discussing the topic of working with individuals with OUD. This provider told a story about one time in which this hesitation and discomfort was particularly present:

> I went to a conference for addiction medicine recently. And it was very striking how many people were talking about youth-specific treatment and in the youth group a lot of peds people were like we need to be responding we just don't know how to reach them, we don't know what to do, you know I think there is a lot of 'What do we do?' The discomfort is there because there isn't a clear plan to follow, and that is just very scary.

If they are not confident in their own abilities, it appears that providers find a great sense of comfort in knowing that someone else on their team feels confident in delivering evidence-based clinical interventions to SUD populations. According to one provider, the idea of taking on

an OUD patient alone without the support of a behavioral provider to help guide clinical intervention and assessment is particularly daunting, "One of the things that I think is hard for us, is that sense of being alone. Having someone to play the case to and get some guidance from, especially from a therapeutic standpoint would be pretty fruitful, that's for sure."

Some providers mentioned that it is not uncommon for medical providers to unintentionally make patients feel judged or misunderstood. One provider described a scenario in which he observed fellow primary care providers talking about how they talk to their patients with addictions, noting that often a first-line approach among PCPs is to simply tell patients to quit and hope they do so. This provider explained overhearing a fellow colleague exclaim one time, "I don't know. I tell all my patients to quit smoking and none of them have done it." This provider went on to express his frustration with this kind of approach to addiction intervention, explaining, "I felt like he was angry with them. I was like, 'Dude. Wow.' But it makes you think that's all doctors are for – is to give advice. I guess I kind of think this is true. If you're diabetic, you go to a dietician and what does the dietician do? They tell you what to eat, but people already know what to eat. So, at the end of the day, it's completely useless."

Participants in this study also noted that sometimes they struggle working with SUD patient populations because measurable improvement can take a long time to occur. One provider explained how they have found it helpful to encourage fellow PCPs to not hyper-focus on how much someone is using, but rather to focus on helping patients meet psychosocial milestones, like being able to perform better in school, at work, or in interpersonal relationships. As another provider explained:

> I try to tell my fellows who are really struggling with two of their kids right now, this is not a one-year problem, this is a life cycle problem, they might overdose and die, that's true. But a lot of it's trying to get goals over time. So, one thing I learned from a few, we haven't done that many real adolescents, young ones, but one thing I've seen is that

> focusing on whether they're using or not, may be less important than focusing on are they meeting life cycle goals?

While participants noted that encouraging a focus on lifecycle goals rather than specific reductions in use is helpful, participants also acknowledged that they still want to know that their interventions are having measurable impacts on their patients' lives. Participants note that being able to see this measurable impact can help them to feel as though they are good at their jobs and therefore increase their motivation to continue working with high-risk and high-acuity patient populations. According to one provider:

> If doctors aren't doing a thing, they feel is productive, they feel really adrift and they feel really negative about things. So, the idea that if you do [Motivational Interviewing] in an addiction case, sure it may not make this person quit drinking, but it raises the chance they'll quit drinking. And over time it'll make a difference and so suddenly the doc feels like they have a thing to do.

Although PCPs interviewed in this study note that prescribing buprenorphine is an intervention with measurable impact, one provider also explained wanting to have other tools at their disposal to utilize in case their patient is not *yet* willing to engage in MOUD treatment. Although one provider asserted that while it is "really hard to break bad doctor habits," this same provider also noted that therapeutic skills can be taught, and can be "exactly what doctors need" in order to break said "bad habits" and become more effective in their interactions with patients. As this provider explained:

> I do think that once you're in that space, where instead of forcing people to do things, you realize it is not your job to make people stop. It's your job to talk to patients about their habits or to get them to talk about it. So, suddenly doctors have to have a thing that they can do—they can show that they did a thing! Like, if I can write in my note, 'We did Motivational Interviewing around Alcohol Use Disorder,' that's as good for me as saying, 'I fixed an ingrown toenail or I prescribed medicine for hypertension.' Because I did something that makes me feel like a real doctor.

Participants noted that it is helpful to learn specific therapeutic techniques—namely Motivational Interviewing techniques—along with other forms of trauma-informed care

intervention. Those interviewed in this study explained that feeling equipped to engage in these interventions helps to increase their sense of self-efficacy when working with SUD patient populations. One provider even shared that interventions like MI also have the potential to make PCPs feel "liberated." This provider specifically stated, "I actually think about things like MI as being the place that people are liberated to move forward." According to one provider, MI is often one of the first interventions he implements when starting to treat an individual with addiction, "when I discover that a patient is using, I will, you know, ask a little bit more about this—using a bit of Motivational Interviewing—and find out where they are in terms of having an interest in quitting." Additionally, another provider shared how helpful it is to have an MI-skills trainer offer trainings to PCPs:

> Recently some students were doing some research project, an MI-based project to try to get people to drink less in school. And one of them was one of our MI teachers for a while. She came and did some MI training and helped us get better. And it was like a real mindblower to learn that we're not going to talk about your drinking, we're going to focus on the values of the person. That was really, really fruitful.

Another provider shared how helpful it is to even have a pamphlet in their primary care office that outlines exactly what they should say when faced with specific challenges working with SUD patient populations. This provider described an old pamphlet his clinic used to keep in stock, noting, "it had in it what to say in the doctor's visit. Like literally exactly what words to say with speech bubbles and everything. It was so great, and doctors loved it because they felt like they had a structure that made sense of what they were doing."

Subcategory 1.C: Buprenorphine Induction for Youth with OUD is Complex and Difficult for PCPs to Manage

According to participants, is important that youth OUD patients are carefully monitored and medically managed when going through withdrawal. Participants noted that this is a very

critical phase in youth OUD treatment, and one that is often riddled with many challenges. Providers painted a picture of two distinct types of ambivalence that can prevent successful buprenorphine induction, with one type coming from providers and one type coming from youth. Furthermore, both provider and youth ambivalence seem to be exacerbated by the medically complex nature of helping patients safely withdraw from fentanyl and transition to buprenorphine.

Sub-Subcategory 1.C.i: The Ability to Initiate and Appropriately Manage Buprenorphine Induction "Lives in the Cusp" of Youth Ambivalence: "You're Really Asking People to Suffer Now to Get Better Later, and that's Hard." Participants noted that, as our system currently operates, youth patients really have to be motivated enough to seek out OUD treatment on their own. As one provider put it, "It [buprenorphine treatment] *does* require you to be proactive as a patient." However, participants noted that there are *many* reasons that youth hesitate to go through the necessary phases of withdrawal before beginning buprenorphine treatment. For example, participants explained that withdrawal is frightening and uncomfortable, and that there are specific and confusing rules about how to initiate and manage withdrawal appropriately. While providers did not have specific solutions regarding how to make the withdrawal and induction phase less frightening or more simplistic for youth, many still asserted that it is important to bring awareness to the ways in which ambivalence toward treatment initiation prevents successful office-based buprenorphine treatment. Participants expressed hope that by increasing their own awareness of why youth may feel ambivalent, they can more astutely and effectively tailor their interventions and meet their youth patients where they are at. Providers interviewed in this study explained that it is logistically challenging for youth to successfully manage their own withdrawal and buprenorphine induction without adequate

caregiver and provider support—especially when tasked with doing home inductions which outpatient treatment primarily requires. As one participant explained, going through withdrawal at home and finding time to connect with a provider to complete the withdrawal assessment often a physically and mentally daunting task, one that often produces ambivalence and hesitation amongst patients:

> The assessment can be done over the phone. You have to ask how they are doing, what has their use been, when was their last use, what withdrawal symptoms are they experiencing currently, etc. And whether they are able to take a couple of days off of whatever they're doing, that can impact whether they're really able to manage withdrawal and do that home induction at all.

Another participant noted that the increase in-home inductions amidst the COVID-19 pandemic made withdrawal management and buprenorphine induction even more challenging. Specifically, this provider explained it is not uncommon for patients to take their doses at the incorrect time when tasked with managing one's own induction at home. According to this participant, "I have had folks that do take it too soon because we did a lot of home inductions when I was in the clinic during the pandemic."

According to participants, it is physically very hard for *anyone* to endure opiate withdrawal. Participants purported that if it is challenging for adults to endure, it might be even more challenging for youth. As one participant explained, "I'm always thinking, 'Who's the most likely to withstand the most bullshit?' Like if a 32-year-old, strapping young gentleman can't handle home inductions from fentanyl, how am I going to expect a 16-year-old to do it?" Another participant noted how fentanyl makes this process much more challenging, explaining, "Most of my kids are using fentanyl- so getting them on Suboxone from fentanyl is exceedingly difficult, as you know. And for an adolescent with an adolescent brain with the amount of distress tolerance that an adolescent brain can handle, it's even harder." One provider explained

that the only intervention her patients find helpful to endure the discomfort of opiate withdrawal is to sleep through the worst of it. According to this provider:

> I really encourage people to just go to sleep. If you can go to sleep and get through that 10 hours or so after the withdrawals really kick in, you'll be much happier. Don't try to stay up all night and resist and get frustrated and want to go out and use it to make it go away because that's what you don't want to do and that makes sense to you to do that.

Furthermore, participants shared that many youth come into buprenorphine treatment with preconceived notions or misinformation, which may make them more ambivalent to follow provider recommendations. According to one participant:

> In my experience, especially in that age group, there is a lot of misinformation that they come into buprenorphine treatment with. So, there's a lot of expectation that it will do certain things or it will help for a certain period of time, things like that. So that is one of the barriers because so often folks will have experienced buprenorphine on the street as a tool to get through withdrawal symptoms until another preferred illicit drug is available. That's what they come to the clinic expecting, that this is something that I just need to get through the withdrawal symptoms and then I'll be good to go.

Providers in this study noted that getting through the worst of withdrawal is particularly hard for youth because they often lack future-thinking, and often struggle to understand that although they are uncomfortable now, temporary discomfort has the potential to lead to long term stability. According to this provider, "There's no future thinking of 'I'm doing this now to feel this great thing later.' That's harder for youth." Similarly, another provider stated, "It takes a lot of future thinking to get started, and youth are in-the-now thinkers. If they feel good, they're like 'I don't need it [Buprenorphine] anymore.' So, there's a lot of people who cycle through and are like 'Man I thought I had it all together. But here I am back again.'" Furthermore, participants explained that many youth have had very bad experiences going through withdrawal in the past, and therefore understandably want to avoid feeling that way ever again. As one provider explained:

> The hard part about that is that often times people will have experienced that precipitated withdrawal when trying it on the street or know people that have experienced that precipitated withdrawal because they don't want to go to that 12-hour inter-withdrawal phase when it's safer to take that medication, so. . . . It's hard to get anyone to get to that point of withdrawal, really.

According to participants, youth's lack of "future thinking" can also increase their desire to continue using opiates rather than endure the necessary phase of withdrawal before initiating MOUD treatment. As one provider explained, "Well, of course, they're not going to want to go through withdrawal because it feels terrible. They also know from a lot of experience that using it again is going to make them feel better. So, it just makes sense that people would want to do that rather than push through." Similarly, another participant noted, "As you're struggling, if you're early in your sobriety and you run out [Of buprenorphine] – you know exactly where to go for the drugs that you've used in the past. They're [youth] less likely to get judgment from dealers or from friends who give them drugs." Another provider shed light on how ambivalence can lead a youth to want to keep using rather than pursue treatment, noting,

> Ambivalence is a thing I definitely have had some patients, and much more in the adolescent period—adolescents often want to use sometimes. So, they're ambivalent about being on buprenorphine, because if they're on buprenorphine regularly they can't use like they used to – or they don't feel high when they do use. So that creates tension for sure.

Participants noted that because many youth people with OUD are in the first few years of their use, it is not uncommon for youth to fall prey to the "Optimistic Bias" and view themselves as not needing buprenorphine treatment to eventually stop using opiates. As explained by providers interviewed in this study, many youth think that they can use for a little while, and then eventually just decide to quit with limited or no medical intervention. Providers note this optimistic bias greatly inhibits their ability as a provider to begin the buprenorphine induction phase for their youth patients. According to one provider:

> So, I had one young man who was in his early 20s—definitely in that adolescent period and he came in with his parents. He actually worked for and lived with his parents and his dream was to use heroin. This was before the fentanyl boom, so his dream was to use heroin occasionally, like every other week or so. That would be the best-case scenario for him. But of course, very quickly, he wasn't able to sustain that, and yet he still wanted to. He was very resistant to being on buprenorphine because he knew that would take that option away from him. I think everyone in the early stage of their addiction trajectory, regardless of their age, has the idea that they don't want to be physically dependent because they can just decide to quit. I think everyone's like that for the first couple years. Obviously, younger people are more likely to be in the first couple years of their use because they're younger. But even a 45-year-old who started last year often says that same kind of thing. And after a few years of spinning your wheels, people kind of grow out of that way of thinking.

Similarly, participants noted that many youth believe that when they do decide to quit, they will not need the help of an MOUD to stop using opiates all together. Explaining this unique presentation of the "Optimistic Bias," one participant noted:

> I think for adolescents more than adults, there is this idea of, 'I want to be cured of my addiction, I don't want to be on opiates at all.' So, a lot of them are more open to the idea of Vivitrol than buprenorphine. They're more open to Vivitrol than I would even say my adults are. Because they like this idea of being on a total blocker, and not an opiate. Cause as they see it—even though I can explain how it works and how it's different—it's like, 'I'm cured! I did it. I got off my drug.' With buprenorphine, though, I would say the vast majority of youth are open to using buprenorphine for withdrawal management and then afterwards they are like 'I'm ready to be off now.' So, it's a lot of conversations about, 'This is what it [Buprenorphine] helps with; it can help with cravings, with relapse prevention, with all of these other things.' And explaining that when people are on it, they tend to do better at school and their jobs and aren't involved with as many legal issues.

Sub-Subcategory 1.C.ii: The Ability to Initiate and Appropriately Manage Buprenorphine Induction also "Lives in the Cusp" of Provider Ambivalence, which is Especially High Amidst the Fentanyl Era: "Since Fentanyl Came Out, Starting Buprenorphine has Gotten Much Harder." Although there are likely many factors that contribute to provider ambivalence to manage office-based buprenorphine induction, the increased complexity that comes with managing fentanyl withdrawal and subsequent buprenorphine induction were the most prominent source of ambivalence reported by providers

in this study. Providers noted that it is critical to acknowledge how prevalent fentanyl use is among youth in our country and how the lethality and addictive potential of this drug make youth OUD treatment immensely complex. According to one provider:

> Everyone needs to be paying attention—fentanyl is disproportionately affecting youth. Now people who maybe wouldn't have gone on to have a serious addiction, or have derailed many aspects of their life, will have that happen. It's just so addictive so quickly. So, where it may have taken a year of using heroin, it can just take like 6-8 weeks. And a lot of people are like, "I got it! I'm still going to school and working." But then they realize they have gotten arrested and they're stealing from people, you know—they don't got it. It's just so prevalent and so cheap. It was 20 dollars a pill when I first started and now it's 4 for a lot of people. If you know where to get it. Probably not the random high schooler who only uses it once in a while. I had a patient in Hawaii who was getting it delivered, while on vacation. It's heartbreaking. It's why I love working with adolescents, and why I think we have a unique opportunity to help them get on a different path before things are more entrenched and it just becomes so much harder to change.

Multiple providers explained that, because fentanyl lasts longer in the body than other opiates due to various pharmacodynamics, providers must be particularly targeted and creative in their induction approaches. According to one PCP, the long-process rate of fentanyl combined with the fact that individuals do not always know that they have been taking fentanyl, presents unique challenges when managing the induction phase of buprenorphine treatment. This provider stated:

> The other hard thing about it is that the withdrawal trajectory is different with fentanyl than it is with heroin. Fentanyl is processed more slowly, so it takes a little longer. It seems to go through enough withdrawal to not trigger that precipitated withdrawal when you're taking the buprenorphine. Sometimes folks don't even know what they're taking. . . . they're 'taking Oxy' is a very common report. They're taking Oxy, in which case the processing of that in their bodies is going to be much sooner than if they're taking fentanyl.

Another provider explained that:

> It's a combination of time. How much time are you going to wait until we can see how far along you are in those withdrawal symptoms. If it's fentanyl, it's going to take longer for you to get to the point where it is safe to take the buprenorphine. As we know, the longer that period drags on the more difficult it is.

Three providers explained that many providers rely upon the ability to engage in "micro-induction" with fentanyl users, but that successful micro-induction can be exceedingly challenging for various medical and psychosocial reasons. One provider stated:

> In the fentanyl era, this is kind of a new thing we're struggling with. Since fentanyl came out, starting buprenorphine has gotten much harder, just physically harder. Because the fentanyl lasts too long and the risk of precipitated withdrawal has been really challenging and people are trying all kinds of clever tricks in order to just be able to get you started. I'm sure you've heard about induction—to get it started—but that induction really lives in the cusp of ambivalence, because you're doing two things at once. And while ambivalence is what we do in addiction medicine, you're really asking people to suffer now to get better later, and that's hard. So, we've had a few youth really, really struggling to just get started.

A second provider noted:

> I was trying to micro-dose this poor girl; she was like 23 and had come in for a fentanyl overdose. She got Narcan and wanted to start buprenorphine but she had had fentanyl recently so I couldn't just start her. You have to wait a long time; well, you know the whole fentanyl/buprenorphine thing. So, I couldn't start her, which sucked.

According to the third provider, there is a higher fallout rate now with fentanyl to buprenorphine induction because of how long it can take to get to an adequate state of withdrawal, and relatedly how much support patients need from their providers to succeed:

> When people come off fentanyl and go onto buprenorphine, it's not as easy with the fentanyl that is being used. To do the micro-induction is a lot rockier. We have a higher fallout rate. I think about the "cookbook" or "you can do it in your sleep" thing you can do when people are transitioning to buprenorphine from heroin or oxycodone or Percocet is not so with fentanyl. You actually need a higher touch induction. We end up calling patients sometimes every day or every other day to troubleshoot because they're a lot sicker because of the pharmacodynamics of the way fentanyl operates. It's like they're going through a precipitated withdrawal process on a prolonged basis because the fentanyl is gassing off of their fat tissues and it's being released into their body for a longer time frame. So, the inductions are actually trickier. So, I wouldn't be surprised in both the adult and peds populations for doctors if they're starting to see that they're having a harder time getting patients through it. I think that's why it's so rewarding to be in a clinic where you can have a high-touch environment. But I believe in this happening in primary care. I wouldn't want to say that all of this needs to happen in a specialty environment. That would be impractical and unwise.

Providers emphasized that in order to help a fentanyl-using patient successfully and safely get onto buprenorphine, they would like more support, structure, and time to facilitate frequent communication and check-ins with patients. According to participants, it appears that each moment of the transition from fentanyl withdrawal to buprenorphine induction is critical to ensure patient well-being and success.

Barrier Number Two: PCPs Feel Ill-Equipped to Treat Youth Patients with OUD

This section refers back to the information in Table 3.

Subcategory 2.A: PCPs get Limited Training on SUD Treatment in General: "There's a Challenge in Medical Training, in that there's so much to Learn and Limited Time to do so."

Participants described a distinct lack of substance use training and exposure in medical school, residency, and beyond. One participant pointed to this lack of exposure in medical school as a major cause of current limited access to and knowledge of buprenorphine for individuals with OUD: "It's in [Medical school] where the exposure hasn't started." Postulating as to the cause of this lack of training and exposure, one participant explained that in medical training, "There's so much to learn and limited time to do so. So, some stuff gets shortchanged, and there's always things that are short changed." Moving the conversation toward youth substance use and OUD treatment, one participant stated: "So, does the lack of training apply to youth substance use or youth opiate use disorder? Absolutely." When it comes to medical school and residency training on buprenorphine prescription, one participant shared, "Many places don't teach residents about buprenorphine." This same participant later asserted how their buprenorphine prescription training was not at all the norm:

> I was trained as a resident, so I've been prescribing buprenorphine since my third year of residency. Which I think is becoming more common, but was definitely not common necessarily at the time that I was a resident. And so, I think we are probably a little bit more liberal than many places, just given our depth of experience.

Participants noted that there are distinct categories of training in medical school, organized by specific demographics and relevant diagnoses and conditions that providers may be tasked with treating when working with these populations. As one participant put it, “I think, in general, we think of medical school, it’s like, ‘Here’s pediatrics. Here’s adult medicine.’ And then there’s not that much on treating substance use disorders. Period. At least when I was training.” Another participant similarly recalled learning “nothing” about buprenorphine treatment throughout their medical training: “Oh, there was nothing. I remember I did one day in an inpatient rehab unit. I’m sure I’d heard of methadone.” These sentiments highlight that in medical training, the importance of knowing how to treat substance use disorders is not a priority; it appears, then, that current medical school curriculum and training emphases are failing to epidemic magnitude of OUD in our nation.

Often in a somber tone, a couple of participants distinguished their training as particularly unique and far from the norm having received ample training on substance use treatment and exposure to working with SUD populations. One participant stated, “I will say, the program where I did my training was unique in that there were more opportunities than most places to get exposure.” One participant even positioned their residency program as “forward thinking” because the program believed that buprenorphine prescription should be a “normal part of family medicine practice.” However, even within this program—a program that claimed to see the benefit of buprenorphine prescription—this participant noted that many of the preceptors were not adequately trained in buprenorphine prescription or even credentialed to prescribe with an X-Waiver. This participant stated, “They [The residency program] had to get the preceptors or their faculty trained in the buprenorphine waiver training because they weren’t even trained in it. So,

when they had the residents coming in and starting to do it, the preceptors felt very uncomfortable because they didn't know anything about this and were like "how do we do this?"

Optimistically, it appears that when medical students and residents are encouraged to prescribe buprenorphine to patients with OUD and are provided with adequate training and support to pursue necessary and required training, providers will often go on to integrate buprenorphine prescription into their practice. As one participant put it, "It does spread from there. When it is part of a residency, it then spreads out to all the places that the residents graduate and go to." One participant who reported frequently prescribing buprenorphine to both youth and adults stated: "I was actually trained in a residency program that was doing a lot of buprenorphine prescribing."

Perhaps uncoincidentally, participants who felt their medical school and residency training programs provided them with adequate knowledge on buprenorphine were also the participants who had formal specialization and certification in addiction medicine. This relationship between knowledge and practice then begs the "chicken or the egg" question; does ample SUD training and exposure in medical school and residency lead an individual to pursue further specialization? Or rather, do medical students and residents who have already determined that this is an area of interest for them actively pursue training in programs that are known for providing adequate SUD training and exposure.

Subcategory 2.B: PCPs get very Limited Training on OUD Treatment of Youth Patients: "There is a Lack of Exposure and a Lack of Conversation around Caring for this Age Group."

Not only did participants reference a lack of SUD training and exposure in medical school and residency, but many participants also pointed out that there is limited *youth* specific

substance use and MOUD training in medical school and residency programs. According to one participant, "Well, definitely in the pediatric population, there is, I think, minimal education for providers about opioid use disorder, treating that, and that the first line of treatment would be buprenorphine in that population."

Another participant noted that, in general, providers do not think of youth with they think of someone struggling with addiction. This inaccurate understanding of who an "addict" is likely contributes to the limited amount of training and conversations on the topic of youth addiction. According to one participant:

> I think that there is a lack of exposure and a lack of conversation around caring for this age group. When you think of addicts, the stigma is the homeless and the people on the street. And you have an image of adults. Even though so many of them are kids and have been for years. So, if you're outside of the conversation we are having, it doesn't always occur to people that it's an issue or that it's something that they should be looking for or concerned about as providers.

In acknowledgement of how unique it is to treat youth with OUD—especially transitional-aged youth—one participant highlighted the very limited training that PCPs get on how to help transitional aged youth or young adults with addiction. According to this provider,

> There's very little on this intersection of when a youth becomes an adult, and what the unique challenges are that this cohort or demographic may face in accessing care or in transitions of care. I mean, if you have always gotten your care from a pediatrician, or from [Hospital name], and now all of a sudden, "Boom!" you're 21 and your pediatrician won't see you anymore. That can be really destabilizing. I would say we don't get much training on that.

This lack of youth-specific SUD and OUD training and exposure in medical school, residency, and beyond is likely to perpetuate misunderstandings of current best-practice treatment for youth with OUD. As one participant noted, the lack of education PCPs receive on youth OUD treatment means that "Not everybody knows that kids can take buprenorphine . . . and that it's

safe to do. We tend to not use opioids in kids in general for chronic pain, and so they're probably just a sort of new concept."

Participants noted that the lack of youth-specific SUD and OUD training and exposure in medical schools and residencies contributes to stigma toward youth with SUDs; according to participants, when there is increased stigma there is also increased fear of providing office-based OUD treatment to youth. According to one provider:

> From a systems standpoint, people are just scared in general—especially the under 18 realms. So many programs stop at 18 years old, even though you can prescribe lower for buprenorphine. So, a lot of people are like, "What if something goes wrong?" "What's going on with their little brains?" and then they think, "Well, maybe I shouldn't be doing this.

This same provider later stated, "There's also just a lack of studies for kids under 18 years old. Or they're more case studies and not big, randomized control trials. So, people have a lot of. . . I think there's fear and stigma, obviously. Especially when it comes to prescribing for young people."

Sub-Subcategory 2.B.i: Limited Training on Youth OUD Treatment can Result in Developmentally Insensitive Treatment Approaches and Expectations of Youth: "The Adolescent Prefrontal Cortex is not a Stable Place to Be." Participants noted that for anybody, and particularly for youth, it can be challenging to coordinate and manage one's medical care needs. According to multiple participants, it is uncommon for youth to independently pursue medical care because they either have not identified they need help, or they do not know how to navigate the healthcare system. Many participants asserted that it is unfair to expect youth to complete the same tasks we expect adults to; youths' brains are actively developing and therefore youth do not have the executive functioning skills that facilitate being proactive and organized. As one participant described:

> I mean in general, teenagers and folks in their early 20's don't come to see doctors that often. I would say in this age demographic it's just not uncommon to have people not pursue preventative care. Plus, that requires the young patient or the individual to identify that they have a particular behavioral pattern that is problematic.

Another participant noted that, likely because of certain developmental limitations, many youth still rely upon adult caregivers to help them access medical care. According to this provider:

> People I know at that age are not even making their own doctors' appointments. Like when they come home from college, they're still like, "Mom will you make me my doctor's appointment?" So not only do they have to make an appointment, they also have to know who to call. And for a lot of them, by the time they call, they hear the person on the other end say, "Oh. You have to do all these things too." So now they're like, "I tried, I went, but I didn't even get my buprenorphine. Nothing happened!" They're very action oriented in that way.

Participants described that, sometimes, youths' unreliable nature can make initiating and maintaining buprenorphine treatment particularly challenging in a primary care setting. According to one provider, one challenging phenomenon that frequently limits youth access to buprenorphine in primary care is "lack of youth follow-up." According to this provider, "I try to build rapport in that first visit, and then say to them that it would be great if we had an opportunity to chat about this again. I let them know that I want to support their health, and so on and so forth. And then what often happens is that I don't see that patient again." Similarly, another provider reported, "so with youth ages 18 to 25, the big issues have been mostly about showing up, being dependable, and being regular. And I know when I was under 25, I never went to the doctor. Ever. And I rarely showed up for things on time, I just wasn't a very reliable person in those days. I think showing up at the doctors is really hard. That's been a big challenge."

Participants also referenced that youths' developmentally expected and impulsive nature jeopardizes a young person's ability to adhere to medical treatment. One participant noted, "The adolescent prefrontal cortex is like not a not a stable place to be." According to another

participant, youth are universally regarded as high-risk due to the unpredictability of their behavior: “Even in our ASAM Criteria, we have special categories for adolescents that are at a higher level of care for the same level of illness because of their impulsivity.” While impulsivity can mean that youth are particularly adept at responding to crises, it can also mean that when a young person decides they want treatment they want that treatment immediately. However, our medical system rarely, if ever, makes immediate medical care feasible outside of seeking emergency room services. One participant described the downfalls of youth impulsivity, explaining that “Many people tend to respond to crises, but especially adolescents; they’re like, “Oh, my God, what is happening, I’m in withdrawal, like, this is the worst thing ever!” or “I can’t do this anymore, I want to make a change today.” And then like, the instantaneousness of that does not tend to translate into like “Oh, I’m gonna get an appointment in two weeks, and then I’m gonna do this thing.”

The fact that youth struggle to adhere to prescribed medication regimens is particularly troublesome to providers because buprenorphine is only effective when taken as prescribed. As one participant expressed, “Kids are terrible at taking medicine every day.” Failure to take buprenorphine as prescribed can significantly jeopardize one’s safety and treatment trajectory and poses challenges for providers providing outpatient primary care services who are not able to routinely and closely monitor their patients as an inpatient or emergency room provider could. One participant shared that youth often struggle to take buprenorphine as directed:

> With adolescents specifically, they use the drug differently. That’s what I found out over two years doing this. When I prescribed Suboxone to adults and they would be on it for a long time, like months to years, they know how to wake up, they usually have like a more established life, even though they were in addiction. So, you know, like, they know how to take medicine, they know how to get to their appointments, they have this idea of like, I’m gonna take this for my chronic disease, which is addiction. And youth have a very

> different stage of development, right? Like, you know, they, they're one, they tend not to stay on it as long they tend to start and stop it.

Participants also noted that youth with OUD often fall prey to the "Optimistic Bias" (Arnett, 2000), or in other words, often underestimate the acute and chronic impacts that drug use has on their lives. As we know, this way of seeing the world is especially dangerous considering the highly powerful and lethal nature of illicit opioids like fentanyl. It is not uncommon for youth to discuss their drug use in a nonchalant and minimizing way. One participant illuminated this and stated, "I have had several young men say to me, 'If I was going to overdose, I would've overdosed by now, so I think that I'm good.'" Relatedly, another participant noted, "Kids up to 25 are not thinking they're going to overdose and die. So, I think that's a really complicated trap." Another participant explained how "Some kids are like, 'This is none of your business because this is what I do in my free time and it's not about medicine. It's not about my health. It's what I do recreationally and with my friends and that is none of your business.' We have gotten that response before, or something like 'This [My drug use] is okay. I'm not going to be hurt. This is not something that I have to be worried about.' So, it's that whole idea of 'I'm fine.'"

Subcategory 2.C: The "Do No Harm Dilemma" is Complicated by Feeling Ill-Equipped

Many PCPs want to avoid causing harm to their patients and therefore experience increased hesitation and decreased motivation to engage in managing treatment for cases they fear are outside of their scope of practice. According to one participant, "In their [PCPs'] heads, they're like "I'm not trained. I don't want to do any harm." Another participant alluded to the "Do No Harm Dilemma" and stated, "I know that it's [Buprenorphine] is a life-saving medicine and I know it should be low-barrier. But when you're the person that's the PCP, you feel like you need to do better than that." This participant elaborated that PCPs often view themselves as a patient's

"healthcare quarterback" leading PCPs to "want to be able to give them and have access to the things that they need to live their best life."

This sentiment is reminiscent of the traditional promise—or Hippocratic Oath (Miles, 2004)—that providers agree to when they decide to become a doctor. In essence, the Hippocratic Oath notion is good in that providers want to help patients get the best care they can even if that means sending a youth elsewhere to get it. To this end, one provider noted, "Honestly, having a more supportive system, like at a hospital for instance, might be best, because they often have greater resources than we do in our clinic. So, in that case, it may actually be a referral outward." However, the "Do No Harm Dilemma" can have a paralyzing impact on a PCP, leading them to deliver limited or no intervention, or to over rely on referring youth with OUD out of primary care to higher levels of care or specialty substance use clinics.

One example of the "Do No Harm Dilemma" showing up in primary care practice is a PCPs desire to learn more about buprenorphine before prescribing just in case there are any "unintended consequences" that could further complicate a youth's treatment. According to one participant:

> When you have this new medication, that's still an opiate, there's going to potentially be this hesitancy. Anytime there is a new medication—although buprenorphine isn't that new anymore—there are going to be early adopters and late adopters. Everyone's going to be a little bit different in terms of. . . are you going to be on the cutting edge of trying this new med? Versus, are you going to be a little bit more conservative and say, "I want to see all the data, I want to make sure that there aren't, you know, secondary, unintended consequences before I really practice this."

Some participants noted that they feel hesitant to implement an intervention that they do not have ample experience with. Participants noted that they often feel ill-equipped and under-trained on buprenorphine treatment for youth with OUD, meaning that PCP hesitancy is usually extra high toward this intervention. One participant noted that when considering youth addiction treatment

in primary care—which they defined as "an area in which people are not necessarily well-informed"—they find it particularly important to have adequate time "to engage" to avoid practicing in a "shoot from the hip" manner.

One participant referred to this phenomenon as a "fear factor," explaining, "I think it's the same way as that the kid is more likely to die by suicide after you start them on an SSRI. So, you don't want to just see a secure message that says, 'I'm 15 and I need an antidepressant.' and say, 'Sure. Which pharmacy do you want? Here you go!'"Abiding by the "do no harm" oath is particularly challenging when working with youth who are inherently high-acuity and high-risk. According to one participant, PCPs often "know that youth need special attention and do not want to just chuck a prescription at them. By nature of being a youth that has a substance use disorder, there's just a level of severity that that implies." Or, as another provider explained, "The medicine [Buprenorphine] is easy. It's just the risk of what's happening in youth's lives that you have to tend to." Adding a developmentally sensitive perspective, another participant noted "There is a lot of impulsivity in adolescence—and a lot of these youth have a diagnosis that has something to do with impulsivity. So, they can get themselves stuck in that. And that is really hard to manage."

Participants described how the "Do No Harm Dilemma" compels PCPs to build rapport with youth before prescribing them buprenorphine, despite the risk that a youth may not return for a second visit. As one participant noted, "I often am meeting a patient for the first time and wanting to both establish rapport number one, diagnosis number two, and then also find out what they are hoping for." This participant later shared "I try to build rapport in that first visit. Then say to the youth, 'You know, I think it'd be great if we had an opportunity to chat about this, again.'" As this participant described, the desire to establish rapport first and foremost often

means that buprenorphine prescription doesn't happen on the first visit. PCPs consequently hope that youth will return for their follow up so that buprenorphine prescription can commence. According to another participant, "rarely on that first visit am I saying, 'Hey, let's jump on this right now.' I would usually say, 'Let me get to know you a little bit first.'"

Participants also noted that providers often desire to see measurable improvements among the patients they treat, and additionally like to have tangible tools and carry out straightforward treatment plans. Participants described how seemingly unsolvable problems can lower provider sense of self-efficacy and therefore diminish motivation to continue to engage in complex treatment planning and intervention delivery. However, when working with a high-acuity and high-risk population like youth with OUD, participants noted that improvement is not easy to come by, often takes a while to occur, and necessitates that a youth be committed and motivated to "follow doctor's orders."

Participants also noted that personal and professional history with opiate prescription can influence a prescriber's prescriptive behavior; according to participants desire to first learn more about buprenorphine before prescribing it. One participant asserted that the desire to learn more before prescribing is likely particularly relevant among "folks who have either seen or lived through—or maybe even erroneously prescribed opiates that they were told were safe." Considering personal and professional history with opioid prescription therefore makes it unsurprising that some providers may seek further knowledge and assurance before prescribing buprenorphine to a youth with OUD.

Providers hinted that PCPs must shift their focus from providing "perfect" care toward a focus on simply providing care. One participant described that PCPs get caught up in "box checking" by thinking, "Oh I sent them [A youth] on to a higher level of care or a specialist who

does this better," but then failing to acknowledge that in many cases, the "kid can't get in to see that person for 2 months." We know that youth in our country are in dire need of increased access to OUD treatment. We also know that PCPs have a unique potential to make a difference in a youth's life. So, we must continue to remind PCPs that the extensive training and ongoing supervision and consultation they engage in will help them determine a safe and sufficient treatment plan within a first visit, and that what matters the most is meeting a youth where they are at rather than being flawless in the execution of your first-visit treatment planning.

Participants encouraged PCPs to take advantage of having a youth with OUD standing before them, and attempt to engage them in OUD care within their first visit. While participants remarked that the "Do No Harm Dilemma" may compel a provider to refer a youth with OUD out of their office to a more "appropriate" level or setting of care, participants also noted that often youth do not follow through or receive follow-up. Participants noted that providing *some* in office-care is better than providing a referral outward, especially as this can make youth feel as though they do not have a "right" place to be treated. As one participant put it, "There's a balance. I want to provide the highest standard of care for my patients, but sometimes I'm also like 'I don't know what to do.' This is something you have to be comfortable with adolescents, maybe more so than with adults."

Participants noted that the act of referring a youth outward frequently stems from the previously noted "fear factor," or PCP's fear of failing a youth with OUD. One provider asserted that we must "set prescribers free" from the expectation of "perfection," or in the case of SUD treatment, of helping a patient achieve total sobriety.

> When doctors feel like they're a failure, they don't want to do it [Prescribe buprenorphine]. So, for some of the providers, that false expectation that they are

> supposed to make the person sober can be a painful barrier that makes you not want to do the work at all. Setting prescribers free from that expectation is important.

This provider explained that, in fact, sobriety should not be a PCP's primary goal. Instead, a PCP's primary goal should be to help a youth with OUD stay safe and alive by providing what they know to be the gold-standard for OUD treatment.

Barrier Number Three: PCPs Hold and Observe Stigma toward Patients with OUD—Especially Youth

This section refers back to the information in Table 4.

Subcategory 3.A: PCPs Hold and Observe Stigma against Individuals with OUD: "Stigma is Really the Starting Point."

A stigma toward individuals with OUD is very present in our society at large and within our medical systems, and it was discussed by the participants. Specifically, participants often cited that stigma toward individuals of all ages with OUD is a major impediment to buprenorphine prescription in primary care clinics. When providers hold stigma against individuals with OUD, they are less likely to want to directly engage with or manage their care. As one provider put it, "I think that stigma is really the starting point," or the core issue behind the lack of access to buprenorphine treatment in primary care. One provider described an experience working in a clinic in which patients with addiction were routinely stigmatized and ostracized:

> Many colleagues kept coming up to me, apologizing to me and saying, "Oh my God, I'm so sorry you have to deal with this." And honestly, I actually really enjoyed working with the patient, the patient wasn't hard at all. I was having a really hard time with the nurse taking care of the patient because the nurse was being really judgmental.

Another provider described that many providers do not want individuals with OUD in their clinic for fear of potential problems and challenges that these patients may cause. This

participant equated a PCP's lack of desire to have an individual with OUD in their clinic to when citizens strongly oppose having addiction treatment centers in their neighborhoods, otherwise described as when individuals ascribe to the sentiment of "not in my backyard" or "NIMBYism" (Bernstein & Bennet, 2013). According to this participant,

> Then there is the Not in My Backyard (NIMBY) example. . . . I've heard this even in the area of our clinics, of people or clinics, not wanting to really be suboxone providers because of the assumed associations of what that patient demographic may look like. And these are not always accurate assumptions. But there are assumptions that, oh, the types of patients who have opiate use disorder are the ones who maybe are more commonly experiencing homelessness, maybe they are more violent, maybe they are more abrasive to our staff, or to other patients and to other folks, and for many clinics who try and attract a particular clientele. They don't want too many patients that they perceive to look or behave in a particular way to be at their clinic. And that's absolutely something that I have seen. I think it's embarrassing, I think it's a false dichotomization, and it's also just wrong, like our responsibility is to treat the people in front of us with the resources and knowledge that we have. But I think that's something that's very real and does happen.

Some participants noted that when providers hold stigma toward individuals with OUD, it can be easily perceived by patients and therefore make patients hesitant to pursue care for fear of being judged by their healthcare providers. As one provider explained, "I still have patients that established with me years ago because they were like, 'I just didn't feel judged.' Which totally breaks my heart. Many of our patients travel hours to get to us, which is super sad." Another provider gave a case example to exemplify how provider stigma lowers patient's propensity to seek treatment or willingness to meet with new providers:

> So. . . I was happy to see this [Adult] patient, but I was like, "Dude, there's a doctor I can send it to right in [Name of the city the patient lived in]! You've got a job, you've got insurance. You can go to this doctor in [Name of the city the patient lived in]." And he was like, "No, I would never go to another doctor. I just know how they're going to be with me." And this referral was to a community health center where I think they're really nice. . . but still, it was really clear to him that doctors are "bad news." And honestly there's enough negative experiences at the doctor's office where maybe they are actually judging you for addiction. . . and if you expect to be judged. . . then you're wondering, is this treatment because they hate me? Because I'm an addict?

One participant explained how stigma against individuals with OUD and those taking prescribed MOUDs shows up in their workplace. As this participant reported, "Of course we see bias. When we see patients, who are suffering from an opiate use disorder, it's not uncommon for them to not be treated in the same manner as other patients. I think there's data to show this as well. I mean, this is true if you run the gamut. Whether it's the size of your body or the color of your skin, we are all biased. This certainly plays a role in opioid use disorder as well." Although stigma is widely known, it still comes as a disappointment and surprise to many providers, with one noting, "It's shocking to me—I don't know why I'm shocked, but, like, it's shocking to me how many people are like, we don't want to deal with that."

One participant posited that the stigma around OUD—and MOUDs—is largely informed by the fact that, before the DATA Waiver (X-Waiver) law came into effect and was an option credential for medical providers to pursue, OUD was not seen as a condition to be treated by medical providers. According to this participant, "Up until the DATA Waiver, the principle of OUD was that it is somebody else's problem. It was designed by law, going back to 1914, to not be a part of the medical system. So, the DATA Waiver lets it be part of the medical system, but it has been a slow journey. Over 20 years now and we are just starting to make real progress." Another participant noted witnessing a lot of anti-MOUD sentiment in treatment settings they have worked in, stating, "in the treatment milieu, I see a lot of anti-Medication Assisted Treatment (MAT) attitudes. So, my patients come in a lot bearing the burden of that."

Participants described working alongside providers who hold stigmatized views of MOUD treatment, viewing MOUDs like buprenorphine as "replacing one opiate with another." One participant explained, "I know that there are providers out there who feel that they are not going to kind of like, quote unquote, reward a someone who has opiate use disorder with an

opiate and therefore they may say, I'm not going to prescribe Suboxone, I'm not going to prescribe buprenorphine." Relatedly, another participant described that many PCPs still hold the belief that MOUD treatment is "replacing one opiate with another":

> I think there is still this notion at times that you're just replacing one opiate with another opiate. And why would you do that? In a little bit of defense of prescribers, of the folks who have seen or lived through and even maybe prescribed erroneously, at one time they were told these opiates were safe. And then they reach really terrible outcomes. Then you have this new medication that's still an opiate, then there's going to be this hesitancy.

Another provider noted that sometimes PCPs' stigma toward individuals with addiction is informed by the personal experiences and tragedies they have endured in their own lives. As one participant described, "there are so many reasons I think providers shy away from this area and these patients. Much of it is a stigma in their own lives. What they've seen, what they've experienced. The tragedies that they've seen in their own families. So, stigma is a part of all that."

Subcategory 3.B: PCPs Hold and Observe Stigma against Youth with OUD, which makes Youth Hesitant to Seek Treatment: "They aren't Going to go to Someone that they don't Feel Safe with or Trust."

Participants described stigma that they've observed themselves holding and their colleagues similarly holding. One provider illuminated how she sees stigma toward youth with OUD showing up in her practice:

> I've seen a lot of labeling when I talked to primary care partners who don't do this work, which I understand. Labeling them as "manipulative," saying things like "This kid will do anything to get what they want. This kid is. . . . " It's just so much labeling. But then I'm then like, okay, "So tell me, why did they go to you?" Like they are doing what is natural when you're an adolescent with an addiction; people protect their addiction. They're trying to protect themselves and survive. I don't think that means they're inherently "bad kids'' who are just trying to manipulate you, and do whatever they want. That makes me really sad.

One participant explained how provider stigma sometimes the likelihood that a youth with OUD will feel comfortable both pursuing and remaining in treatment, noting: “For black and white thinkers, like most are in those age ranges, it feels like, ‘Nope, they’re [PCPs] not into it. They don’t want to help me. Like, they don’t want me here. So, I’m just gonna leave.’” According to another provider, pursuing OUD treatment feels particularly daunting for many youth because developmentally youth tend to place care more about what others think of them and are therefore particularly vulnerable to and fearful of societal stigma: “the stakes are so much higher for an 18-year-old. They really worry about what we [Medical providers] think about them.”

Considering the vulnerability and acuity that comes with being a young person with an addiction, it is especially important that PCPs ensure that primary care feels like a safe and welcoming place for youth to seek OUD treatment. Many participants asserted the importance of building rapport, safety, and trust with youth with OUD, with one participant stating, “Youth aren’t going to go to someone that they don’t feel safe with or trust. That’s a whole other layer.” Similarly, another participant asserted, “the environment would need to be welcoming to youth in general. So, we need systems and processes that allow for privacy and de-stigmatization of youth with these problems as the basic table stakes.” Another participant noted that when youth have a doctor who has very different identity domains than they do, trust and safety can be especially complex to establish: “I think getting trust is going to be so hard. I think it’s terrible, but I try to remember this, that they might not trust me because every other old white doctor who they’ve ever dealt with has been a jerk to them.”

Participants highlighted the importance of an outpatient medical environment feeling comfortable, safe, and willing to facilitate care and meaningful referrals for individuals struggling with addictions. Relatedly, one participant admitted feeling uncertain how to ensure

that sense of comfortability or safety, stating, “What makes it feel safe for youth? What gets them in the door? And this is probably less the young people that are dragged in by mom or dad, but the young people who would come on their own. When I went to the dentist today—a rich person’s dentist—they were so friendly, like the friendliest people ever. And I was like, ‘I wish everyone was this friendly to all my patients!’ They always feel like they’re getting judged. So, we need to work on trying to make them feel safe. But it’s really hard. And I just don’t know what it takes to get young people in the door, to make young people feel safe about that.”

Other participants reiterated how critical it is that treatment settings are comfortable and non-judgmental for youth, and added in the importance of trauma-informed care. According to one participant:

> I think for adolescents, it’s important to think about if the environment where they’re getting care is somewhere they feel comfortable? Like are we making it you know trauma focused? Is it someplace they can come in and don’t feel like they’re judged for being drug using teenagers or are gonna be labeled as bad? And I think the same of low-barrier buprenorphine clinics sometimes, like there’s a lot of adults there and it’s you’re one of many people that are like, waiting for your appointment and when you’re a younger person that can be intimidating. Like, in houseless youth, they tend to like even when they’re houseless, they tend to congregate in areas that are not as adult heavy. So, they might be uncomfortable.

Similarly, another participant stated, “Oh my gosh, you know what—trauma-informed care! I mean that’s a whole other piece that’s missing for providers. It is one of those huge things. . . and it sounds huge to anybody who doesn’t know what that means or who isn’t familiar because they think treating trauma is ‘Not part of what they do.’ But it’s not about treating trauma. It’s just about understanding.”

Providers reported that many youth seeking buprenorphine treatment—or addiction treatment in general—end up getting passed around from clinic to clinic or provider to provider despite their developmental need for stability and consistency. As one participant asserted that

for youth, there is a strong developmental desire to form attachment and seek stability within their medical care team. This participant stated, “Any transfer of trust is hard. I love the idea of warm handoffs, but you can only do so many before they fall off. Youth want to have an attachment that’s natural for their level of development. When you hand them off, they feel abandoned?” Another participant also alluded to youth’s developmental need for stability and consistency, stating “I mean, if you’ve always gotten your care from a pediatrician, or from a certain clinic, and now all of a sudden you’re 21 and they won’t see you anymore. That can be really destabilizing.”

Participants discussed how frequent it is for youth seeking MOUD treatment to experience disruptions—or changes—in provider. One provider shared that when working with youth, it is helpful when providers ensure that adequate time is given to explaining exactly who is, or might eventually be, on a youth’s care team as a means of increasing a youth’s sense of safety and security in the relationship. According to this provider,

> Youth are very—in my experience—relationship focused. So, we are in a system where we want to see, you know, people efficiently. When we’re in the medical system, we want to make sure you have people in on time and see all the people and if you’re not there, somebody else sees them for you. And we do all this stuff, but like youth want to see the same person. So, some of the youth I work with have just transferred care to me, just specifically because they’re like, well, “I saw a different person every time.” I think even if you just explain, “Like maybe you’ll see these three people. Or, “This is your team!” However—it’s just that youth need a lot of framing around that.

According to one participant, it is uniquely challenging to be a new provider working with a young person with addiction who has likely had many other providers before. In this instance, it would not be surprising for a youth to be skeptical toward new providers and not feel certain if they should trust them. One provider explained this idea, stating “I would imagine, if you are a youth with OUD, and I don’t know how or when or why you started using, I was in need?” So, I can understand why there would be some hesitancy there.” According to

participants, it seems that any transfer of care only exacerbates a youth's perception that providers do not want to work with them and that there is no "right" place for them to pursue addiction treatment.

Barrier Number Four: Structural and Systemic Barriers

This section refers back to the information in Table 5.

Subcategory 4.A: Limited Treatment Options: Few High-Quality, Youth-Centered SUD Resources Exist

Participants highlighted that there are very few, high-quality treatment settings for youth to receive SUD care within. It is likely that the distinct lack of SUD treatment options for youth only perpetuates youths' belief that they are outsiders and do not have a rightful "place" in society. One provider who trains other medical residents noted that there is not currently a good place for providers to get specialized training in adolescent addiction medicine in the state he resides and practices in. This participant noted that, even within the state's local children's hospital, there is limited to no adolescent addiction medicine training or treatment. According to this participant:

> I have not really found a good adolescent training place for my fellows. And I actually think the problem is I don't think we really have a great place, honestly. So, I know at [Hospital] they do some stuff. Getting into [Hospital] as a patient is hard, at least I don't know how to get patients into [Hospital] if they're not already [Hospital] patients. I don't think they do any buprenorphine out of the [Hospital] mental health group, I heard. There's a guy named [Physician name]. So, I talked to him, but it was probably like eight years ago, by then they weren't doing buprenorphine. I was annoyed with him for not doing that, but he kind of felt like that was again someone else's problem and they were focused more on mental health. And then of course I just learned about literally just last Tuesday, this youth clinic at [Clinic name]. Now I'm guessing they don't see any parents there, I think it's going to be homeless for youth just because of geography, I could be wrong.

Two providers explicitly referenced that there are minimal—if any—withdrawal management options that will accept a person under the age of 18 in their home state. As one

participant explained, “I don’t know if anyone else has told you this, but there is currently nowhere in the state of Washington that will detox a kid inpatient. Unless they’re like admitted for something else, so there is like no detox facility that will exclusively take a kid for opioid detox. So, you have to have some stupid provider who is willing to risk their butt to do their own crazy thing. . . to basically be just admit him to their hospital and think, ‘This might not get covered, but he’s going to die if I don’t.’” The fact that there are essentially no places to send a youth to safely detox puts providers in a challenging position, in which they often feel that the only way to get a young person the care they need is to somehow get them admitted to an inpatient hospital for another medical need.

Providers conveyed skepticism about the quality and accessibility of care at SUD treatment centers for youth. According to one provider, some SUD treatment centers are not safe or therapeutic environments, leading many providers to hesitate to even refer youth with OUD to such services. This provider stated:

> There’s also just like a very entrenched population of people who are using drugs around some outpatient SUD clinics that are older. And, anybody by definition who is using a drug is considered a vulnerable person. So, then you’re putting vulnerable adolescents in contact with adults who are also vulnerable. It’s a recipe for potential bad relationships and interactions.

Similarly, another provider noted that PCPs are often unsure of the right direction to lead youth in OUD; According to this provider, PCPs are often trained to believe that primary care is not an ideal treatment setting for youth with OUD, however, PCPs feel do not believe that other outpatient treatment options can give youth the quality of care that they need and deserve. This provider stated,

> And then, in primary care, I was definitely trained to believe, like, “Oh, if they’re failing your outpatient buprenorphine clinic, they need a higher level of care. They need to go to intensive outpatient care. They need to be somewhere where they use really direct services. I don’t want to send young people to those places, like, they are not great places

> for young people. But that's what we're trained to do. Instead of saying "How can our system better accommodate young people?" we say, "They failed our system."

Regarding the low quality of some SUD treatment centers, one provider noted that often youth get put on too many psychiatric medications during inpatient or stays in medically managed withdrawal facilities. According to this participant:

> There are not many detox options for people under 18. So, they either go to (residential detox facility name), where they have a detox. Or, actually, do they? I think they have an adolescent detox, but I'm not sure. I know they have an adolescent inpatient unit. And then people can go to (inpatient hospital name), but they're shutting down that program. And they also just get prescribed a ton of psychiatric medications while in these places. I'm like "You went in with none and you came out with 8?!"

Another participant noted that some youth aren't even eligible to receive care at inpatient or medically managed withdrawal facilities because they do not have good enough insurance, they have pre-existing conditions, or they have an active history of polysubstance use. According to this participant,

> So, for people under the age of 18, there are for-profit places outside of the state for people with good insurance. And I mostly work with people on Medicaid so it is really just sad. And you can't have other medical conditions. And then there is also a bunch of street Xanax and benzo use going on right now, and these places often don't want to accept people using those because it can be dangerous and they can have seizures.

Lastly, one participant asserted that to truly provide high quality youth addiction treatment, treatment centers should integrate a youth's family or support system into treatment to enact long-lasting change. However, this participant could not think of a treatment center in his home state that did so for youth. This participant noted: "Ideally the trusted places in your community are built to involve families so they can easily have an addiction program that supports the family and is within the CRAFT model. Doing this doesn't have to involve this big system change, it can involve making changes within existing units."

Subcategory 4.B: Limited Access to Transportation: "I Think a lot about Transportation. How are They Getting There?"

Multiple participants noted that one common logistical barrier that is particularly challenging for youth seeking OUD treatment in primary care is simply finding reliable and affordable transportation to get to and from appointments. Participants shared that many of their young patients with OUD often do not have their own car, do not have a caregiver who is willing or able to take them to and from appointments, or simply are not familiar with how to navigate public transportation on their own.

As one participant stated, "I think a lot about transportation. How are they getting there? If they have difficulty from a transportation standpoint of getting there, then that's going to be a really big issue." Another participant added, "It's hard enough to have a young person make it to their appointment on a certain date, with some sort of transportation that many of them don't have." Furthermore, another participant highlighted the challenges youth in rural settings face with transportation to and from clinic, noting "Access is especially relevant for young people who, you know, maybe haven't gotten their license or can't afford a car or can't get transportation, especially in a rural setting."

Subcategory 4.C: Pharmacy-Based Barriers: "One Big Thing is Making Sure Youth get their Prescriptions, and that is a Systems Thing that Needs to be Solved."

Many participants described that it is often hard for youth to physically pick up their prescriptions once filled. noting that getting one's prescription filled in the first place is a huge challenge. One participant noted that because of the way our healthcare system currently operates, youth of all backgrounds struggle to pick up their prescriptions at pharmacies, stating:

> One big thing is making sure youth get their prescriptions, and that is a systems thing that needs to be solved. We have money that is grant funded to pay for people's prescriptions,

> but obviously the initial prescription is the one that is most time sensitive and that's where our system fails them over and over. So having someone to help them pick it up, or having a peer to pick them up. And ways to pay for it if they can't figure out their insurance. And that should be as much a part of the visit as any part of the visit. Not to mention there is a huge crisis with youth who are houseless and do not have support people. There are also plenty of people at home, though, who do not have support people who can take them to pick up their prescription either.

Another provider highlighted the multitude of challenges that make prescribing, filling, and picking up buprenorphine prescriptions very challenging for youth with OUD. This participant explained that:

> Often youth don't know their insurance. Like almost everybody I have worked with is qualified for Medicaid, but they don't even know what it is. So then even if I can look up and see their medical claim, I can't see what their pharmacy benefits are. If I prescribe it to a pharmacy, like 50% of the time the pharmacy can't find their insurance either, even though I know they have Medicaid under some plan. I also have a lot of youth who have changed their name or changed their gender, but pharmacies don't like doctors to prescribe a med under a different name. So, it feels like "You can't do this. You can't do that." It's an endless list of why they can't pick up their medication.

It appears that providers find it challenging to access the full spectrum of buprenorphine formulations across a multitude of settings. One participant noted the differences between the formulations stocked in rural versus urban inpatient settings, noting that we must ensure that providers have access to a wide range of formulations to increase access to buprenorphine:

> They [one rural inpatient setting] have buprenorphine but they are very limited in what they have. So, I can't micro-dose from inpatient settings because I can't physically give a dose of buprenorphine that's less than one milligram because they won't split a tablet in quarters like. Whereas like in [Urban inpatient setting] we have different formulations of buprenorphine. Like at [Urban hospital name], for example, they have films instead of tablets and they'll allow you to cut it in quarters. So, like it's just all these weird systemic things that someone, at some point, just has to put a stink up about changing.

This same participant elaborated on the challenges they face when attempting to help youth get *any* MOUD prescription filled in a pharmacy—from Sublocade to Vivitrol. This participant said:

> One of the pharmacy things that I run into is that I would love to put more kids on Sublocade. But it's only FDA approved for ages 17 and up, so that's a problem. And

> Vivitrol is only FDA approved for 18 and up. So, I've had multiple insurance companies refuse to. . . . I've had kids come to me like having been started on Vivitrol already in California and I can't continue it—because they're in rehab so it's like bundled—and then I can't continue it when they get to my office because it's not covered by their insurance. So, I have like multiple 17-year old's that we just get by on samples until they turn 18.

Participants noted that providers often find it difficult to access buprenorphine in the formulation they need, at the time they need, and in the location, they need. Considering this, participants noted that it is not surprising that youth with OUD sometimes feel bewildered when faced with logistical and financial barriers to buprenorphine. Accentuating how logistical barriers like pharmacy-based barriers exacerbate financial stress for youth patients, one participant stated:

> Cost is constantly an issue. In general, not all pharmacies carry buprenorphine or carry enough buprenorphine. Sometimes when my patients switch pharmacies, they go from having a really easy time getting a month at a time to suddenly the pharmacy's like, "Well, we don't have that many or, and you'll have to come back if you want the full prescription. And then they're having to go multiple times. So that is always frustrating.

Subcategory 4.D: It Would be Helpful to Increase Buprenorphine Prescription in School-Based Clinics and Inpatient Hospitals

Some providers noted that increasing the potential for youth to either begin buprenorphine treatment or simply learn more about it in school-based clinics or inpatient hospitals would likely play an important role in increasing access to buprenorphine for youth in primary care. Many youth with OUD are identified as needing treatment either by school professionals, or during a period of hospitalization. However, it appears that currently few streamlined pathways exist to transition youth from these settings into OUD treatment in primary care.

One provider explained how important it is to increase inpatient hospitals' abilities to manage addiction treatment for youth. According to this provider, "It has been so established in the literature that having inpatient addiction medicine decreases patient directed discharges,

decreases readmission, and lots of other good things." Other participants interviewed in this study have also noted how challenging it is to get youth started on buprenorphine treatment because of the limited inpatient treatment options for youth with OUD.

Beyond the inpatient sphere, two other providers asserted that we must increase school's capacity to initiate buprenorphine treatment or simply to educate youth with OUD about the treatment options they have. The potential for schools to be particularly influential in increasing access to buprenorphine treatment for youth with OUD is partially informed by the idea that young people value what other young people have to say. So, if a young person with OUD has a good experience talking to a medical or behavioral health provider in school, it is likely that they will tell their other peers in need of help to try out this helpful and accessible resource. According to one provider:

> I think having a school-based clinic would be great. That sounds like a great place where people can hear from a friend that they went there and the people were really nice to them. Maybe they actually got on buprenorphine, or maybe they didn't get on buprenorphine and instead they just got a Narcan script and were treated with grace. That would be awesome.

Relatedly, another participant postulated that access to buprenorphine treatment for youth with OUD would likely be enhanced if school staff got in the practice of connecting youth — in real time — via video-conferencing to a primary care provider who is able to manage their care in the community. This provider stated:

> I could picture a world in which someone with a background in school-based behavioral health intervention is able to, say, talk to a kid named Joe and have Joe admit he's using in a problematic way and that he would like to hear about medication treatment. In this scenario, it would be nice if we could patch a video in and connect Joe to a PCP.

Subcategory 4.E: It Would be Helpful to Integrate More Flexible, Youth-Centric Treatment Approaches within Outpatient Medical Settings

Participants emphasized the need to make our healthcare systems work for youth rather than demanding that youth work to make the healthcare system work for them. A core recommendation amongst participants to help our healthcare system become more youth-centric is to increase flexibility and youth-centricity in approaches to intervention. According to one provider, "Flexibility seems to be really critical. And our healthcare systems are not really designed to be flexible for people, so that is definitely a barrier." Another participant underscored the importance of integrating new medical providers and current medical trainees into conversations to truly expand our understandings of what primary practice "can do." This participant stated:

> One of the things I love about teaching is when you're new to something, you haven't been so beaten down until you have to just do this. And so, I know my residents get really frustrated with us old folks, they're like "Oh my God, just don't say we can't do it just because you've never done it or because you've already done it before or something." I do really appreciate this creative thinking and this thinking outside the box. Well, they haven't even learned the box yet.

Below are some creative solutions, suggested by participants, that have a potential to push the primary-care envelop and increase access to buprenorphine treatment for youth — and patients of all ages — with OUD in primary care.

Sub-Subcategory 4.E.i: Virtual Interventions (e.g., Texting, Calling, and Video-Conferencing) with Youth Should be Normalized in Outpatient Medical Settings. Participants highlighted that youth today are highly plugged into the technological world; relatedly, participants noted that as a way to make our healthcare systems work for youth, it may be helpful to normalized and increase the usage of virtual interventions (e.g., texting, calling, and

videoconferencing) with this population. Participants noted that one keyway to do so would be to normalize the use of texting and virtual interventions for youth with OUD.

When it comes to their own ability to use texting to connect with youth with OUD and to monitor their treatment progress, one provider explained that texting is not viewed as an ideal intervention and is therefore often avoided by providers even though many youth prefer this mode of communication to coming in in person. This provider stated:

> I think the lack of texting in primary care is very problematic. I have a colleague who works at a very, very low barrier program where most of the folks are homeless or at least semi-homeless, and they do a lot of their work through texting on the cell phone that the company gives her. They know that when they call youth, they are going to answer the phone, so the issue of them not showing up to appointments has been a lot less challenging.

This same provider went on to note that normalizing texting-intervention is likely to help patients with OUD of any age. Sharing one case example, this provider shared:

> I have one young guy, well he's actually older, like in his 30s, but he never shows up. He doesn't answer his phone for his regular appointments because he only has one of those text only cell phone accounts, which also only works when he is connected to Wi-Fi. But then he will call me later on when he is on Wi-Fi and we will figure out a way to meet.

According to this provider, by not utilizing texting as a common intervention with you, we are significantly limiting access to buprenorphine for youth with OUD, and not providing them with the structure and support they need to succeed with buprenorphine treatment.

In addition to making texting more common for OUD intervention with youth, this same provider asserted that the ability to have telephone call appointments with youth increased since during the COVID-19 pandemic. This provider noted that the increase in telephone appointments was a welcome change to his practice, and one that he hopes continues to be normalized and

approved given its potential to increase access to buprenorphine care for youth with OUD. According to this provider:

> Now in the COVID period, we get to just call people. And that has been transformative, I think. So, if they don't remember, if I call their cell phone, they're usually answering their phone. Well, I should say, let me take that back, people under 25 or people under 35, don't answer their cell phone that well. But if they're expecting a call, they're likely to answer their phone. One thing that's really annoying for me is that [Hospital] does not like us to text people, it's considered bad. So, we're not supposed to use our personal numbers for good reasons, but they haven't built any infrastructure to text people. And I find for a lot of people, particularly in this age category, not being able to text people is just disastrous. And even if you're going to call them, you'd normally text before you call. So, a cold call, people don't answer those things. And voice messages, which again, for old people was a big thing, I don't think people even check their voice messages. I don't think my son who is 26 has ever checked a voice message in his life.

Beyond texting and calling, this provider also noted that video appointments used to not be allowed for buprenorphine prescription and treatment management because of a law known as the "Ryan-Haight Act." This provider elaborated, explaining that:

> Video used to not be able to be done for buprenorphine, and that may still be an issue because there was a lot that made it hard. The Ryan-Haight Act was designed to keep people from prescribing oxycodone over the internet, which is good. But it also swept up buprenorphine prescription in that process, so you had to have a one face-to-face visit, at least one face visit is for buprenorphine. But this has been suspended during the pandemic. Everyone's assuming it'll be an act of congress to make it go away. I could be wrong. But let's assume that's not an impediment, I could picture a story maybe where you talk to a patient in real time or maybe the next day, but ideally that day you just hook up a video visit on the kid's cell phone or whatever, and before we know it, we're going! And then we can offer them buprenorphine.

Sub-Subcategory 4.E.ii. It May be Helpful to Increase Access to Long-Acting Injectable Forms of Buprenorphine: "Being on Sublocade is like Automatic Stability in a Lot of Ways." Multiple providers suggested that a keyway to increase access and adherence to buprenorphine in primary care for youth with OUD is to increase the availability of Sublocade—the long-acting injectable form of buprenorphine—in primary care settings. There was a

considerable amount of discussion among participants about Sublocade's promising potential for youth. One provider alluded to the buzz surrounding Sublocade, stating, "There are certainly a lot of thoughts right now around Sublocade, or long-acting injections of buprenorphine." Two providers strongly endorsed the use of Sublocade for youth with OUD because it can provide youth with a prolonged period of stability and normality. One provider asserted that Sublocade is an ideal medication for youths, stating:

> Being on Sublocade is like automatic stability in a lot of ways because it's in there. They might still be using, and we might still check in on them. But it's just a different picture of how often we need to see them and what it needs to look like. I think it's like the ideal medicine for an adolescent honestly.

Similarly, another provider shared that they are trying to do a lot of Sublocade prescriptions because:

> It lets you feel a period of normality. They get to feel like, "Oh this is what it feels like to not have my day dominated by my addiction." This is why the relationship is important because you can then build other things in and help them see what it feels like to be healthier and what you can do when you're on it.

Furthermore, one provider noted that knowing their youth patients are on Sublocade provides a great deal of emotional relief for providers themselves, as they know their patients have a life-saving medication in their system for at least a month, rather than getting dosed one day at a time. This provider explained, "I stay up worrying about my kids all the time and like if I knew they had Sublocade in them, like their overdose potential just like plummets. That makes me feel better as someone who worries about my patients, you know?" These comments seem to suggest that Sublocade not only has the potential to boost youth stability, but it also has the potential to boost a provider's sense of stability and control.

Participants described that youth often struggle to properly take daily doses of their medications and find persistent and consistent follow up with providers to be quite the hassle.

Relatedly, participants purported that long-acting injectable forms of buprenorphine (i.e., Sublocade) may be particularly beneficial to youth with OUD. One provider explained that youth would likely enjoy having to undergo less intensive supervision from medical providers, stating, "I think youth would benefit from it [Sublocade] because it's less follow-up." Furthermore, because one injection of Sublocade lasts one month in a youth's system, youth do not have to face their own ambivalence toward addiction treatment daily, but can rather decide once every month to want to engage in MOUD treatment. One provider described this phenomenon, stating:

> What is cool about the injections is that youth only have to decide they want to be in recovery once a month. You only have to make the decision once a month rather than every day. So, it's great for people who are waffling or like "I didn't take my buprenorphine today" or have intermittent apathy, which is so real in adolescence. The fundamental of adolescence is that it's like an unstable, emotional place. So that's why the long acting injectable is so cool. Because, it's just one and done. And, yes, getting them to the clinic once a month can be hard. But for kids who have support and are stable, like a once a month visit with their parents or with whomever is way easier then like waffling on and off of Suboxone. When people are unstable like on Suboxone, we often try to bring them in every week because we're worried about them.

Another provider added that not only would less supervision feel nice for youth, but so would less frequent dosing, which requires youth to be consistent and organized. This provider stated, "I think especially for youth, taking a pill or multiple pills or films every day is hard. And so, as we get more into these opportunities for long-acting medications for youth, I think that might be a really good fit."

Although providers expressed excitement about Sublocade for youth with OUD, they also expressed considerable frustration due to the multitude of barriers that stand in the way of successfully getting Sublocade into their office. One challenge that participants reported when attempting to get Sublocade in their office is whether their clinic is adequately set up to store the medication safely and securely. As one provider shared, "I cannot inject it at my site because we only have a little fridge for vaccines, but we don't have the whole locked facility that you need to

have this. So, you have to have these really specific things." According to another provider, getting Sublocade into your office is one hurdle, but having someone who is able to inject it is another: "Having people in your clinic who can administer injections and even getting those injections into a clinic is certainly a barrier."

Outlining the multiple hoops providers must jump through just to be able to have a dose of Sublocade in their office to give to a patient, one provider shared:

> Sublocade is a highly controlled substance and unlike Suboxone that can't be distributed in a pharmacy. So, you have to have a license to give it on site. You have to apply for the license and then you get the license and it's an expensive medication that is only for that one person. If I prescribe it for that person, and their insurance pays for it and it comes to us, I cannot give it to anybody else. Because it is assigned just to them if the insurance delivers it. It's just prescribed to them. Where I work is different because we have our own pharmacy that is part of our own clinic so they actually buy it and then I actually get to prescribe it to them and then if they don't show up then the pharmacy has not actually taken it out of their inventory and assigned it to a patient. So, I have a very unique situation, so I've just heard this from other hospital settings. Like if it is prescribed to their patient, they cannot give it to anybody else. Where I work, we keep it in stock. So, I get a little more freedom. But there is kind of like this feeling of, "Well if I order it for you. I'm ordering it just for you. Are you going to show up?" If you don't give it to them, I don't know what will happen. Like what do they do with it?

Echoing this sentiment, another provider added:

> It's not being used a lot, period because in order to get Sublocade in your office, there are huge barriers. Sublocade is the long-acting buprenorphine, and is given monthly. And the barriers to that are that it is a controlled substance that you have to keep in your office. You have to order it specially for the patient and then get it delivered to your office. But in order to have a controlled substance stored in your office, you have to have a double locked door in a locked fridge and a key behind another locked door. And the DEA has to inspect you. So, it's a huge pain to get Sublocade and very few clinics that even do buprenorphine also have Sublocade. It's really limited.

Although providers appear excited about the potential for Sublocade to improve the current state of OUD treatment for youth, it also seems that providers feel overwhelmed and burdened by the number of obstacles they and youth must surpass to access it.

Although it is currently challenging enough to even access Sublocade, it is also challenging to make youth feel safe and interested in taking Sublocade due to its long-acting nature and the reality that it must be administered as a shot. According to one provider, "Very often, Sublocade is not a young person's first choice. They might have tried buprenorphine and thought they were good. They might have thought 'I got this; I'm going to power through it.' But then they're like, 'You know what, I don't have it.' And taking medication every day is hard." Some of the initial hesitation that youth have toward Sublocade stems from their optimistic bias or sense that they do not need long-term treatment for their opiate use disorder to get things under control. For this reason, sometimes the idea of taking medication for one whole month feels like too much: "I think from a young person's perspective, I think the idea of doing something for a month is like 'Woah I don't even know that I need that.'"

Furthermore, a lot of youth have never heard of Sublocade before and therefore fear taking a medication that they view as too "new." One provider shared: "I get a lot of kids who are really skeptical. A lot of the kids haven't heard of Sublocade and that freaks them out. And they're like, 'Are you experimenting on me?' I get a lot of that." However, this same provider went on to explain that when you increase the amount of information a youth has about Sublocade and how helpful it can be to them, their hesitancy usually declines. This provider stated:

> And then when I, like, show them the data, like, they're very interested in seeing the data and because, like, they're learning. That's what today's youth is like. So, and, and after that, that I'm like, you don't have to take this every day. Then they're like, oh cool. Once we get there, it's like, then you don't have to do this every day and you can just check in with me once a month. And you don't have to have your parents badgering you three times a day to take your Suboxone, which I see a lot of like parent child conflict over the dosing. And I think there's a lot of shame in that interaction, too. It just eliminates so much friction in between that relationship and my experience. It gives them more of a sense of medical autonomy because they don't have to tell their parents everything.

Since youth hesitancy seems to be a significant barrier to receiving a Sublocade injection in-office, it seems then that a logical and feasible solution to eliminating this barrier is to increase youth—and caregiver—awareness of the benefits of Sublocade for youth with OUD.

Another reason youth hesitate to get a Sublocade injection is because it comes in the form of an injection and is not a pain free injection at that. According to one provider, explaining that Sublocade is a relatively uncomfortable injection often produces fear and ambivalence among patients. Specifically, this provider noted:

> The first hesitation about Vivitrol and Sublocade is "I don't like shots." Especially with adolescents, it's like "No." Even some of my IV using clients are like "No, I hate injections. I hate all of this stuff." And so, for Sublocade I have to explain that the shot goes in your belly, right under the skin. That it is not the same as getting a shot in your arm. And I have to be honest that it actually hurts a lot to get because it's thick, and it's just uncomfortable because you're just pushing in a lot of stuff under pressure and it doesn't feel good. We could give lidocaine, there are some clinics that do but ours won't because you have to have a doctor monitoring that when the nurses are giving it.

Similarly, another provider cited youth "needle-phobia" as a key barrier in getting Sublocade shots to youth, stating:

> So, with the first shot . . . it's really big and it's a really thick solution. The first shot is like a triple dose basically to get you over the hump. And there's a lot of hesitation about that. And I find that few of my kids are injecting, most of them are smoking if they're using opiates so there is a lot of needle phobia. So, there's a lot of initial resistance.

Not only is the physical procedure of receiving a Sublocade injection intrusive, but it can also be logistically challenging to coordinate getting a youth their injection. Due to the aforementioned barriers, some PCPs cannot administer the injection themselves and therefore must send youth out to secondary clinics in order to receive the dose. However, many participants stated that they do not like to inject a youth with Sublocade without conducting their own assessment themselves, meaning that even if a youth is able to get themselves to this office, youth are often asked to tell their story to a brand-new provider, which is not very appealing.

One provider described the rigamarole that youth must go to when they must be sent outside of their primary care clinic to get a Sublocade injection, sharing:

> So, then there's the issue that to give the shot elsewhere, it is usually part of an appointment. So, if you send a patient to a closer clinic, they're usually like "We would at least need to talk to them and do an addiction assessment to determine if we should be giving this shot, what else is going on, and if there are other health issues." Which all makes sense but my adolescents are not that into that. Because to them it's like, "Why do I have to go see someone else? I don't want to do that." So, I am lucky because I can have a case manager drive them up to (city name), but it is a lot. Yeah, it's a lot.

Although Sublocade has immense potential to be a game-changer for youth with OUD, there appear to be multiple barriers that prevent Sublocade from getting to youth. Given the high likelihood for Sublocade to be a particularly feasible way for youth with OUD to take buprenorphine, it is incredibly important that key stakeholders consider ways to lessen or eliminate existing systemic and structural barriers.

CHAPTER V: DISCUSSION AND RECOMMENDATIONS

Discussion

The purpose of this study was to illuminate barriers providers face when prescribing buprenorphine to youth ages 16-25 with OUD in outpatient medical settings (e.g., primary care, family medicine, internal medicine clinics). To this author's knowledge, this is the first CGT analysis that utilizes PCP perspectives to outline barriers that providers face when providing buprenorphine treatment in outpatient medical settings. Increasing our awareness of the barriers providers in outpatient medical settings encounter is particularly important in the present moment, as the fentanyl crisis only continues to escalate and uniquely impact youth in the US. To best serve our youth with OUD, it will be important to continue to explore barriers as they present across continuums of care and utilize provider perspectives in order to engage in meaningful practice transformation.

Barrier Number One: PCPs Feel Overwhelmed

PCPs Feel Stretched Thin

Findings of this study reveal that many PCPs do not feel they have enough time or capacity to manage the complexity of office-based buprenorphine treatment ethically and effectively for youth with OUD. Participants in this study noted the palpable level of PCP burnout in their clinical environments, highlighting the need to optimize PCP time and balance the many responsibilities that come with efficiently and effectively treating youth with OUD with buprenorphine in an outpatient medical setting. This sentiment is reminiscent of Wakeman and Barnett's (2018) finding that many individuals believe buprenorphine treatment to be more time consuming and complicated than other, typical primary care-based interventions. This is also in alignment with the findings of the Pew Charitable Trusts report (Budick, 2022), which

suggest that providers often want and need more support, especially regarding highly complex cases such as helping a youth with OUD. Furthermore, these findings echo the current high rates of burnout among PCPs in the United States, with such levels only worsening during and after the COVID-19 pandemic (Nishimura et al., 2021; Nishimura, 2022; West et al., 2018). It is important to actively monitor PCP rates of burnout within outpatient medical clinics, and to respond proactively to high levels of burnout by strategizing clinic-wide ways to lower provider burnout. For example, it is important to consistently ensure adequate staffing ratios, to ensure that PCPs are taking their allotted time off, to notice how often PCPs are working overtime, and to take an emotional temperature of specific clinical environments. According to Abraham et al. (2020), negative primary care practice environments are one of the most common predictors of PCP burnout.

Results of this study reveal that PCPs have historically felt as though they do not have enough time to pursue the training and certifications required by the Drug Addiction Treatment Act of 2000—or, in other words—have not had enough time to get the "X-Waiver" they needed to prescribe. While this Act was meant to increase access to buprenorphine treatment in primary care settings, we know that it discouraged buprenorphine prescribing as it required providers to get additional training and receive special permission from the Drug Enforcement Administration (DEA), and to work all of these additional trainings into their already very tight schedules. Promisingly, this barrier has been eliminated since the findings of the present study were collected. Section 1262 of the Consolidated Appropriations Act of 2023 (P.L. 117-328) (the Act)—which was signed into law on December 29, 2022—removes "DATA-Waiver Program," or the federal requirement that providers submit a Notice of Intent (NOI) attesting to the completion of certain training requirements to prescribe buprenorphine (SAMHSA, 2023a). This

change became effective immediately, and the DEA notified stakeholders of this change in a letter on January 12th, 2023 (SAMHSA, 2023a). The elimination of this barrier presents a hopeful future for PCPs who have long desired to prescribe buprenorphine but lacked the time.

PCPs Desire Increased Psychosocial Support

Although buprenorphine treatment is an effective treatment on its own (Hadland et al., 2018), integrating psychosocial services into buprenorphine treatment produces favorable outcomes for youth. According to the Pew Charitable Trusts report (Budick, 2022), the United States current lack of parity for mental and behavioral health services significantly limits access to effective treatment for OUD within primary care settings. While we can work to increase PCP's training in behavioral health interventions, we also must work to increase the presence of individuals who specialize in delivering said interventions by ensuring there is adequate funding for their positions. By building up a robust behavioral health presence in the field of primary care, unnecessary stress and responsibilities will be taken off PCPs plates, therefore granting PCPs the time they need to focus on medically managing buprenorphine treatment.

Results revealed within this major barrier revealed that PCPs often hesitate to work with youth with OUD because of the possibility of having to work with their families and caregivers. Results of this study position this barrier as a key demotivator for PCPs who, already overwhelmed, hesitate to take on the added responsibility of managing a young patient's care as well as additional case management that comes with working with their caregivers. This finding amplifies the need to continue to integrate behavioral health support and case manager presence into primary care systems, ensuring that every PCP who needs a behavioral health expert can easily access one. Furthermore, this major barrier highlights the need for more research on how best to integrate families and caregivers into youth OUD treatment. It seems that this theme is

underrepresented in current literature on barriers to primary-care buprenorphine treatment of youth with OUD. However, results from a transdisciplinary provider learning series (Peavy et al., 2023) reveal that lack of access to adjunctive support services (i.e., social work; mental health) is the highest barrier to providing MOUD care to adolescents—a finding that is also consistent with Hutchinson et al.'s 2014 study. These results indicate that it is extremely important for providers to be able to co-provide mental health and social work services alongside adolescent MOUD treatment and for healthcare institutions to determine how to be able to pay for mental health services, social work services, and address staffing and reimbursement barriers to expanding MOUD access to adolescents. Peavy et al. (2023) even note that, according to participants in their study, adolescents may benefit more than their adult counterparts from adequate access to services ancillary to MOUD.

PCPs Find It Helpful to Work Alongside a RN with MOUD Knowledge

Although current literature asserts the need to expand the primary care workforce and ensure that PCPs have adequate ancillary support, no studies were found that explicitly referenced the need to integrate nurses who specialize in OUD treatment as core members of primary care, OUD treatment teams. Some participants in this study, however, referenced having worked on pilot projects that included the inclusion of a nurse who specialized in OUD care and case management and explained the immensely helpful impact that OUD nurses had on lessening PCP workload, improving patient experience. Nurses possess the level of scientific awareness needed to assist PCPs in safely managing and monitoring their patient's progress in OUD treatment. Nurses with specialized knowledge about OUD can take charge of SBIRT interventions in primary care settings and therefore limit the tasks that a PCP must complete when they are face-to-face with their patient. Nurses who specialize in OUD treatment can also

step into the role of a case manager if needed, bringing to the table a deep knowledge of existing OUD resources in their surrounding geographic area, an ability to connect with caregivers and coordinate appointments with more ease and capacity than many PCPs, and an understanding of when a step-up in care is needed based on patient symptoms and presentation.

While increased funding for OUD nurses has the potential to greatly improve patient and provider experiences of primary care-based buprenorphine treatment, it is important to be aware of high levels of burnout currently experienced within the nursing community. Much like primary care providers, the COVID-19 pandemic made the world acutely aware of an extremely overworked and overwhelmed healthcare workforce, with nurses often bearing the brunt of highly taxing and traumatic work.

Buprenorphine Induction for Youth with OUD Is Complex and Difficult for Many PCPs to Manage

Participants in this study do not feel they have enough time or support to effectively manage buprenorphine induction, and related periods of withdrawal and/or relapse. According to the Center for Evidence Based Policy (2017), management and monitoring of buprenorphine induction and opioid withdrawal for individuals of all ages is incredibly challenging and dangerous, and ideally happens in inpatient or residential treatment facilities where 24/7 supervision and support is available. Opioid withdrawal is physically uncomfortable, and although frequently non-life threatening can lead to severe physiological symptoms or even death if enough fluid loss occurs resulting in life-threatening electrolyte imbalances (Srivastava et al., 2020). Essentially, buprenorphine induction can be a highly complex medical process to manage, a level of complexity that can exacerbate PCPs' feelings of overwhelm and hesitation to take on new youth OUD cases in outpatient settings. The increase of fentanyl use among youth

with OUD only makes buprenorphine induction more challenging, because of fentanyl's potency and is therefore uniquely difficult to safely manage withdrawal from (Shearer et al., 2022). Limited studies exist that explore the impact that fentanyl has on increasing PCP hesitation and fear to manage OUD treatment.

Furthermore, high levels of ambivalence among youth to withdrawal also highlights the need safely and successfully for ample mental and behavioral health support within primary care practices. Youth patients in withdrawal are at a particularly vulnerable part in their OUD treatment journey. Developmentally speaking, youth have a relatively immature prefrontal cortex, and therefore lack future-thinking, are prone to more risk taking, struggle with impulse control, and are typically incentive driven and aversive to distressing situations and emotions (Sommerville et al., 2010). According to SAMHSA's (2021) guidelines, a young person must reach a stage of "moderate" withdrawal before they can even begin buprenorphine treatment. Youth must therefore be provided with adequate support with the primary care system to surpass this necessary phase of treatment and begin lifesaving, buprenorphine, treatment.

We know that OUD can effectively be managed and treated in primary care settings, with a strong body of evidence supporting the integration of pharmacotherapy and addiction treatment into regular primary care practice (Buresh et al., 2021; Carney et al., 2018; Durkin, 2017; Fiellin et al., 2008; Fiellin et al., 2014; Hickman et al., 2018; Larochelle et al., 2017; O'Conner et al., 1996; Weinstein et al., 2017; Weisner et al., 2001). Despite knowing this, we also know that PCP buprenorphine prescription rates for youth with OUD remain extremely low (Borodovsky et al., 2018; Feder et al., 2017; Hadland et al., 2017; Hadland et al., 2018; Levy, 2016; Levy, 2019; Olfson et al., 2020). Therefore, we must take PCPs' present concerns seriously and strategically work to decrease burnout and overwhelm by increasing PCP's time and capacity to help youth

with OUD receive primary care-based buprenorphine treatment. We must commit ourselves to making PCPs feel successful when working with youth with OUD and to increase PCPs awareness that buprenorphine treatment *is* within their scope of practice. In line with suggestions within the Pew Charitable Trusts report (Budick, 2022), we need to augment the primary care workforce, increase peer support for providers, and enforce integration of mental and behavioral health services into primary care practice.

Barrier Number Two: PCPs Feel Ill-Equipped to Treat Youth Patients with OUD

PCPs Get Limited Training on SUD/OUD Treatment, and Even More Limited Training on Youth OUD Treatment

Participants in this study repeatedly referenced receiving little to no training on best-practice SUD treatment intervention in medical school, residency, or throughout their careers. Participants noted a lack of training on best-practice interventions for youth with SUDs throughout the course of their training and professional development. This finding further supports findings of the Pew Charitable Trusts report (Budick, 2022), which asserts the need for more robust medical school and residency training on OUD treatment, as well as an increase in continuing medical education on the matter.

Recent studies (Haffajee et al., 2018; Tesema et al., 2018) indicate a growing movement to integrate teachings about OUD treatment into medical school training today. Relatedly, evidence suggests that recent medical graduates or current trainees are more inclined to view MOUDs as effective, and more likely to express interest in working with this population (Kennedy-Hendricks et al., 2020; McGinty et al., 2020; Peterson et al., 2020). However, it is unclear whether this increase in training on MOUDs includes particular considerations for providing buprenorphine treatment to youth with OUD. Further research is merited into the degree to

which medical school, residency, and medical continuing education curricula are responding to this need for increased PCP education on best-practice medical and behavioral health interventions for youth with OUD.

Limited Training on Youth OUD Can Result in Developmentally Insensitive Treatment Approaches and Expectation of Youth: "The Adolescent Prefrontal Cortex is not a Stable Place to Be."

A young person's prefrontal cortex—the area of the brain responsible for executive functioning that influences self-monitoring, error correction, and impulse control—does not fully mature until one reaches their mid to late twenties (Galvan, 2010; Sommerville et al., 2010). This underdeveloped prefrontal cortex can lead a young person to lack a fully developed "behavioral brake system" (Galvan, 2010), or to struggle to engage in health-seeking behaviors and avoid risk-taking ones. Research also supports a young person's propensity to fall prey to the "optimistic bias," or the belief that they are invincible and that tragic consequences of risky actions would "never happen to me" (Arnett, 2000). This optimistic bias can lead young people to underestimate the impact that drug use may have on their lives and therefore hesitate, or not even think to, pursue treatment.

Knowing what we know about a young person's brain, it makes sense that the healthcare system—which necessitates proactivity, organization, and preventative action—is a challenging system for youth to navigate. When limited training exists on youth OUD treatment in medical school and residency and throughout PCP's professional development, developmentally insensitive approaches and expectations to youth OUD treatment can result. Participants interviewed in this study assert the need to further integrate developmentally sensitive understandings into treatment approaches so that we can make our system work for youth, rather

than make youth work for our system. Instead of swimming against the current and hoping that youth can show up effectively in our healthcare system as it stands, we must be creative and innovative in our approaches, making sure to be youth-centric in all aspects of primary care practice and buprenorphine treatment.

Participants referenced various ways to integrate family members and loved ones throughout treatment. One participant noted the utility of increasing the use of Community Reinforcement and Family Training (CRAFT) in clinics. CRAFT was founded in the 1970s by Robert Meyers and William R. Miller as an adapted version of another intervention known as Community Reinforcement Approach (CRA; Miller et al., 1999). CRAFT is intended to help close significant others ("CSOs") of someone with a substance use disorder learn how reinforce their loved one with an addiction when they choose safety and sobriety, and how to remove positive reinforcement when the individual chooses to continue using and putting themselves in harm's way. CRAFT is a unique method in that it centers helping an individual with an addiction make a positive change in their life, while also prioritizing CSO's own mental health and well-being and granting CSO's permission to step back and center their own needs. CRAFT focuses largely on integrating parents, family members, and caregivers into the support of an individual with, and is therefore an ideal approach to take when helping a youth struggling with addiction.

Participants also highlighted how helpful it is to normalize and integrate virtual interventions into outpatient youth MOUD treatment, to further integrate MOUD treatment and education around MOUD treatment into schools, and to creatively engage all team members in wrap around care when a youth with OUD comes into an outpatient clinics (i.e., have a social worker meet separately with the caregivers while the medical provider meets with the youth, ensure in office warm-hand offs between youth with OUD and behavioral health providers,

provide psychoeducation to caregivers and youth). Further, specific youth-centric recommendations can be in the "recommendations and suggestions for future research" section.

The "Do No Harm Dilemma" Is Complicated by Feeling Ill-Equipped

Many participants noted that PCPs do not feel adequately trained to provide buprenorphine treatment and therefore experience as sort of cognitive dissonance; PCPs often feel stuck between their desire to help their patients and not cause them any harm. This dissonance is deeply rooted in the Hippocratic Oath (Miles, 2004)—which providers agree to when they decide to become a doctor. Many PCPs desire to get more training on buprenorphine before prescribing it or want to first get to know a young person and then prescribe to them on their second visit. The complex nature of both the lives and the brains of youth patients with OUD only further complicates matters; when providers feel ill-equipped, under-trained, *and* as though they have inadequate behavioral health support, it truly begins to feel like they are not the right provider to be helping this vulnerable, young patient.

Although PCPs appear to often feel trapped by this "Do No Harm Dilemma" as it is referred to in the present study, a very strong body of evidence supports buprenorphine treatment of OUD in office-based settings for individuals of all ages. Four randomized, controlled clinical trials support buprenorphine as a safe and effective method of treating youth OUD, without serious, adverse side effects (Gonzalez et al., 2015; Marsch et al., 2005; Marsch et al., 2016; Woody et al., 2008). OUD can effectively be managed and treated in primary care settings, with a strong body of evidence supporting the integration of pharmacotherapy and addiction treatment into regular primary care practice (Buresh et al., 2021; Carney et al., 2018; Durkin, 2017; Fiellin et al., 2008; Fiellin et al., 2014; Hickman et al., 2018; Larochelle et al., 2017; O'Conner et al., 1996; Weinstein et al., 2017; Weisner et al., 2001). Furthermore, many patients actually prefer

integrated, office-based, MOUD treatment, as they see it as a more accessible and flexible setting of care than more traditional substance abuse residential treatment facilities or outpatient therapy (Fox et al., 2016). Existing evidence and results of this CGT analysis support that PCPs are uniquely positioned to help treat youth with OUD. However, PCPs themselves doubt this to be true. To mitigate the impact of the "Do No Harm Dilemma," we must therefore ensure that PCPs are adequately supported, trained, and empowered to see buprenorphine treatment as an intervention they are qualified and encouraged to implement.

Barrier Number Three: PCPs Hold and Observe Stigma toward Patients with OUD—and Uniquely toward Youth with OUD

Participants in this study noted that stigma toward individuals with addiction has a large impact on access to addiction treatment. This stigma extends toward individuals with OUD, and specifically contributes to misunderstandings or stigmatized beliefs about buprenorphine treatment and its ability to save lives and turn around one's addiction treatment trajectory. Participants in this study commonly cited stigma as a barrier they've witnessed contribute to lowered-access to buprenorphine for individuals of all ages, and especially for youth. Participants observed stigma in society, at their workplaces, amongst their colleagues, and within themselves and echoed much of the research that exists today in relation to how stigma limits access to buprenorphine treatment.

In line with Wakeman and Barnett's (2018) findings, participants cited that many of their colleagues still believe that buprenorphine is a "replacement addiction," an idea which is built upon a fundamental misunderstanding of addiction, physical dependence, and behaviors associated with addiction and dependence. Participants also expressed that many of their colleagues view patients seeking buprenorphine as simply wanting to divert it or sell it, a

pervasive myth that Cicero et al. (2018) asserted is factually inaccurate and which majorly discourages providers to prescribe buprenorphine at all. Participants also referenced the stigma produced by the previous X-Waiver requirement; a sentiment also expressed in the Pew Charitable Trusts Report (Budick, 2022).

As Budick (2022) noted and participants in the present study reiterated, patients of all ages are impacted by perceived stigma, and relatedly often struggle to seek out care for fear that they will be treated poorly or have trouble finding a provider who is even to treat them. Individuals with addiction not only struggle to find treatment, but often even struggle to find housing—a key stabilizing factor in anybody's life that must be present for safety and stability to be achieved. Researchers have termed the stigma toward having individuals with addiction living in one's neighborhood "NIMBY-ism" (Berstein & Bennet, 2013); it seems then, based on participants' reports, that NIMBY-ism extends beyond neighborhoods and into primary care clinics as well, making treatment feel unsafe and unwelcoming to individuals with OUD.

Barrier Number Four: Structural and Systemic Barriers

Limited Treatment Options for Youth with OUD Exist

Participants in this study noted that—overarchingly—PCPs want to provide patients with the best care that they can. However, PCPs are also aware of a very limited number of behavioral and medical referrals to specifically refer youth with OUD to. This small number of clinical resources that currently exist for youth with OUD only seems to worsen PCP's feelings of overwhelm and therefore increase PCP's hesitation to help youth with OUD.

Although literature on psychosocial treatment interventions for substance use demonstrate efficacy and utility of many EBPs (Wells et al., 2013), research is currently lacking on what specific behavioral interventions have proven to be uniquely helpful to youth with OUD.

Despite the promising potential of Adolescent Community Reinforcement Approach (ARCA)—a behavioral health intervention for youth with OUD receiving conjunctive buprenorphine treatment—was proposed in Marsch et al.'s (2005) randomized controlled trial as particularly promising for youth OUD treatment, none the present study's participants explicitly mentioned this youth-specific substance use approach. This suggests that there may be helpful resources out there that PCPs are unaware of. Existing evidence also reveals that 12-Step programs like NA or AA—which are very commonly included in referral resource lists for youth—produce high rates of drop-out and relapse among youth (Matson et al., 2014; Pecoraro et al., 2013).

While PCP's limited awareness of resources may contribute to the feeling that limited resources exist for youth with OUD, it is also true that there is a distinct lack of treatment centers and resources that accept and or specialize in treating youth with OUD. For example, many youth who are beginning the process of buprenorphine induction need medically supervised opioid withdrawal, yet multiple providers in this study noted not knowing of anywhere in their state they could send youth to receive such services. This leaves well-intentioned providers who hope to start youth on buprenorphine stuck between a rock and a hard place: do they attempt to manage withdrawal within an outpatient setting despite knowing the inherent risks that come with such a lack of supervision? Or, rather, do they avoid the process of buprenorphine induction altogether due to there being no specialized and reputable centers to send youth to get the process started? To set providers—and youth—up for success in buprenorphine treatment, we provide ongoing education to PCPs as to what youth-specific resources exist within their geographic region, we must expand the number of youth-specific resources that exist in the first place, and we must ensure that the resources we are expanding are the ones that evidence show us that youth actually enjoy and maintain engaged in.

Limited Access to Transportation

Although seemingly small, a big step in the buprenorphine treatment process is physically getting to and from appointments, picking up medications, etc. Participants in this study noted that youth uniquely struggle to independently transport themselves to and from appointments and therefore often rely upon caregivers, public transportation, or hospital-based shuttle services. A review of recent literature reveals a distinct lack of attention currently being paid to how logistical barriers such as lack of access to transportation decrease youth access to and retention in buprenorphine treatment. Results of this study highlight the need to increase awareness around this issue so that we can accurately understand the impact that logistical barriers such as this are having on current low rates of youth buprenorphine treatment. Potential transit-based barriers *must* be integrated into PCP visits with youth; whether this is discussed between a youth and an MA, a youth and an RN, or a youth and a PCP, it is simply important that this barrier-brainstorming session occur to help youth—and their caregivers—prevent the very frustrating and difficult to surmount barriers that come with limited access to transit.

Pharmacy-Based Barriers

Further accentuating the need to investigate the impact of logistical barriers—like youths' lack of access to transportation—many providers also noted that once a youth agrees to begin buprenorphine treatment, they must then be able to physically seize hold of their prescription to begin the treatment process. This barrier underscores the need for the increased ancillary support and longer provider visit times in primary care settings. To limit the impact that pharmacy-based barriers have on a youth's ability to either initiate or maintain buprenorphine treatment, providers and youth must actively work together to brainstorm potential barriers *before* they arise. It is also possible that increasing access to long-acting injectable forms of buprenorphine may also help

mitigate some existing pharmacy-based barriers to accessing buprenorphine. For example, instead of having to go to a pharmacy multiple times in one month, a youth who receives a monthly, long-acting injection no longer has to make multiple trips to the pharmacy in order to access their medications. For youth who particularly struggle with access to affordable and reliable transit, or who struggle to understand their insurance coverage, this could be a game-changer.

There Is a Call for Increasing Buprenorphine Prescription in School-Based Clinics and Inpatient Hospitals

As one way to increase access to buprenorphine for youth with OUD in primary care, we must ask ourselves, in what settings are youth most likely to feel safe disclosing this need and hearing about potential treatment options? In what settings are youth most likely to be identified as struggling with substance use? Contemplating answers to these questions, it seems that enhancing access to buprenorphine treatment and education in school and inpatient settings may be one feasible and potentially very important solution, to first identifying which youth need help, and second, getting said youth connected to MOUD treatment resources in outpatient medical clinics.

A review of current literature on barriers to buprenorphine treatment for youth revealed limited studies on the potential access-increasing impact of integrating buprenorphine-treatment into school-based clinics and youth inpatient treatment centers. Although it is known that buprenorphine treatment—and medically managed opioid withdrawal—often occurs within residential settings for adults with OUD, little is presently known about access to such services for youth under the age of 18 years old. Furthermore, results of this study reveal that, at present, few streamlined pathways exist to transition youth with OUD between school or inpatient

settings into primary care. It is not clear from existing literature whether adolescent inpatient units and school-based primary care clinics have normalized buprenorphine treatment into regular practice. However, research does support that to best support youth with OUD we must approach their treatment from a systems-based lens and include individuals from every corner of their community (Clemmey et al., 2004; Fishman et al., 2003; Perry & Duroy, 2004) from teachers to caregivers to peers to medical and mental health providers, research shows that wrap-around care for youth with substance use is strongly encouraged and supported.

When it comes to integrating buprenorphine treatment into school-based primary care clinics, it is important to capitalize on the potentially positive impact that youth can have on one another. Although some research shows that peer-to-peer relationships can lead to increased substance use for a young person, this is not always the case; peer relationships can also be a positive influence. The potential positive impact of peer-to-peer relationships is highlighted in Evans et al.'s (2020) study on the Living the Example (LTE) program, a program that trains adolescent youth ambassadors to develop and spread prevention messages within their own social media networks and through involvement in school activities. Furthermore, Zuckerman et al. (2020) noted that when young people feel connected to people at their school, this can protect them from engaging in drug abuse and serve as a critical substance abuse prevention intervention. By not integrating buprenorphine treatment into school-based primary care clinics—as well as into inpatient treatment centers that accept youth under 18 years old—we are significantly limiting the doors through which youth with OUD can seek buprenorphine treatment and therefore doing youth a major disservice.

Future research should explore pilot buprenorphine treatment programs that support youth through opioid withdrawal, buprenorphine induction, and buprenorphine treatment

maintenance within both school and inpatient hospital settings. The existing amount of support that is already present in such settings provides an extremely solid foundation upon which to expand access to buprenorphine treatment for youth, and to increase youth's awareness that they can continue to follow through on their buprenorphine treatment within their primary-care clinic if they prefer.

Virtual (e.g., Texting, Calling, and Video-Conferencing) Interventions for Youth Should be Normalized in Outpatient Medical Clinics

To optimize youth-centered buprenorphine treatment, participants of the present study assert that we must increase our comfortability utilizing virtual interventions such as texting, calling, and video-conferencing. By normalizing and accommodating virtual interventions for primary care OUD treatment—and continuing to provide the option to have traditional in-office visits—it is likely that our healthcare system will feel safe and more accessible to youth with OUD. Similarly, the Pew Charitable Trusts report asserts that an increase in telehealth investment and virtual intervention have large access-enhancing potential. Just as we must expand access to youth buprenorphine treatment into school and inpatient settings, we too must expand access to youth buprenorphine treatment in the virtual world.

Although our world has embraced virtual medical and behavioral health intervention in a post COVID-19 world, it seems that we have been slower to embrace virtual buprenorphine treatment, with only few participants in this study noting that their practice has significantly shifted toward virtual buprenorphine intervention. We know, however, that youth face a multitude of unique barriers when it comes to getting to in person appointments—from struggles to organize their own schedules, limited access to transit, and fear of facing perceived stigma in

primary care clinics—it seems then that a virtual space may increase youth's sense of autonomy and control and therefore motivation to engage in OUD treatment.

It Could Be Helpful to Increase Access to Long-Acting Injectable Forms of Buprenorphine for Youth Across a Continuum of Settings

There is a growing amount of discussion in the field of youth addiction treatment about Sublocade's promising potential for youth. One reason Sublocade is viewed as potentially very promising for youth is because young people often struggle to properly take daily doses of their medications and find persistent and consistent follow up with providers to be quite the hassle. Therefore, less supervision feels nice for youth, but so would less frequent dosing, which requires youth to be consistent and organized. Furthermore, the long-acting nature of Sublocade could also limit provider and youth involvement with caregivers because of the decreased need for visits with a PCP. Sublocade is a promising intervention for youth with OUD, and one that can be administered in primary care settings. However, there are currently few studies that explain how Sublocade may be uniquely helpful for youth (Prokop et al., 2022; Wenzel et al., 2021), and no known studies that specifically investigate the utility of increased access to Sublocade in primary care settings for youth with OUD. More research into the efficacy of Sublocade for youth is merited, namely comparing treatment retention and outcomes amongst youth receiving primary care OUD treatment and studies that contrast benefits of traditional buprenorphine formularies with the benefits of Sublocade.

Although providers appear excited about the potential for Sublocade to improve the current state of OUD treatment for youth, they are also overwhelmed and burdened by the number of obstacles they and youth must surpass to access it. These barriers often come in the form of the transit and pharmacy-based barriers; further highlighting the need to integrate transit

and pharmacy-based barrier discussions into regular PCP practice. Other challenges in accessing Sublocade and successful initiating youth on Sublocade treatment stem from whether or not a primary clinic is adequately set up to safely and securely store the medication, whether or not a primary care clinic has someone who is able to inject Sublocade, whether or not youth are on board with this seemingly "new version" of buprenorphine, whether or not youth are hesitant to receive the shot, and whether or not caregivers are on board with their youth receiving a longer-acting form of buprenorphine. Participants noted that many youth fear getting a Sublocade injection because of needle-phobia, and the fact that this injection is known to be quite painful. While there is no way to completely eradicate needle-phobia among youth, providers can attempt to offset a youth's fear of needles by providing ample psychoeducation about how likely it is that getting a long-acting injectable form of buprenorphine can improve their health outcomes.

CHAPTER VI: RECOMMENDATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

First, it is strongly recommended that members of primary care leadership and other key stakeholders continue to acknowledge, assess, and address PCP burnout. Ideally, every primary care clinic would consist of multi-disciplinary team members who are confident in their ability to deliver SUD behavioral health interventions to youth, to engage in complex family-systems work and support parents and caregivers of youth, and to safely manage withdrawal and induction phases of buprenorphine treatment in an outpatient setting. As our world continues to rapidly change and evolve, so must our ability to support those who work tirelessly to provide medical care to our most vulnerable citizens.

Rather than approaching PCP burnout from a reactive standpoint (i.e., waiting until signs of burnout are high), healthcare systems must integrate proactive and protective policies and procedures to ensure the well-being of PCPs in the United States. Some suggestions for such protective policies and procedures include, but are not limited to, ensuring PCPs have adequate vacation time, eliminating unnecessarily time-consuming credentialing and training requirements (e.g., the X-Waiver), ensuring adequate ancillary and behavioral health support in primary care clinics, providing supplementary training and support for PCPs who are tasked with inducing or managing OUD withdrawal symptoms for a youth with OUD seeking buprenorphine treatment in primary care, and hiring specialized OUD nurses to work directly alongside PCPs managing buprenorphine treatment. It is also recommended that primary care clinics work to maintain a close alliance and working relationship with nearby facilities that can provide higher levels of OUD care should a youth patient need to be transferred from an outpatient level of care.

From a burnout prevention perspective, it is important to note that "OUD Nurses" should ideally be individuals who are explicitly hired to manage OUD patient treatment alongside primary care providers, who are paid adequately to do so, and who are not expected to simultaneously fulfill the same duties that other nurses in the primary care clinic have on top of their OUD specific duties. If an OUD nurse happens to have low caseloads of OUD treatment cases to aide PCPs in, then, this nurse could of course utilize their nursing skills in any other way necessary in the clinic, but the OUD nurses' job first and foremost would be to manage and coordinate OUD treatment within an outpatient medical setting and serve a direct aide to PCPs in this quest. Organizational and managerial steps must be taken to ensure protection of OUD Nurses' time and to prevent OUD nurse burnout, should this role become a more common element of primary care practice.

Being able to manage buprenorphine induction and associated phases of treatment effectively and safely is an acutely important result revealed throughout this CGT analysis. While patient and provider ambivalence toward buprenorphine is difficult to measure and control, we can make measurable and specific amendments to our current medical systems' approach to opioid withdrawal management and buprenorphine induction. Specifically, it appears that we must provide more patient and provider education about withdrawal management and induction, ensure PCPs are adequately trained on the complex nature of fentanyl withdrawal management and subsequent buprenorphine induction, and increase support to patients in the withdrawal and induction phases of treatment across inpatient, outpatient, and home-based treatment settings. Enacting these changes—among many others—is likely to set up both patients and providers for increased success and therefore increase access to and receipt of buprenorphine in primary care settings.

Given recent changes in buprenorphine prescription policy and regulation, it is important to closely monitor and track how—if at all—PCP prescriptive behavior subsequently changes. Now that all PCPs have the capacity to prescribe buprenorphine within outpatient settings, it will be interesting to note changes in prescription rates in the upcoming years. Participants in the present study noted that part of their hesitation to prescribe was informed by the knowledge that they if they were to go out of town, there might not be a credentialed provider who can cover for them. Recent regulatory changes should theoretically help to mitigate this concern; however, it will be important to follow up with PCPs and investigate whether or not this barrier persists. It is recommended that all outpatient medical clinics have clinic wide trainings to ensure that PCPs are updated on recent regulatory changes and provided with adequate training on buprenorphine treatment in order to boost providers' sense that they are capable to prescribe buprenorphine and to cover for buprenorphine-taking patients on their colleagues panels should their colleagues go out of town or take any extended leave.

Second*, we must continue to creatively and realistically consider how to integrate family members, caregivers, and peer supports into the lives of youth in need of MOUD treatment.* Participants asserted the unique influence family members and caregivers have on youth's MOUD treatment trajectory, underscoring the need to adeptly integrate them throughout a youth's treatment—from beginning to end. While many youth who are identified as needing MOUD treatment may not have supportive caregivers or family members in their lives, many do.

For those that are lucky to have supportive individuals on their side, it must become part of procedure to have PCPs, RNs, and behavioral health staff members connect with youth's family members and caregivers as soon as possible. Caregivers should be offered a similar level of behavioral health support as a youth in treatment and should routinely be monitored and

checked-in with throughout the course of the youth's treatment. Outpatient medical clinic staff members are encouraged to seek training and consultation regarding best-practice ways to engage caregivers in substance use treatment, including but not limited to taking trainings on the CRAFT method, MI, and other family-based therapeutic interventions.

Electronic health systems should include notation of key family members and loved ones in youth's lives and should include ways to notate if this loved one has been successfully contacted and engaged in their own care. Outpatient medical clinics providing MOUD care to youth should carefully consider and update their referral resources for family-therapy and individual therapy and ensure a diverse and well-rounded list of providers in the area that specialize in working with youth with addiction and their families. Youth who are identified as not having any caregivers on board with their treatment should be given their own unique "flag" within electronic health record systems—a flag that indicates that this youth must be provided with resources and referrals to youth support groups, youth centers, and other youth-empowerment groups. Outpatient clinics should consider offering behavioral health support groups for all youth in OUD treatment, and if staff have the capacity these groups should also include family members and caregivers.

Third, *it is critical that primary care leadership and other key stakeholders continue to ensure PCPs receive adequate exposure and training to working with youth with OUD*. This exposure and training should occur by the early stages of a PCP's medical school training and must persist throughout each PCP's practice. SUD training should be integrated into all medical school curricula and a training component of all PCPs medical residencies. Within SUD trainings, a strong emphasis should be on OUD treatment across the lifespan and special considerations for today's youth with OUD. SUD trainings should focus on ensuring that PCPs

comprehend the uniqueness of the young brain and how ongoing brain and psychosocial development can impact the trajectory of a youth's SUD/OUD treatment. With adequate training and exposure, it is likely that the access-liming impact of the "Do No Harm Dilemma" will be minimized. Pediatricians must also be exposed to working with youth with OUD and receive ongoing training on best practice OUD intervention for young patients and their caregivers and families. Additionally, more studies are needed to outline specifically what additional training PCPs desire to be able to manage buprenorphine induction cases safely and efficiently with patients in need of fentanyl withdrawal.

Fourth, *primary care leadership and other key stakeholders must acknowledge and address that stigma toward individuals with OUD—and particularly toward youth with OUD—is a major barrier to initiating and successfully engaging in office-based OUD treatment*. Although research supports that SUD broadly, and OUD specifically, are highly stigmatized diseases (Tsai et al., 2019; van Boekel et al., 2013), limited research exists that specifically explores stigma toward youth with OUD. Future research should explore how stigma toward youth with OUD differs from stigma toward adults with OUD, and how this stigma is felt and experienced by youth patients. Given the distinct differences between youth and adult access to buprenorphine in primary care (Bagley et al., 2021; Hadland et al., 2017; Mauro et al., 2022; Olfson et al., 2020), we must continue to fight against the stigmatization and characterization of youth with addiction and to encourage PCPs—and society at large—to see OUD as a disease like any other that deserves treatment in primary care settings.

Primary care teams must commit to ongoing anti-OUD bias trainings, ensure that PCPs engage in reflective and growth-oriented individual and group supervision, and efficiently enact changes to policies and procedures to decrease the access-limiting impact of stigma within their

office. As a part of this ongoing work, primary care teams should also work to specifically acknowledge how youth patients' fears of being stigmatized by medical providers may be keeping youth from seeking help and work to ensure low-barrier access to care. Some suggested methods of ensuring that youth know how and feel safe enough to pursue office-based OUD treatment include, but are not limited to, placing office-based MOUD treatment advertisements in bathroom stalls, public transit, and schools, providing after visit summary resource lists to any youth who may be at risk of developing OUD, ensuring adequate after school appointment times for youth, facilitating working relationships with school counselors who can initiate referrals on behalf of a youth with OUD who needs treatment, elongating visit times for youth with OUD to ensure adequate time to establish rapport and build trust, ensuring that youth are actively engaged in informed-consent conversations with their PCPs and aware of their rights to privacy.

Fifth, *major structural and systemic barriers identified throughout the present study must be carefully and continuously addressed to increase access to buprenorphine treatment for youth with OUD seeking primary care services*. First, SUD treatment options for youth must be increased across the United States. Current SUD treatment facilities for adults should consider the access-increasing impact of extending their care to individuals below the age of 18. Funding for facilities that specialize in youth OUD treatment—from withdrawal management to induction to maintenance—must be provided so that youth with OUD have a specialized center to seek services across the continuum of inpatient and outpatient care. Such facilities should ensure minimum qualifications and training be met by *all* staff members, and that ongoing efforts to ensure the safety and well-being of youth patients be maintained.

Youth with OUD seeking treatment must also be provided affordable access to transportation to and from OUD treatment facilities—including primary care clinics. For

example, youth with OUD should be afforded subsidized transit passes in case they are unable to either drive themselves or find someone else who can drive them to receive treatment. Many public schools will provide students with free transit passes, as well as many official city/county departments. Results of this study highlight the need to ensure PCP visit times with youth are longer than typical PC appointment times to allow for discussions on matters such as a youth's access to transit. One potential way to mitigate potential timing problems would be to always book youth with a longer time slot, normalize telehealth intervention, and increase the frequency and availability of at-home delivery of buprenorphine for youth with OUD.

PCPs should be proactive in discussing potential pharmacy-based barriers to care with each youth OUD patient. Said discussions should focus on ensuring youth know their insurance information and how to provide their pharmacy with said information, that youth are informed on how to pick up and request refills for prescriptions, that youth are granted affordable access to transit to and from the pharmacy, and that pharmacies PCPs are calling buprenorphine into have adequate stock of buprenorphine in appropriate formularies and dosages. Primary care team members could work to come up with a system to somehow alert pharmacies when a youth without a caregiver might be picking up their buprenorphine prescription so that pharmacy staff are aware they may need increased support and patience.

Schools and inpatient hospitals were identified throughout the present studies as areas in which access to buprenorphine treatment for youth with OUD is limited and therefore must be increased. Furthermore, while school-based primary care clinics do exist, it was noted that primary care services or primary care treatment referrals must continue to be an active and integrated part of schools—from middle school onward. Primary care leadership, inpatient hospital leadership, and other key healthcare stakeholders must continue to reflect on how best to

ensure broad access to buprenorphine treatment across a wide array of settings within a youth's life. By casting the metaphorical treatment "net" as wide as possible, it is hoped that youth with OUD can access buprenorphine treatment no matter where they are or when they need it.

Outpatient medical clinics and key stakeholders must also continue to broaden their perspectives on what is and what is not within the scope of outpatient medical practice. One of the greatest strengths of outpatient medical settings like primary care clinics, family medicine clinics, and internal medicine clinics, is these clinics ability to meet an incredibly wide range of needs for individuals across the lifespan. Continuing to capitalize on the strengths inherent to generalist practice will be critical to the increasing access to buprenorphine treatment for youth with OUD seeking primary care services. Furthermore, because outpatient medical clinics are able to meet such a broad range of patient needs, we must also specifically consider how best to meet youth needs.

Specific, youth-centric suggestions illuminated within the present study first and foremost include normalizing the use of virtual (e.g., texting, calling, and video-conferencing) interventions for youth with OUD. In practice, this might look like attempting to engage a youth in OUD treatment first and foremost through the use of HIPPA compliant and secure messaging and text-messaging platforms, facilitating initial meeting and continued treatment check-ups via phone call or video-conferencing versus requiring the in person presence of a youth with OUD, and ensuring that PCPs can easily be virtually connected to school-based health clinics in order to facilitate warm-hand offs for youth with OUD and collaborate with school-based medical and behavioral health providers. It is also recommended that the United States continuously work to increase youth access to other harm-reduction treatment interventions for youth with OUD, or treatment interventions that emphasis meeting people where they are at and offering accessible

prevention, treatment, and recovery-oriented interventions. It is critical that our nation continue to expand access to harm-reduction approaches across political, programmatic, and practice lines. Examples of harm-reduction interventions for youth with OUD include, but are not limited to, providing naloxone and drug testing kits to youth including fentanyl test strips, ensuring youth have access to safer sex kits including condoms, increasing access to syringe service sites and sharp disposal and medication disposal kits, providing wound care supplies to youth in need, funding medication lock boxes to ensure safety of medications, providing supplies to promote sterile injections and therefore reduce the risk of infectious disease transmission through injection drug use, providing safer smoking kits to reduce the spread of infectious disease for those smoking opioids, and ensuring youth have adequate education on OUD and associated treatments.

Other youth-centric recommendations to incorporate into primary care practice include but are not limited to increasing the prevalence of mobile van delivery of MOUD to wherever the youth in need of treatment may be—from the street to their parents' house. It may be useful to increase appointment reminders for youth with OUD and ensure that reminders are sent out through a variety of platforms in order to optimize the potential of reaching youth (i.e., communicating appointment and prescription pick up reminders through texting, email, social media, school officials, caregivers, or peer navigators.

PCPs should also become increasingly aware of the potential for long-acting injectable forms of buprenorphine—like Sublocade—to help youth with OUD seeking outpatient OUD treatment. Although Sublocade is currently gaining more attention and regularity within United States outpatient primary care clinics, this momentum must continue. XR-buprenorphine must be made increasingly accessible and accepted as a pivotal treatment tool for youth with OUD and

trainings on what XR-buprenorphine is and how it can be uniquely impactful to youth should be a part of all medical school curricula, residency program training, and ongoing continuing education for primary care providers. Furthermore, providers must think compassionately about how to provide youth with injections in a manner than minimizes pain and discomfort.

It is acknowledged that there are many other helpful recommendations to continue to increase access to buprenorphine treatment for youth with OUD seeking primary care services. As such, ongoing conversations regarding this topic are highly encouraged across all realms of healthcare practice with an emphasis on cross-disciplinary collaboration and consultation to continue to provide youth with OUD the best treatment possible.

CHAPTER VII: LIMITATIONS, SUMMARY, AND CONCLUDING REMARKS

Limitations

Several limitations to this research merit close attention and consideration. A major limitation of this study is that it included a snow-ball sample of primarily White, female PCP participants from an urban metropolis in the Pacific Northwest. Therefore, this convenience sample likely does not broadly describe the sentiments and experiences of a more diverse sample of PCPs across the United States. We know that the United States' current opioid epidemic pervades metropolitan borders, state lines, racial and ethnic groups, socioeconomic statuses, etc. To produce more generalizable results and to truly understand the barriers—or "bumps"—PCPs face when prescribing buprenorphine to youth with OUD in primary care, future studies should recruit more diverse samples that interview providers from a more diverse continuum of rural to urban clinical practice locations, medical school and residency training backgrounds, and racial, ethnic, and gender compositions.

Another limitation of this study's sample is that all of the interviewed participants with prescriptive authority had first-hand experience prescribing buprenorphine, although not all had prescribed to youth under the age of 18 years old. While this level of experience likely contributed meaningfully to the results of this study, it also could be viewed as a potential limitation because—despite all of the mentioned barriers—the providers in this study were somehow still able to find a way to prescribe buprenorphine to youth in their outpatient medical practices. It would be interesting to interview only prescribers who had no previous experience prescribing buprenorphine to youth, and better understand the barriers they experience, if they differ from the barriers unveiled in the present study, and reasons why these barriers continue to stand in the way of actual prescription of buprenorphine to youth.

No patient perspectives of youth with OUD were included in the development of the present CGT. Furthermore, no family members or caregivers of youth with OUD were interviewed either. The exclusion of these unique perspectives is inherently a limitation to the present study. However, the purposeful exclusion of these individuals was made by the primary researcher in order to paint a more distinct picture of pervasive barriers that *providers* face. Future studies must include youth voices and the voices of their loved ones. Utilizing all of the aforementioned perspectives is likely the only way to enact meaningful, lasting change within outpatient medical clinics.

Many of the PCPs interviewed in this study had limited experience specifically prescribing to youth with OUD, which sometimes required them to call upon a few moments in time to draw conclusions about youth-specific barriers. Future studies should analyze the experiences of PCPs who primarily work with youth ages 16-25 with OUD to accurately reflect youth-specific barriers. Since the results of this study are not representative of barriers faced by PCPs prescribing buprenorphine to youth with OUD across the nation, providers who consume this research are limited in their ability to apply insights derived from this data to their own practice. Furthermore, interviews were conducted in 2021 and 2022, and therefore may not reflect the impact of ongoing efforts to increase access to buprenorphine within the United States.

It is critical to highlight the inherent bias that comes with having one expert analyst create CGT codes. It is impossible to determine how my own personal life experiences, coupled with my own professional experiences impacted my determination of each code. Although I attempted to do most of my literature review after data analysis, to produce a dissertation proposal, I did have to do some literature review beforehand. This is antithetical to a true CGT

theory approach, and therefore likely guided the formation of my major categories, sub-categories, and sub-subcategories. It is also important to acknowledge my own positionality as a white, able-bodied, cis-gender, middle class, woman with a graduate degree, and how this positionality certainly impacts the way I interact with others.

Furthermore, I did not have any external reviewers and did not engage in any group thematic coding sessions, as many scholars do when develop their own original CGT. This is a major limitation of this study, and something to acutely bear in mind when interpreting the validity of results. Despite attempting to recruit a small group of unpaid research assistants to engage in group coding with, I was unable to secure a small group of individuals who were able to engage in such group coding over the course of 1-2 years' time. I also did not make any group coding requests of my committee. Therefore, I knowingly agreed to go about analysis on my own, knowing that this would be a major limitation in my study. Future studies should center on the importance of this aspect of CGT development and ensure that group coding can occur.

Although the inclusion of an RN in the present study is not a limitation in and of itself, it is important to note and to consider how a study might differ if the study sample were to *only* be RNs assisting with youth buprenorphine treatment in outpatient medical settings. It is possible that the major themes garnered throughout such a study might differ from those unveiled in the present study. Therefore, future studies should selectively analyze RNs insights into major barriers to providing youth with OUD buprenorphine in outpatient medical settings; comparing and contrasting RN-endorsed barriers and PCP-endorsed barriers could reveal meaningful distinction.

Summary

PCPs interviewed in this study described in depth the multitude of barriers that prevent them from prescribing or successfully initiating buprenorphine treatment for youth ages 16-25 with OUD. These barriers span across individual, relational, clinical, and systemic levels and contribute to low rates of buprenorphine prescription for youth with OUD seeking primary care services. Results of this study reveal that barriers to buprenorphine prescription for youth with OUD in primary care fall primarily into four major categories.

First, PCPs feel overwhelmed, a feeling that is informed by PCPs having limited time, needing more robust ancillary and behavioral health support, and struggling to manage the complexity of buprenorphine induction in an outpatient setting. Second, PCPs feel ill equipped to treat youth patients with OUD, a reality that is influenced by PCPs receiving limited training on youth OUD treatment, having limited understandings of what approaches and expectations are developmentally appropriate for youth with OUD, and feeling paralyzed by a desire to "Do No Harm" to their youth patients. Third, stigma that is held and observed by providers, patients, and society greatly limits primary care-based access to buprenorphine for youth. Fourth, many specific structural and systemic barriers stand in the way of buprenorphine prescription to youth with OUD in primary care. Structural and systemic barriers revealed throughout data analysis include limited clinical resources, limited access to transportation, pharmacy-based barriers, the need to increase youth access to buprenorphine in school-based clinics and inpatient hospitals, the need to normalize virtual interventions (i.e., texting, calling, video-conferencing), and the need for increasing youth access to Sublocade in primary care settings.

Based on these findings, it appears that PCPs are likely to encounter many insurmountable barriers when prescribing buprenorphine to youth with OUD in outpatient

medical clinics. Although the barriers identified throughout this analysis mirror many of the general barriers to buprenorphine treatment in primary care supported by existing literature, many barriers identified throughout the present analysis are novel and unique in the way they pertain to and impact *youth* with OUD seeking primary care services. It is hoped that these findings will offer providers and policy makers the understanding they need to make necessary individual, relational, clinical, and systemic level changes to increase access to buprenorphine treatment for youth with OUD in primary care.

Concluding Remarks

The United States is lucky to have countless PCPs who are devoted to increasing access to the life-saving treatment of buprenorphine for youth with OUD. However, the immensely complex and rapidly evolving opioid epidemic continues to challenge and exhaust healthcare professionals on the frontlines. In order to optimize the well-being of those with the tools to save countless lives, it is imperative that researchers and clinicians continue to unveil which targeted interventions are currently needed to support and encourage PCPs managing buprenorphine treatment for youth seeking services within the backbone of the US medical system—our primary care clinics. The magnitude of this ongoing and escalating epidemic necessitates open communication and consistent collaboration, as well as the careful implementation of evidence-based strategies to lessen the devastating impacts of today's opioid epidemic on our youth. It is my most sincere hope that this dissertation continue spark the critical conversations we must be having to not only keep our most vulnerable citizens alive, but also to help them thrive. As I begin my career as a postdoctoral fellow providing integrated behavioral health services in an outpatient family medicine setting, I look forward to integrating the findings of this research into my own clinical practice and to inform necessary programmatic change.

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APPENDIX A: RECRUITMENT FLIER

Dissertation Research: Providing Buprenorphine to Youth with OUD in Primary Care

- Are you a licensed prescriber in WA state?
  - OR a Registered Nurse who has worked with prescribing practitioners in a primary care setting?
- Do you currently - or have you previously - worked as or with a prescriber in a primary care setting in WA state?
- Are you curious to chat about your experiences/understanding of providing youth with access to buprenorphine?

Please contact primary researcher, Maeve O'Leary Sloan, if you are interested in participating in a ~30 min long, audio recorded interview on this subject. More information on this project will be provided at that time.

ANTIOCH UNIVERSITY

Researcher Contact Info:
msloan@antioch.edu

APPENDIX B: ELLIGIBILITY QUESTIONS

1. Are you an (active) licensed medical prescriber in the state of Washington or are you a Registered Nurse working alongside licensed WA state prescribers?
2. Do you currently practice - or have you previously practiced - in a primary care setting?
3. Do you have access to either a phone or a laptop to participate in a recorded interview?

APPENDIX C: DEMOGRAPHIC QUESITONS

Please select your age group:

- 21—30
- 31—40
- 41—50
- 51—60
- 60+

Please select the racial/Ethnic category that best describes your own race:

- White/European American
- Black/African American
- Asian/South East Asian/Pacific Islander
- Hispanic/Latinx
- American Indian/Alaska Native
- Biracial/multiracial

Are you recognized as Native American or a member of an indigenous group in the United States?

- Yes
- No

Select the gender group that best describes you:

- Male
- Female
- Transgender (male to female)
- Transgender (female to male)
- Genderqueer
- Gender neutral or non-binary
- Other

Please circle your degree:

- MD
- PA
- PA-C

- ARNP/NP
- RN
- DO
- DDS
- DPM
- DVM
- RPh or PharmD
- Other: _____

How many years have you been licensed to prescribe?

- Under 5 years
- 5-10 years
- 10-15 years
- 15-20 years
- 20-25 years
- +25 years
- Not applicable

Do you currently practice within a primary care/family medicine setting?

- Yes
- No

(Please respond if you answered no to number 7)

Have you ever practiced within a primary care/family medicine setting?

- Yes
- No

APPENDIX D: INFORMED CONSENT

Dissertation Informed Consent

Assessing Buprenorphine Access-Limiting and Access-Enhancing Factors for Youth with OUD Seeking Primary Care Services

If you are receiving this consent form, I am inviting you to consider participating in my doctoral dissertation research study, entitled: "Assessing Primary Care Providers' Experiences Providing Buprenorphine to Youth Ages 16-25 with Opioid Use Disorder (OUD): A Grounded Theory." This informed consent form is intended for licensed prescribers OR registered nurses working with licensed primary care prescribers in Washington state who are open to discussing the topic of providing youth (ages 16-25) with OUD access to buprenorphine in a primary care setting.
Name of Principal Investigator: Maeve O'Leary Sloan, MA
Name of Dissertation Chair: Michael J. Toohey, PhD
Name of Organization: Antioch University Seattle, PsyD in Clinical Psychology
Working Title of Project: "Assessing Buprenorphine Access-Limiting and Access-Enhancing Factors for Youth with OUD Seeking Primary Care Services: A Grounded Theory"

Introduction

I am Maeve O'Leary Sloan, a student at Antioch University Seattle (AUS) in pursuit of my PsyD in clinical psychology. As a part of this degree, I am in the process of completing my doctoral dissertation, which aims to investigate primary care providers' experiences and understandings of providing youth with OUD access to buprenorphine in a primary care setting. Below, I will provide you with information about the study and ultimately invite you to become a part of this research. You may talk to anyone you feel comfortable talking with about this research, and take time to reflect on whether or not you want to participate. Of course, you may also ask me questions at any time by emailing me at msloan@antioch.edu.

Purpose of Research

The purpose of this research study is to gain an understanding of the range of individual experiences with providing youth with OUD access to buprenorphine in primary care. The knowledge gained will serve to remedy the current lack of research on the matter, and to stimulate further discussions regarding best-practice intervention and improvements to relevant training and education.

Type of Research

This research will involve your participation in a semi-structured interview conducted via telephone or video conferencing. In this interview, you will be asked to share your experience with and understanding of providing youth with OUD access to buprenorphine in a primary care setting. I will have a few questions available to guide our conversation. This interview will be audio recorded solely for research purposes, but all of your contributions will be de-identified prior to publication or the sharing of the research results. As we speak, you are encouraged to leave out any information identifying you or others, especially information that may breach client confidentiality. Such information spoken during the interview will be excluded from the analysis. These recordings, and any other information that may connect you to the study, will be

kept in a locked, secure location. Before beginning the interview, you will be emailed a copy of the informed consent form and asked to sign it, scan it, and email it back to myself.

Participant Selection
You are being invited to participate in this study because I have identified you as someone that may feel comfortable speaking on this topic. If you are a licensed prescriber OR Registered Nurse working with a licensed prescriber in Washington state and currently work - or have previously worked - in a primary care setting, you are eligible to participate in this study. If you have ever had your license revoked in Washington state, you are unfortunately not eligible to participate in this study.

Voluntary Participation
Your participation in this study is completely voluntary. You may choose not to participate at any time. You will not be penalized for your decision not to participate or for anything of your contributions during the study. You may withdraw from this study at any time. If an interview has already taken place, the information you provided will not be used in the research study.

Risks
No study is completely risk free. However, I do not anticipate that you will be harmed or distressed during this study. You may stop being in the study at any time if you become uncomfortable. If you experience any discomfort as a result of your participation, I am happy to provide you with additional resources to contact in order to ease this distress (e.g., help lines, clinic names to seek counseling services).

Benefits
There will be no direct benefit to you, but your participation may help others in the future.

Reimbursements
You will not be provided any monetary incentive to take part in this research project.

Limits of Privacy and Confidentiality
The amount and type of information you provide in this interview is voluntary. In order to support the confidentiality of your interview, you are advised to not use your own name or the names of others in the recorded interview. Additionally, you are encouraged to avoid disclosing information that may identify clients. All information you provide for this study will be treated confidentially, and all recorded data will be kept on an encrypted and password protected device by the primary investigator. The primary investigator will transcribe the recorded interview and delete the audio recording no more than a year following the interview.
With any digitally stored data, there is the risk of it being compromised. All participants will be informed immediately in the unlikely event of a breach of confidentiality. Results of the research will be reported as interpretations of the aggregate data. Quotations by individual participants with the least amount of corresponding demographic information needed for the purposes of the research may be included in the final report. Your signature on this form will be the only

information identifying you as a participant in this study, but it will not be linked to your interview recording or transcript.
Generally speaking, I can assure you that I will keep everything you tell me or do for the study private. Yet there are times where I cannot keep things confidential as a mandated reporter. The researcher cannot keep things confidential when:

- The researcher finds out that a child or vulnerable adult has been abused
- The researcher finds out that that a person plans to hurt him or herself, such as commit suicide
- The researcher finds out that a person plans to hurt someone else

There are laws that require many professionals to take action if they think a person is at risk for self-harm or are self-harming, harming another or if a child or adult is being abused. In addition, there are guidelines that researchers must follow to make sure all people are treated with respect and kept safe. In most states, there is a government agency that must be told if someone is being abused or plans to self-harm or harm another person. Please ask any questions you may have about this issue before agreeing to be in the study. It is important that you do not feel betrayed if it turns out that the researcher cannot keep some things private.

Future Publication
The primary researcher, Maeve O'Leary Sloan, reserves the right to include any results of this study in future scholarly presentations and/or publications. All information will be de-identified prior to publication.

Right to Refuse or Withdraw
Your participation in this research is voluntary. You have the right to decline or withdraw from the research at any time without consequence or penalty.

Who to Contact?
If you have any questions, you may ask them now or later. If you have questions later, you may contact myself, Maeve O'Leary Sloan at msloan@antioch.edu or my dissertation chair, Dr. Michael Toohey at mtoohey1@antioch.edu. If you have any questions about your rights as a research participant, you may contact Dr. Mark Russell at mrussell@antioch.edu.

IRB Approval
This research study has been reviewed and Certified by the Institutional Review Board, Antioch University, Seattle. For research-related problems or questions regarding participants' rights, you can contact Antioch University's Institutional Board Chair, Mark Russell, PhD at mrussell@antioch.edu.

SIGNED CONSENT
I have read and understand the information explaining the purpose of this research and my rights and responsibilities as a participant. I have had an opportunity to discuss this information and any questions I may have about my participation in research with the interviewer. My signature

below designates my consent to participate in this study according to the terms and conditions outlined above.
Print Name of Participant: _____
Signature of Participant: _____ Date: _____
Participant Phone Number: _____
(You will be contacted by phone if any confidential information has been breached.)
Is it OK to leave a voicemail message on this phone? Yes ☐No ☐
In addition to agreeing to participate, I also consent to having the interview audio-recorded.
Participant Signature: _____ Date: _____

To be filled out by the researcher or the person taking consent:
I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.
A copy of this Informed Consent Form has been provided to the participant.
Print Name of Researcher/person taking the consent_____
Signature of Researcher /person taking the consent_____
Date _____
Day/month/year

APPENDIX E: SEMI-STRUCTURED INTERVIEW GUIDE

1. What is the general attitude toward providing buprenorphine to youth in your clinic?

2. Do you feel prepared to treat youth with OUD in outpatient settings? With buprenorphine treatment, specifically?

3. Have you noticed any stigma associated with providing buprenorphine to youth with OUD in outpatient medical settings?

4. Over the course of your career, what changes have you witnessed that have either increased access, or decreased access to buprenorphine for youth with OUD?

5. If you had infinite resources, what would you change in your clinic—and beyond—when it comes to buprenorphine treatment for youth with OUD?

*"Waving the Red Flag" and the "Flip-Flop" technique (Strauss & Corbin, 1998) were used throughout as additional methods of depending on analysis.